Australian Government
Australian Maritime Safety Authority

Complex maritime emergency management

February 2022

COMPLEX MARITIME EMERGENCY MANAGEMENT

Planning Handbook for the Australian Emergency Management and Maritime Sectors

Version 2.0 03 Feb 2022

Australian Maritime Safety Authority

DOCUMENT CONTROL

Version	Date	Owner	Updates
V1.0	24 Apr 21	AMSA	Initial version published on AMSA website
V2.0	03 Feb 22	AMSA	Second version provided to AMSA Publishing for publishing

FOREWORD

Complex Maritime Emergencies (CMEs) are a persistent threat to the global maritime environment, and those who work on and by the sea. We are periodically reminded of this threat by seemingly random, catastrophic events - ranging from collisions to offshore spills and even the loss of aircraft in remote areas.

The Australian Maritime Safety Authority (AMSA) recognises that to be truly effective in the management of CMEs, we must work in a co-ordinated and collaborative fashion with partners and stakeholders who bring advanced understanding of the operational environment, and those who do not. This Handbook provides leaders with cross-jurisdictional planning guidance for effective management of CMEs. It should be read in conjunction with the National Plan for Maritime Environmental Emergencies (NPMEE), which sets out additional considerations and the role of the Maritime Emergency Response Commander (MERCOM) in the Australian Maritime Environment.

This Handbook complements the 2021 Crisis Appreciation and Strategic Planning (CASP) guidebook released by Emergency Management Australia (EMA) and the Australian Civil-Military Centre (ACMC). CASP is a strategic planning tool drawing on approaches used by the military, human-design thinking and the Australasian Inter-Service Incident Management System (AIIMS) to aid in making sense of complex issues related to crises and disasters using a national lens.

This Handbook aims to provide:

- Clearer understanding of multi-jurisdictional issues requiring management and consideration
- Improved inter-organisational response through the coordination of multiple governance arrangements
- Minimisation of suffering for impacted individuals, communities, infrastructure and environments
- Improved access to information, experts, and specialist advice to support evidence-based planning, response and recovery systems
- A better understanding of existing arrangements and the need for regular exercises.

We ask that you continue to work with us as we invest in preparing ourselves, and Australia, to manage a new era of complexity in Emergency Management in the maritime environment. Further, we invite you to adopt this guidance and work with us to refine it over time to best reflect the practices we know are most effective, efficient and aligned with our national values and interests.

Regards

MICK KINLEY
Chief Executive Officer

CONTENTS

1 INTRODUCTION

1.1 PURPOSE

Australia has an extensive maritime domain extending to 200 nautical miles from our coastline and shares maritime boundaries with Indonesia, Timor-Leste, Papua New Guinea, and other nations. The Australian Search & Rescue Region (ASRR) covers one-tenth of the surface of the world. Within the entirety of Australia's maritime jurisdictions, responsibilities for emergency management are shared between the states, the Northern Territory and the Commonwealth Governments.

The purpose of this Complex Maritime Emergency Management Handbook (this Handbook) is to provide planning guidance and context for users across jurisdictions towards establishing an agreed, structured and coordinated response to a Complex Maritime Emergency (CME). Specifically, it seeks to address complex emergencies that encompass multiple jurisdictions, sectors and/or hazards and that present a significant threat to Australian communities, critical infrastructure, economies and the environment. This Handbook should be utlisited in conjunction with the Crisis Appreciation and Strategic Planning (CASP) Guidebook processes and products that enable emergency management practitioners to make sense of complex situations.

This Handbook:

- acknowledges existing maritime and emergency management arrangements across jurisdictions, which may be called upon to support the management of a CME
- recognises that the initiating agency or jurisdiction may not have ultimate control for the duration of a CME and that a flexible coordinated approach is required
- provides guidance to develop suitable mechanisms for ensuring there are agreed coordination arrangements in place for incident and resource management
- more accurately describes the complex interaction between state and Commonwealth jurisdictions.

1.2 WHAT IT IS NOT

This Handbook is not an assessment mechanism by which jurisdictions will be held to account. Rather, it outlines a collaborative planning approach to ensure the obligations and capabilities required to respond to CMEs are understood across agencies and jurisdictions. It provides guidance that may be useful to jurisdictions to consider as they build their capability and prepare for management of CMEs.

This Handbook does not replace any existing emergency management plans or arrangements, however should be read in conjunction with relative extant maritime emergency plans in both the jurisdictional and national context. The focus of this Handbook is to ensure agencies and jurisdictions work collaboratively to understand, assess, and build capabilities needed to manage a CME.

1.3 AUDIENCE

The audience for this Handbook is:

- Executives and managers of governments, industry, responders, operators and impacted stakeholders
- Executive crisis teams and emergency planners in immediate response agencies
- Planning and emergency management entities in each jurisdiction responsible for regulating safety and operations at sea
- Control agencies for search and rescue (SAR), i.e. Police, Coast Guards, Australian Defence Force (ADF) and the Australian Maritime Safety Authority (AMSA)
- Control agencies for other classes of maritime emergencies, e.g. oil and hazardous and noxious subtsances incidents, maritime casualties
- External entities including shipping companies, aviation companies, and the media.

