Ms Yvette Goss National Transport Regulatory Reform Productivity Commission LB2, Collins Street East MELBOURNE VIC 8003

Dear Ms Goss

Firstly, I would like to thank the Productivity Commission for granting the Australian Maritime Safety Authority (AMSA) an extension to 12 July 2019.

AMSA is now pleased to make the following submission to the Commission's inquiry into National Transport Regulatory Reform. This submission relates to the 2011 Council of Australian Governments (COAG) agreement on domestic commercial vessel safety reform. It reflects progress to date in delivery of the national system for domestic commercial vessel safety and achieving nationally consistent regulation, improved safety, and enhanced productivity and efficiency.

I look forward to seeing the Commission's draft report later this year.

Yours sincerely

BRAD GROVES

Acting Chief Executive Officer

12 July 2019



Productivity Commission
National Transport Regulatory Reform Issues Paper

Australian Maritime Safety Authority submission

12 July 2019

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Executive Summary

The Australian Maritime Safety Authority (AMSA) is pleased to make the following submission in response to the Productivity Commission National Transport Regulatory Reform Issues Paper (Issues Paper).

This submission relates to the 2011 Council of Australian Governments (COAG) agreement on domestic commercial vessel safety reform. It reflects progress to date in delivery of the national system for domestic commercial vessel safety and achieving nationally consistent regulation, improved safety, and enhanced productivity and efficiency.

The focus of the reform was on the establishment of a national system, with a single National Law, national regulator, national compliance and enforcement system, and a national database. This was a significant reform involving the transition of separate state and territory regulation into one national system. Many of the foundation elements of the reform have been delivered.

On 1 July 2013, the Marine Safety (Domestic Commercial Vessel) National Law Act 2012 (National Law Act) commenced. This effectively ended more than a century of having multiple maritime regulators and regulations for the safety of domestic commercial vessel operations. The National Law overcame several situations in which the domestic maritime industry was hindered in operating nationally. For example, prior to the National System, seafarers certified in one jurisdiction may not have had their qualifications recognised in another. Certification of vessels and their crewing arrangements were limited by recognition between jurisdictions, requiring engagement with multiple maritime regulators in order to conduct similar activities in different parts of the country. A further situation the National Law addressed was the requirement that state or territory certified vessels needed to comply with an entirely different Act (Navigation Act) in order to cross the "boundary" between states or territories. This required the owners to engage the Commonwealth regulator and seek exemptions to cross the 'border'. Under the previous system obtaining recognition of qualifications, vessel certificates, crewing arrangements and equipment requirements was not guaranteed and it is well known that on occasion, fitting of additional equipment was required at substantial cost to operators. The National Law removed these barriers to movement and created the framework for a truly national maritime marketplace.

On commencement of the National Law, state and territory marine safety agencies were delegated all service delivery functions under the National Law.

A review of the national system in 2014 identified inconsistencies in jurisdictional service delivery as the cause of systemic inefficiencies that were preventing the realisation of the full benefits of the national system. To resolve this, Transport ministers decided in November 2014 that AMSA would assume full service delivery responsibilities for all domestic commercial vessels. AMSA assumed responsibility for delivering National Law services from the states and territories on 1 July 2018, creating further potential for greater efficiency and consistency in domestic commercial vessel regulation.

As the national regulator, AMSA now administers all functions involved in the operation of the national system, including making subordinate regulations (marine orders), developing and maintaining standards, accrediting marine surveyors, performing all operational and enforcement functions, and maintaining a national database of domestic commercial vessels.

While the national system is a relatively new regulatory regime, the intended objectives and outcomes of the reform are being delivered. Intrastate regulatory boundaries have been removed enabling labour and vessels to operate across jurisdictional waters, under one set of regulations.

Measures to enhance safety have been implemented through new requirements for safety management systems, contemporary safety equipment and consistent survey (inspection) regime for most vessels. An example of the advantages of a nationally consistent approach to safety is AMSA's regulatory reform mandating the use of float free automatically activating emergency position indicating radio beacons (EPIRBs) on certain classes of vessels from 1 January 2021. AMSA is also actively considering ways to enhance passenger safety on board domestic commercial vessels and will be consulting with the community on a number of measures to improve operational safety outcomes on passenger vessels. This review will focus on arrangements used to account for passengers, minimise the risk of passengers falling overboard, and increase passenger chance of survival if they go overboard.

