Department for Transport

Maritime Safety Action Plan
Maritime safety matters

Moving Britain Ahead

Maritime and Coastguard Agency

Department for Transport

TRINITY HOUSE

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

Northern Lighthouse Board

Commissioners of IRISH LIGHTS
Navigation and Maritime Services

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Ministerial Foreword

As Minister for Maritime, I have come to understand the harsh realities of the marine environment where there is ever-present risk and potential for loss of life. However, I am also proud of the UK maritime sector's safety record and continue to be impressed by the professionalism and dedication of those who have worked so hard to ensure that we continue to set the standard.

Much of that work occurs behind the scenes and is rarely noticed until there is an accident, despite it being fundamental to the wellbeing of so many people.

When I launched the inaugural Maritime Safety Week in July 2018 it was, in part, to change that position by highlighting the quality and range of safety activity across the UK. The expertise, commitment and passion of those who took part, and with whom I spoke during the week, was truly staggering.

This, our first ever Maritime Safety Action Plan, builds on what I learned during Maritime Safety Week and is part of the continued implementation of the Safety recommendations from the Department's Maritime 2050 strategy. It sets out the Department's approach to maritime safety and what I see as the priority areas for action to be taken forward.

Some relate to on-going activities such as the survey of our international domestic passenger and fishing vessel fleet and investigations made by the Marine Accident Investigation Branch. This ongoing work is crucial for the delivery of our core safety function and those who work in these areas should be given the credit they deserve. Without them, UK's maritime industry would quickly cease to function.

We have set out here an ambitious and forward-looking safety agenda which requires proactive and ongoing preparation for the future. Our Maritime 2050 strategy will allow us to be at the forefront of doing just that.

I am delighted to be launching this Maritime Safety Action Plan and announcing new initiatives, such as an awareness campaign aimed towards recreational boaters, at such an important time. Demonstrating the comprehensive range of work already being undertaken and mapping out the passage plan for the future, this document shows how we will deliver continuous and meaningful safety improvements.

None of this can be achieved in isolation. Close partnership working between government and the sector will be vital if we are to meet these challenges successfully and reap the benefits of a safer industry.

I look forward to seeing our progress during Maritime Safety Week 2019 and beyond.

Nusrat Ghani MP

1. Executive Summary

Why a Maritime Safety Action Plan

1.1 Maritime safety is fundamental to the success of the United Kingdom (UK). As an island nation, we rely on the maritime industry to deliver up to 95 per cent of our imports and exports and much of the food, fuel and materials we need not only to prosper and drive economic growth, but for our basic daily needs.

1.2 Britain has a proud maritime history and has always offered the world outstanding services, expertise and legislation in accordance with the very highest international standards. In a sector where the number of accidents and incidents still lags significantly behind other safety-critical industries, the UK continues to be held in high regard by the international maritime industry as a safe place in which to operate.

1.3 However, we must never become complacent and it is still too often the case that safety is rarely prioritised with its importance only becoming clear following a serious accident or incident. This must change if we are to realise the revolution in performance that everyone desires.

1.4 To deliver that revolution will require everyone who works within the sector, from large shipping conglomerates, owners and operators of our domestic fleets, those in the fishing industry, recreational mariners and government to further enhance the robust working relationships already in place.

1.5 This inaugural Maritime Safety Action Plan (the Plan) has been developed to explain the significant work that the Department for Transport (DfT), its agencies and partners are already doing, both domestically and in international fora, to drive that improvement. It identifies the significant challenges that remain and articulates the government's key priorities and ambitions for maritime safety going forward. For the first time, it also defines the specific actions we are committed to taking to realise that vision.

1.6 The Plan complements and underpins Maritime 2050[1], which sets out the government's long-term vision for the maritime sector. Maritime 2050 includes a number of short, medium and long-term safety recommendations and this Plan plays a significant part in setting out a route map for their future delivery and implementation.

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[1] https://www.gov.uk/government/publications/maritime-2050-navigating-the-future

Our Roles

1.7 The DfT's role in maritime safety is fulfilled by the Maritime and Coastguard Agency (MCA), Marine Accident Investigation Branch (MAIB), the three General Lighthouse Authorities (GLAs) and a small team within the Department. All have essential functions in developing, co-ordinating, implementing and enforcing maritime safety.

Working with partners

1.8 DfT works closely with a wide range of partners in the sector, including volunteers, when developing and implementing safety policy to ensure that it is proportionate and meets the needs of industry without being unnecessarily burdensome. In line with guidance from the Government's Better Regulation Executive, policies are developed in two stages: identifying the rationale for government intervention and appraisal of the options to deliver the intended outcome. A wide range of policy tools are considered and delivery can be achieved through both administrative and regulatory measures and can include industry-led approaches.

1.9 An example is the Port Marine Safety Code (PMSC) and related Guide to Good Practice. This voluntary guidance was, and continues to be, developed in partnership with the industry. It is used by all marine facilities in the UK but its quality and effectiveness has also been recognised internationally with a number of countries having adopted it for their own purposes.

1.10 This Plan also sets out new initiatives being taken forward between the sector and government, such as the development of a joint awareness campaign about the potential dangers of drinking while using the water recreationally.

1.11 Raising the profile of why and how the DfT family works with its partners is critically important in ensuring that changes in safety policy, messages and campaigns reach those who need to take action. This can be difficult and is one of the reasons why Ministers have introduced Maritime Safety Week to ensure that the excellent work which is already being done is highlighted. Maritime Safety Week also creates a focal point for the promotion of the importance of safety and facilitates wider discussion and sharing of best practice.

1.12 Similarly, Maritime 2050 sets out the strong linkages that already exist between government and the maritime sector across its seven key themes. The importance of safety to the wide spectrum of maritime users is woven throughout the document but it also includes specific material on emerging challenges and the actions that are, and will, be taken to meet them. Implementation of the Maritime 2050 safety recommendations will further enhance partnership working between the DfT family and industry.

1.13 There are many examples of initiatives where government and the sector work in close partnership to deliver a common objective. This powerful approach brings all those who have an interest to the table to deliver an effective solution. Some of the key areas where this method has been applied, with significant dividends for all involved, are explained below.

Strategic approach to drowning prevention

1.14 The National Drowning Prevention Strategy[2] clearly demonstrates the collaborative approach to policy-making and implementation that permeates all of DfT's safety work.

1.15 As part of the National Water Safety Forum (NWSF), the MCA has contributed to the development of a National Drowning Prevention Strategy which is addressing the risks that all water users face when interacting with the water. It has set out clear actions designed to reduce accidental drowning fatalities in the UK by 50 per cent by 2026 and reduce risk amongst the highest risk populations, groups and communities.

1.16 A bi-annual review[3] has shown that significant strides have been made in taking forward the ambitious programme of work put forward in the original strategy. Major successes have been achieved, such as building on the valuable Water Accident and Incident Database (WAID) reporting platform to enable wider use of data in understanding causes and types of water incidents as well as informing work on how to prevent them. The NWSF also lead the response to a Transport Select Committee inquiry into drowning prevention, playing a valuable role in ensuring legislators are informed about the issues and what is already being done in this area. However, there remains much more to do and the bi-annual review has set out where the new priority actions lie to maintain the momentum of the first two years. These include publishing a framework for water safety communities, and developing funding proposals and a review of the business case for a new WAID.

Fishing Vessel Safety

1.17 Fishing remains the most dangerous industry in the UK. Since 2012, there have been a total of 45 deaths while fishing in the UK, and 103 since 2006. Commercial fishing is 5 times more hazardous than the UK's next most hazardous industry, with an average of 54 fatalities per 100,000 full or part-time workers between 2012 and 2018.

1.18 As part of the **Fishing Industry Safety Group (FISG)**, the MCA has worked in collaboration with the FISG membership to develop a strategy to tackle fishing vessel safety. Looking forward, the FISG will actively promote fishing vessel safety and the welfare of those working onboard. The underlying theme for promoting the FISG Strategy will be based on "tangible demonstration of consequence".

1.19 The FISG strategy takes a comprehensive view of fishing vessel safety and has identified specific actions relating to **man overboard prevention, use of personal locator beacons and personal flotation devices, stability and hull survey requirements, codes of practice, safety management systems and crew qualifications.**

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[2] https://www.nationalwatersafety.org.uk/strategy/

[3] https://www.nationalwatersafety.org.uk/media/1004/uk-drowning-prevention-strategy-year-two-review.pdf

1.20 Crucially, the strategy also emphasises the value of the UK's implementation of the ILO Work in Fishing Convention (ILO 188) which, for the first time, sets a benchmark for living and working conditions for fishermen and will apply health and safety legislation to all fishermen regardless of employment status. As part of the implementation process, all fishermen will be required, subject to a risk assessment, to wear Personal Flotation Devices (PFDs) on open decks in order to reduce the number of drownings as a result of man overboard situations.

1.21 The FISG strategy has also set a clear and ambitious target of eliminating all preventable deaths in the industry by 2027.

Seafarer Safety and Health

1.22 The success of any industry is inextricably linked to the people employed in it. Making sure seafarers are safe and healthy at work is, therefore, a fundamental component of supporting positive outcomes for seafarers and the sector.

1.23 That is why the MCA is actively taking forward work to further improve seafarer wellbeing; understand and address mental health issues; and tackle persistent behavioural and cultural tendencies that can sometimes lead to unnecessary risks.

1.24 Creating a health and safety environment which is as good as that in shore-based safety-critical industries is both a guiding principle and an ambitious target for the MCA's policies. When combined with participation in innovative research into human element principles and continued leadership in international fora, we will continue to make professional users of UK waters safer and healthier than ever before.
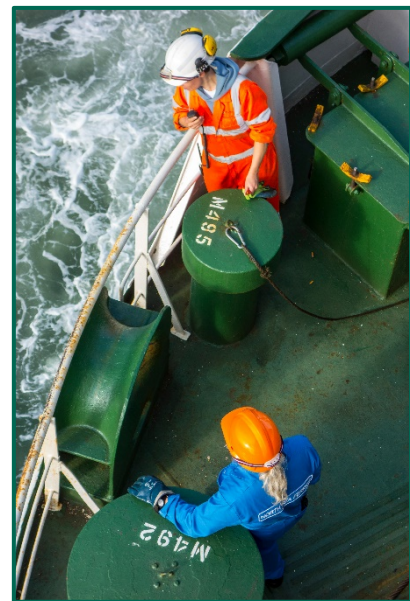
Rescue Boat Grant Fund

1.25 The UK has a remarkable, and unique, history of independent charities who work closely with HM Coastguard to deliver a significant, and highly effective, search and rescue capacity on the ground. Bringing together the best combination of centralised co-ordination, rapid deployment and detailed local knowledge, these charities are staffed and run by dedicated volunteers who risk their lives on a daily basis to save others.

1.26 These charities often rely on public donations as the assets and equipment they require to maintain their operations and ensure their volunteers have the best possible kit to deal with dangerous environments are extremely expensive. Raising and maintaining sufficient capital, particularly for those organisations based in remoter locations, can be a constant battle which makes saving for larger capital purchases that are vital to their continued operation, such as rescue boats, particularly burdensome.

1.27 To ensure that this critical resource is not lost, the DfT introduced the Rescue Boat Grant Fund (the Fund) in 2014. The Fund provides £1 million a year in challenge grants which independent (non-RNLI) inshore and inland charities operating a rescue boat can apply for to assist them with major purchases. New assets must be available nationally to further enhance resilience in times of emergency such as flooding and other disasters.

1.28 **To date the Fund has awarded over £4.6 million to over 100 different charities and facilitated the purchase of over 80 new rescue boats and thousands of other pieces of vital equipment.**

1.29 **Ministers have announced a further £1 million for the Fund over 2019-20.**

Implementing and innovating safety

1.30 A safer maritime network will have an enormously positive ripple effect on the rest of the maritime sector, its users and local communities. It will boost economic growth and opportunity, improve journeys and promote a culture of efficiency that delivers both immediate and associated benefits to a diverse range of people and water users. These objectives can only be achieved through effective implementation alongside an on-going consideration of the innovation needed to meet the needs of a rapidly evolving sector.

1.31 The DfT's key role is in ensuring that the necessary policy and legislative framework is in place to not only save lives but also to support UK maritime growth and maintain international competitiveness. As well as its domestic policy function, it is actively involved in fora for making maritime legislation at the international level, including the International Maritime Organization (IMO) and International Labour Organization (ILO). The UK's activity at the IMO strives to make the most of the UK's opportunity to inform and influence international legislation, giving the UK even greater scope to adapt how we regulate and work with industry to deliver improved safety for workers, the public and the environment.

1.32 In a changing world it will be increasingly important for the UK to continue to act as a leader in international fora to allow us to take advantage of opportunities to influence global rules.

1.33 The MCA leads on engagement within the international fora. To ensure that it continues to deliver the high-quality policy, guidance and implementation work it is recognised for, the MCA will undertake an internal review of policy-making and continue to embrace findings and recommendations resulting from MAIB investigations.

1.34 The UK is already a hot bed of safety innovation with a large number of small firms producing world-leading and state of the art products. The General Lighthouse Authorities' Research and Development team (GRAD)[4] take forward ground-breaking work with physical and radio marine aids to navigation, support systems and their integration to support the GLA's mission to deliver a reliable, efficient and cost-effective aids to navigation service for the benefit and safety of all mariners.

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[4] See https://www.gla-rad.org for more information

1.35 Research and innovation will be even more critical in the future to ensure that the UK remains at the forefront of developments in maritime safety.

Marine Navigational Safety

1.36 Rivers, coastal waters and seas are inherently dangerous places in which to operate a vessel. They are a changing and dynamic environment which demand a high level of skill, attentiveness and adaptability of their users.

1.37 While that will always be the case, the aids to navigation and guidance in place in the UK ensure that our waters are some of the safest in the world and the UK's long-term vision is, ultimately, to eliminate preventable accidents. The MCA has proven its effectiveness in minimising navigational risk and enabling safe and effective decision-making through providing evidence-based navigational guidance, standards and services to a technologically evolving maritime industry.

1.38 Examples include the MCA's continued delivery of work such as its Civil Hydrography Programme (CHP) in association with the UK Hydrographic Office (UKHO), Maritime Safety Information (MSI), Maritime Surveillance and Navigational and Radiocommunications Policy.

1.39 Collaboration with industry allows for more bespoke navigational safety policy development and an enhanced ability to share lessons learned and best practice. That is why DfT seeks to create navigational safety policy in conjunction with industry wherever possible. The Port Marine Safety Code sets a high standard for what can be achieved through effective partnership between industry and government and has been effective in helping to maintain and enhance the already high safety standards at ports, harbours and other marine facilities across the UK.

1.40 As well as the spectrum of ongoing work that is crucial for safe navigation of mariners every day, the MCA aims to enhance and improve its navigation safety business delivery through actions such as the technological improvements to the Civil Hydrography Programme and identifying new products around the outputs of the UK Marine Weather Service.

1.41 The MCA's navigational safety work also looks to the future. Technology is rapidly changing the landscape of how ships and people navigate on the water. The UK has a clear ambition to be an enabler for emerging technologies. DfT has acted on this ambition by developing the Maritime 2050 Strategy along seven different themes and, using a route map approach, setting out the tangible actions which need to be taken to deliver that vision.

General Lighthouse Authorities

1.42 As DfT Non-Departmental Bodies, the three General Lighthouse Authorities (GLAs) underpin the UK's maritime safety infrastructure. Trinity House, the Northern Lighthouse Board, and Irish Lights not only maintain and operate aids to navigation, such as lighthouses and buoys, around the UK's coast, but they also provide a rapid response to new dangers to navigation safety such as wrecks. Their fleet of vessels are equipped to the highest technical standards and are manned by experienced officers and crew.

1.43 With a shared mission to deliver a reliable, efficient and cost-effective aids to navigation service for the benefit and safety of all mariners, the GLAs have statutory duties under the Merchant Shipping Act 1995 and fulfil the UK and Irish Government's responsibilities under the IMO Safety of Life at Sea (SOLAS) Convention.