1.4 SCOPE

1.4.1 COMPLEX MARITIME EMERGENCIES

CMEs are large-scale and multi-faceted events that exceed the resources of a single jurisdiction and pose distinct threats to community safety, the economy, and the environment. CMEs may include a range of incidents resulting from the operation of vessels or aircraft within maritime geographies, such as:

- Cruise ship capsizing and evacuation
- Maritime casualty grounding in sensitive environmental areas
- Multi-vessel incidents
- Hazardous or noxious substance major incident
- Tanker, container or bulk carrier vessel fire.

CMEs have variables not present in land-based disaster response arrangements. This Handbook is designed to provide emergency managers with context and planning guidance in the event they have an obligation for response actions.

Classification as a CME requires one or more of the following characteristics:

- Potential for significant delays and difficulties in responding to critical situations
- The incident contains multiple hazards, e.g. a mass rescue event from a cruise ship and a major oil spill (in which case the National Plan for Maritime Enviromental Emergencies should be referenced)
- The incident is large-scale, where the consequences and required resource allocation occurs across multiple jurisdictions

- Where there may be uncertainty as to the coordination arrangements for a maritime emergency
- The event is likely to have catastrophic consequences to life, infrastructure, the economy, the environment or other operational impacts
- The response to the event causes significant conflicting priorities for resource allocation.

1.4.2 GEOGRAPHIC SCOPE

This Handbook addresses incidents occurring within Australia's maritime domain, including:

- State coastal waters (extending to three nautical miles from the baseline)
- The Commonwealth marine domain, extending to the Exclusive Econominc Zone (EEZ) and Australia's Search and Rescue Region (ASRR).

This Handbook also addresses incidents that may occur outside Australia's maritime domain in international waters, but that impact Australian interests. This may include:

- Incidents involving Australian assets or vessels
- Incidents occurring on the High Seas, that may impact upon Australia's maritime domain
- Incidents occurring in neighbouring countries' jurisdictions that require transboundary coordination.

1.4.3 EXCLUSIONS

The following incident types are considered out of scope for this Handbook:

- Terrorism or security related incidents should be managed in accordance with the *National Counter-Terrorism Plan*
- Offshore petroleum industry incidents should be managed in accordance with the *Offshore Petroleum Incident Coordination Framework*
- Military incidents in the maritime context should be managed in accordance with established Department of Defence protocols.

1.5 INTEROPERABILITY WITH EXISTING ARRANGEMENTS

CMEs are coordinated under complementary joined-up arrangements. This Handbook acknowledges and promotes consistency with those extant arrangements to enable an orderly transition should it be determined that those arrangements are not delivering desired outcomes in timely fashion.

In particular, responses to CMEs should be pre-planned for utilisng the CASP process and products. This will idenfity key strategic issues and capabiltiy requirements as well as second, third and fourth order consequences.

Jurisdictional planning for CMEs should acknowledge relevant legislation and emergency management arrangements and align proposed response and recovery structures with the same. Appendix B contains a non-exhastive list of relevant legislation.

2 CONTEXT

There has been a shift in the maritime risk profile driven by increasing dependency on global shipping and increasing congestion of shipping chokepoints. As a result there has been a change in the type, scale and subsequently, management of major maritime incidents[1]. Global trends and expectations include:

- A decrease in tolerance of environmental and societal impacts as a result of maritime incidents, placing pressure on immediate and effective government-led responses
- Domestic and international regulation of the maritime sector has increased, amplifying the legal, jurisdictional and administrative complexity during a response[2]
- Cyber security threats are increasing and are creating a new dimension of strategic threats to vessel operations, such as remote takeover of large vessels
- Growth in Australian imports, including consumer goods, has increased demand for throughput at Australian ports[3] [4]
- The emergence of autonomous vessels
- Alternative fuels such as Very Low Sulphur Fuel Oils and Hydrogen
- Technological advances and innovation, driving safety improvements and increased concentration of risk – such as dependence on satellite infrastructure
- New vessel designs are larger to minimise fixed operating costs and deliver economies of scale. This has increased the exposure of the maritime sector to the cost of wreckages, storm debris, recoveries, environmental sensitivities and liabilities.

AMSA is a primary stakeholder in the management of CMEs taking place in this changing landscape. Considering these recent experiences and trends, AMSA identified a need to further develop and refresh national arrangements for managing CMEs and acknowledges the importance of developing this alongside key partners and stakeholders.