Together with measures to improve safety, AMSA recognises that regulatory arrangements continue to need to be streamlined to reduce the complexity of the national system and provide greater certainty. AMSA is also reviewing seafarer qualification and certificate of competency arrangements. This review is aimed at streamlining the requirements for obtaining and holding certificates of competency and qualifications for crew and masters of domestic commercial vessels; and ensuring that, those who hold a certificate of competency have a satisfactory level of education, training and experience, across the country.

The key challenge for AMSA in delivering the national system is in establishing a more level playing field for all operators under the national system, and strike a balance that promotes safety for all sectors without making requirements overly complex or placing an undue regulatory burden on industry. This is not a simple deliverable considering the starting basis that AMSA had, which was seven very different systems that were regulated, implemented, overseen and cost recovered across the entire spectrum of possibilities.

The cost of the transition to the national system has been funded by Commonwealth, state and territory government at a cost of around \$112.4 million over ten years. In 2018, the Australian Government decided not to introduce a domestic commercial vessel industry levy for the first three years (2018 - 2021) of the national system. However, it has announced a review of all costs and charges for the national system in 2020 – 2021, which will be informed by two years of nationally consistent data on the effort required to deliver the national system.

It is far too soon to attempt to quantify the economic cost and benefit of the national system given the formative nature of the regulatory system, lack of consistent reliable historic data transferred from the states and territories, and the transitional arrangements that were applied as part of the reform. As collection and consistent treatment of national data is built over the medium to longer term, this could be used to support a review of the national system as a whole, and to better understand the cost and benefits of the various measures implemented.

AMSA considers that further changes to the national system regulatory framework are warranted. In particular, incident data indicates that grandfathering arrangements that provide for existing operators to continue operating in accordance with the requirements that applied before the national law commenced on 1 July 2013, and which were agreed to by COAG, are not sustainable in their current form. Since this agreement was made, evidence has shown that, in addition to presenting a safety risk in some instances, grandfathering arrangements create an uneven playing field across the domestic commercial vessel fleet; provide a perverse incentive to avoid contemporary safety standards; and undermine a key objective of the national system - to provide a single national framework for ensuring the safe operation, design, construction and equipping of domestic commercial vessels. While not all

grandfathering arrangements present a risk to safety and are a feature of other transport regulatory regimes, AMSA considers it necessary and appropriate to review the future of grandfathering with a view to winding back those areas that create a barrier to a safer, even and more productive industry.

There is also ambiguity in AMSA's role and co-regulators in the application and enforcement of work health and safety laws on domestic commercial vessels and associated duty holders.

While the COAG intergovernmental agreement specifically stated that occupational, health and safety regulation was *outside the scope of the national system*—and would operate in conjunction with the National Laws— the delineation of responsibilities and obligations between AMSA and WHS regulatory authorities is unclear. There is a need for greater clarity, education and awareness on the role of AMSA and co-regulators, particularly the important role that state and territory work health and safety regulators play in ensuring that domestic commercial vessels (that are workplaces) are safe.

Finally, AMSA's operating environment is continually changing. New technologies are emerging and the way that industry interacts with technology is also evolving. The challenge for AMSA is to keep pace with new technologies and vessel types and ensure that through our policies, regulations and capabilities, we can anticipate these challenges and respond to change in ways that support a safe, environmentally responsible, and efficient maritime sector. This may require greater flexibility in the National Law to enable AMSA to respond to new developments and apply appropriate regulatory standards.

The following sections provide a high-level response to themes identified in the Issues Paper relevant to AMSA. We welcome the opportunity to discuss these matters and other relevant matters further with the Productivity Commission.

Nationally consistent regulation

In 2011, COAG agreed on the national regulation of all commercial vessels in Australian waters (that is, within Australia's Exclusive Economic Zone). The focus of the reform was the establishment of a national system, with a single National Law, national regulator, national compliance and enforcement system, and a national database.

On 1 July 2013, the National Law commenced. This effectively ended more than a century of separate responsibilities for the safety of domestic commercial vessels, owners and crew. These separate regimes created significant barriers to cross jurisdictional operations due to different regulatory requirements in areas such as qualifications, equipment, crewing and difficulties in obtaining permission or exemptions to operate across borders. The National Law removed these barriers to movement and created the framework for a national maritime marketplace.

In the early stages of the national system, state and Northern Territory marine safety agencies continued to provide services to industry under the National Law. This approach minimised disruption to industry, although in doing so it also perpetuated the inconsistency in the application and enforcement of national regulations by the states and Northern Territory maritime safety agencies.