1.44 The GLAs have published an aspirational and forward-looking strategy that has highlighted the key challenges ahead, including overreliance on navigational technology, increasing vessel size and traffic density as well as the emergence of autonomous vessels. The strategy, "2030 - Navigating the Future"[5] will allow the GLAs to prepare for, and adapt to, these changes bringing them into even closer collaboration while working towards their shared mission.

The complete safety picture

1.45 The Plan not only provides important context around the range of maritime safety issues that the DfT family is involved in but also outlines the targeted action we, and our sector partners, are taking across each area. This document sets out an ambitious path forward to make the UK's water's even safer and to ensure the UK remains firmly established in its role as a world-leader in maritime safety. The Plan also aligns with the strategic, forward-looking nature of Maritime 2050.

1.46 While the inherently dangerous nature of the marine environment means that significant risk will always exist, the quality of the UK's regulatory framework and targeted intervention provide reasons for optimism. The work already underway is a tangible demonstration of how the UK is already taking steps towards further improving its maritime safety record in the coming years. Taken together with the actions outlined below, they will form a comprehensive approach to ensure that all users of our seas and coasts are as safe as they can be.

1.47 This Plan will be a living document. The specific actions, as well as the broader ambitions they support, will be revisited on a regular basis to ensure progress against them can be monitored. We will ensure that, where necessary, delivery is appropriately resourced and funded.

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[5] https://www.trinityhouse.co.uk/about-us/media-centre/publications

The government's priorities for maritime safety

1

Deliver a successful Maritime Safety Week 2019 which reaches a wide audience with a variety of targeted safety messages and continue to implement the Safety recommendations of Maritime 2050.

2

Internally review our policy-making and evidence base, ensuring we have the skills and knowledge to better deliver the necessary changes to improve safety standards and promote industry growth while embracing new and emerging technology.

3

Meet the ambitious target of eliminating preventable deaths in the fishing industry by 2027 through the continued implementation of the Fishing Industry Safety Group (FISG) strategy developed collaboratively between government and industry.

4

Achieve a 50% reduction in UK drowning fatalities by 2026 through the continued implementation of the National Drowning Prevention Strategy.

5

Develop guidance on seafarer wellbeing, to be published in 2019, by working in strategic partnership with industry, alongside embedding human element principles in MCA practice.

2. Our Role in Maritime Safety

2.1   The success of the UK Government's safety work would not be possible without collaboration and joint-working between the Department for Transport (DfT), the Maritime and Coastguard Agency (MCA) and the independent Marine Accident Investigation Branch (MAIB). It is also underpinned by the efforts of the General Lighthouse Authorities (GLAs). Each organisation plays a critical role in building and maintaining maritime safety standards, and the activities of each are complementary resulting in a comprehensive safety environment in the UK.

Ambition

- Offer an internationally leading safety service spanning policy, regulation enforcement and effective delivery across the DfT, MCA, MAIB and GLAs

Department for Transport

2.2   DfT has overall responsibility for maritime safety policy, including leading some of the government's strategic international engagement and representation at relevant international forums such as the International Maritime Organisation (IMO) and the International Labour Organization (ILO). The work of its small team includes maintenance, guidance and advice on the legislative framework surrounding maritime safety, policy development, response to accidents and incidents, administration of the Rescue Boat Grant Fund and supporting the Maritime Minister as a sector champion.

It also acts as sponsor for the work of the MCA and the General Lighthouse Authorities (GLAs). This means the Directorate works in collaboration with the MCA and GLAs to support them as they drive forward implementation and help them in delivering a high quality service to their users.
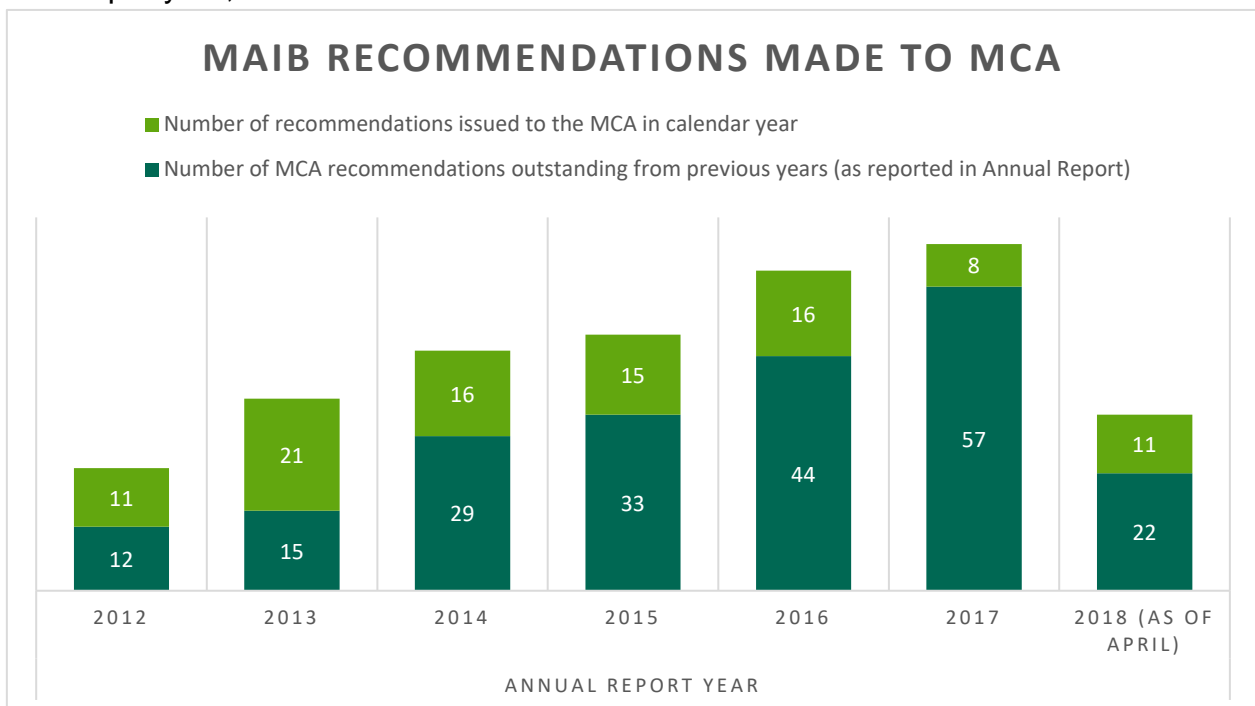
Maritime and Coastguard Agency

2.3   The MCA is at the forefront of the government's safety work, developing and implementing safety policies as they apply to commercial shipping, domestic passenger ships, fishing vessels and those working on these vessels. The MCA sets high and proportionate safety standards in accordance with the instruments developed by the IMO and ILO and monitors them through its audit, survey and inspection roles. The MCA also holds a huge amount of institutional knowledge which it uses to offer technical and professional guidance for both commercial and leisure operators. The MCA makes significant contributions to safety through non-regulatory activity such as engaging and working with stakeholders and partner organisations to develop non-mandatory guidance, best practice and advice.

2.4   The MCA actively supports MAIB accident investigations and provides input to MAIB accident reports. MAIB conducts 25-30 investigations per year and, in 2017 alone, the Chief Inspector issued 62 safety recommendations. The MCA has placed a renewed focus on addressing MAIB recommendations as detailed in Figure 1, which shows the number of outstanding recommendations reduced from 57 in 2017 to 22 in 2018.

2.5   Figure 1: Number of issued and outstanding recommendations made by MAIB to MCA per year, 2012-2018

MAIB RECOMMENDATIONS MADE TO MCA

■ Number of recommendations issued to the MCA in calendar year
■ Number of MCA recommendations outstanding from previous years (as reported in Annual Report)

Year	Outstanding	Issued
2012	12	11
2013	15	21
2014	29	16
2015	33	15
2016	44	16
2017	57	8
2018 (AS OF APRIL)	22	11

ANNUAL REPORT YEAR

2.6   As well as monitoring safety standards and continuing to foster a safe and predictable maritime environment in the UK, the MCA has a strong commercial focus. Primarily through its promotion and management of the UK Ship Register (UKSR), it works closely with both the biggest global shipping lines and smaller commercial operators to facilitate registration with the UK Flag. The UKSR offer is world-leading for its quality assurance, flexibility and international reputation.

2.7 Through Her Majesty's Coastguard, the MCA provides a 24-hour search and rescue service and carried out an average of 7 taskings a day in 2017/18.[6] By working closely with community-based Coastguard Rescue Officers and developing a national asset register, the MCA can call on the support of 3,500 community-based Coastguard Rescue Officers to support them in their protection for all users of the coast.

2.8 To quantify just some of MCA's recent achievements:

- The HM Coastguard function of the MCA responded to more than **24,300** incidents in 2018, directly saving lives and preventing countless more serious injuries.

- Marine Surveyors carried out **2,732** inspections and **3,467** surveys on UK ships to ensure they meet the required safety standards. The Surveyors also conducted **1,095** port state control inspections on foreign flag ships which led to **34** detentions, improving the overall safety of the UK's marine environment.

Marine Accident Investigation Branch

2.9 The Marine Accident Investigation Branch (MAIB) fulfils an important independent role in the Government's safety work and its primary purpose is to investigate, in a no blame manner, the causes of marine accidents and make recommendations to prevent reoccurrence.

2.10 MAIB was formed in response to the Herald of Free Enterprise tragedy of 1989. As with the Rail Accident Investigation Branch (RAIB) and the Air Accidents Investigation Branch (AAIB), the independence of the branch guarantees complete objectivity in the investigation of accidents. The Chief Inspector of Marine Accidents reports directly to the Secretary of State for Transport, which embeds further its independence and importance in Maritime safety investigations.

2.11 MAIB is now part of the Accident Investigation Chiefs' Council, which has been formed to coordinate the three AIBs engagement with external authorities, and to share best practice between the Branches.

2.12 After 30 years in operation, MAIB has accumulated a wealth of knowledge and expertise in understanding causation and the chain of actions which lead to incidents. At the end of each investigation, a report of its findings, conclusions and recommendations is made publicly available. However, when a need is identified for urgent action then recommendations are issued immediately in special Safety Bulletins. Anonymised safety lessons derived from other enquiries are published twice a year in Safety Digests[7], and a summary of MAIB's work, including progress towards implementing safety recommendations is published in its Annual Reports.[8]

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[6] https://www.gov.uk/government/statistics/search-and-rescue-helicopter-statistics-year-ending-march-2018
[7] https://www.gov.uk/Government/collections/maib-safety-digests
[8] https://www.gov.uk/Government/collections/maib-annual-reports

General Lighthouse Authorities

2.13 The General Lighthouse Authorities (GLAs) of the United Kingdom and Ireland are:

- Irish Lights – responsible for the whole of Ireland

- Northern Lighthouse Board – responsible for Scotland and the Isle of Man

- Trinity House – responsible for England, Wales, the Channel Isles and Gibraltar

2.14 Together they have the statutory responsibility for the provision of marine aids to navigation around the British Isles. Their joint mission is the delivery of a reliable, efficient and cost-effective aid to navigation service for the benefit and safety of all mariners.

2.15 Between them, the GLAs look after over 16,000 aids to navigation (AtoN). These include lighthouses, buoys, radar beacons, AIS and the Differential GPS service and AtoN for Local Lighthouse Authorities and for the Offshore Oil and Aquaculture industries. They also have a statutory responsibility to mark and if necessary remove wrecks and new dangers to navigation.

2.16 Through their research and development team 'GRAD', the GLAs are world leaders in researching and developing ground-breaking technology to improve the safety of navigation. They are also active members of IALA which sets international standards for aids to navigation.

Enhancing how we work together

2.17 While the DfT, MCA, MAIB and the GLAs work closely together already, there is an opportunity to further improve working practices.

2.18 In addition to more formal performance arrangements, a regular, tri-partite working group between the DfT, MCA and MAIB has been established to provide a forum in which each organisation can better articulate their ambitions for the future and provide updates on current priorities. This also facilitates better knowledge-sharing across the organisations while ensuring that any emerging safety issues are identified quickly and a comprehensive response is quickly put into action. Ultimately, the tri-partite working group means that the government can more effectively unify organisational strategic vision with operational demands and independent feedback.

2.19 The relationship with the GLAs is already extremely strong and, again, takes the form of both formal arrangements such as the corporate planning process and informal day-to-day operational discussions. The Secretary of State also appoints Non-Executive Directors to the Boards of both Trinity House and the Northern Lighthouse Board and regular meetings are scheduled to enable issues to be raised and discussed.

Action

- MCA, MAIB and DfT will create a high level working group which meets bi-annually, in line with MAIB Safety Digest publications, to discuss and identify safety priorities.

  — 1 year

- Continue to embrace the findings and recommendations from MAIB to ensure lessons are learned and acted on, achieving zero overdue MAIB recommendations by the end of the 2019/2020 reporting year.

  — 1 year

Figure 2: Relationship between Parliament, Government safety work and sector partners.

Parliament

Holds government to account

Maritime Minister

Steers policy

Department for Transport

Retains overall responsibility for safety policy

Marine Accident Investigation Branch

Investigates accidents and makes safety recommendation

Maritime and Coastguard Agency

Implements government policy

General Lighthouse Authorities

Deliver an Aids to Navigation service for all mariners

Sector partners

Independent organisations working collaboratively with government to develop policy

Strategic international engagement

Securing successful outcomes for the UK in international fora

3. Working with Partners

3.1   Developing and implementing safety policy is not a one-directional conversation. The Department seeks to work with non-Governmental parties with an interest in maritime safety wherever possible, to ensure that our safety work and legislation is practical and proportionate, always bearing the end user in mind and delivering the best possible outcome.

3.2   The DfT and MCA value sector partner collaboration hugely. From involvement in technical working groups to policy delivery, stakeholders always play a critical role in shaping and informing decisions, getting key messages out to a broad range of people and driving forward industry-changing innovation.

Ambition

- Continue working closely with the professional maritime industry, recreational water users, search and rescue volunteer organisations and other safety organisations to make the UK's maritime environment safer than before and adaptable to emerging risks.

Maritime Safety Week

3.3   The inaugural Maritime Safety Week, held in July 2018, was a tremendous success. The aim, in introducing a specific week targeted at safety issues, was to bring the industry together and provide a focus to highlight all the fantastic work that is already being done on a daily basis to ensure the safety of our seas and inland waterways.

3.4   The UK already sets the standard in ensuring the wide variety of people who use and enjoy our waters for business or pleasure can do so in safety. However, the marine environment continues to pose significant risks and there is always more to be done to explain the dangers and keep people out of harm's way.

3.5   That is why we are reprising Maritime Safety Week in July 2019, with the objectives to:

- further highlight and recognise all the excellent safety work that already goes on across the maritime sector;

- provide an opportunity to focus on some specific challenges that the sector faces, such as those considered at last year's fishing safety round table, and what is being done to tackle them;

- facilitate the sharing of knowledge, experience and best practice which the sector holds; and

- capitalise on the momentum initiated during last year's Safety Week by delivering key safety messages to the target audiences who would benefit from hearing them the most and announcing new safety initiatives.

3.6 Ultimately, our ambition through Maritime Safety Week and beyond is to support the reduction of preventable deaths in waters in the UK. Ministers will also be using maritime Safety Week to support this Plan by announcing targeted new initiatives and funding which will assist in the delivery of our key priorities and actions.

3.7 However, Maritime Safety Week is not *just* a standalone week. The initial activity serves as a focal point but the work on display is ongoing throughout the year, and the actions arising from Safety Week 2019 will feed in and support the spectrum of other areas that are covered in this Plan.

Industry spotlight

The UK's maritime industry is leading the world in developing and implementing safety systems, products and methods that are changing the way mariners and recreational users alike are able to engage with the dangerous marine environment. Maritime Safety Week 2018 was able to highlight Shell UK as just one such example. Shell UK is leading the way in making seafarers safer, not just in the UK but across the globe.