2.1 COMPLEXITIES IN THE MARITIME CONTEXT

There is a wide-ranging scope of international and national legislative instruments and authorities that already work to both enable and constrain response activities. Decision makers should be aware

[1] Det Norske Veritas – Germanischer Lloyd Report (2020) – Oil & Risk Projections

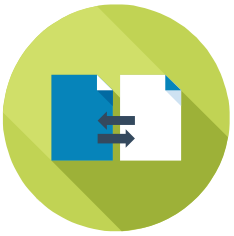
[2] Harris, P. (2019). Climate Change and Ocean Governance: Politics and Policy for Threatened Seas. Cambridge, UK: Cambridge University Press.

[3] Australian Maritime Safety Authority. (2019-20). Annual Report. Canberra, ACT: Australian Government.

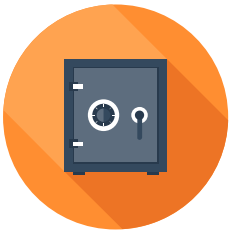
[4] Caldwell, J. P. (2020). Rail, Air and Sea Freight Forwarding in Australia: AUSTRALIA INDUSTRY (ANZSIC) REPORT I5292B. IBISWorld.

of sector-specific legislative provisions that prohibit or enable certain activities. When considered in tandem, various laws and regulations will cover a wide range of issues, which may include:

Ownership and scope of powers



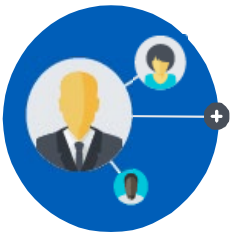
Transfer of powers



Insurances

Legal right to operate in specific geographic areas

Workplace regulations



Interface with vessel personnel, government agencies and geographically distributed specialist resources

2.1.1 INSURANCE

Insurance creates a complication with regards to recovery due to its potential to misalign with government intent and the effect of unclear liabilities. There is also the added complexity of the common requirement to leverage highly specialised resources only available to commercial operators.

There are multiple types of insurance in the maritime industry, and each insurer will want to be kept informed of the response so they can justify or fight the costs of the response. They include:

- Hull and Machinery Insurance: for the vessel and the equipment onboard
- Protection and Indemnity Club Insurance: for third-party risks unrelated to hull and machinery such as loss of cargo, pollution, wreck removal and salvage
- Marine Cargo Insurance: for protection against the loss or damage of cargo due to accident or delay in delivery.

2.1.2 OWNERSHIP, REGISTRATION, CLASSIFICATION SOCIETIES AND FOREIGN NATIONALS

Foreign going vessels have complex ownership, registration and crewing issues that will cross multiple international jurisdictions. Take for example the number of stakeholders who would be interested in a fictional container vessel incident. The owner, from Greece, the flag state

(registration) is Panama, the classification soceity is from the United Kingdom, the crew are from four different nations, and the owners of the containers and their contents are all stakeholders. Each would be interested in the response and required resources. This is in additon to the salvors and the insurers.

2.1.3 SALVAGE

Maritime salvage is a complex and specialist area of international law. The principle of the law is that any person who helps recover another peron's ship or cargo in peril at sea is entilted to a reward commensurate with the value of the property recovered. There must be specific conditions met for this law to apply and it is governed by various conventions and procedures.

While AMSA and state and territory government agencies can direct actions to prevent enviromental emergencies, salvage is a commerical matter and should be entered into by the vessel in peril and the salvor. Salvage today is a highly specialised industry and there is limited large vessel salvage capacity or expertise within Australia.

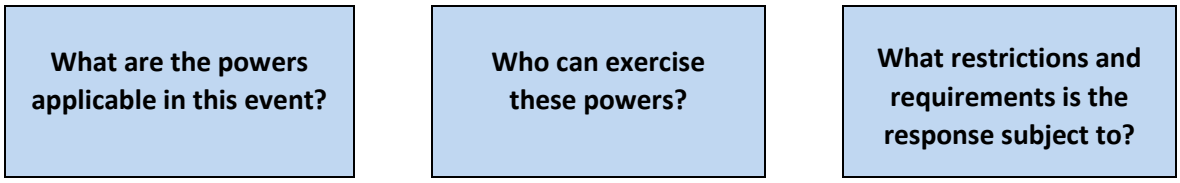
Even if a salvor has been appointed there will still be a requirement for government agencies to interact and manage components of the CME.

2.1.4 LEGISLATION AND LEGAL CONSIDERATIONS

Leaders and coordinators of CMEs work in a unique and complex legislative environment, and within Commonwealth and State/Territory emergency management frameworks. Leaders should clearly identify the regulatory pressures related to the situation, determining the required stakeholders to exercise governmental authority (where required) and the appropriate governing structures. During a CME, agencies and structures are likely to be operating concurrently, and potentially in conflict. Even where concurrent laws are consistent, legal outcomes will manifest differently depending on their interaction with various factors such as location, time and type of event, as well as vessel characteristics including its type or class, flag, origin and destination.

