

<p>Title: Post Implementation Review: The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Chemical Agents) Regulations 2010 as amended.</p> <p>PIR No: DfTPIR0070</p> <p>Original IA/RPC No: DfT0012</p> <p>Lead department or agency: Maritime and Coastguard Agency</p> <p>Other departments or agencies: N/A</p> <p>Contact for enquiries: Seafarersafety@mcga.gov.uk</p>	Post Implementation Review
	Date: 08/02/2024
	Type of regulation: EU
	Type of review: Statutory
	Date measure came into force: 06/04/2010
	Recommendation: Keep
	RPC Opinion: N/A

Recommendation and Summary of Justification

This is a review of the Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Chemical Agents) Regulations 2010, as amended (S.I. 2010/330 - '**the 2010 Regulations**')¹. These Regulations have been amended by:

- The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Miscellaneous Amendments) Regulations 2010 (S.I. 2010/1110)²;
- The Treaty of Lisbon (Changes in Terminology) Order 2011 (S.I. 2011/1043)³;
- The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Chemical Agents) (Amendment) Regulations 2012 (S.I. 2012/1844 – '**the 2012 Regulations**')⁴;
- The Classification, Labelling and Packaging of Chemicals (Amendments to Secondary Legislation) Regulations 2015 (S.I. 2015/21)⁵;
- The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Miscellaneous Amendments) (EU Exit) Regulations 2018 (S.I. 2018/1202)⁶;

The scope of this post implementation review ('**PIR**') requires a review of the regulatory system established by the 2010 Regulations. The obligations for the PIR were inserted into the 2010 Regulations by the 2012 Regulations. Aside from inserting a PIR clause into the 2010 Regulations, all the amendments as listed above are for the most part minor word substitutions or insertions and have been incorporated into this review.

Overall, the evidence gathered regarding the efficacy of the 2010 Regulations, for this PIR, indicate that they have met their objectives, act as part of a harmonised approach to safety standards, align the maritime and shore-based sectors, are considered non-contentious and are low-cost. Therefore, the Maritime and Coastguard Agency ('**MCA**') conclude that the 2010 Regulations, are fit for purpose and recommend that they should be **kept**.

¹ <https://www.legislation.gov.uk/ukSI/2010/330/contents>

² <https://www.legislation.gov.uk/ukSI/2010/1110/contents/made>

³ <https://www.legislation.gov.uk/ukSI/2011/1043/contents>

⁴ <https://www.legislation.gov.uk/ukSI/2012/1844/contents/made>

⁵ <https://www.legislation.gov.uk/ukSI/2015/21/contents/made>

⁶ <https://www.legislation.gov.uk/ukSI/2018/1202/contents/made>

1. What were the policy objectives of the measure?

Issue

Chemical agents come in many different types and the results of exposure to hazardous chemical agents can result in consequences ranging from very minor up to very serious or even fatal, although it should be noted that exposure to hazardous chemical agents is considered unlikely to occur on many vessels. In this context, chemical agent means any chemical element or compound, on its own or admixed, as it occurs in the natural state or as produced, used or released, including release as waste, by any work activity, whether or not produced intentionally, and whether or not placed on the market (See Annex A – Background for further detail).

Objective

The 2010 Regulations complete the implementation into United Kingdom ('UK') law of Council Directive 98/24/EC of 7 April 1998 (as supplemented by Directives 2000/39/EC and 2006/15/EC) on the introduction of measures to protect workers from risks related to exposure to chemical agents at work ('**Directive 98/24/EC**') (See Annex A – Background for further detail). The intention of the 2010 Regulations was to extend to the maritime sector the duty on employers to reduce the risk to their employees' health resulting from exposure to chemical agents at work.

Regulations introduced by the Health and Safety Executive ('HSE') had already implemented the Directive for land-based workers. It is MCA policy that health and safety legislation for ships should, as far as possible, align with that for workers ashore to ensure an equivalent level of safety for seafarers, and to avoid conflicting standards at the margin between the two regimes.

The 2010 Regulations built upon the existing Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 (S.I. 1997/2962 – **the 1997 Regulations**)⁷ (also referred to as the "General Duties" Regulations) that already require general risk assessments to be undertaken, and appropriate measures to be taken to alleviate any risks identified. However, following negotiation and development within the European Council the particular risk of the minimum safety and health requirements for the protection of workers from the risks related to exposure to chemical agents at work was addressed, the outcome of which was a new Directive, Directive 98/24/EC with measures intended to protect workers and mitigate risk.