This was recognised by COAG who decided in November 2014 that AMSA should assume full responsibility, including service delivery, for this national reform.

On 1 July 2018, AMSA assumed full responsibility for delivering all services under the national system. This was the final step in implementing a national and nationally-consistent approach to maritime safety regulation and services across Australia.

AMSA now administers all functions involved in the operation of the national system for domestic commercial vessel safety. This includes making marine orders, developing and maintaining standards, accrediting marine surveyors, performing all operational and enforcement functions, and building and maintaining a national database of domestic commercial vessels.

Grandfathering arrangements inhibiting national consistency

The greatest constraint on the further development of a truly national system is the grandfathering arrangements agreed by COAG as part of the reform. These grandfathering arrangements were agreed so existing domestic commercial operators could continue to operate in the same manner as they did before the national system came into effect. Whilst a logical approach at the time, the effect of how it was interpreted and applied has inhibited AMSA's ability to make regulatory improvements and improved safety outcomes to be fully recognised across the domestic commercial vessel fleet.

While AMSA has 'wound back' grandfathering arrangements in relation to safety equipment and EPIRBs , operational requirements and survey frequency, and created incentives for vessel owners to move to more contemporary standards generally, there is more to be done. However, the centrality of grandfathering to the national system and gaining industry 'buy-in' to the reforms means that doing more requires not only a careful, consultative review that takes into account incident data, and other key indicators but also a reassessment by policy makers of whether the original intent of the reforms is being achieved.

The national system was designed so that no existing operators would be negatively impacted by the reform. It was intended to provide greater opportunity for national movement for existing operators and crew, and to provide a truly national system for new entrants, without significantly affecting existing operators who simply wished to continue operating in the same manner as they did before the reform. What has been found is that due to the significantly wide scope of what state and Territory maritime safety agencies accepted, the decision allowed unacceptable situations to continue, which is obviously not an intended consequence. The introduction of the national system in 2013 was not considered to be the appropriate time or mechanism through which to apply new standards to the existing domestic commercial vessel fleet. However, this did not mean that new standards or requirements would never be applied to existing vessels. This was made clear in the 2012 Regulatory Plan which stated that the grandfathering arrangements would continue to apply unless incident data dictated the need to adopt an alternate approach. The 2012 Regulatory Plan committed to the continual assessment of the safety of the national fleet in light of incidents, emerging risks, changing technology and/or changing expectations. It is important to acknowledge that there are sectors of industry that view AMSA pursuing this path as in conflict with the decisions made by COAG, and therefore unacceptable.

The national system grandfathering arrangements have the unintended consequences of creating a competitive advantage for pre-national system operators, as compared to new entrants. For example, there are 'survey type' vessels in some jurisdictions, including those carrying passengers and operating offshore, that are not required to be periodically surveyed or be operated in accordance with contemporary crewing requirements — unlike a newly constructed vessel of the same type and conducting the same kind of operations. Where an existing vessel is able to operate without meeting current crewing or survey standards, the operational costs of that vessel are less, and the operator has a competitive advantage as compared to the operator of a new vessel.

In addition, the capital investment costs of a new vessel which meets the latest standards may be higher; creating incentives for holding onto older vessels due to their grandfathered status. Older vessels are subject to older standards which do not provide the same level of safety as the current design and construction standards. As such, creating strong incentives to hold onto older vessels will likely lead to more incidents, injuries, serious injuries and deaths in the domestic commercial vessel fleet.

National database

Domestic commercial vessel data

One year of full service delivery has given AMSA greater visibility of the size, demographics and diversity of the domestic commercial fleet.

It is estimated that there are approximately 27,000 vessels in the domestic commercial vessel fleet. Of the estimated 27,000 vessels in the fleet, approximately:

- 9% are passenger vessels
- 45% are non-passenger vessels (this includes trading vessels and small passenger vessels those with 12 passengers or less)
- 35% are fishing vessels, and
- 11% are hire and drive vessels.

Many of these have been in the fleet for considerable time. Some are 'survey type' vessels and not required to have a certificate survey because of the grandfathering provisions, and therefore restricting AMSA's visibility of the fleet and demographics.

These and many other vessels may have entered into commercial service prior to the national implementation of the NSCV in 2008, and will therefore have been subject to the Uniform Shipping Laws Code (USLC) or an alternative unspecified standard.