Its "Partners in Safety" programme was introduced in 2012 with the aim of reducing the number of safety incidents at sea. Working together with 500 global shipping and maritime companies, there has been a significant reduction in the number of serious actual and potential incidents by a factor of four since 2011. This example clearly demonstrates that coordinated effort in the right area can yield life-changing results and that while the seas will always be dangerous, lives can be saved.

Similarly, the HiLo (High Impact Low Frequency) initiative, developed by Shell and launched in collaboration with the UK Chamber of Shipping, Maersk and Lloyd's Register in February 2018, uses a predictive mathematical model to examine ship incident data. Highlighting patterns of events that could lead to major incidents if left unchecked, it allows companies to prevent incidents before they occur using optimisation models and predictive analytics.

In another innovative use of data, Shell's Performance Management Visualisation Tool provides automated ship performance analytics and dashboards to give real time insights to vessel operators. The system is being used to reduce safety exposure, for example by avoiding congested anchorage sites or navigating in congested shipping lanes.

Charity and Volunteer Spotlight

3.8 Not only is the UK industry taking forward revolutionary and innovative work in improving safety, but the UK maritime sector benefits enormously from having an extensive, highly-organised and highly-trained network of search and rescue charities and volunteers.

3.9 In particular, the Royal National Lifeboat Institution (RNLI) is a leading example of the amazing results that can be achieved through charitable organisations. RNLI volunteer lifeboat crews provide a 24-hour rescue service in the UK and Ireland and the seasonal lifeguards ensure beach-goers remain safe. Delivering such a professional and organised service means that RNLI crews and lifeguards have saved over 142,200 lives since 1824.

3.10 The RNLI should also be recognised for its highly effective educational and informational campaigns. For example, the Swim Safe partnership programme between the RNLI and Swim England aimed to provide access to a Swim Safe session for every child across the UK and the Republic of Ireland.[9]

3.11 Between 2014 and 2016, the programme grew by 115%, increasing from 4 sites and 3,287 participants to 14 sites and 7,059 participants. A 2016 evaluation of the programme found that before taking part in the programme, only 54% knew they should put one hand in the air if they got into danger in the water. After taking part in the programme, this number rose to 94%, proving the effectiveness of the RNLI in translating a message into practical retention of information in the end user.

3.12 The Coastguard Rescue Service (CRS) is another volunteer organisation of note, providing a national coastal network of professional Coastguard Rescue Teams who provide a 24/7 Search and Rescue capability across the UK. All CRS teams have the training and equipment to deliver Casualty care, Search, Water Safety and Rescue. Where required, teams are equipped with additional technical rescue equipment to enable them to perform Rope Rescue and Mud Rescue.

3.13 The CRS consists of around 3500 volunteers, who are trained, supported and managed by 120 full time staff within Her Majesty's Coastguard. The CRS responds to over 8,500 incidents annually.

3.14 The CRS is also capable of providing mutual aid in keeping with the Civil Contingencies Act 2004, assisting other emergency responders inland where practicable including Flood Response.

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[9] https://rnli.org/about-us/our-research/research-summaries

Personal watercraft

3.15 The UK seeks at all times to develop policy responses that bear the end user in mind and are proportionate to the scale of the problem. That is why public consultations, which seek to capture the thoughts and insights of sector partners and individuals, are a crucial part of the government's evidence base when considering how to develop and improve policy.


3.16 Following a court case in 2005 in the aftermath of an accident involving a personal water craft (PWC), an appeal judge determined that such craft were not subject to the same rules as other maritime vessels as they were not within scope of the definition of a "ship". As a result, there remains a legislative gap which means that many PWC users cannot be prosecuted for using their craft negligently, causing accidents or endangering the safety of others.

3.17 Some legislation already exists; harbours and ports have the option of introducing by-laws or directions but these are only applicable in the waters they manage.

3.18 DfT has already held two public consultations on this issue but is now looking again at a solution and will publish another consultation in 2019.

Alcohol use among recreational mariners on the water

3.19 The UK's rivers and coastal waters are used by a wide-spectrum of people with differing levels of knowledge and experience about the risks of the water. It is therefore important that a multi-layered approach is taken to address cross-cutting safety issues.

3.20 The commercial maritime industry already has existing international regulation prescribing alcohol limits, set by the International Maritime Organization and by the European Parliament. Some companies also have private limits applied to their employees which are even more stringent than those international requirements. The same is not true for recreational mariners in the UK, where there is no existing national legislation to regulate alcohol consumption while using the water.

3.21 Local authorities also have the ability to create and apply by-laws which can offer protection against excessive alcohol use by recreational mariners, and have in some cases proven effective in prosecution during legal proceedings.

3.22 The issue of alcohol limits for recreational mariners is becoming increasingly relevant to the safety of all UK water users following recent incidents. DfT is actively responding to these recent incidents and will be engaging with the sector on its experience as part of its public consultation on personal watercraft. DfT encourages a high level of response to the consultation across the maritime sector.

3.23 Any legislation put in place would be more effective if the people who will most likely be affected by it are aware of why it has been developed and what it means for them.

3.24 That is why, in 2019, the DfT will work with a group of industry partners to develop a joint awareness campaign about the potential dangers of drinking while using the water recreationally. **This campaign will be crucial in raising the profile of the issue nationally and will build on continued messaging around the importance of being safe on the water.**

Safety in Ports

3.25 Ports are a crucial part of the Maritime network and provide a gateway to international trade, driving prosperity and economic growth across the country. The Department for Transport's Port Connectivity Study estimated that ports contribute £5.4bn GVA to the UK economy and around 35,000 jobs.[10]

3.26 Safety on both the dry and wet side of the quay is critical to the smooth flow of goods and people through our ports. That is why the MCA works closely with the Health and Safety Executive (HSE) who provide guidance and support to the ports industry. Similarly, the Port Marine Safety Code (PMSC)[11] and related Guide to Good Practice[12] are important guidance documents developed and updated collaboratively and are voluntarily signed up to by ports and harbours.

3.27 The Port Marine Safety Code (PMSC) is an excellent example of practical, proportionate and useful guidance which can be produced when Government and industry work well together.

3.28 The PMSC is a voluntary code for Ports, Harbours and Marinas which acts as a catch-all standard for port marine safety requirements against which Ports self-certify their compliance. Ports are required to undertake this self-certification once every three years by writing to the MCA to validate compliance.

3.29 As part of the PMSC, The Maritime and Coastguard Agency (MCA) seeks to undertake eight 'health checks' annually, aiming to visit a range of different types of organisation across all parts of the UK. A visit may be triggered by evidence of a problem (or potential problem) at a harbour or facility, self-reported non-compliance or a request for assistance. A health check is intended to identify where things are working well but also areas where improvements could be made to strengthen compliance and is not a formal inspection or enforcement action.
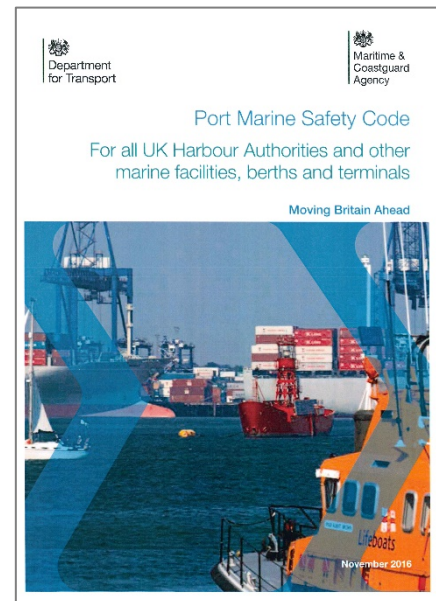
Maritime 2050

3.30 The DfT's recently published Maritime 2050 strategy[13] further demonstrates how there is a close relationship between Government and industry in every part of the Maritime sector, from the environment to technology, from trade to people, and from infrastructure to security.

3.31 Maritime 2050 also highlighted how safety is a "fundamental principle on which the UK will never compromise". Stakeholders supported this strongly during Maritime 2050's call for evidence phase, where contributors expressed concerns that the UK might be willing to compromise its safety standards to become more competitive on a global stage. However, Maritime 2050 reaffirmed the UK's continuing commitment to the highest possible safety standards.

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[10] https://www.gov.uk/Government/publications/transport-connectivity-to-ports-review-of-the-current-status-and-future-infrastructure-recommendations

[11] https://www.gov.uk/Government/publications/port-marine-safety-code

[12] https://www.gov.uk/Government/publications/a-guide-to-good-practice-on-port-marine-operations

[13] https://www.gov.uk/government/publications/maritime-2050-navigating-the-future

3.32 This Action Plan is an important part of the delivery of the Safety recommendations arising from Maritime 2050, particularly in the short term, which include reaffirming the UK's commitment to developing international safety frameworks through the ILO and continuing to support the GLAs in safeguarding shipping and seafarers. Maritime 2050 also recommended producing this document as well as Maritime Safety Week in 2019 and beyond, which the Department has delivered, clearly demonstrating action in taking forward a set of strategic and impactful pieces of work.

Action

- Deliver a profile-raising Maritime Safety Week 2019 that supports improvement in safety standards for a range of water users across the UK
  - 1 year

- Implement the short-term safety recommendations of government's Maritime 2050 strategy
  - 1 to 5 years

- Deliver continuous improvement to the Port Marine Safety Code and Guide to Good Practice, with MCA conducting a minimum of 8 port health checks per year
  - Ongoing

- DfT to work with industry partners to develop a joint awareness and educational campaign about the potential dangers of drinking while on the water
  - 1 year

- Issue a public consultation on the regulation of personal watercraft, including an evidence-gathering question on alcohol limits for recreational mariners
  - 1 year

4. National Drowning Prevention Strategy

4.1   There is a wealth of work being done across a huge number of areas to improve maritime safety that deserve recognition. The following chapters provide particular focus in to key areas of work that the Department, its agencies and partners are taking forward and which provide more granular detail about the scale and ambition of maritime safety work across the UK's maritime sector.

4.2   It is important to remember that there are waters all across the UK that are used for a diverse range of purposes which are often not commercial in nature. The risks posed by bodies of water are very real; on average, 400 people drown in the UK each year and a further 200 people take their own lives in our waters, despite the massive efforts of search and rescue emergency services who respond to around 35,000 water-related rescue and flood events annually.

4.3   44% of drowning fatalities happen to people who had no intention of entering the water, which serves as a reminder that it is not just recreational water users who are at risk and provides substantial evidence for the impactful educational campaigns run by RNLI and others.

4.4   The rate of death in the UK compares favourably in global terms, reflecting the UK's already high maritime safety standards and performance as well as the effectiveness of preventative measures already in place. However, drowning in the UK accounts for more accidental fatalities annually than fire deaths in the home or cycling deaths on the road, so there is clearly more that needs to be done.

4.5   For these reasons, the MCA has been working as part of the National Water Safety Forum (NWSF) to develop and implement a National Drowning Prevention Strategy[14] with the ultimate aim of reducing drowning fatalities in the UK by 50% by 2026.

Ambition

- Reduce drowning fatalities in the UK by 50% by 2026
- Reduce risk amongst the highest risk populations, groups and communities

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[14] https://www.nationalwatersafety.org.uk/strategy/

National Drowning Prevention Strategy

4.6 The National Drowning Prevention Strategy, launched on 29 February 2016, was developed by members of the National Water Safety Forum (NWSF). The NWSF brings together expertise from the following organisations:

- Amateur Swimming Associations

- Royal Life Saving Society UK

- Royal National Lifeboat Institution

- Maritime and Coastguard Agency

- Canal and River Trust

- Royal Society for the Prevention of Accidents

- British Sub-Aqua Club

- National Fire Chief Officers Council

4.7 The NWSF was established over 10 years ago and has already facilitated high quality collaborative work to reduce drowning and improve water safety. The Drowning Prevention Strategy serves as a step-change in approach by all organisations with an interest in water safety working towards a single aim and is designed to deliver an even-greater impact to its users than previous drowning prevention measures.
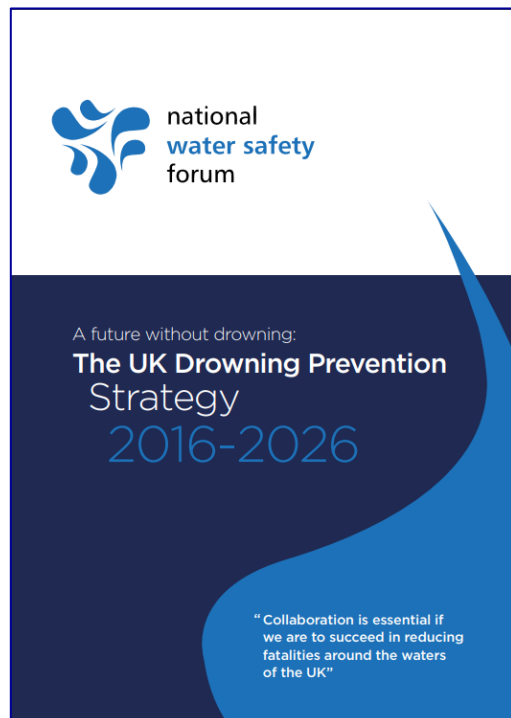
Purpose

4.8 The primary purpose of the Drowning Prevention Strategy is to prevent accidental drowning fatalities in the UK, by Government working in partnership with stakeholders interested in water safety on the coast and inland waters to ensure consistent guidance for the safe enjoyment and management of activities in, on and around water.

4.9 The strategy serves as a **'call to action'** for stakeholders to engage with the strategy. It also serves as guidance for individuals and organisations who have a responsibility for drowning prevention and water safety.

4.10 This strategy provides a coherent, well-informed framework within which the NWSF and other organisations and individuals can plan, coordinate and prioritise their drowning prevention activities to ensure maximum impact, and a substantial and sustainable reduction in drowning in the UK.

Ambition

4.11 The ambitions for the National Drowning Prevention Strategy are clear and aspirational:

- Reduce accidental drowning fatalities in the UK by 50% by 2026.

- Reduce risk amongst the highest risk populations, groups and communities.

Actions

4.12 The strategy responds to user need and provides a comprehensive approach to delivering on the strategy's objectives. The priority areas for action have been identified through analysis of the Water Accident and Incident Database (WAID):

1 Communities and environments

2 Demography

3 Recreational and everyday activities

4 Behaviours

4.13 WAID provides a national record of how many people accidentally drowned in the UK and in which activities. It defines if these were maritime or inland accidents, suicides or natural causes and where the incidents occurred. It merges stakeholder information to provide a single record of a fatal incident. WAID has been running for over 10 years and so serves as an important evidence-base for informing policy.

4.14 To improve evidence - including causal behaviours and analysis of non-fatal incidents - a new platform is required to allow the success of campaigns and prevention activities by all stakeholders to be measured. A business case has been developed to consider options for future funding of a replacement system. A technical debt analysis has identified that the data platform is at risk of not being supported in the future as the technology is outdated and the government is considering options with partner organisations to decide how that new platform can be delivered.

4.15 The first iteration of the drowning prevention strategy identified that:

- Every child should have the opportunity to learn to swim and receive water safety education at primary school and where required at Key Stage 3.

- Every community with water risks should have a community-level risk assessment and water safety plan.

- To better understand water-related self-harm, the NWSF will focus on utilising existing data and intelligence to best effect, and developing stronger relationships with mental health and allied health experts, networks and advocates.

- There needs to be an increase awareness of everyday risks in, on and around the water.

- All recreational activity organisations should have a clear strategic risk assessment and plans that address key risks.