The policy objectives of the 2010 Regulations were to: -

- Implement Directive 98/24/EC.
- Reduce the risk of workers on ships, fishing vessels and small vessels from suffering illness or even death as a result of exposure to chemical agents whilst at work.
- Lay down the minimum requirements for the protection of workers from risks to their safety and health arising, or likely to arise, from the effects of chemical agents that are present at the workplace or as a result of any work activity involving chemical agents.
- Ensure seafarers protection from adverse health and safety risks with regards chemical agents, as far as appropriate, is consistent with protection for shore-based workers.

Implementation of the 2010 Regulations was intended to be proportionate to the risks and to consider existing controls in order to minimise the impact on businesses. Furthermore, they require employers to identify which of their employees may be at risk, and from which chemical agents, to assess the degree of risk and to introduce measures to eliminate or, where that is not possible, minimise the risk.

⁷ <https://www.legislation.gov.uk/ukSI/1997/2962/contents/made>

This approach has the effect that the 2010 Regulations support, underpin and supplement the 1997 Regulations by furnishing industry with more specific information regarding chemical agents.

The 2012 Regulations complete implementation into UK law of EU Directive 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC, which amends Directive 98/24/EC ('**Directive 2009/161/EU**'). Directive 2009/161/EU does not make significant changes to Directive 98/24/EC, but simply adds to that Directive a further 18 chemical agents for which Community indicative occupational exposure limit values ('**IOELVs**') (See Annex A – Background for further detail) have been set and for which Member States are required to establish national indicative occupational exposure limit values which take into account the Community limit value for the substances concerned.

The policy objectives of the 2012 Regulations were to:

- Implement Directive 2009/161/EU.
- Correct an error in the 2010 Regulations which omitted a reference to the list of exposure limits in Directive 2000/39/EC.
- Insert a review clause into the 2010 Regulations requiring the Secretary of State to review the 2010 Regulations and publish a report containing the conclusion of that review.

Thus the 2012 Regulations supplement the 2010 Regulations with the intention of further protecting workers from the risks associated with exposure to chemical agents at work.

2. What evidence has informed the PIR?

Based on the proportionality criteria in the Better Regulation Framework Manual ('**BRFM**')⁸ and Magenta Book⁹, a low level of resource has been used to inform a "light-touch review" of the evidence base.

This PIR uses the following evidence:

- The impact assessment that was created at the time of drafting the 2010 Regulations ('**2010 IA**') (to be found at the end of the Explanatory Note)¹⁰. The level of analysis undertaken was in line with the depth of available information.
- Survey responses from the engagement exercise conducted at the time of drafting the 2010 Regulations.
- The impact assessment undertaken at the time of drafting the 2012 Regulations ('**2012 IA**')¹¹.
- Marine Accident Investigation Branch (MAIB) Annual Reports¹².

Taking account of the low evidence base, the low response rate to the engagement exercise conducted at the time of drafting the 2010 Regulations, the minimal costs and benefits and the fact that stakeholders have alternative avenues to discuss and bring up issues resulting from the implementation of the 2010 Regulations, for example the MCA attend the twice yearly National Maritime Occupational Safety and Health Committee ('**NMOHSC**') which is held online and attended by many of the stakeholders and

⁸ <https://www.gov.uk/government/publications/better-regulation-framework>

⁹ <https://www.gov.uk/government/publications/the-magenta-book>

¹⁰ https://www.legislation.gov.uk/ukxi/2010/330/pdfs/ukxiem_20100330_en.pdf

¹¹ https://www.legislation.gov.uk/ukia/2012/2027/pdfs/ukia_20122027_en.pdf

¹² <https://www.gov.uk/government/collections/maib-annual-reports>

stakeholder representative groups, from which the MCA have not been made aware of any issues relating to the 2010 Regulations, the MCA consider it disproportionate to undertake a consultation exercise to inform this review that will most likely yield results with little to no new information.

A thorough desk top appraisal of relevant actions by the European Commission was undertaken while conducting this PIR to assess the alignment and effectiveness of the 2010 Regulations and the 2012 Regulations with European guidelines and standards. While there have been regular reviews done by the European Commission prior to Brexit, these updates will not apply in subsequent national amendments as the UK is no longer part of the European Union. The UK's approach post Brexit will replicate a balanced approach by mirroring HSE legislations and pursuing international alignment where possible.