In the event of a CME, participating agencies should collaborate to identify the relevant conventions, legislation and regulations and their impacts on the operating environment. Specifically, they should consider the legislative responsibilities of government organisations in relation to each other, as well as the legal obligations applying to private entities participating in CME response. To assist with planning, Sources of Law and Types of Relevant Legisation are located in Appendix B.

FIGURE 1: KEY QUESTIONS TO BE CONSIDERED BY EMERGENCY MANAGERS IN A COMPLEX MARITIME EMERGENCY



CMEs are governed by existing local, state, national and international arrangements – including arrangements for maritime, mass casualty and search and rescue incidents. Notwithstanding this policy diversity, CMEs reframe the role of the Commonwealth as one of having primary jurisdictional and legislative responsibilities for CMEs.

Additional guidance on determing the lead agengy and supporting agencies for responding to a CME can be found in the following documents:

- Australian Government Crisis Management Framework[5]
- Guide to Australian Maritime Security Arrangements[6].

[5] https://www.pmc.gov.au/resource-centre/national-security/australian-government-crisis-management-framework

[6] https://www.abf.gov.au/what-we-do-subsite/files/gamsa-2020.pdf

3 PLANNING

Planning for CMEs should be organised around Australia's prevention, preparedness, response and recovery (PPRR) approach. PPRR provides a methodology for thinking and planning comprehensively across the emergency management cycle rather than just paying attention to one element of the process.

Given the complex nature of maritime emergencies, each stage of planning should consider the size, volatility and potential consequences inherent to the maritime environment. Plans should be agile, scalable and adaptable.

3.1 Complex Maritime Emergencies Principles

This Handbook should not replace extant disaster and emergency response arrangements or responsibilities. CMEs should be planned for and managed utilising extant Commonwealth and state response and recovery systems and funding arrangements. Nevertheless, a series of consistent principles are necessary to promote uniform CME management, and to ensure a clear understanding and delineation of state and Commonwealth accountability.

Below are a series of principles that should complement existing arrangements to coordinate maritime emergencies. They collectively recognise the unpredictable nature of maritime incidents, the complex interplay between relevant stakeholders and the degree of harm that can eventuate when maritime emergencies are not adequately managed. These five principles are:

1. Planning to enhance existing arrangements, enable adaptive responses and address stakeholder interests, capabilities and limitations
2. Collaboration and knowledge-sharing
3. Leaders should span beyond traditional boundaries and be willing to operate in concurrent and connected domains of activity
4. The control of CMEs is likely to be distributed, as consequences are realised concurrently in an ambiguous operating environments
5. Emergency management should take into account the legal and liability challenges inherent in CMEs.

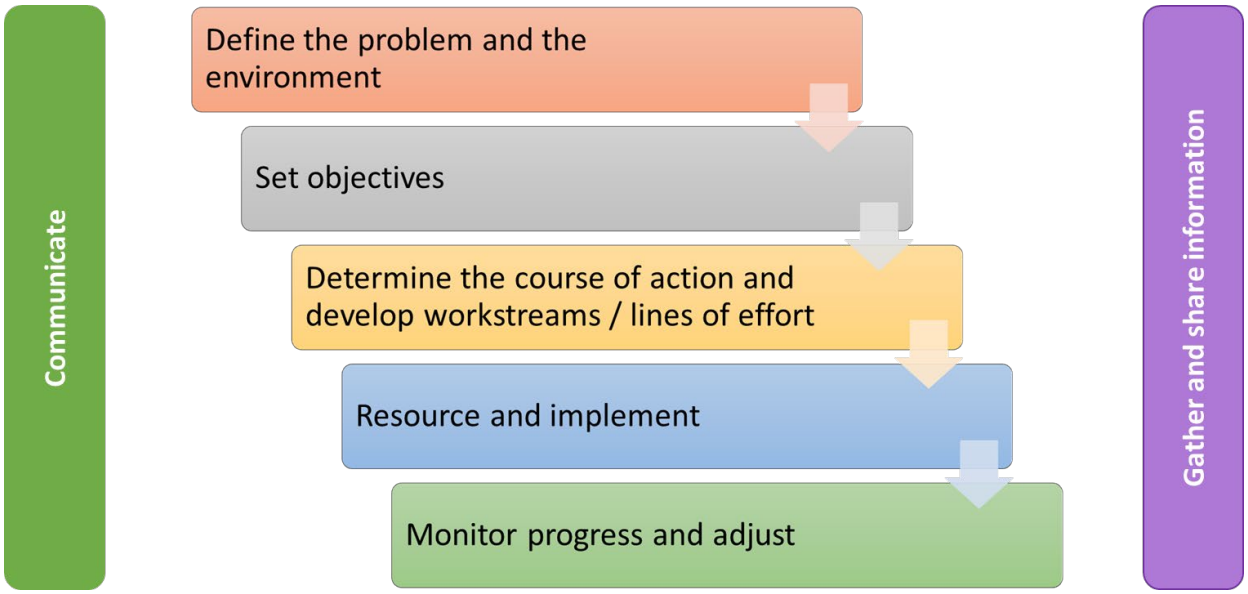
These principles build on and complement those outlined in the *Australian Disaster Preparedness Framework*:

- All hazards
- Borderless
- Globally linked, locally enabled
- Simple
- Agile and scalable
- Adaptable

- Outcomes based
- Timely.