4.16 The NWSF also identified a number of supporting activities that will aid in the delivery of the key targets:

- Improving evidence and data

- Supporting partners and networks

- Providing leadership and advocacy

- Mobilising resources and sustained investment in drowning prevention

- Measuring success

- Taking an approach to water safety activities that is focused on reducing the risk of drowning while continuing to promote the benefits of enjoying water-related activities

4.17 The MCA continues to work in collaboration with NWSF partners to provide consistent and targeted safety messages and interventions. The MCA's continued involvement ranges from financial support, by providing £45,000 funding per annum until 2020, to working as a key member of the Co-ordination Group, chairing the Coastal Group and continuing to provide HM Coastguard data for the WAID database.

4.18 The success of the national drowning prevention strategy will be measured using national fatality data, which will give a clear indication about how well the strategy has performed against its target of reducing accidental drowning fatalities in the UK by 50% by 2026.

Progress update and looking forward: Biennial Review

4.19 March 2018 marked two years since the launch of the Drowning Prevention Strategy. A review was undertaken to measure progress against intended targets, and to evaluate which actions are needed for 2017/18 to maintain momentum and build on existing successes.

4.20 Some key achievements under the Drowning Prevention Strategy to-date include:

- Updated Swim England advice for swim schools and further expanded the Swim Safe programme

- Creation of a Coastal group and broader inland waters group to help drive community target theme

- Completed scoping phase to better understand water-related self-harm

- Coordinated approach to campaigns and continues to provide key messaging on everyday risks in, on and around water

- Built WAID reporting platform to enable wider use of data (in beta), and agreed version 2 WAID taxonomy, allowing for better causal factors analysis and record quality

- Developed a business plan for improved WAID system

- Commitment to assist with the strategy from over 80 national and regional organisations

- Acted as a leader in front of legislators by providing a coordinated and detailed response to the Transport Select Committee enquiry into drowning prevention and agreed to keep the committee informed of future progress[15]

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[15] https://www.parliament.uk/business/committees/committees-a-z/commons-select/transport-committee/inquiries/parliament-2015/national-drowning-prevention-strategy-16-17/publications/

4.21 The above achievements are just a few of the wide-ranging accomplishments of the National Drowning Prevention Strategy in only its first two years.

4.22 The review also served as an opportunity to re-evaluate actions and identify what needed to be done to continue making inroads into the prevention of further drowning accidents across the country, including:

- Publishing a framework for a water safety plan for councils and other local organisations

- Seeking to review a sample of local authorities and other communities' performance against the standard of water safety risk assessment and water safety plans

- Take forward funding proposals and review the business case for WAID v2 service

Beach safety

4.23 In 2016, a tragic incident occurred when seven men drowned whilst playing football on a sandbar when the tide came in. The incident was followed by an inquest in June 2017 when the Coroner recommended that a review of responsibilities pertaining to beach safety in the current system should be carried out.

4.24 In their response to the Coroner, the MCA have commissioned an independent legal review to gain an improved understanding of the national roles and responsibilities for beach safety and which will make a number of recommendations to reduce the risk of a similar incident occurring in the future. The report is due to be published in 2019 at the RoSPA Water Safety Conference.
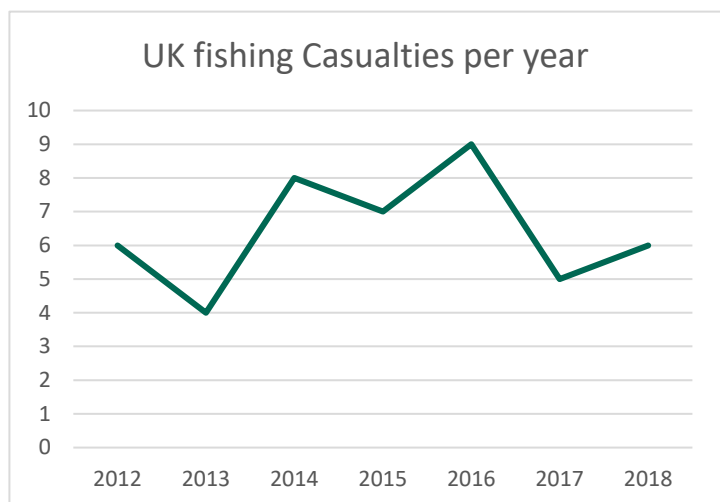

Action

- Implementation of the National Drowning Prevention Strategy
  - Ongoing
- Publish and promote interim, voluntary Beach Safety Risk Assessment Guidelines for landowners and local authorities with the busiest beaches
  - 1 year
- Support the development of a longer-term digital tool to assess and address beach safety risks
  - 2 years
- Develop funding proposals and review business case for a new Water Accident and Incident Database
  - 2 years

5. Fishing Vessel Safety

5.1 Fishing remains the most dangerous industry in the UK.

5.2 Between 2012 and 2018, there were a total of 45 deaths while fishing in the UK, and 103 since 2006.

5.3 Commercial fishing is 5 times more hazardous than the UK's next most hazardous industry, with an average of 54 fatalities per 100,000 full or part-time workers between 2012 and 2018.

5.4 Therefore, a key safety priority for government and industry is to enhance the focus on fishing

Figure 3: UK fishing casualties per year, 2012-2018

vessel safety to make fishing a safer and more sustainable industry that has safety and welfare at the centre of its culture. It will be supporting this aim through the announcement of a number of new initiatives and by making significant new funding available to drive further improvements during 2019.

5.5 The government has worked hard to develop a clear plan for improving the UK fishing industry's safety record. With a shared focus on levers ranging from legislation to risk assessments and safety management systems to training and qualifications, the approach is thorough, proportionate and informed by best-practice.

5.6 The work will be underpinned by The Fishing Industry Safety Group (FISG) strategy, which was developed collaboratively between Government and industry, and has the ambitious target of eliminating preventable deaths in the fishing industry by 2027.

5.7 It will also be informed by findings from the Fishing For a Future Report[16], commissioned by Seafarers UK and conducted by Cornwall Rural Community Charity (CRCC) which looked not only at safety measures, but a range of ways to reinvigorate UK fishing.

Ambition

- Provide an enhanced focus on fishing vessel safety
- Eliminate preventable deaths in the fishing industry by 2027

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[16] https://www.seafarers.uk/wp-content/uploads/2018/06/Seafarers-UK-Fishing-For-a-Future-Report.pdf

Fishing for a Future report

5.8 The fishing and fish-processing industries are an important part of the UK economy, employing 22,000 people across the UK and contributing over £1billion each year.[17]

5.9 Commissioned by Seafarers UK, the Fishing for a Future Report was conducted by Cornwall Rural Community Charity (CRCC) and looked at the needs, challenges and opportunities for UK fishing communities.[18]
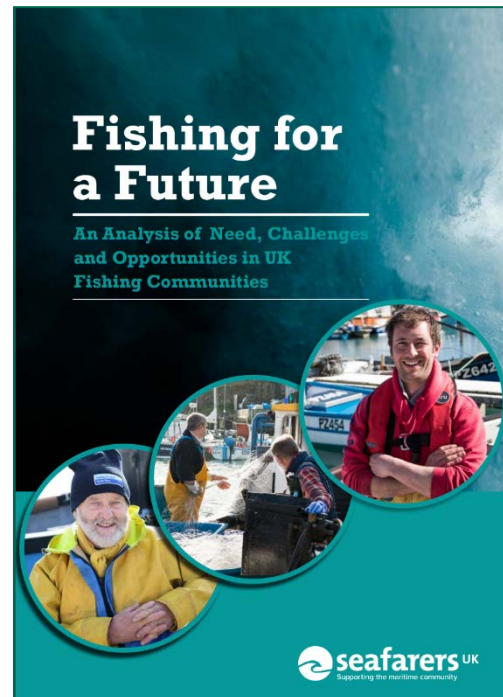
5.10 Launched by George Eustice MP on 25 June 2018, the report not only provides guidance to Seafarers UK on their grant making, but it encourages a range of stakeholders to collaborate on projects to assist fishermen to make a living and improve their safety and welfare. The Report found that UK fishing communities require a "fresh collaborative approach to innovative interventions to improve their wellbeing" and noted that acting to improve safety culture is paramount in terms of behaviours and training.

5.11 Key safety issues highlighted include:

- The need to improve safety culture among fishermen.

- Supporting initiatives to improve behaviour change through the purchase and use of safety equipment, such as funding for Personal Flotation Devices (PFDs) with Personal Locator Beacons (PLBs) and support to prevent overboard situations, as found in the Harvard Business School work with MCA.

- Sponsoring port improvements and the promotion of the MCA's Safety Management System to build on the improved regulatory framework resulting from ILO 188 which the UK has recently implemented.

- The need for MCA to be more consistent and robust in its enforcement activity.

5.12 Other findings include:

- Assisting ports to improve infrastructure and credit unions being useful in improving access to funds for business development

- Raising awareness of health support services for fishermen

- Provide animateur support to improve funding take up by fishermen and to develop and take forward ideas on the working environment and safety

- Enhancing support to promote access to the industry and its perception amongst potential recruits

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[17] https://www.seafarers.uk/wp-content/uploads/2018/01/Fishing-for-a-Future.pdf
[18] https://www.seafarers.uk/wp-content/uploads/2018/06/Seafarers-UK-Fishing-For-a-Future-Report.pdf

5.13 The Fishing Industry Safety Group recognises the importance of the Fishing for a Future Report and has incorporated its key findings into the FISG strategy detailed below. Safety initiatives developed by FISG will therefore take a co-ordinated approach with work ongoing to address the Report's findings.

Fishing Industry Safety Group strategy

5.14 In order to address safety concerns in the fishing industry, the MCA has worked in close partnership with the Fishing Industry Safety Group (FISG) to develop a strategy with the ambitious target of eliminating preventable deaths by 2027.

5.15 Following a detailed investigation of the causes of fatalities, the FISG strategy set out three key areas on which the MCA and the fishing industry should focus in order to improve its safety record. These were:

- Vessel Stability

- Prevention of Man Overboard

- Safety to persons

Stability and Hull Survey requirements

5.16 Incidents involving small fishing vessel stability continue be a high priority for the MCA's safety work. There are currently no requirements for stability on existing vessels of less than 15 meters or new vessels of less than 12 meters. Incidents such as the capsize of the JMT, Stella Maris and Heather Anne have demonstrated that, were such requirements to be introduced, then future incidents and fatalities may be avoided. A number of MAIB investigations have identified a lack of stability as being a significant contributory factor in accidents and have recommended that MCA introduce stability criteria for new and significantly modified fishing vessels under 12m and stability assessment methods for existing vessels under 15m.

5.17 MCA has taken on board the recommendation from MAIB and worked collaboratively with industry to agree at the Extraordinary meeting of FISG in 2017 that new criteria and assessment methods should be introduced. Work is ongoing, and it is planned that criteria for new vessels and assessment methods for existing vessels will be introduced in 2020.

Man Overboard

5.18 Since 2013, the Industry and Seafish, which is a Non-Departmental Public Body (NDPB) set up by the Fisheries Act 1981, have provided over 8,000 free Personal Flotation Devices (PFDs) to fishermen. These were provided in response to a number of recommendations from MAIB and were accompanied by an intensive education campaign on the benefits of PFD wear.

5.19 Despite this significant investment from Government in the safety of fishermen and mitigation of man overboard situations, evidence from MAIB statistics and 35 MAIB investigations into accidents involving commercial fishing vessels since 2013 have demonstrated that many fishermen still do not wear PFDs.[19] In fact the evidence shows no downward trend in the rate of commercial fishermen who have drowned, while 67% of those who drowned were not wearing a PFD at the time they entered the water. This is despite the likelihood of surviving a man overboard incident being significantly greater if a PFD is worn.[20]

5.20 Figure 4: PFD use among fishing drowning fatalities, 2000-2015

Fishing drowning fatalities 2000-2015

■ PFD not worn   ■ PFD worn   ■ PFD unknown
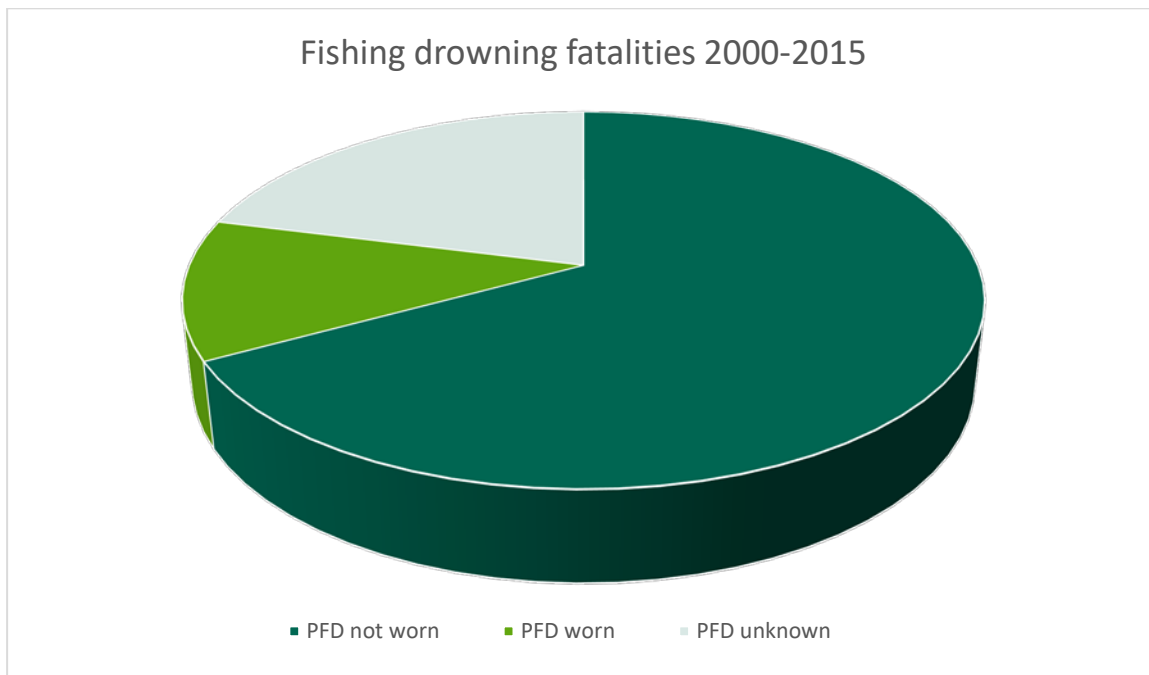
Promoting the use of Personal Floatation Devices (PFDs)

5.21 PFDs can be incredibly useful in making the working environment safer for fishermen. As highlighted in MAIB's Safety Digest 1/2017, PFDs are more than simply "floatation" devices.[21] Wearing a PFD:

- Reduces stress on the heart by preventing a struggle to swim

- Keeps a person's face clear of the water, allowing them to breathe

- Assists in rescue and recovery by providing something to grab onto

- Increases visibility, helping rescuers to find those in the water

5.22 ILO 188 mandates that a proper assessment of health and safety risks be undertaken by fishermen and measures taken to prevent those risks.

5.23 Under this provision, MCA now requires that PFDs must be worn if the risk of going overboard has not been eliminated and it has not been demonstrated that wearing a PFD is unnecessary. Following implementation of ILO 188, the MCA now has legislation which allows enforcement action to be taken against the owner or skipper should it be identified that PFD should have been worn at the time of going

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[19] https://assets.publishing.service.gov.uk/Government/uploads/system/uploads/attachment_data/file/564789/MAIB_Lifejackets-Review.pdf
[20] https://assets.publishing.service.gov.uk/Government/uploads/system/uploads/attachment_data/file/658960/12._MGN_Compulsory_provision_and_wearing_of_personal_flotation_devices_on_fishing_vessels.pdf, P1
[21] https://www.gov.uk/Government/publications/maib-safety-digest-volume-1-2017

overboard. This course of action was agreed with Industry at the Extraordinary meeting of the Fishing Industry Safety Group in January 2017.

5.24 The Department recognises that regulation alone will not bring about changes in behaviours and even when wearing a PFD, cold water shock and unfamiliarity with recovery procedures can hamper recovery. It is therefore important to prevent man overboard situations as effectively as possible.