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

Both the 2010 Regulations and the 2012 Regulations implement EU Directives into UK law and thus fulfilled the objective of ensuring that the UK honoured the obligations placed upon Member States of the European Union ('EU') (the UK was an EU Member State at the time of the 2010 Regulations and 2012 Regulations implementation) and therefore avoid any proceedings initiated by the EU as a result of not having implemented them.

Regulation was used to fulfil the policy objectives, rather than using guidance, for two reasons. Firstly, this was necessary to implement an EU Directive. Secondly, the approach is in line with HSE's approach, and keeps the policies consistent.

There are no statistics relating specifically to injuries to and diseases of seafarers as a result of exposure to hazardous Chemical Agents, as specified in the regulations, at work. This is because there is currently no requirement for any occupational diseases to be notified to the MCA, although such a requirement will be introduced as part of the implementation by the UK of the ILO Maritime Labour Convention 2006. However, MAIB publish annual accident data¹³ which, whilst not relating specifically to the chemical agents covered in the regulations, can be used as a proxy to show the frequency of injuries and accidents for seafarers.

The injury (including injuries and fatalities) totals due to chemical burns (corrosions) for the period 2013 to 2022 for merchant vessels greater than or equal (\geq) to 100 gross tonnage ('GT') for crew is in the table below¹⁴:

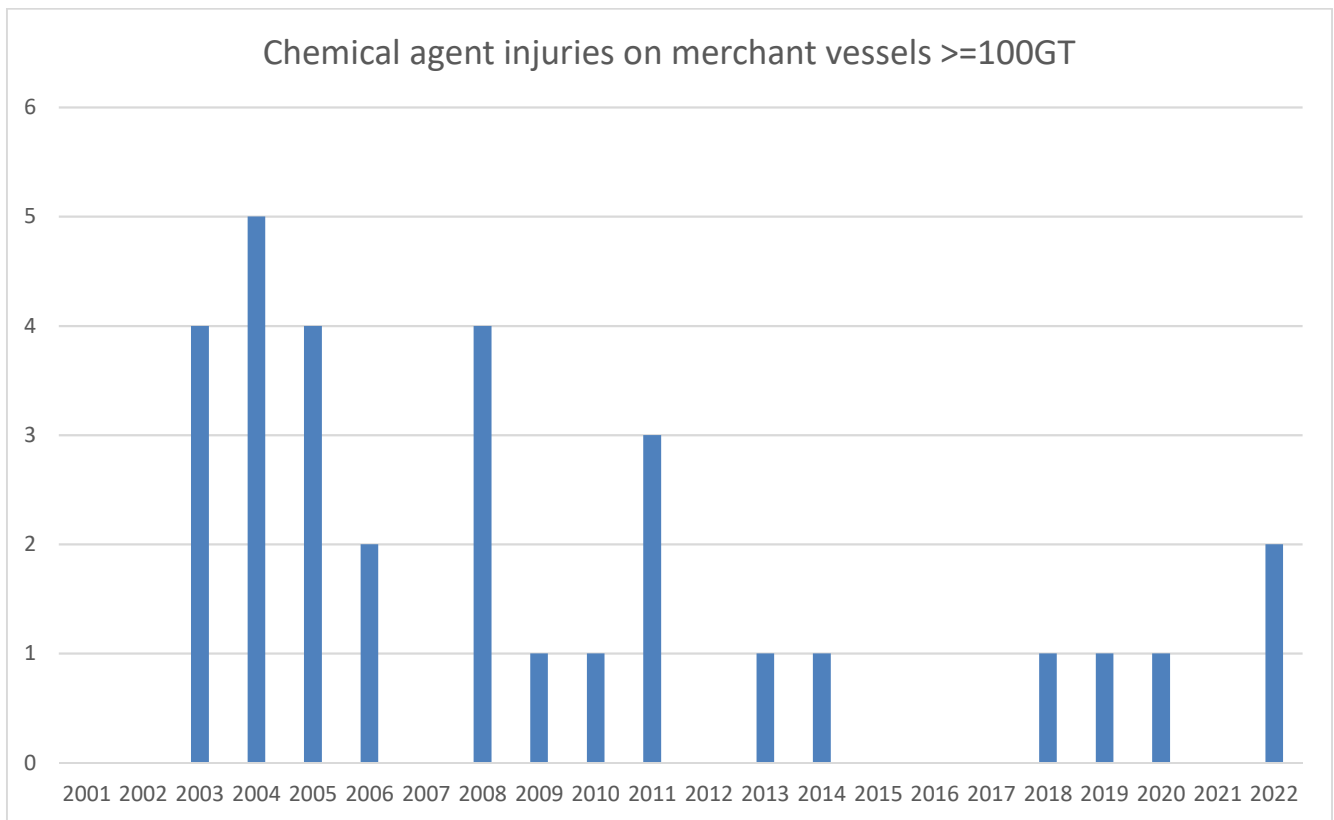
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Chemical burns (corrosions)	1	1	0	0	0	1	1	1	0	2	7