The harmonisation of the principles mentioned above should guide the implementation of planning for CMEs. Principles must be elevated into practical ideals that should be implemented by public and private stakeholders alike in line with the CASP methodoloy and agency specific operational and tactical procedures.

FIGURE 2: EXAMPLE RESPONSE AND RECOVERY MODEL BASED ON CME PRINCIPLES



3.2 STRATEGIC INCIDENT PRIORITIES

This Handbook seeks to align stakeholder priorities in responding to CMEs. Standard emergency management principles of the primacy of life and protection of critical infrastructure, property and the environment remain valid for the management of CMEs and should inform the allocation of resources. As in normal emergency practice, priorities will differ between scenarios. However, in the CME context, it is more likely that these priorities will need to be managed concurrently, rather than linearly. Priorities may also need to be considered in a national context, rather than within individual jurisdictions.

Consistent with national guidance[7], the agreed response priorities are as follows:

1. Protection of human life
2. Minimising harm and injury to people, including those with special needs and the CME responders
3. Provision of essential humanitarian requirements that protect people's dignity and keep them safe

[7] Department of Home Affairs Guidance Note 'National Resource Prioritisation'.

4. Protecting or re-establishing communication networks to ensure the provision of information, warnings, emergency service communications, with and for affected communities
5. Protection of critical/essential infrastructure that, if damaged or destroyed, would have significant consequences on the community, jurisdiction or nation
6. Protection of primary places of residence
7. Protection of assets that support livelihoods, the economy and community financial sustainability
8. Protection of cultural and environmental values.

3.2.1 Crisis Appreciation and Strategic Planning

The Australian Civil Military Centre (ACMC) and Emergency Management Australia (EMA) are promoting the use of a Crisis Appreciation and Strategic Planning (CASP) methodology. CASP is a strategic planning tool to assist in making sense of complex issues related to crises and disasters using a national lens. It draws on approaches used by the military, human-design thinking and the Australasian Inter-Service Incident Management System (AIIMS) employing a structured and systematic methodology to analyse complex scenarios in providing unified response.

The CASP[8] guidebook will assist agency and jurisdiction planners in determining strategic response critical factors, areas of operations, interest and consequence, lines of effort, courses of action and responsibilities and should be used in conjnuction with this Handbook. CMEs should be pre-planned for with the CASP process and products. This will idenfity key strategic issues and capabiltiy requirements.

Agencies should still utilise existing process and procedures for operational and tactical planning.

3.3 LEVELS OF PLANNING

Different levels of government have varying levels of responsibility and engagement in planning for a CME. These are reflective of governments' legislated responsibilities, organisational arrangements (including lines of reporting) and in recognition of their capacity and context to the event.

- **Local Level:** As the closest authority to the event, local organisations play a fundamental role in planning for CMEs. Local incident control authorities are frequently the first on the scene, due to the proximity of resources to the incident. Local authorities are also familiar with the environmental specificities of the area and are often responsible for regulating access to the maritime environment through port or land vantages.
- **State/ Territory Level:** The jurisdictions have primary responsibility for protecting life, property and environment within their boundaries. All jurisdictions, except for the ACT, have established largely volunteer-staffed maritime rescue and coast guard organisations.
- **Federal Level:** Several Commonwealth Government departments have responsibilities in planning for CME coordination, with the primary responsibility vesting with the statutory

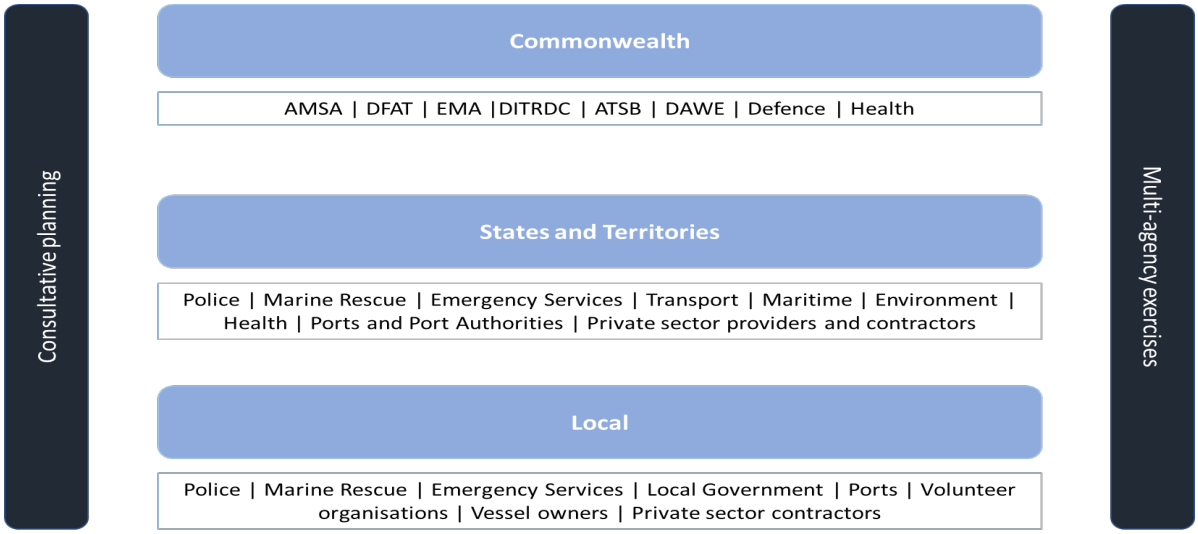
[8] https://www.homeaffairs.gov.au/about-us/our-portfolios/emergency-management/resources