5.25 At every survey and inspection, the MCA ask vessel owners and skippers to conduct a Risk Review of their vessel and identify areas where Man Overboard situations may occur. They are given a Risk Review document which allows them to develop mitigating action. The MCA has also issued a Marine Guidance Notice (MGN 571[22]) which gives important and practical advice on preventing Man Overboard.

5.26 It is not only Government that is working to reduce the numbers of Man Overboard incidents. For example, the RNLI have developed educational material[23] aimed at commercial fishermen which proposes a host of ideas for reducing the risk of a Man Overboard occurring and successful recovery of persons in a Man Overboard situation.

Personal Locator Beacons

5.27 To improve notification and location of an emergency, the new Small Fishing Vessel Code of Practice[24] requires all vessels to carry either an Emergency Position-indicating Radio Beacon (EPIRB) or a Personal Locator Beacon (PLB) for each member of the crew. EPIRBs and PLBs must operate on 406MHz to quickly transmit an accurate position obtained from a built-in GNSS receiver to a satellite and on to the Coastguard.

To ensure that European Maritime Fisheries Funding supports up to 60% of the cost of these items, they are not mandatory until 23 October 2019.

Safety of Persons on Board

5.28 There are three Codes of Practice for the Safety of Fishing Vessels (less than 15m; 15m to less than 24m; and 24m and over). These Codes address construction, stability, machinery, fire protection, protection of crew, life-saving appliances and emergency procedures. By putting in place mandatory standards, they set a level of safety on board the vessel and minimise the risks to the crew of an incident occurring. If it does, the Codes help to ensure the crew can respond effectively.

5.29 In response to recommendations made by MAIB following accident and investigation reports, as well as suggestions from industry groups, the MCA launched New Codes of Practice on 23 October 2017. The Regulations update, consolidate and recast 17 sets of existing Rules and Regulations, and enact three Codes of Practice for the construction and safe operation of fishing vessels.

5.30 MAIB recommendations for Small Fishing Vessels implemented by the Codes of Practice included the carriage of EPIRBs, PLBs, life rafts, Bilge Alarms, Carbon Monoxide Alarms and the requirement for modifications that affect the vessels size, structure or dimensions or if they change fishing method, to be approved by MCA

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[22] https://www.gov.uk/government/publications/mgn-571-f-fishing-vessels-prevention-of-man-overboard
[23] https://rnli.org/safety/choose-your-activity/commercial-fishing#
[24] https://www.gov.uk/government/publications/msn-1871-fcode-of-practice-for-safety-of-small-fishing-vessels

prior to work taking place. The Code also requires the conduct of monthly emergency drills.

5.31 The new Codes of Practice clearly demonstrate the MCA delivering continuous improvement in maritime safety, taking on board recommendations from MAIB and being flexible in response to stakeholder feedback.

Safety Management System

5.32 Safety Management Systems exist for large Merchant Ships and small Domestic Passenger Ships. No system has existed before for fishing vessels in the UK.

5.33 In light of the ILO 188 requirement for safety procedures for accident prevention on fishing vessels over 24m, and to assist with compliance with the newly implemented Codes of Practice, Industry launched a new Fishing Safety Management Code (FSM) in 2017 which is based on the International Safety Management Code.

5.34 This FSM provides the structure for the requirements the vessel should have in place regarding the safe operation of fishing vessels and guidance for establishing a safety management system. It also provides guidance on the maintenance and servicing of safety equipment that relates to the operation of the vessel.

5.35 Implementation of the FSM will be an important part of helping fishing vessel owners to comply with their statutory safety obligations and the MCA looks forward to continuing working with industry to help them develop the FSM framework. Safety Management Systems are a new concept for the fishing industry which means many owners and skippers are expected to require significant assistance in developing them. For this reason, the Systems are not currently mandatory and the industry's free Safety Folder[25] can act as a Safety Management System while the industry has time to adapt.

Other Safety Improvements

ILO 188

5.36 To date, UK maritime health and safety legislation has only applied to "workers" (usually interpreted as employed fishermen). The majority of the UK fishing fleet is made up of self-employed share fishermen, which has unfortunately resulted on occasion in owners and skippers taking the view that the safety of share fishermen is not their responsibility.

5.37 The MAIB recommended that Health and Safety requirements should extend to contracted and share fishermen. Having successfully implemented ILO 188, which applies to all fishermen regardless of their employment status, MCA is now able to ensure that the skipper and the owner are held responsible for the safety of everyone on board and not just the individual.

5.38 ILO 188 also improves the legal framework for many aspects of living and working conditions which include:

- Minimum age

- Responsibility for operation of the vessel

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[25] https://www.seafish.org/media/1404347/safety_management_folder__june_2015___v3_.pdf
https://www.safetyfolder.co.uk/

- Medical Certificates

- Manning and Hours of Rest

- Crew Lists and Work Agreements

- Recruitment

- Payments

- Accommodation, Food and Water

- Medical Care and Repatriation

- Liability of the owner in case of occupational illness, injury or death

5.39 All fishing vessels will be inspected every 4 or 5 years (in conjunction with their fishing vessel safety certificate) for compliance with the requirements of ILO 188.

Under 16.5m Skippers Certification

5.40 Since 2008, the MCA has contributed £2.75m to subsidising the cost to commercial fishermen of undertaking voluntary safety training. Seafish has used this to lever over £6m of additional funding from other sources, mainly EU Fisheries Structural Funds. This has funded over 25,000 voluntary training places taken up by fishermen working on UK registered commercial fishing vessels.

5.41 Mandatory Certification is currently not required to skipper vessels under 16.5m. Voluntary Certification is currently available from Seafish, when fishermen complete free Seafish courses in Bridge Navigation, Engine Room Watchkeeping, Stability and GMDSS courses. The courses have been reviewed by the Training Group of FISG, and fishermen who complete them are given a Skippers Certificate for Under 16.5m Fishing Vessels.

5.42 Industry and MCA agreed at the extraordinary FISG meeting of the Fishing Industry Safety Group in 2017 that there should be a requirement for mandatory Under-16.5m Skippers Certification. This Certification is also acceptable on Small Commercial Vessels so is transferable to other maritime sectors.

Looking forward

5.43 While there is a huge amount of work the MCA and industry have already been doing to make the fishing industry safer to work in, there are some important actions going forward which will be crucial in reducing the number of preventable deaths.

5.44 Working with industry, MCA will roll-out and take enforcement on ILO 188 which will:

- improve working conditions for fishermen and address issues of potential exploitation;

- require PFDs to be worn, unless a written risk assessment demonstrates this to be unnecessary;

- apply Health and Safety legislation to all fishermen regardless of employment status; and

- require medical certification for all fishermen.

5.45 The requirement for all fishermen to have a medical certificate is being phased in over time and on other provisions the MCA will work initially with fishing vessel

owners towards compliance. However, the legislation is in place to provide a framework for enforcement in case of unsafe or unacceptable working conditions.

5.46 MCA are to develop and implement stability and hull survey requirements for fishing vessels under 15m, for mandatory application, through the Small Fishing Vessel Code, by 2020.

5.47 As agreed at the Extraordinary meeting of FISG in 2017, work will continue towards the development of a mandatory Skippers Certificate for vessels of less than 16.5m.

Action

- Implementation of revised fishing vessel code to address outstanding MAIB recommendations

  - 1 year

- Implement the Fishing Industry Safety Group (FISG) strategy

  - 2 years

- Take forward the Fishing for a Future Report findings, including supporting behavioural change in safety practices and increasing PFD usage

  - 5 years

- Proactive implementation and enforcement of ILO Work In Fishing Convention (ILO 188)

  - Ongoing

6. Seafarer Safety and Health

6.1   While the extensive work in Chapter 5 is leading to improvements in the safety of fishing vessels, it is also important to consider the safety of the fishermen and seafarers themselves. A safe vessel can mitigate many of the risks associated with working at sea but not all of them and that is why the Department is taking forward innovative policy work to ensure that not only are vessels safe, but the humans on board and ashore are, too.

Ambition

- Ensure comparable levels of health, safety and wellbeing on ships and fishing vessels as applies to workers ashore.

As safe at sea as on land

6.2   **The strategic aim of the MCA's work in this area is to ensure comparable levels of health and safety on ships and fishing vessels as applies to workers ashore**. Onshore health and safety is well-developed and proven to be effective, setting an ambitious standard for maritime safety to aim towards.

6.3   To this end, MCA maintains close contact with Health and Safety Executive (HSE) and draws on their specialist expertise to develop compatible legislation and guidance, and to ensure close co-operation and consistency in enforcement activity at the margins between the two regimes.

6.4   UK legislation on health and safety for seafarers broadly mirrors that for workers ashore under the Health and Safety at Work etc. Act 1974, but is made under the Merchant Shipping Act to allow it to be enforced on UK ships wherever they are in the world. Many of the requirements derive, as do HSE's, from the EU Occupational Health and Safety Framework Directive and its many daughter directives, but are also underpinned by the Maritime Labour Convention, 2006 (MLC) and ILO 188 (see Chapter 5) which apply to all those working on ships regardless of their employment status.

6.5 MCA also works closely with its social partners through the National Maritime Occupational Health and Safety Committee and other ad hoc working groups to support the development of industry guidance and to develop and maintain its own health and safety publications.[26] In particular, it is mandatory for all UK merchant ships to carry the Code of Safe Working Practices for Merchant Seafarers.[27] This widely respected document sets a high standard for safe working guidance and is also used on ships flagged outside of the UK.

The Human Element

6.6 It is often cited that up to 80 per cent of accidents in the shipping industry are due to human behaviour. When latent and organisational factors are considered, that figure is probably closer to 99 per cent. In order to begin tackling this issue, the MCA has developed a human element strategy for the shipping industry.[28]

6.7 The MCA has produced important guidance on applying human element principles to improving safety on board vessels, and can be found in "The Human Element: A Guide to Human Behaviour in the Shipping Industry"[29] and "Being Human in Safety Critical Organisations", as well as the accompanying pocket book, "Behaving Safely: A practical guide for risky work".
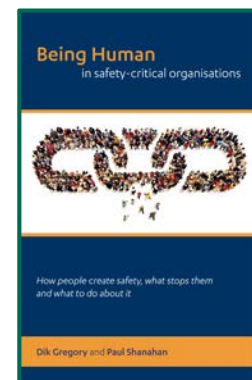
6.8 The MCA is working to embed human element principles in other guidance and MCA's practice. In particular, user-centred design; user-centred procedures; cultural transformation and Just Culture; human performance and limitations and proactive human element consideration.

6.9 The MCA will consider making proposals to IMO about methods to improve the safety of ships and seafarers using human element principles as opportunities arise and as further analysis, evaluation and research is undertaken.

6.10 The MCA continues to develop effective strategic partnerships with a range of organisations who research and develop innovative approaches to the health, safety and wellbeing of seafarers. The MCA engage regularly with our maritime social partners, maritime professional bodies, industry bodies, shipping companies, other government bodies, and other industries, each of which brings their own skills and experience to enhance collective knowledge and expertise. The MCA's goal is to develop a better understanding of human element issues across the industry, which will enable the identification and implementation of strategies to improve maritime safety and operational performance.

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[26]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/671403/CSWPMS_GOV_UK_2017.pdf
[27] https://www.gov.uk/government/publications/code-of-safe-working-practices-for-merchant-seafarers-coswp
[28] https://www.gov.uk/government/publications/human-element-strategy-and-research
[29]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/295826/MIN_392_the_human_element_research_project_599.pdf

6.11 The Human Element Social Partners Consultative Committee takes a broad overview of the industry and provides guidance on the direction for human element work. The Human Element Development Group (HEDG), comprised of a wide range of industry and academic representatives, looks at human element issues in greater detail. For instance, HEDG has identified issues around the ship-shore interface; Non-Technical Skills; Just Culture; and Leadership and Management skills which are currently being addressed.

6.12 MCA will continue to contribute to Human Element research to support the development of policy and implementation of HE principles in the shipping industry, in collaboration with other organisations.

6.13 A further goal is to affect a cultural and behavioural shift in the industry, in particular the development of a truly effective "Just Culture" where the norm is no longer to tolerate issues such as fatigue, stress, bullying, accidents and low performance.

Preventing Modern Day Slavery

6.14 Internationally, those working at sea are potentially more at risk of exploitation and abuse as they are 'out of sight', working for months remotely and at sea, away from their friends and families and sometimes for very little financial compensation. That is why the police, working with the National Crime Agency (NCA), Border Force, Immigration Enforcement and the Gangmasters and Labour Abuse Authority (under new powers from the Immigration Act 2016), investigate organised cases of modern day slavery and labour abuses.

6.15 The Modern Day Slavery Act is rightly recognised internationally as a vital piece of legislation in tackling this form of abuse and the UK was one of the first signatories to the ILO Protocol of 2014 to the Forced Labour Convention, 1930. The international fishing sector is complex with legislation and powers being subject to domestic and international jurisdictions. Therefore, the DfT and the MCA are working closely with other Government agencies, such as Border Force, GLAA, NCA NMOC and local police authorities to identify cases of abuse of vulnerable seafarers and fishermen in and around our waters and to provide protection.

6.16 Merchant Shipping legislation includes basic requirements for a transparent employment agreement, payment of wages, provision of accommodation, food and water, and provision for medical care. ILO 188 introduces global standards for many aspects of living and working conditions and will also be critical for preventing labour abuse and exploitation in the fishing sector.

6.17 Failure of an employer to fulfil obligations such as timely crew payment or adequate accommodation standards, could be considered indicative of Modern Day Slavery. In many cases, this may be a temporary situation resulting from the vessel operator's cashflow issues which can often be tackled through the MCA using its enforcement powers.

6.18 The MCA engages with the national police Modern Slavery transformation programme set up by the Home Office, which joins up interested government agencies under the Prime Minister's Modern Slavery Task Force. If the MCA's surveyors find evidence of Modern Day Slavery when they inspect a vessel, they will report this to the police and/or the NCA.

6.19 Unfortunately, it is often the case that vulnerable crew members removed from poor working conditions will often reassure enforcement officers that they are content with their working conditions and are not being exploited. This may be genuine, or it may stem from fear that they will not gain employment elsewhere in the sector should they complain. Some seafarers may even have a distrust of authority and be unable to see past the uniform to the official who has their wellbeing in mind.

6.20 That is why the work of charities, including the seafaring and fishing missions and the ITF, is so crucial in providing vital support and reassurance to those potentially at risk.

6.21 There are a number of ways in which the success of this work on reducing seafarer exploitation and abuse might be measured, such as:

- Number of reported incidents of abandonment of seafarers[30], including worldwide information on seafarers and fishermen who have been abandoned and their current status

- Port state control records in the UK

- Fewer MAIB recommendations relating to regulation of health and safety and living and working conditions on fishing vessels

Current projects

Seafarer well-being

6.22 The well-being of employees in all organisations and industries is a crucial part of fostering positive business outcomes. In the commercial maritime sector where profit margins are continually being squeezed and there is constant pressure on maximising return on investment, there is growing evidence, such as the information coming from the HORIZON and MARTHA fatigue research programmes, as well as the Seafarer's Happiness Index[31], of high levels of fatigue and stress among seafarers, as well as concerns about general well-being and possible mental health impacts.

6.23 Emerging understanding increasingly indicates that, in addition to physical fitness for service at sea, wellbeing and good mental health play a significant role in the safe and effective operation of ships. The MCA would, therefore, like to see a greater focus among ship owners on the wellbeing of crew alongside enhanced safety measures.