No incidences for fishing vessels were recorded during this period. Data is not available for vessels <100GT.

The graph below (showing chemical burns injuries on UK registered vessels \geq 100GT between 2001 and 2022) shows that the occurrence of injuries is due to chemical burns (corrosions) is very low and decreased after 2011, when the regulations came into force. No comparison of fishing vessels has been included as data is not available prior to 2005. Whilst other factors are likely to have influenced the overall trends in safety, the number of incidences did reduce after the introduction of the regulations.

¹³ <https://www.gov.uk/government/collections/maib-annual-reports>

¹⁴ Data has been collated from separate annual reports.



Surveyors are regularly on-board UK ships to inspect their safety management systems and compliance with the Maritime Labour Convention, which includes health and safety provisions. The results of inspections are entered onto the MCA's Pelorus database, but this data is currently unavailable due to technical difficulties between systems. The MCA hope to address this issue for the future. However, should significant compliance issues be noted by MCA surveyors those issues would be raised and flagged for further scrutiny. To date the MCA has not recorded issues with compliance with regards to the 2010 Regulations.

This PIR has aimed to assess all impacts since the introduction of these regulations. No business impacts had been estimated in the original impact assessment and no evidence to the contrary has since arisen.

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

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

Signed: **Katy Ware**

Date: 17/11/2023

Signed: **Davies of Gower**

Date: 05/03/2024

4. What were the original assumptions?

2010 Impact Assessment

The 2010 IA considered three policy options:

- Option 0: do nothing.
- Option 1: extend the land-based Health and Safety Regulations to the maritime and fishing sectors.
- Option 2: introduce new Merchant Shipping Regulations to implement Directive 98/24/EC.

'Do nothing' was not considered an option as the UK was at the time an EU Member State and had an obligation to implement EU Directives to avoid breaching commitments and potential infraction proceedings.

Option 1 was not considered viable as land regulations would fail to address the different issues raised by exposure on land when compared to exposure on ships and the land regulations cease to apply outside of the UK.

Option 2 was considered the most appropriate and the 2010 IA explored the cost/benefits of implementation against the baseline of the 'Do Nothing' option.

In order to inform the 2010 IA, a targeted stakeholder exercise was undertaken at the time. Notification of the survey was sent to some 380 individuals, companies and organisations in the maritime, yachting, coded vessel and fishing sectors inviting their comments on the proposed regulations. Only 10 responses were received of which only 5 related to the draft regulations. The remainder either offered comments on matters other than the draft regulations (e.g., the level of guidance contained in the draft Marine Guidance Note); offered no comments; or supported what was proposed.

In addition to the stakeholder survey, the same 380 individuals, companies and organisations were approached regarding the likely costs of implementing Directive 98/24/EC. Their views were that costs were likely to be minimal and benefits were also likely to be minimal. As mentioned above, the 2010 Regulations build upon the 1997 Regulations that already require general risk assessments to be undertaken, and the view was that these risk assessments essentially already take account of risks such as those specified in the 2010 Regulations and that the risk of exposure on board most vessels was very low. Thus, the 2010 Regulations did not introduce a new or significant burden.

The 2010 IA concluded that the MCA did not have access to any evidence to enable it to monetise the costs of the 2010 Regulations. In addition, no such evidence was provided by consultees. Whilst some operators may have incurred costs for the training of seafarers and the supply of specialised safety equipment, such costs may not have arisen on all vessels as safeguards may already be in place or exposure to chemical agents may not occur. This view was supported by the consultation responses, none of which indicated that any costs would arise.

With regards to benefits, the 2010 IA concluded that the MCA did not have access to any evidence to enable it to monetise the benefits of the 2010 Regulations. Initial informal consultation suggested that the potential benefits of the 2010 Regulations were likely to be minimal at best. In addition, none of the consultation responses considered that benefits would arise. This could be because chemical agents are either not present on UK ships, or because risks have already been considered and appropriate protective/remedial measures put in place.