From 1 July 2018, AMSA became solely responsible for managing the data for the National System. Previously, AMSA received a snapshot after state and territory regulatory bodies had interacted with the industry and there are limitations due the quality and completeness of the historic data. AMSA is working to address this as a priority.

A key issue for AMSA in developing and maintaining a national database as that there was previously no consistent methodology for capturing records or data for domestic commercial vessels. Prior to AMSA taking on service delivery, some jurisdictions ran decentralised paper-based record management systems, while other jurisdictions maintained electronic files. It has also become apparent that not all required records may have been captured accurately, comprehensively or at all, regardless of the methodology used.

This has practical implications for AMSA and industry, as it is not always clear what certificate or approval a vessel may have, if any, nor the history the vessel and operator have with the state and territory regulatory bodies. As a result, AMSA regulates domestic commercial vessels based on mostly inherited data that contains errors, and is incomplete. Correcting these issues is time consuming and resource intensive and remains an ongoing challenge for AMSA.

Incident data and information

A further challenge for AMSA is strengthening the incident reporting culture in the domestic commercial vessel fleet. Incident reporting plays an incredibly important role in identifying and addressing safety risks and hazards. Incident reporting is used to support investigation of incidents which in turn inform implementation of appropriate control measures to avoid reoccurrence of incidents. It also supports analysis and development of more effective safety strategies and advice to owners, operators and seafarers to avoid similar events in the future or mitigate risks.

AMSA publishes a monthly summary of the serious marine incidents related to domestic commercial vessels on the AMSA website¹. We are also investing in data analysis to learn from and produce better metrics around this data.

AMSA actively participates in coronial inquiry processes to better understand the events and factors that contributed to an incident and, where possible, take steps to prevent these events from reoccurring.

This topic is a clear reflection of the ambiguity of regulatory roles mentioned earlier.

Work health and safety regulators also have a role in responding to notifiable incident under state and territory laws, including incidents that occur on domestic commercial vessels that are workplaces. AMSA would welcome clarity of roles and increased participation by state and

¹ Monthly incident report, available at https://www.amsa.gov.au/vessels-operators/incident-report

territory work health and safety regulators during the coronial processes so that there is increased awareness regarding the application of work health and safety laws on domestic commercial vessel.

While state and territory coroners are responsible for investigating and determining the cause of death for those cases reported to them, they cannot, in all cases, undertake systemic investigations of all serious incidents - including those that do not lead to a fatality. This function could be undertaken by a body such as the Australian Transport Safety Bureau if the agency was resourced to undertake that role across the domestic vessel sector. The result of the investigation could be provided to AMSA to take steps to minimise the chance of incidents reoccurring.

Improved safety

AMSA has taken clear and significant steps to lift safety standards across the industry. As part of a broader review of reforms to the transport sector, HoustonKemp was commissioned by Department of Infrastructure, Regional Development and Cities to analyse the safety outcomes arising from the national system, and summarises the major safety outcomes being

- the consistent application of the National Law, bringing previously unregulated vessels and vessels with jurisdictional exemptions into a nationally consistent safety regime,
- making changes to the regulatory framework to improve safety and remove red tape and complexity wherever possible,
- consolidation of regulation setting responsibilities with AMSA enabling more responsive changes to the NSCV and marine orders in response to developments in best practice, and
- the development of a nationally consistent dataset to allow for more considered and risk based decisions on safety regulatory administration.

AMSA supports these findings.

In addition to those features of the national system designed to bring a nationally consistent approach to regulation, AMSA has instituted requirements for new and existing vessels to have safety management systems addressing contemporary safety requirements, as well as consistent periodic survey requirements for most vessels, and applied transitional requirements for vessels to have contemporary safety equipment. AMSA has also mandated the use of float free automatically activating EPIRBs from 1 January 2021 for a wider sector of the fleet to improve safety outcomes.

AMSA is also actively considering ways to enhance passenger safety on board domestic commercial vessels and will be seeking community views on a number of possible measures to improve operational safety outcomes on passenger vessels. This review will focus on arrangements used to account for passengers, minimise the risk of passengers falling overboard, and increase passenger chance of survival if they go overboard.

While it is far too soon to quantify safety outcomes at this early stage of the reform, particularly given the lack of consistent reliable historic data, and the transition arrangements that were applied, the long term trends identified through national incident data accumulated over time will be used to inform the safety measures.