6.24 The MCA is working with industry partners to develop best practice guidance that:

- Promotes better understanding of physical and mental health and wellbeing issues throughout the industry

- Provides effective guidance to organisations on the adoption and implementation of effective wellbeing policies and practices

- Nurtures the principle that wellbeing is a shared responsibility between ship-owner and seafarer

- Provides effective, compelling information to assist seafarers and other individual to raise their own wellbeing

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[30] http://www.ilo.org/dyn/seafarers/seafarersbrowse.home
[31] https://www.missiontoseafarers.org/seafarershappiness

6.25 Reducing levels of fatigue among seafarers is a fundamental part of improving seafarer wellbeing and safety. Since 2009, the MCA's aim has been to reduce levels of fatigue among seafarers, with three ambitious objectives:

- Work for international change

- Provide educational and cultural change around fatigue among seafarers

- Enforce compliance with fatigue prevention measures

6.26 The existing MGN 505 (M) Human element guidance - Part 1: Fatigue and Fitness, serves as a notice to all commercial operators in UK waters.[32] It provides information on causes of fatigue and guidance on good practice in its prevention and management. Similarly, MGN 520 (M) Human Element Guidance Part 2 - the Deadly Dozen has been very well received by the industry.

6.27 The MCA promotes this guidance through its own channels as well as working with industry organisations and, where opportunities arise, through individual company policies and practices. For example, we worked with the National Workboat Association to strengthen the guidance on fatigue prevention in the G+ Good practice guideline for the safe management of small service vessels used in the offshore wind industry, and are supporting their ongoing campaign on this issue. We hold regular Human Element Advisory Group seminars, present at seminars organised by other organisations, and meet with individual shipping companies and maritime organisations.

Medical stores and Ship Captain's Medical Guide (SCMG)

6.28 The MLC and ILO 188 require seafarers to have access to free medical care on board and place some duties on governments to lay down standards for provision.

6.29 The SCMG is a safety-critical Government-produced publication which must, in accordance with the Merchant Shipping and Fishing Vessels (Medical Stores) Regulations 1995, be carried on UK ships that provides practical guidance to those crew members with responsibility for medical care of those working on board.

6.30 The requirements for medical stores derive from a European Commission (EC) Directive and are determined on the basis of distance from the shore that the vessel is operating in. The technical annexes are currently under review, modernising the requirements to reflect advances in medical diagnosis and treatments. The UK will take this opportunity to update the published list of medical stores for UK ships.

6.31 In order to modernise and improve the provision of medical care on board ships, the MCA is already taking forward a number of actions:

- Contribution to the further EU review of the Directive on medical treatment on board vessels, including medical stores - in particular, seeking to allow more flexibility in the requirements for stores based on a wider range of risk factors;

- Updating and publishing the 23rd edition of the Ship Captain's Medical Guide (SCMG) in 2019, with guidance similarly updated and with improved presentation, to better support those providing medical care, and particularly emergency medical care, at sea;

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[32] https://www.gov.uk/Government/publications/mgn-505-human-element-guidance-fatigue-and-fitness-for-duty

- Introducing consequential amendments to first aid/medical care training for seafarers.

Looking ahead

Records for seafarer medical examinations

6.32 Hard copies are currently used as records for seafarer medical examinations. The MCA aims to digitise the system, moving to online verification of seafarer medical certificates. This would mean much improved efficiency for approved doctors and the MCA, reducing the administrative burden on all involved and making the gathering of statistics on seafarer medical examinations much easier.

6.33 Under the implementation of ILO 188, the MCA are extending seafarer medical examinations to UK fishermen for the first time. This will enable MCA to identify health issues and trends across the fishing population and build a deeper evidence base on the priorities for seafarer health across the industry.

Training in Human Element Principles

6.34 The International Convention on Standards of Training, Certification and Watchkeeping (STCW) 1978 as amended lays down mandatory training in leadership and management for ship's officers. In 2012, in partnership with representatives from the UK shipping industry, MCA produced a UK statutory course which adds value to this framework and includes training in human element principles, known as "HELM".

6.35 An independent review of HELM was undertaken in 2017. The review found that 64.5% of participants felt HELM to be the best in class; 59.9% believed HELM training had changed crew leadership and management behaviour for the better and 85% agreed the need for a shore-side HELM equivalent.

6.36 However, the report also found that there is more to do to promote effective human element training and guidance in the maritime industry. MCA therefore intends to review the HELM courses, in partnership with industry, and enhance human element, leadership and management training for seafarers and their management ashore aiming to be industry-leading and act as a gold-standard for human element guidance across any industry.

6.37 MCA believes improvements to HELM should not only reflect our mandatory requirements under international regulation, but could, through an elective modular approach, go above and beyond to meet higher level demands from industry and play a pivotal role in reducing the perceived shore side skills shortage identified by the Maritime Growth Study. In particular, improvements would involve working closely with industry partners to;

- Review the current two-tier approach to HELM to produce a training package that both meets UK international obligations under STCW and remains relevant to the needs of the industry;

- Consider options for developing HELM further to meet higher level leadership and management objectives, with particular relevance to developing shore-side skills;

- Consider the possibility for HELM to form the foundation of a formal maritime academic qualification;

- Place the emphasis on soft, non-technical skills that are critical to effective leadership and management; and

- Develop a professional status for mariners on a par with other high profile reputable professions

Seafarer identity documents and documentation

6.38 The UK has worked within the ILO and IMO frameworks, assisting the international bodies to undertaken extensive work enhancing global maritime security and protecting ships and ports against the threat of international terrorism. One of the results of this work has been the development and adoption of the Seafarers' Identity Documents Convention (Revised), 2003 (No 185 - "ILO 185")), which provides for a seafarer identity document intended to enhance maritime security whilst facilitating shore leave and the professional movement of seafarers.

6.39 The Department and MCA are working with the Home Office and Border Force on prospective implementation of ILO 185. In tandem with implementation of the Convention, it is hoped to digitise official logbooks and crew lists which, by reducing the administrative burden on ships' crew, would present an opportunity for reduction of fatigue and potentially improve the statistical data available to MCA on seafarers working on UK ships.

Action

- Work with industry to develop guidance on seafarer wellbeing
  - 1 year

- Engage with our social partners and the wider Red Ensign Group to engage in studies of, lobby for and campaigns to promote and address mental health issues at sea.
  - Ongoing

- Embed human element policy-making principles in MCA practice across the workforce and continue to develop effective strategic partnerships with the shipping industry
  - Ongoing

- Modernise and improve the provision of medical care and ship captain's medical guides on board vessels, including digitisation of seafarer medical exam records
  - 1 year

- Protect vulnerable seafarers and eradicate modern day slavery
  - Ongoing

7. Rescue Boat Grant Fund

Ambition

- Support inshore and inland search and rescue organisations through effective distribution of grant funds to support purchase of essential equipment

Background

7.1 The Inland and Inshore Rescue Boat Grant Fund (the Fund) was created by HM Treasury in 2014 as a £5million, 5-year Fund, designed to enhance the operational capabilities of inland and inshore volunteer search and rescue organisations. These search and rescue organisations often provide invaluable search and rescue resource by listing their assets on the DEFRA and MCA National Asset Registers, effectively enhancing the capabilities of national rescue organisations by making local assets available in the event of an incident.

7.2 The DfT administers the Fund and it has been an enormous success in the five years since its introduction. Each year an expert panel, including the RNLI, Royal Yachting Association, MCA, DEFRA and devolved administrations and chaired by DfT, advises ministers on specific allocations of funding awards, lending their invaluable knowledge and expertise to the process.

7.3 To date, the Fund has supported the purchase of over 80 boats, over 5,000 items of crew kit (e.g. drysuits, crew lifejackets, helmets, boots, whistles, torches) and over 1,800 other items of equipment for rescue operations.

7.4 The Fund is primarily designed to support large capital purchases of essential equipment which charities might otherwise struggle to buy at the risk of losing their operational capacity. Funding to train volunteer rescuers is also available from the government through the UK Search and Rescue Volunteer Training Fund operated by the Charities Aid Foundation.

7.5 DfT Ministers prioritised a further £1 million for 2019-20 to ensure that the Fund could be perpetuated for another year and will be evaluating its effectiveness and looking at the strategic options available to support the sector in future as part of the Spending Review process.

Over 80 boats
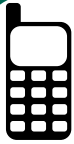
Over 1800 items of equipment for rescue operations

5000 items of crew kit

Action

- DfT to review the Rescue Boat Grant Fund to determine its effectiveness and consider the wider strategic aims for government support for the sector
  - 1year

8. Implementing & Innovating Safety

8.1 A safer maritime network has the potential to boost economic growth and opportunity, improve journeys and promote a culture of efficiency that will deliver both immediate and associated benefits to a diverse range of people and water users.

8.2 Those objectives can only be achieved through effective implementation alongside ongoing consideration of the innovation needed to meet the needs of a rapidly evolving sector.

Ambition

- Deliver safe, secure, sustainable maritime transport which boosts economic growth and opportunity, improves journeys and promotes a culture of efficiency.

- Be a world-leader in effective implementation of international and domestic safety legislation

- Through the General Lighthouse Authority Research and Development (GRAD) team, innovate new physical safety infrastructure and spearhead best practice to meet the demands of a rapidly evolving maritime sector.

International Impact

8.3 The UK government is recognised across the world for its expertise and commitment to negotiating ambitious and deliverable regulation on a wide range of issues. UK domestic legislation is driven by the rules-based approach agreed at a range of international fora.

8.4 The International Maritime Organization (IMO) is a specialised agency of the United Nations (UN) and is responsible for setting global standards in safety, security and the environmental performance of the international shipping industry.[33] The International Labour Organization (ILO) is the only tripartite U.N. agency which brings together Governments, employers and workers of 187 member States and sets labour standards, policies and programmes to "promote decent work for all women and men".[34]

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[33] http://www.imo.org/en/Pages/Default.aspx
[34] https://www.ilo.org/global/lang--en/index.htm

8.5 This global framework provides essential places in which consistent standards and a level playing field can be developed for an industry which is inter-boundary by its nature and means that companies and employees in all regions can operate in a safe and regulated space.

8.6 DfT and MCA both actively engage with the IMO on the development of international standards. The IMO is based in London, reflecting the centrality of the UK to international maritime business and regulation.

8.7 The UK's activity at the IMO strives to make the most of the opportunity the UK has to inform and influence international legislation, giving the UK even greater scope to adapt how we regulate and work with industry to deliver improved safety for workers, the public and the environment.

8.8 The UK ensures its regulatory framework not only saves lives but is also supportive of UK maritime growth and maintains international competitiveness. The UK's interventions span regulation, standard setting, guidance, raising awareness, improving training and influencing behaviours amongst others.

8.9 The government has made a meaningful impact on ILO resolutions in recent years following on from its extensive involvement in the negotiations leading to the development of both the MLC and ILO 188 convention.

8.10 In 2016, the UK took a leading role in securing agreement of the ILO Members to amend the technical standard for seafarer identity documents to confirm with the ICAO 9303 (passport standard). This will encourage more Members to ratify the Convention, providing benefits for border security and enhancing the well-being of seafarers by facilitating transit to and from ships and shore leave in ports of call.

8.11 In 2017 and 2018, the UK chaired a working group and the full Special Tripartite Committee on the Maritime Labour Convention 2006 (MLC), resulting in the adoption of measures to safeguard the employment protection and wages of seafarers held captive due to piracy or armed robbery.

Domestic regulation

8.12 The UK believes the purpose of any regulation is to bring order and stability, enabling society and international bodies to understand established processes clearly and follow them easily.

8.13 The Merchant Shipping Act 1995 has formed the basis of UK primary legislation for over 20 years combined with a wide array of secondary legislation. The UK has a historic pedigree of passing justifiable legislation that ensures safety and security across the maritime sector, as well as allows maritime businesses to reach their potential.

8.14 Our areas of regulatory responsibility are wide ranging, covering all aspects of living, working and operating at sea and around the coast. Our operational function delivers a survey and inspection regime that ensures standards for safety, security and environmental protection are met, and that responsible parties are held to account where these falls short.

Adaptability

8.15 Whilst the longer-term trend in the maritime sector of an overall reduction in reported accidents and fatalities is promising, there remains scope to further manage risk in what is a rapidly changing sector. The UK is therefore proactively considering how it can deliver a policy function that results in improved outcomes for the public and the business community within the context of an evolving maritime environment.

8.16 The MCA has already shown how it is an innovative safety organisation and is able to improve on existing structures and processes. Following the 1999 report *Safer Ships, Cleaner Seas* - the review into the Sea Empress disaster where hundreds of tonnes of oil was released into the sea off Milford Haven - the MCA created a leading and ground-breaking model in the form of the Secretary of State's Representative (SoSRep).

8.17 SoSRep is a model of casualty management and incident response that is held in high regard across the international maritime sector. SoSRep is empowered to make crucial and time-critical decisions without delay and without recourse to a higher authority, where such decisions are in the overriding UK public interest and where a lack of such autonomy would present a real threat to safety or effectiveness of response.

8.18 To continue delivering an innovative policy function that delivers results in the public interest, the MCA will undertake evidence-based policy analysis and use MAIB data effectively, while learning from success areas in other organisations.

8.19 The MCA will also work in close collaboration with MAIB to ensure that our future policies and regulatory framework embrace the findings and recommendations given to the MCA following marine accident investigations.

Survey and Inspection Transformation

8.20 The MCA Survey and Inspection Transformation Programme is delivering significant change to the UK's ship survey and inspection regime and is an example of innovation which is greatly enhancing a commercial offer without compromising on safety standards.

8.21 The Survey and Inspection Transformation Programme was designed to take on board feedback from industry that a more flexible system for surveys and inspections was desired. The success of the regime is an excellent example of the MCA working closely with customers and stakeholders and remaining flexible in how it delivers a commercial service of the highest quality while maintaining safety quality.

8.22 The transformation means the 9 Marine Offices around the UK, which have responsibility for the operational delivery of the MCA's regulatory function, have been restructured alongside the creation of new contracts, terms and conditions for Marine Surveyors. This has allowed for weekend and out of hour working as well as flexible deployment which have all greatly improved efficiency. Ultimately, these changes are enabling the MCA to be able to meet the needs of its customers and deliver an improved and more flexible commercial service.

Spotlight on GLA innovation

The General Lighthouse Authority's Research and Development team (GRAD) are taking forward a range of exciting, technology-focused projects that will deliver an improved safety service for their users, as well as an enhanced database for developing thinking about marine navigational safety. Their work will be pivotal in ensuring that the GLAs are ready to implement AtoN services which are fit for purpose in the e-Navigation environment and in the face of increased cyber threats. For example, in 2017/18 alone, GRAD defined a new, logical way of looking at maritime positioning integrity, as well as continued to develop and exploit the GRAD "Bomb" series of LED light sources, among a host of other achievements.[35]

Action

- Ensure successful safety negotiating outcomes for the UK at the International Maritime Organization and the International Labour Organization

  – Ongoing

- MCA to undertake an internal review of policy-making, create a policy "product backlog" for MCA safety policy and create a methodology for collaborative policy making to deliver a service that best meets public need

  – 1 year

- Complete the Survey and Inspection Transformation Regime

  – 1 year

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[35] https://www.gla-rad.org/

9. Marine Navigational Safety

9.1 The MCA is at the front line of developing and implementing a wide and rigorous programme of work that is designed to de-risk UK waters and make them safer for all users. With extensive responsibilities for delivering on a number of international obligations while also looking ahead to understand the impacts evolving technology in the Maritime sector will have on the navigation of ships, this is a particularly important area of work for the government and underpins much of the wider Maritime safety picture.

Ambition

- Minimise navigational risk and enable safe and effective decision-making
- Implement international obligations for navigational safety
- Enhance navigational safety to support a technologically evolving sector

Navigation Policy

9.2 Largely derived from the ongoing requirements of SOLAS Chapter IV, V and the Convention on the International Regulations for Preventing Collisions at Sea (COLREGS), Navigation policy continually meets a demanding workload while delivering policy of the highest standard.