body AMSA[9] in Commonwealth Waters. Emergency Management Australia has a whole of Government coordination function, and the Department of Foreign Affiars and Trade will lead international engagement. Defence can also provide significant resource capability.

In addition to levels of government planning, it is recommended that the various private sector stakeholders involved in CME management undertake appropriate and proportionate levels of planning. This includes port owners and operators, vessel owners, maritime service organisations and partners of government capabilities (such as Government owned or controlled enterprises, or outsourced service providers). The private and public sector should communicate planning strategies in order to align their preparations and understanding of scope of responsibility.

Figure 3 below provides a non-exhasutive list of government and private stakeholders who could be involved with the planning and response of a CME.

FIGURE 3: PLANNING AND RESPONSE STAKEHOLDERS IN A CME



3.4 CROSS-SECTORAL AND CROSS-JURISDICTIONAL RESPONSES

As noted in the definition of a CME, the maritime environment poses several additional challenges to mainstream emergency management, including cross-sectoral and cross-jurisdictional events.

- **Cross-sectoral:** A CME may require coordinated response across health, maritime, aviation and environmental or other sectors. The broad scope of industries engaged while providing specialist skills and resources, poses difficulties due to; differences in communication, regulatory powers and restrictions, the potential for resourcing discrepancies and competing governance structures.
- **Cross-jurisdictional:** The maritime environment increases the likelihood of emergencies that cross jurisdictional boundaries. The *United Nations Convention on the Law of the Sea* (UNCLOS) was entered into force for Australia in 1994 and outlines key aspects of international law at sea. These notions of sovereignty and jurisdiction in the maritime context are complex but, may result in more than one international jurisdiction being involved.

[9] Established under the *Australian Maritime Safety Authority Act 1990*. As a corporate Commonwealth entity, AMSA is also subject to the *Public Governance, Performance and Accountability Act 2013*.

4 COORDINATION ARRANGEMENTS

Coordination involves the bringing together of organisations and elements to ensure an effective response to CMEs. This Handbook acknowledges it is unlikely the authorities, resources and expertise required to manage a CME will reside within a single jurisdiction or sector. The effective management of a CME would therefore require the coordination and integration of multiple organisations and agencies, across jurisdictional and sectoral boundaries.

4.1 COORDINATION

The Commonwealth, states and Northern Territory have existing coordination arrangements which should continue to apply where one jurisidiction is limited in the abiltiy to exercise authority over all aspects of the response.

This Handbook does not seek to provide a definitive joint coordination model for CMEs. Rather, coordination efforts should be underpinned by mutually agreed upon command principles that can be tailored to the legal, environmental and political contexts of each jurisdiction. The desired outcome is a flexible model to satisfy the needs and expectations of internal and external parties.

During the developmet of this Handbook, and in consultation with stakeholders, a broad consensus was reached around a Joint Co-ordination Framework characterised by:

- Multi-jurisdictional, agency and sectorial support
- Identifying common purposes
- Managing resources through practical allocation and distribution mechanisms

These themes would contribute toward a coordinated approach to the application of powers, authorities and resources with due regard for shifting strategic, operational and tactical realities of actors and jurisdictions. This holistic approach to coordination can provide clarity around what stakeholders can expect from themselves and each other in the CME management process.

4.2 ACCOUNTABILITIES

The location of the incident will determine the initial lead response agency. For incidents that occur within coastal (state) waters the relevant state agency will be the lead responder. Coastal waters are a belt of water that extends three nautical miles seaward from the territorial sea baseline. For incidents beyond the three nautical mile limit out to the Australian Search and Rescue Region (ASRR), AMSA will be the initial Commonealth response agency. Further information on Australia's maritime boundaries can be found at the Geoscience Australia website[10].