Additionally, the 2010 IA assumed that work related to exposure to chemical agents is unlikely to occur on most ships and fishing vessels, except for vessels carrying dangerous cargoes and that safety measures already in place under international dangerous cargo legislation reduce the risk of exposure to an insignificant level. In this context it should be noted that these regulations provide for international dangerous cargo legislation to take priority where it contains more stringent provisions.

2012 Impact Assessment¹⁵

The 2012 IA considered two policy options:

- Option 0: do nothing;
- Option 1: introduce amending regulations to amend the 2010 Regulations to do the minimum possible to give effect to Directive 2009/161/EU in UK law and correct the error identified in the 2010 Regulations in respect of implementation of Directive 200/39/EC.

'Do nothing' was not considered an option as the UK was at the time an EU Member State and had an obligation to implement EU Directives to avoid breaching commitments and potential infraction proceedings.

Option 1 was considered the preferred option and the 2012 IA explored the cost/benefits of implementation against the baseline of the 'Do Nothing' option.

The 2012 Regulations, as stated above, essentially update the list and exposure limits of chemicals defined as chemical agents with an associated risk and thus introducing them was assumed to have minimal impact on businesses and limited impact on seafarers, who may have experienced a benefit from improved safety, as outlined in the original impact assessment. This was not monetised as the MCA considered exposure to be unlikely.

No evidence has been forthcoming that indicated that these assumptions have not been reasonable.

5. Were there any unintended consequences?

The 2010 Regulations built upon the 1997 Regulations and are believed to be in widespread compliance. At no point during the drafting of the 2010 IA and during its stakeholder survey exercise, was evidence forthcoming that there had been any unintended consequences associated with the implementation of the 2010 Regulations. Furthermore, in the time since the 2010 Regulations were implemented, stakeholders to whom the regulations apply, including small and micro businesses, have not made the MCA aware of any new evidence that any unintended consequences have been identified.

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

As the policy is estimated to have had no impacts, no burden is expected to be on businesses. No small or micro business exemption was considered as part of the Small Firms Impact Test, as EU Health and Safety Directives are required to be applied to all workers irrespective of the size of the company employing them. It is, however, policy when implementing an EU Directive to go no further than is necessary to implement the provisions of that Directive i.e., there is no "gold-plating" of the Directive requirements.

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?

It is UK policy that when implementing an EU Directive into UK law to go no further than is necessary to implement the provisions of that Directive i.e., there is no "gold-plating" of the Directive requirements. From

¹⁵ https://www.legislation.gov.uk/ukia/2012/2027/pdfs/ukia_20122027_en.pdf

the interaction the MCA have with EU counterparts the MCA have identified many consistencies between the UK's implementation and other national regulatory regimes. The international nature of the shipping industry benefits from a harmonious regulatory framework that simplifies compliance and avoids the burdensome issue of internationally trading vessels being required to comply with varying countries differing regulations. This is further evidenced by one of the MCA's key stakeholders, The UK Chamber of Shipping, which has members operating ships under various EU flags. The MCA engage with the UK Chamber of Shipping on a regular basis including at several meetings per year, such as the NMOHSC, and to date no concerns have been raised about the differences between the UK regime and that of the UK's European neighbours.

Furthermore, the UK's method of implementation, which closely followed the approach taken by the HSE who implemented parallel legislation for workplaces ashore, aimed to minimise the burdens on businesses through practical assessment of exposure levels, proportionate risk management and exemptions. The MCA have no evidence that this has not been successful.

The Norwegian Maritime Authority

The Norwegian Maritime Authority's regulations can be found [here](#).

The regulations cover a wider remit than the UKs, however the section that does pertain to chemical agents (Chapter 11) is broadly equivalent, with an emphasis on risk assessment. Differences are minimal and unlikely to have an impact on the outcome, for example in the UK regulations the employer must ensure that there are arrangements whereby at-risk workers are kept under appropriate health surveillance, whereas the Norwegian regulations require that a register of persons working on board exposed to chemicals and biological agents be maintained.

The Danish Maritime Authority

The Danish Maritime Authority's guidance can be found [here](#). And the regulation is [here](#). This also reflects the UK regulations in that it is primarily risk assessment based. There are no notable differences in implementation.