9.3 Policy areas covered include e-Navigation, electronic radionavigation and non-electronic equipment Carriage Requirements (such as Electronic Chart and Information Systems i.e ECDIS), positioning, smart shipping/autonomous/unmanned vessels & the sea-going 'rules of the road' etc. Providing specialist navigational expertise of a leading international standard, technical experts support a range of activities across the business including Survey and Inspection, international representation at IMO and International Association of Marine Aids to Navigation and Lighthouse Associations (IALA), the Red Ensign Group and HM Coastguard, among others.

Civil Hydrography

9.4 The MCA oversees and delivers the UK's national hydrographic survey (seabed mapping) service to support the update of nautical charts and publications around the British Isles. The UK Civil Hydrography Programme (CHP) is delivered in association with the UK Hydrographic Office (UKHO).

9.5   The MCA maintain a nominal £5-6m annual spend to undertake prioritised surveys of UK waters all year round using a state-of-the-art technical survey specification developed in collaboration with the UKHO. These works are outsourced to industry under long-term survey contracts.

Figure 5: Hydrographic data & the nautical chart
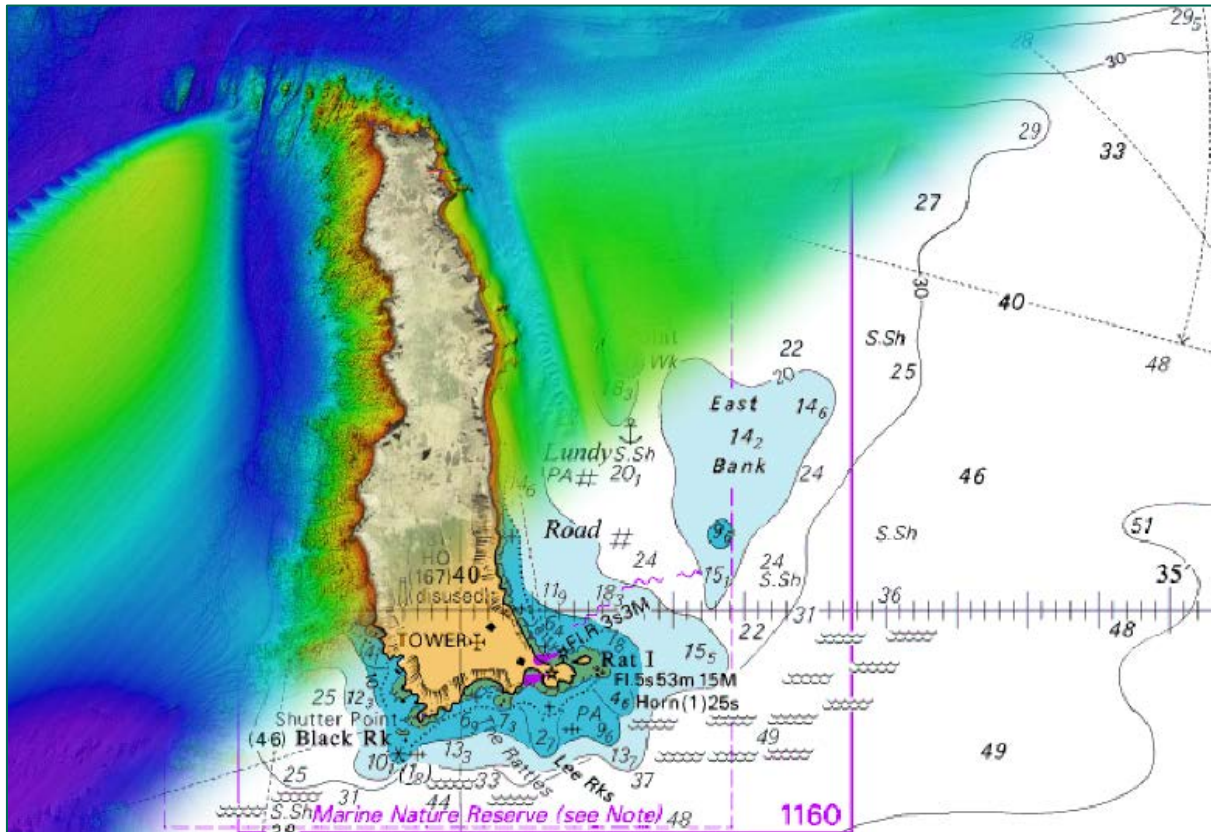
Maritime Safety Information and the UK Marine Weather Service

9.6   Safe navigation is impossible without accurate and current information.

9.7   MCA fulfil the business and safety critical role of delivering the UK's international obligations for the dissemination of Maritime Safety Information (MSI) i.e. navigational and weather warnings, including delivery of the UK Marine Weather Service (UKMWS) in association with HM Coastguard, the Met Office and the BBC. This obligation comes from the ongoing requirement of the International Convention: SOLAS Chapter 5, Regulation 4 'Navigational Warnings' and Regulation 5 'Meteorological Services & Warnings'.

9.8 The UKMWS is comprised of 13 bespoke weather services (including 'The Shipping Forecast' as broadcast by the BBC) supplied by the Met Office. MCA supplies the resulting forecasts and scripts to the BBC for onward broadcast, acting as the BBC's marine weather provider.
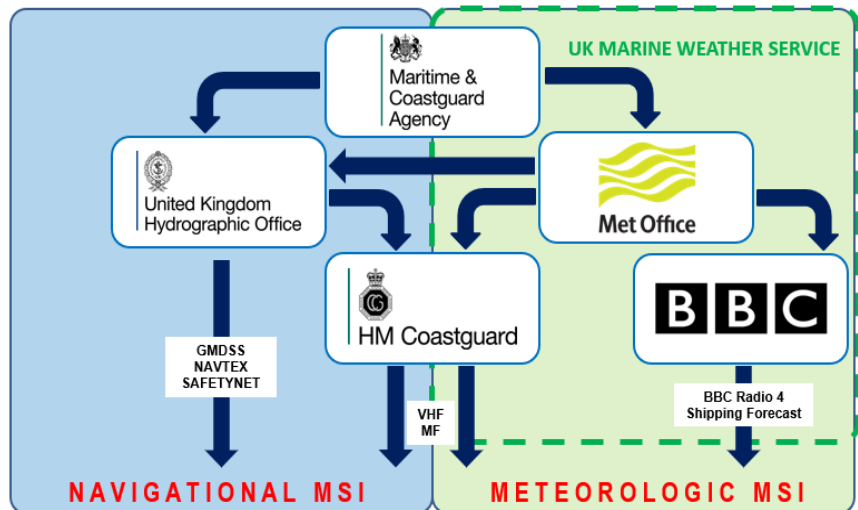
Offshore Renewable Energy Installations and Marine Licensing

9.9 Within the MCA, Navigation Safety is a statutory consultee for maritime navigation requirements under the Planning Act 2008, and the Electricity Act 1989, and a primary advisor under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010. As a statutory consultee, the MCA review and assess all applications made for licensable activities and exemption requests, ranging from grab samples and small moorings up to Nationally Significant Infrastructure Projects (NSIPs) such as Offshore Renewable Energy Installations (i.e. wind, wave, tidal stream and tidal range) of over 100MW rated capacity. As such, MCA respond to between 60 and 70 consent/license applications each month from across the UK.

9.10 The DfT hosts the Nautical and Offshore Renewable Energy Liaison (NOREL) group, which provides a forum for government, industry and trade bodies to discuss navigational safety policy around offshore renewable energy installations. The central NOREL group discusses general policy approach, while the technical working groups consider more specific issues of navigational safety.

9.11 The NOREL group is valuable in bringing together a range of expertise to ensure the legislation and policy approach best meets the practical needs of offshore renewable energy installations and vessels navigating around them while ensuring the highest possible safety standards.

Maritime Surveillance

9.12 Within Navigation Safety, the Maritime Surveillance Team are responsible for delivering the UK's ongoing international obligations under SOLAS Chapter 5, Regulation 19 'Long Range Identification & Tracking' & the EU Vessel Traffic Monitoring Directive.

9.13 The primary action area is the ongoing implementation of the MCA's Consolidated European Reporting System Version 3 (CERS3), to collect, compile and submit digital vessel reports to the European Maritime Safety Agency's (EMSA) SafeSeaNet vessel reporting system. Information here is also made available to THETIS, the reporting system for Port State Control (PSC), to support related inspection obligations, and is shared across government to enrich statistical trend analysis of vessel traffic movements.

9.14 The MCA has an obligation under CERS3 to maintain our data quality and are proud of routinely achieving in excess of 98% data quality through direct machine-to-machine data transfer from ports or through manual data entry by vessel Masters or Shipping Agents.

Vessel Traffic Management (VTM) Policy

9.15 Largely derived from the ongoing requirements of SOLAS Chapter 5 Regulation 12 and & the EU Vessel Traffic Monitoring Directive. VTM policy continually meets a demanding workload while delivering policy and operations oversight of the highest standard.

9.16 Policy areas covered include Vessel Traffic Services (VTS), audits of VTS Operations centres & VTS Training Organisations, chairing of bi-annual VTS Policy Steering Group Meetings, representation of UK and MCA in International Maritime Organization (IMO) & International Association of Marine Aids to Navigation and Lighthouse Associations (IALA) with regards to Ships' Routeing and VTS respectively.

Radio Spectrum and Technical Standards Unit (RSTSU)

9.17 RSTSU is a highly specialised grouping within the MCA's Navigation Safety Branch (NSB) and its activities derive from the implementation of SOLAS Chapter 4 (Radio Communications) and Chapter 5 (Navigation).

9.18 RSTSU represents the UK at IMO on Global Maritime Distress and Safety System modernisation and associated equipment carriage and performance standards and is working to ensure that UK regulations will promptly track SOLAS Chapter 4 in the future. The latter will simplify the process for UK vessels which choose to implement changes swiftly. RSTSU also represents the UK at the joint IMO/International Telecommunications Union (ITU) meeting.

9.19 RSTSU informs UK radio spectrum policy about issues in the use of radio spectrum by the maritime community for safety and communications purposes. UK policy then feeds into international decision making where RSTSU participates in meetings as subject matter specialist for the UK. This participation enables appropriate innovation to meet new/emerging demands with consideration for existing systems and operational needs.

9.20 Operation of radio sources within the UK may have safety implications for vessels in UK waters. For agreed criteria, the national authorisation processes include RSTSU as a consultee and will result in the issue of a navigational warnings where appropriate.

9.21 Test standards for equipment are intended to create a market with products fit for purpose and to assure compatibility across products and are referenced by regulation. RSTSU engages within the international community in the development of international standards for conformity testing of both navigation and safety radio equipment. Innovations, such as autonomous vessels, and changes in the radio environment will continue to demand new and amended standards.

9.22 Within the MCA, RSTSU provides technical advice and guidance on radio/radar performance, interference and standards issues for onboard equipment. For the wider community, RSTSU publishes Notices to Mariners and Safety Bulletins, as well as general guidance and information on radio safety equipment.

Looking forward

9.23 In addition to delivering ongoing business as detailed above, the ambition of the MCA Navigational Safety branch is to enhance and improve Navigation Safety business delivery to support a mature, but technologically evolving, maritime sector. In particular, actions for the NSB for are to:

- Successfully complete planned survey programmes as part of the UK Civil Hydrography Programme (CHP)
  - Deliver associated technical development linked to updating the CHP survey specification, routine resurvey review and software-based hydro-management tools.

- Deliver a Memorandum of Understanding (MoU) between MCA and BBC for the onward broadcast of the Shipping Forecast from Radio 4 as part of the UK Marine Weather Service work, plus verify and update the MoU with the Met Office.
  - Continue to deliver the UK Marine Weather Service and take steps to identify new products/commercial ambitions around its outputs.

- As the offshore renewables sector continues to grow, continue to provide statutory maritime advice and guidance to the 4 UK marine licensing authorities with defined statutory timescales.

- Plan and deliver an annual audit programme for UK Vessel Traffic Services (VTS) and associated training centres.
  - Undertake National Competent Authority (NCA) function on behalf of UK.

9.24 In addition to continued business delivery and improvement, the Government's Navigation Safety work must be adaptable to the future demands on navigational safety that emerging technology presents. Therefore, the MCA has clear ambitions in two primary areas in anticipation of changes that the Maritime sector will see in the coming years, as identified in the Maritime 2050 strategy and building on the work of GRAD in developing future-focussed aids to navigation:

- Maritime Innovation - to act as an enabler to industry for new and emerging technologies such as maritime autonomy and smart shipping

- Data - to develop and implement a coherent evidence-based approach to location linked Navigation Safety policy & services

Action

- Deliver the UK's national hydrographic survey service
  - Ongoing
- Deliver international obligations for maritime safety information
  - Ongoing
- Deliver international obligations for Maritime Surveillance and Navigational Policy, including the ongoing implementation of MCA's Consolidated European Reporting System Version 3 (CERS3)
  - Ongoing
- Deliver annual audit programme for UK Vessel Traffic Services (VTS) and associated training centres
  - Ongoing
- Review Port Marine Safety Code and re-invigorate engagement with industry to ensure it remains suitable and effective
 - 1 years

10. General Lighthouse Authorities

Background

10.1 The three General Lighthouse Authorities (GLAs) of Trinity House (England, Wales, Channel Islands and Gibraltar), the Northern Lighthouse Board (Scotland and Isle of Man) and Irish Lights (Northern Ireland and the Republic of Ireland) provide marine aids to navigation (AtoNs) across the United Kingdom and Ireland and share a mission to deliver a reliable, efficient and cost-effective aids to navigation service for the benefit and safety of all mariners. Their statutory mandate comes from the Merchant Shipping Act 1995:

"the General Lighthouse Authorities shall have the superintendence and management of all lighthouses, buoys and beacons within their respective areas."

10.2 The GLAs also have responsibilities in relation to dangerous wreck outside of harbour areas.

10.3 The GLAs are DfT Non-Departmental Public Bodies and meet the UK and Irish Government's responsibilities set out in the IMO Safety of Life at Sea (SOLAS) Convention to "….provide such Aids to Navigation as the volume of traffic justifies and the degree of risk requires." Their operations are funded from Light Dues, a tax paid by all commercial shipping arriving at UK and Irish ports and make no call on the UK Exchequer.
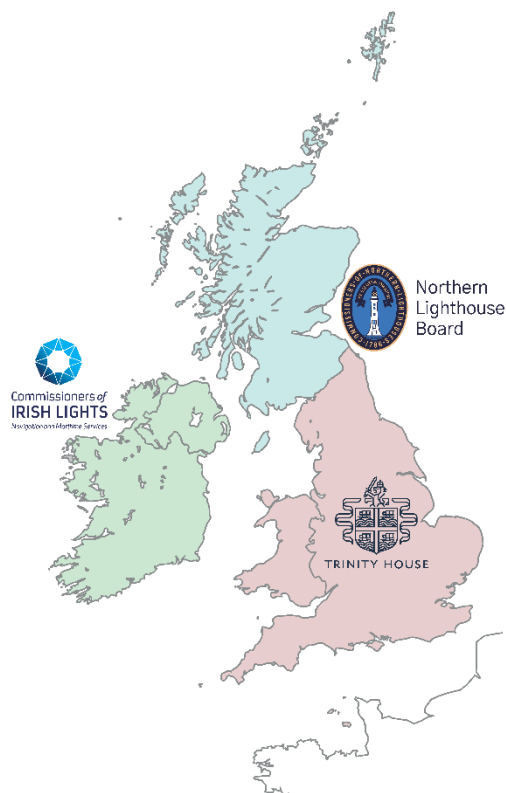
Ambition

- Deliver a reliable, efficient and cost-effective aids to navigation (AtoN) service for the benefit and safety of all mariners.

Aids to navigation

10.4 The GLAs provide essential AtoN services to all mariners, ranging from navigators of the largest and most sophisticated cargo and passenger vessels through the complete spectrum of craft and mariners to the most infrequent leisure and fishing user.

10.5 The critical role of AtoNs to safety is often understated against their essential place in facilitating successful trade flows, as well as protecting the marine environment, marine coastal industries and even the general public.