Safety risks associated with grandfathering arrangements

As highlighted above, AMSA considers that continuing grandfathering arrangements in their current form, is not sustainable and requires review. AMSA's view is that the broader public also expects vessels—particularly passenger vessels—to be safe, and periodically checked by a qualified person to ensure they meet and continue to meet contemporary safety standards. Accordingly, AMSA sees a clear need for a review of the current grandfathered arrangements for higher risk vessels, and for regulatory changes that will allow AMSA's focus going forward to be on the safety of all vessels, all operators, and all crew – rather than on preserving all of the grandfathering arrangements that currently exist.

Over the six years since the commencement of the National System, incidents - including fatalities - have highlighted problems with some of the vessel standards, survey and crewing arrangements that have been grandfathered to align with pre-national system vessel standards, and that, in some cases, the grandfathered arrangements pose risks to safety, property and the environment.

State and territory coroners have recommended the removal of grandfathering for domestic commercial vessels, especially fishing vessels which tend to be older, subject to more exemptions historically, and operate in higher risk conditions and operations. AMSA's view is that incident data warrants a reconsideration of the grandfathering arrangements inherited with the national system, with a view to winding back those aspects which are unsafe.

AMSA has ended some grandfathering arrangements for carriage of safety equipment, operational requirements and periodic survey requirements for most vessels. However there remains a large section of vessels that entered commercial service before the national system commenced that are still permitted to comply with the crewing, construction and design requirements that applied on 30 June 2013. Importantly, many of these vessels were not required to have a survey certificate or undergo a routine survey inspection regime — not only do these arrangements create an uneven playing field, but create safety risks as vessel modifications that affect the operation of the vessel go undetected. AMSA considers that continuation of these arrangements into the future, indefinitely, is out of step with community expectations of the commercial vessel sector.

AMSA acknowledges that the grandfathering arrangements were a central principle of the National Law agreed by policy makers and changes may have significant cost impacts, particularly for owners and operators of older vessels. Nonetheless, we consider that preserving grandfathering arrangements, in their current state, is not sustainable and that current grandfathering arrangements need to be addressed for the safety of persons on board these vessels.

Productivity improvements

HoustonKemp also assessed the productivity benefits associated with the national system reform, and found benefits in:

- shifting to the use of accredited private surveyors, from previous government employed surveyors in most jurisdictions,
- ensuring that certificates of competency are nationally recognised to improve mobility of crew across jurisdictions,

- consolidation of regulation setting responsibilities with AMSA enabling more responsive changes of the NSCV and marine orders in response to developments in technologies and practices that improve productivity, and
- improving the national market for the sale of domestic commercial vessels through nationally consistent regulatory requirements, including certification standards and survey requirements.

AMSA supports these findings, which are consistent with the direction of regulatory and operational improvements AMSA has made to date and has planned as part of its future regulatory agenda for improving the National Law.

Regulatory burden and cost

One of the objectives of the COAG reform was that there would be no overall increase in the regulatory burden as a result of the national system. Further, the intent was that the national system would reduce complexity.

Steps have been taken to streamline construction standards, survey requirements, crew competency standards, and vessel and operator certification. New regulatory measures are risk-based, and AMSA undertakes industry consultation on proposed changes to the laws that apply to domestic commercial vessels.

Streamlining regulation

In November 2013, Commonwealth, state and territory Transport Ministers agreed to a 'Streamlining Review' to ensure that the potential safety and economic opportunities of the national system could be recognised. The Streamlining Review was overwhelmingly supported by industry, which saw it as a unique opportunity to resolve concerns with how the national system had been implemented, and to address existing regulatory problems that had existed in state and Northern Territory marine safety frameworks.

Reforms aimed at streamlining the regulatory arrangements were progressed in 13 areas of the national system as a result of the Streamlining Review, including construction standards, survey requirements, crew competency standards, and vessel and operator certification. Almost all of the streamlining reforms had taken effect by 1 July 2018.

When undertaking any regulatory reforms, AMSA complies with the Australian Government's Deregulation Agenda aimed at improving the quality of regulation, and minimise the regulatory compliance burden on the community. This includes applying the Regulatory Burden Measurement framework for calculating the compliance costs of regulatory changes and the Regulator Performance framework to minimise the impact of regulators on those they regulate while still delivering the vital role they perform. To meet these obligations, AMSA has applied a risk-based approach to regulation and compliance.