The Irish Maritime Authority

The Irish Maritime Authority's regulations can be found [here](#). The Irish regulations list an occupational exposure limit for inorganic lead and its compounds, and the UK regulations do not, and instead MSN 1888 refers to the HSE guidance on calculating the exposure limit. Despite the difference in methodology the impact is the same. Other aspects relating to lead such as the regulations on biological monitoring and the exposure levels for health surveillance to be required, are the same.

Although there has not been any significant change to Directive 98/24/EC, the UK's approach post Brexit will replicate a balanced approach by mirroring HSE legislation while looking out for international comparisons. This will allow the UK to review, adapt and develop tailored regulations where necessary to address specific issues within a national context while considering associated risks and benefits, market dynamics as well as the needs of the industry.

Summary

➤ Post Implementation Review:

The obligations for this post implementation review were contained within the 2012 Regulations which inserted a review clause into the 2010 Regulations.

➤ Extent

The 2010 Regulations, have effect on owners/operators of UK merchant ships, yachts, fishing vessels, hovercraft, pilot vessels, inland waterway vessels and other vessels with employed workers on them as well as to the employers of such workers and apply to seafarers of any nationality when employed on UK registered vessels. The 2010 Regulations do not apply to seafarers, including UK seafarers employed, on non-UK vessels other than to a limited extent when such vessels are in UK waters.

➤ Recommendation:

Keep - the MCA recommend that the 2010 Regulations are fit for purpose and should be kept.

➤ Cost Summary:

The assumptions underpinning the implementation of the 2010 Regulations that they would realise a negligible cost/benefit appears to be reliable.

➤ Proportionality:

Low – the MCA have adopted a proportionately light touch approach to this review, in line with the proportionality criteria in the BRFM and Magenta Book . The MCA host and take part in several stakeholder engagement meetings per year, such as the National Maritime Occupational Health and Safety Committee Meeting, which affords an avenue for receiving any feedback. In the years that the 2010 Regulations have been in place the MCA have not identified or been made aware of any issues with them. At the time of implementation, the 2010 Regulations and the 2012 Regulations were not contentious and did not infringe on policy owned by other Departments.

➤ Lessons Learned:

There do not appear to be any significant lessons for future impact assessments arising from this PIR. The evidence gathered for this PIR has been appropriate as no new evidence has come to light to indicate a significant change is required to the 2010 Regulations.

➤ Next Steps:

The MCA intend to monitor all avenues of feedback to ensure that the 2010 Regulations remain appropriate and no issues or consequences are identified. The next review of the 2010 Regulations is due to be published in August 2028.

Background

Workers exposed to hazardous chemical agents at work are potentially at risk of suffering adverse effects to their health because of lack of awareness of the risks by both employer and workers alike, or as a result of poor health and safety practices which could lead to hazardous levels of exposure. To address these risks, the European Commission, with the agreement of Member States, introduced a series of Directives intended to protect workers from hazardous levels of exposure to chemical agents that have been identified as being hazardous to health by introducing IOELVs based on advice from the European Commission's Scientific Committee on Occupational Exposure Limits, a body of experts drawn from throughout the EU, including the UK. Identification of such hazardous chemical agents is an on-going process and Member States are accordingly required to implement such Directives by establishing national limits in law, taking into account the IOELVs set out in the Directive.

The first of these, EC Directive 98/24/EC imposed both occupational and biological exposure limit values and health surveillance measures in respect of lead and its ionic compounds; and prohibition of the production, manufacture or use at work of four other chemical agents. Directive 2000/39/EC introduced a first list of IOELVs for a range of chemical agents. Subsequently Directive 2006/15/EC introduced a second list of IOELVs and also made changes to existing IOELVs.

The 2010 Regulations were made on the 11 February 2010, and were intended to implement these three EC Directives in UK maritime law.

The merchant shipping legislation supplements shore-based legislation, implemented by the HSE, which applies to workers in Great Britain and on the UK Continental Shelf. The merchant shipping legislation provides the same protection for workers on UK flagged ships worldwide, and on non-UK ships when they are in UK waters.

As indicated earlier the identification of hazardous chemical agents, and the establishing of IOELVs for them is an on-going process and a further Directive (Directive 2009/161/EU) has been introduced, which again supplements Directive 98/24/EC by establishing IOELVs for an additional 18 substances, each having been subject to a six-month consultation period at EU level, together with amended limit values for Phenol which replace those established by Directive 2000/39/EC.