10.6 Changes in traffic patterns, the intensification of the use of sea space by offshore renewable energy and other developments, the proliferation of high-speed and larger craft and their interaction with marine leisure activities all place new demands on the GLAs as AtoN service providers.

10.7 More generally, the vulnerabilities of GNSS—such as GPS—to interference, jamming and service denial—which are not fully appreciated by some users—must be taken into consideration to ensure resilience when determining future AtoN provision.

10.8 The GLAs also remain aware of potential future pressures on their ability to keep UK waters safe, such as changes in shipboard practices, training, skill levels and experience of seafarers. AtoN service providers must continuously review the level of requirements and delivery to take account of these changes.

10.9 It is clear from in-depth consultation with users in both the commercial and leisure sectors that a mix of visual and electronic AtoN continues to be required by all mariners.

Global Standards / International Influence

10.10 The GLAs play a leading role within the Paris-based International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). IALA sets the international standards for AtoN.

10.11 The GLAs provide expertise to IALA committees and working groups. IALA brings together representatives of the AtoN services of about 80 countries for setting standards, technical coordination, information sharing and coordinating improvements to aids to navigation. IALA is in the process of changing from an NGO to an IGO status. The IALA World Wide Academy provides training and is active in supporting developing countries in advancing their AtoN systems.

10.12 IALA Standards for Category 1 AtoN require an average availability of 99.80% which equates to less than 18 hours downtime per year. Category 2 and 3 AtoN must meet 99.00% and 97.00%.

10.13 The GLAs are also leading the way internationally in researching and developing ground-breaking technology to improve the safety of navigation through the GLAs' Research and Development team (GRAD).

Central monitoring and fleet management

10.14 To carry out their duties offshore, the GLAs operate purpose-built vessels equipped to the highest technical standards and manned by experienced officers and crew.

response areas

Up to 6 hours
Up to 12 hours
Up to 24 hours
Plus 24 hours

10.15 The GLAs co-ordinate their fleet movements to make the best use of their resources and ensure the highest level of service for the mariners in their combined waters. Fleet disposition is managed to ensure that a vessel is always ready to respond within six hours in the highest risk areas and 12 and 24 hours to other areas.
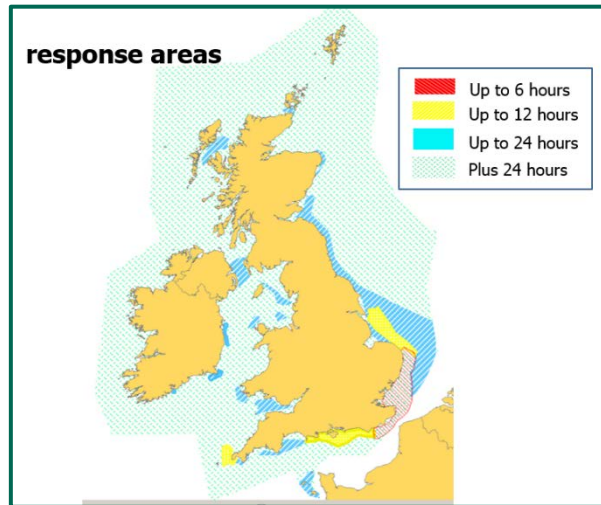
10.16 The GLAs share an aircraft contract to support station maintenance and project work.

Wrecks and new dangers

10.17 When the GLAs are informed of a wreck or new danger, they undertake an assessment of the possible risks to navigation immediately. In addition to the basic information received, the latest technology is used to assess the situation, including historical AIS vessel track information and enhanced charting systems. This assessment ensures the most appropriate response to mitigate the risk presented by the wreck or new danger to the safety of people, property and the environment.

10.18 Working closely with marine partners at the DfT and MCA, if it is considered necessary to deploy a GLA vessel, the Planning Centre considers the disposition of GLA vessels and—in consultation with the GLA within whose waters the incident has occurred—tasks the most appropriate ship.

Irish Lights

10.19 The Commissioners of Irish Lights (Irish Lights) is the General Lighthouse Authority for all of Ireland and its adjacent seas and islands. The Irish Lights mission is Safe Navigation - To be a leading and innovative provider of reliable, efficient and cost-effective navigation and maritime services for the safety of all.

Commissioners of
IRISH LIGHTS
Navigation and Maritime Services

10.20 Irish Lights provides a mix of over 300 visual and electronic AtoN and is responsible for the superintendence and management of over 3,300 Local Aids to Navigation.

10.21 In addition to its coastal infrastructure and communications networks, Irish Lights operate an 80 metre multi-functional vessel, ILV Granuaile, which also provides incident response and commercial charter capabilities.

Safe Seas – Connected Coasts

10.22 In April 2018, Irish Lights published its forward-looking strategy for the period 2018 - 2023: 'Safe Seas - Connected Coasts'.

10.23 The Irish Lights strategy is focussed on the delivery of Next Generation Maritime Services. This will include the delivery of e-Navigation in relevant areas including Maritime Services and development of the Maritime Connectivity Platform. The five key Focus Areas provide a framework to deliver the key mission of Safe Navigation at Sea:

1 Provision of General Aids to Navigation

2 Local Aids to Navigation & Other Navigation Services

3 Commercial Services

4 Value Added Services

5 Tourism Heritage and Community Engagement

10.24 Strategic delivery is based on 6 targeted outcomes:

1 Safety of All - Continued delivery of reliable and value-for-money navigation safety services.

2 International Leadership - Working through IALA, IMO, International Hydrographic Organization, International Telecommunication Union and other bodies to achieve international standardisation and development of AtoN.

3 Technology and Innovation - Continue to lead on the adoption of new technology and the development of innovative approaches that deliver safety and economic benefits for the maritime sector.

4 Collaboration and Partnership - Close working with a matric of local, national and international partners to successfully deliver existing, new and added value services.

5 Supporting the Development of the Wider Maritime Economy - Strengthen our contribution to maritime safety, trade and the environment and deliver maximum value for our stakeholders.

6 Safeguarding the Past - Positioning for the Future - Focus on the future while recognising the value and importance of the unique heritage of our organisation

Northern Lighthouse Board

10.25 The Northern Lighthouse Board (NLB) is the General Lighthouse Authority for Scotland and the Isle of Man and has provided a vital safety service to mariners since 1786.

10.26 NLB currently operates and maintains 206 lighthouses and 170 buoys as well as providing other AtoN including Beacons, Radar Beacons, AIS and a Differential GPS service. In addition, the organisation has responsibility for the superintendence (inspection and audit) of over 2000 local AtoN, ranging from ports and harbours to offshore oil and gas installations.

10.27 As a statutory consultee, NLB works closely with Scottish Government departments during the licensing process for new activity, whether it be renewable energy projects, harbour expansion, oil and gas installations or facilities in support of the aquaculture industry. This close cooperation with stakeholders ensures that the safety of navigation remains paramount but, where appropriate, facilitates vital economic development.

10.28 NLB also remains adaptable to the emerging requirements of its user community, most recently providing new AtoN for the rapidly growing cruise sector. This allows greater access to routes and destinations to the mutual benefit of both vessel operators and Scotland's crucially important tourism industry.

Investing in the Workforce

10.29 At the core of NLB's services is the organisation's people. The skills within the team of around 180 are very diverse ranging from professional Mariners crewing the vessels NLV Pharos and NLV Pole Star through to Chartered Engineers who oversee the continual programme of refurbishment which is required to keep the inventory of lighthouses fit for purpose.

10.30 To ensure a steady talent stream, NLB introduced Apprenticeships for vessel Ratings and AtoN Technicians. Dedication, expertise and innovation are the lifeblood of the organisation and are key to overcoming the considerable challenges of operating in remote locations, often in extremely hostile weather conditions. But underlying every operation is an absolute focus on the safety of the workforce which is achieved through training, careful planning and a safety culture that encourages openness and questioning. NLB has formed a close relationship with HM Coastguard Search and Rescue conducting regular joint exercises to ensure readiness to deal with the evacuation of a casualty from a lighthouse tower.

Trinity House

TRINITY HOUSE

10.31 Trinity House is a charity dedicated to safeguarding shipping and seafarers, providing education, support and welfare to the seafaring community with a statutory duty as a General Lighthouse Authority to deliver a reliable, efficient and cost-effective aids to navigation service for the benefit and safety of all mariners.

10.32 With a mandate that has expanded considerably since its incorporation by Royal Charter in 1514, the Corporation of Trinity House is today the UK's largest-endowed maritime charity, the General Lighthouse Authority for England, Wales, the Channel Islands and Gibraltar and a fraternity of men and women selected from across the nation's maritime sector. It also inspects and audits almost 11,000 local aids to navigation, licenses Deep Sea Pilots and provides expert navigators as Nautical Assessors to the Admiralty Court.

Safety at sea

10.33 Regular reviews of evolving navigational requirements, advances in aid to navigation technology and the demands of maintenance in a challenging and often hostile environment mean that Trinity House has a constant programme of engineering works and maintenance planned out for many years to come. This work is supported by around 300 well-trained and motivated men and women working in dedicated teams afloat and on shore across a broad range of disciplines—including engineers, IT specialists, seagoing personnel, naval architects, administrators and technicians—all in co-ordination to ensure mariner safety.

Supporting seafarers

10.34 Beyond its work as a GLA, Trinity House—in its capacity as the UK's largest endowed Maritime Charity—spends around £5m per annum on its charitable goals, namely the provision of education, support and welfare to the seafaring community. As an example, the Trinity House Maritime Charity—funded entirely separately from its work as a GLA—is a long-standing maritime skills and training provider, sponsoring the training of Merchant Navy cadets to ensure that British commercial shipping is crewed by well-trained men and women. This long-term investment in people and skills ensures well run vessels and safer seas.

GRAD

10.35 The three GLAs are supported by their Research and Development (GRAD) directorate which provides advanced technical research and development of physical and radio marine aids to navigation. GRAD is conducting word-leading and ground-breaking work in the field of aids to navigation and is already recognised internationally for its expertise and innovation.

10.36 This work supports the GLAs' mission to provide aids to navigation for the benefit and safety of all mariners. GRAD is a tri-GLA body and is a distinct yet integral part of all the GLAs.

Activities

10.37 Within the context of the GLA '2030 Navigating the Future' Strategy and the GLA 'Marine Navigation Plan', the activities of the GRAD Directorate are focused annually on strategic objectives around the following areas:

- Operational and engineering support

- Technology/system development and standardisation

- Research and the facilitation of research conducted by bodies on behalf of the GLA

- Policy/technology watch and strategy development

- External funding opportunities

10.38 The purpose of operational and engineering support to the GLAs is to provide specialist technical knowledge, particularly in the areas of visual signalling and Radionavigation. This enables GLA operational and engineering staff to carry out their work more effectively and to do work they would otherwise be unable to. This has resulted in financial and long-term strategic and reputational gains.

10.39 Involvement in technology/system development and standardisation ensures that the GLAs provide equipment and services, which meet future needs and lead the industry as informed customers.

10.40 Research and facilitation of research conducted by bodies on behalf of the GLAs results in GRAD acting as leaders in the fields of visual and radio AtoNs, without expenditure on lengthy and over-ambitious in-house research programmes. This aim is met principally by contacts with industry and academia, through national and international bodies.

10.41 Policy/technology watch and strategy development is a continuous activity again facilitated by involvement in national and international committees. A degree of detachment from the day-to-day running of the GLAs enables GRAD to provide a more objective, global perspective.

Next Steps

10.42 In May 2020, the GLAs will publish their most recent five yearly review of the AtoN provision around the British Isles.

10.43 During 2019 they will conduct a thorough assessment of marine traffic patterns utilising AIS traffic data, stakeholder consultation and risk assessment to determine what changes, if any, are required to the level of AtoN service provision.

10.44 Following on from the GLA Fleet review and Ministers accepting the final recommendation for a "layered 7-vessel fleet of mixed capability, acknowledging the likely continuation of exposed risk in actual conditions, but with additional mitigation measures aimed at closing the risk gap in a cost-effective manner" the GLAs will— with the intention of maintaining an effective fleet—conduct Hm treasury Green Book business cases covering the future of two vessels THV Patricia—a 36 year old multifunction tender—and the buoy tender NLV Pole Star. A long-term plan for future vessel replacement is also being developed to ensure that the GLAs continue to operate a fleet of vessels which meet their operational needs whilst providing value for money.

10.45 The GLAs will conduct a review of their Differential GPS service in 2019 to determine if this service is required post 2025. This review will involve engagement with users of the service as well as the European Commission, IALA and other international partners.

Looking forward, working together

10.46 The 2030 - Navigating the Future strategy forms the foundation that brings the three GLAs into close co-operation in their shared mission.

10.47 The world of navigation has always been subject to constant and at times transformative change. The period between now and 2030 will be no different. Improvements in GNSS will see improved accuracy, availability and integrity in what has become the primary means of navigation for most mariners. The need to mitigate the risks inherent in GNSS vulnerability will undoubtedly see new AtoNs emerge to support GNSS usage and provide resilience within marine navigation.

10.48 The GLAs' coastal environment is complex and will become even more so with thousands of planned offshore installations and aquaculture sites. The international shortage of experiences seafarers who are often over-reliant on navigation technology amplifies the potential risks of navigation our waters.

10.49 As shipping lanes around the UK grow increasingly crowded, the safe transit of ships and seafarers is more important than ever. That is why Trinity House, Northern Lighthouse Board and Irish Lights will continuously improve their operations while meeting the high standards required of their critical maritime safety services.

Action

The three General Lighthouse Authorities will:

- Deliver a reliable, efficient and cost-effective aids to navigation services for the benefit and safety of all mariners
  - Ongoing

- Provide response to wrecks and new navigational dangers
  - Ongoing

- Invest in the research and development of ground-breaking technology to provide innovative solutions in support of safe navigation
  - Ongoing

- Responds to the emerging requirements of mariners and changes to the bathymetry of the waters around the UK
  - Ongoing

- Represent UK interests within IALA
  - Ongoing

11. The complete safety picture

11.1 As this Plan demonstrates, the UK is a world leader across a range of maritime safety specialisms, resulting in UK waters being some of the safest on the planet.

11.2 The Plan also shows that there is more work to do and the collection of actions arising from the document will mark out the route the UK will take in the coming years to further improve our safety record in both the commercial and recreational sectors.

11.3 The Department's Top 5 priorities for Maritime Safety show that we have targeted and measurable work streams to take forward across a range of high-impact areas; from communications and messaging, to fishing vessel safety and national drowning prevention, and how the Department intends to work with the sector to continue making policy of the highest standard and utmost effectiveness.

11.4 We will also seek to continue implementing the safety recommendations from the Department's Maritime 2050 strategy, setting the sector up for years of safer and more successful use and enjoyment of the UK's waters.

11.5 This Plan is, however, the Department's first detailed safety strategy and there will be knowledge and expertise among the sector that surpasses that captured above. Maritime Safety Weeks will serve as forums to have those conversations with collaboration between government and the sector such a fundamental part of the Department's approach to making policy.

11.6 As a living document, the Department will refresh this Plan and report against actions either in standalone publications, future Maritime Annual Reports[36] or MCA publications where relevant. It will also be used internally through DfT governance processes to monitor progress.

11.7 During the Plan's development, the Department sought views from sector experts and will continue to listen to any further thoughts which may help to shape its future development.

11.8 This first iteration of the Plan has focussed primarily on DfT, MCA, MAIB and the GLAs. This is an important safety narrative, but by no means the only one. The Plan is designed in part to engender wider sharing of ideas, actions and best practice across the sector.

11.9 Creating an opportunity to share knowledge and experience is also one of the primary objectives of Maritime Safety Week. The Week also recognises and highlights the excellent safety work that already goes on across the maritime sector and focuses on specific challenges the sector faces and what is being done to tackle them.

11.10 The Department looks forward to continuing working with the maritime sector to keep water users safe and, ultimately, save lives.

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[36] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725560/maritime-annual-report-2017-2018.pdf