As the incident evolves additional agencies will have accountabiltites to lead response activites resulting in decentralised incident management. The geographical and legal boundaries of the

[10] https://www.ga.gov.au/scientific-topics/marine/jurisdiction/maritime-boundary-definitions

jurisdictions mean that degrees of accountability across agencies will vary, and may change as CMEs evolve, i.e. the relevent Health department will be the lead for the management of human casualties once they are ashore. This Handbook suggests that stakeholders employ mechanisms that enable them to quickly identify which authorities are accountable upon the occurance of a CME.

4.3 RESOURCING

All levels of government and private entities have shared interests and responsibilities for resourcing responses to CMEs. It is unlikely that a single stakeholder will have the resourcing availability to address all aspects of planning, response and recovery. A decentralised approach should instead be adopted so that the resourcing burden is shared. This should involve engaging the best suited parties with regard to proximity, capabilities and resource capacity.

Co-ordination of structured and spontaneous resources is a key consideration of parties engaged in CME management. Resources requiring coordination may include:

- Financial resources
- Infrastructure and physical assets
- Offers of assistance (including aid and international capability assistance)
- Philanthropic resources (including funding and volunteers from NGOs, charities and corporations).

The swift response time required for a CME means that the resources immediately at hand may not be adequate. A flexible coordination model will streamline the most suitable resources towards the agency best situated to immediately respond to the given scenario. This will assist in achieving resource efficiency and a coordinated approach.

To better understand the capabilities and resources available at local, state and Commonwealth levels, stakeholders should invest in exercising coordination and resourcing in the CME context. This should be done in line with existing organisational structures, plans and arrangements.

4.4 INTEGRATED GOVERNANCE

This Handbook proposes an integrated governance model is developed to respond to CMEs, which aims to strategically align the separate internal governance structures of the many stakeholders. While this approach is not prescriptive, it is intended to provide key personnel with guidance on how to successfully coordinate multiple governance arrangements.

The integrated governance model consists of four key concepts:

- **Communication:** Good communication between the multiple stakeholders is essential to an integrated governance framework. The agreed approach may include establishing communication methods with varying combinations of interested stakeholders. These methods may be formal or informal, and either temporary or permanent. They may exist with or without a central point of authority, and with regard for preferred channels given the diversity of stakeholders.
- **Coordination:** Coordination in all aspects of the PPRR approach, with a focus on the development of pre-prepared plans. This has the effect of aligning outcomes so that, in the

instance where evolving situations blur lines of responsibility, engaged stakeholders are united in striving for a defined goal.

- **Collaboration:** A collaborative approach to governance is essential to an integrated governance model. The consideration that all participating entities are equal partners that support the separate authorising environment(s) of each entity to flourish in a collaborative manner. It is recommended that each participating entity expressly agree to this notion, whether as part of the terms of reference, a code of conduct, or otherwise.
- **Integration:** Cohesion of the internal governance structures of the various stakeholders, working to provide good oversight and to achieve a common goal. This effect of integration is the streamlining of resources and mutual understanding of governance principles and outcomes.

As may be evident, each of these concepts should be applied with **flexibility**, including the ability to adapt and respond to evolving events and information.

Integrated governance for CMEs should provide across agencies:

1. Transparency and information sharing
2. Effective issue resolution and decision making
3. Defined reporting lines
4. Agreed notification and escalation pathways
5. Avenues for stakeholder engagement
6. Clearly defined objectives
7. Established workstreams / lines of effort
8. Standardised communications.

4.5 Complex Maritime Emergency – Coordination and Planning Considerations

CASE STUDY 1

CASE STUDY

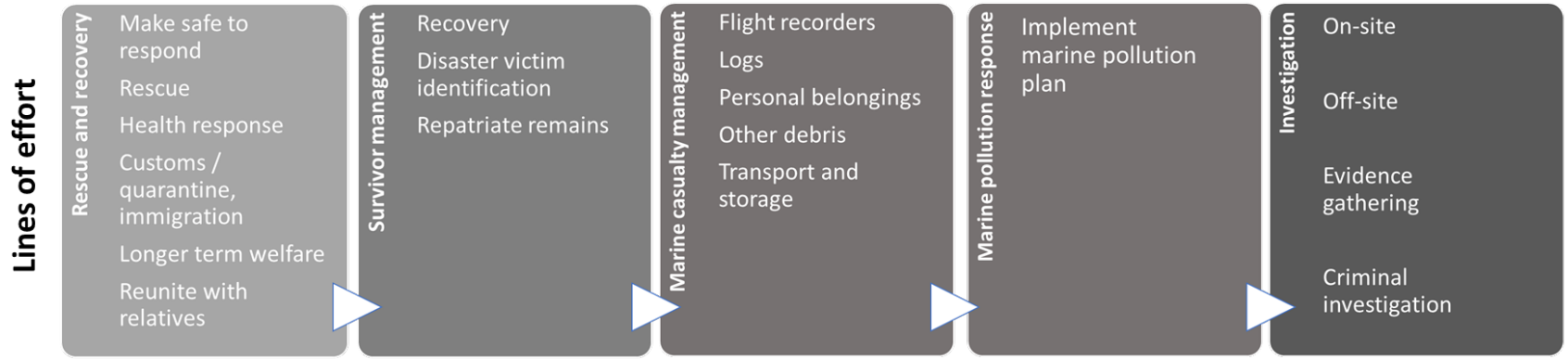
Consider the occurrence of a major incident on the Great Barrier Reef involving the crash of a large commercial airline, in close proximity to a shipping route. This would trigger multi-faceted interests at the local, state, national and international levels, as well as the interests of numerous industries including shipping, aviation and tourism. Response to this complex maritime emergency would activate overlapping responsibilities for agencies that each possess different operational, social, environmental, economic and diplomatic controls, across different jurisdictions and sectors.