One example of a streamlining initiative undertaken by AMSA that delivered significant cost benefits to industry were the changes to the survey requirements for domestic commercial vessels. The Streamlining Review determined that there would be considerable benefits for industry and AMSA in re-aligning survey activities with risk. The outcome of this process was a proposed new survey regime, the impact of which is considered in the Survey under the National System for Domestic Commercial Vessels Regulation Impact Statement (RIS).

The changes align survey frequency with risk on an individual vessel basis, provide for greater flexibility to reduce the number of out-of-water surveys required, and allow surveys to be more easily aligned with other vessel maintenance activities. The RIS indicates that the preferred option represents an estimated \$97 million in quantified net benefits to the community as a whole over a 10-year period, as well as providing numerous unquantified benefits, including for marine safety. The preferred option results in a reduction in compliance costs to business of \$14.31 million per annum, over ten years.

AMSA is well aware that this outcome has not been well received by the third party accredited surveyors conducting the survey regime who have a view that reduced surveys equals increased risk and reduced safety.

Risk-based regulation

The national system captures a diverse range of vessels, from large passenger carrying vessels, to fleets of aquaculture vessels and small human or sail powered craft used in 'hire and drive' operations. The risk-based regulatory approach applied to accommodate this diversity of the fleet including:

- application of the NSCV a performance-based standard that includes 'required outcomes'
 and 'deemed to satisfy' solutions. The required outcomes are a high-level statement of the
 safety outcome required, while the deemed to satisfy solutions provide a prescriptive option
 for meeting the required outcomes. A graded approach is used to ensure that the deemed to
 satisfy requirements match the vessel's level of risk, based on both operational risk
 parameters, and risk parameters inherent in the use of the vessel.
- the frequency of periodic surveys for vessels in survey vary considerably depending on the
 risk of the vessel type and its operations. Survey requirements can also be increased or
 reduced on an individual vessel basis, depending on the performance of that vessel during
 surveys and other compliance monitoring activities.
- application of a number of general exemptions to certification requirements. The
 arrangements ensure that the certification requirements of the National Law do not apply to
 vessel and operational types where, based on risk, they are not justified.

The performance-based approach includes a system of monitoring compliance with safety outcomes. Where operators have compliant vessels, a good safety record and a safety management system, AMSA focuses on periodically verifying that they are complying with the safety outcomes required by the law through risk-based surveillance and systems-based audits. However as noted above, the accuracy and completeness of data remains an ongoing challenge for AMSA.

More regulatory oversight is directed towards industry sectors and operators that do not have an established or good record of compliance, including new operators and crew, where the risks and/or consequences of an incident are high, or where incident data indicates in increase in injuries or fatalities. In addition, breaches of the law may be met with strong enforcement actions in order to promote voluntary compliance across the industry more broadly.

Stakeholder engagement

Stakeholder engagement is a crucial part of AMSA's regulatory development processes. It is a feature of our enabling legislation, a key requirement of the government's best practice regulation frameworks, and an important part of being a modern, best practice regulator. We use a number of different forums and mechanisms to consult and engage our stakeholders, including:

- open public consultation process
- advisory committees
- industry led committees
- temporary working groups established for a specific topic or proposal
- a regionally-based liaison officer network; and
- direct engagement with individual stakeholders.

Exemptions

The diverse nature of the domestic commercial vessel fleet, and the need to ensure the smooth transfer of responsibility from state and Northern Territory marine safety agencies meant AMSA had to take a flexible approach. The exemption power in section 143 of the National Law provides legislative power to AMSA to provide for flexibility in some instances. AMSA can only exercise this power if satisfied that doing so will not jeopardise the safety of a vessel or a person on a vessel.

The diversity of the fleet is largely a result of the broad legislative scope of the national law, which includes a broad range of lower risk vessels, such as hire and drive vessels such as kayaks and small sail vessels. The coverage of vessels for use in connection with 'commercial activities' has also operated to ensure that the national law covers a wide range of activities, including share economy activities. While these vessel operations were treated in a variety of different ways by states and territories prior to the commencement of the national system, national law requirements are not necessarily capable of being appropriately calibrated to suit a wide range of vessels and vessel operations in the same way. The exemption power has been an important means of better tailoring national law requirements to different vessels and operations in a risk-based manner; however, the need to do this highlights unintended consequences of casting the scope of the national law in such broad terms.

General exemptions that apply to a class of person or vessel can only be issued by AMSA's Chief Executive Officer and are generally subject to strict eligibility criteria and conditions being met. These exemptions are publicly available on the AMSA website.

Vessel owners generally have to apply to access these exemptions, with approvals issued for a specific vessel being subject to additional conditions.

'Specific exemptions' granted to a specific vessel or group of common vessels contain vessel and operator specific information, including commercially valuable information, and therefore are not considered appropriate for publication on the AMSA website. In addition to strict internal protocols and appropriate levels of decision making delegation, AMSA's policy on issuing specific exemptions is available on AMSA's website.

AMSA monitors areas of the National Law, including marine orders, where exemptions are frequently sought and evaluates the reasons that applications for exemptions are made. Where appropriate, AMSA works with relevant sectors of industry to identify an effective means of compliance that could be utilised without the need for a specific exemption.

It is likely that exemptions will remain part of AMSA's regulatory framework, as is the case for other transport regulators (including the Civil Aviation Safety Authority). They are an important means of accommodating the vastly diverse nature of the domestic commercial vessel fleet.

AMSA's intention is that they will be used in exceptional circumstances only going forward, rather than as a 'mainstay' of AMSA's regulatory framework. However, it is likely that this will require legislative change to ensure the national law can be better calibrated to ensure it can be tailored to diverse vessels and operations

Co-regulation

The National Law was developed on the basis that it would apply alongside offshore regulation and certain state and territory laws, including waterways management, fisheries management, gas and electrical safety, drug and alcohol, and passenger monitoring, as well as work health and safety.

These laws apply to domestic commercial vessel operators, but are developed, administered, and enforced by other national, state or territory regulators – referred to as 'co- regulators'. Each area of law imposes separate and distinct obligations on operators. However, at times these laws impose obligations that duplicate the requirements in the National Law; impose substantially the same, yet slightly different, requirements, or conflict with National Law requirements.

The effect is that these state and Northern Territory laws can undermine the 'one system, one decision-maker' principle underpinning the National Law. Further, changes to state or territory laws that operate concurrently can have major impacts on commercial vessel operators and AMSA has no control over these changes.

To address this, AMSA has put in place mechanisms to facilitate cooperative arrangements with some co-regulators. This includes memoranda of understanding with most of the state and territory work health and safety regulators, which requires AMSA and the work health and safety regulators to consult on policy and legislative change, collaborate on education opportunities aimed at improving safety, and share research and findings relevant to safety in the maritime industry.

However, there remains some confusion among many in industry on the boundaries and responsibilities of AMSA (and the National Law) and state and territory agencies (and legislation, particularly regarding state and territory work health and safety laws). AMSA's view is that these parts of the National Law should be reviewed in light of the ambiguity and duplication that has arisen.

National system cost

Before AMSA assumed full service delivery functions for the regulation of domestic commercial vessels on 1 July 2018, the Government decided not to introduce a domestic commercial vessel industry levy for the first three years (2018 -2021).

The cost of establishing the national system was funded by government (Commonwealth, states and territories) totalling \$112.4 million over ten years. As part of the Government's funding commitment, it announced a review of all costs and charges for the national system in 2020 - 21. The review will consider the appropriateness of fees and charges, and will be informed by two years of nationally consistent data on the effort required to implement the national system.

A separate, but related, issue was highlighted in a recent Australian National Audit Office (ANAO) review into AMSA's Application of Cost Recovery Principles. The review found an over-recovery of the Regulatory Functions Levy, collected from merchant shipping, and resulting cross-subsidisation of domestic regulatory activities.

A review and quantification/costing of AMSA's service functions across both international and domestic activities would assist in the revision of funding models. Some industry stakeholders have raised concerns about cost impact and called for consideration of public good funding and levy caps. AMSA would welcome the Productivity Commission views on these matters, acknowledging that any funding decisions are a matter for government and expected to be considered in the 2020-21 review.

Future developments

AMSA's operating environment is continually changing and we must ensure that through our policies, regulations and capabilities, we can anticipate these challenges and respond to change in ways that support a safe, environmentally responsible, and efficient maritime sector.

AMSA published the 'Looking Ahead 2017–2027' report² outlining the challenges faced by AMSA as a regulator and response agency, as well as the likely changes to the operating environment over the decade to 2027. This includes:

- anticipating and responding to current and emerging risks associated with Australia's commercial and domestic shipping traffic, routes and hubs
- maintaining an appropriate risk-based approach to regulation and compliance
- enhancing the environmental sustainability of shipping
- assisting the introduction of modern navigation systems and information and communication technologies
- facilitating the operation of autonomous and unmanned vessels, and autonomous capabilities
- Responding to disruption, including the emergence of the share economy
- ensuring human factors are considered in safety
- supporting the development of single window reporting for trade facilitation
- advocating for national marine spatial planning in Australia
- effective international and domestic engagement, and
- anticipating the changing role of seafarers.

One of the key themes of the report, and the Issues Paper, is the rise of autonomous vessels. The type, size and capability of autonomous and unmanned vessels is expected to rapidly increase in the coming decade. While remote (or partial remote), unmanned or autonomous operation of vessels has the potential to offer safety and efficiency benefits, new regulatory approaches need to be developed. Traditional commercial vessel standards, in particular the NSCV, were developed in the context of vessels which require crew and had persons on board the vessel. The risk profile of a crewed vessel are significantly different to those of an unmanned or autonomous vessel, and some traditional standards (such as accommodation and safety equipment) will not be appropriate for autonomous or unmanned vessels. At the same time, the current standards may not appropriately manage some of the risks of automation—such as collision risks—and do not reflect the competencies required to remotely control the vessel.

Another example of disruption in the marine industry is the arrival of the share economy in the domestic vessel space. The 'share economy' offers a number of economic benefits and opportunities (through the efficient utilisation of assets). However, the use of an otherwise recreational vessel in the share economy—for example, by renting out a vessel as overnight accommodation—will render that vessel a 'domestic commercial vessel' under the current

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² 'Looking Ahead 2017–2027' report available at https://www.amsa.gov.au/sites/default/files/looking-ahead-2017-2027.pdf

National Law. The current regulatory framework does not readily accommodate a predominantly recreational vessel that is used commercially from time to time.

New technology

New technology can support improvements to both safety and environmental outcomes. However, the alternative solutions often come with their own safety and environmental risks that must be properly evaluated. The challenge for AMSA is to keep pace with new technologies and innovative ways of operating and provide an appropriate regulatory response.

The following have the potential to make a significant, positive impact in the broader maritime sector, both domestically and internationally:

- automation of shipboard systems and shipping more generally (e.g. autonomous shipping technologies); this has the potential to reduce human error and crew fatigue, with a commensurate increase in safety;
- integration of shipboard equipment to enable improved safety, by the automated monitoring of safety-critical operations (e.g. navigation of ships, engine and cargo operations);
- positioning, navigation and timing services provided by Global Navigation Satellite Systems (GNSS). The US-operated Global Positioning System or GPS is a prime example. Ships already increasingly rely on such electronic information, the use of which yields safety and efficiency gains. However, it can also result in less resilience in the event of service unavailability;
- navigation systems that are capable of effectively using modern, shore-based electronic
 aids to navigation. Rapidly increasing and affordable satellite communications, 5G and
 other developments in terrestrial communications technology. Improved connectivity will
 lead to more oversight of ship operations, support for safety-related decision making and
 efficiency of operations; provision of digital maritime services, increasing safety and
 efficiency; 'maritime actors' such as port authorities and agents, will be able to exchange
 information in an automated and secure manner, to optimise global supply chains; and
 growing shore monitoring of shipboard systems;
- machine to machine information exchange through the adoption of internationally standardised information formats (e.g. use of the International Hydrographic Organization's S-100 geospatial information registry for internationally agree maritime data standards);
- new digital maritime services will provide navigation and safety-related services more efficiently onboard. This will reduce workload and improve situational awareness, leading to improved safety outcomes; and
- increasing commercial pressures on ships and ports will see decentralised support and decision making. Industry can expect more bespoke planning information for their ships from ashore and more efficient traffic organisation (using route exchange and just-in-time arrival mechanisms).

Regulation of new technologies

In cases where technology offers radically different methods of operation, prescriptive regulation will in most cases not be fit for purpose. Regulators need to be agile to recognise when this occurs and to make changes to regulation to permit new or changed ways of working, while preserving effective assurance of safety and environmental protection. Regulators will need to determine whether prescriptive or performance based regulation is most appropriate. This will depend very much on the specific circumstances of the case.

As a safety regulator, AMSA must strike a balance between accommodating innovation and development and maximising efficiency and safety. To do this effectively, we, like other regulators, must keep up with relevant research and development and be effectively engaged with industry and the broader community.