This level of complexity would necessitate a multi-agency coordination model according to which legislative and other responsibilities would be exercised jointly, according to capability, resourcing, proximity and need. For example, facilities and technology required for CME response and management could be deployed by various agencies across a number of jurisdictions.

The effectiveness of the coordination model in this instance would rely upon the ability of all main parties to freely share information and collaborate on key issues in a clear, timely and transparent manner. This would require a high level of trust and buy-in amongst leaders and stakeholders, secured through early negotiation and evaluation of incident objectives, priorities and leadership roles, in line with the principles set out in this Handbook. Agencies need to focus on the early establishment of clear communication channels and immediate knowledge sharing arrangements.

Stakeholders

Commonwealth Agencies	State Agencies	Commercial	Other (private, volunteer, etc)
AMSA GBRMPA DAWE DITRDC ATSB DFAT Home Affairs BoM	Police Ambulance Fire Health Transport & Main Roads MSQ Fisheries Qld Environment & Science	Airline Port operators Shipping operators Tourism operators Fishing operators	Marine Rescue Community groups NGOs



CASE STUDY 2

CASE STUDY

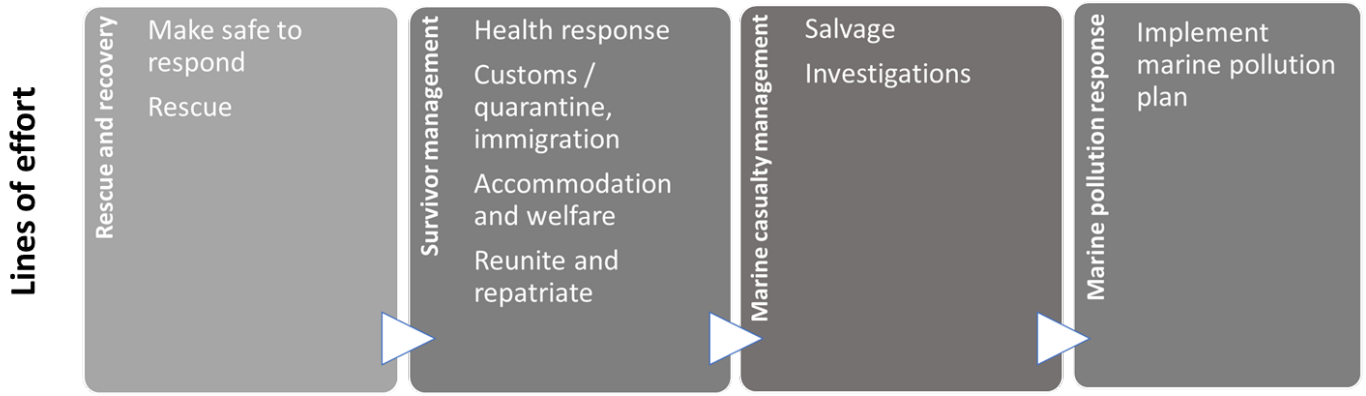
Consider the case of a cruise liner carrying 3501 passengers and crew capsizing 50NM east of Hobart at 0530 local time following an engine room explosion and fire. The vessel is abandoned at 0500 hours launching 20 of its lifeboats. Approximately 600 individuals are not accounted for in the launched lifeboats. The weather is fine, with lights from the east, waves up to 1.5 meters and the sea temperature is 12 degrees Celsius. An intense cold front with deteriorating weather is expected in the next 30-36 hours.

This incident would occur within Commonwealth jurisdiction but could not be managed without the support of neighbouring jurisdictions. It would trigger multi-faceted interests at the local, state, national and international levels, as well as the interests of numerous industries. A response of this size would easily overwhelm the resources of a single jurisdiction and would activate overlapping responsibilities for agencies and jurisdictions that each possess different operational, social, environmental, economic and diplomatic controls.

The response to such an incident would move through various phases in line with the established emergency managed priorities, with different agencies and jurisdictions leading or being accountable for various stages and activities in the response.

Stakeholders

Commonwealth Agencies	State Agencies	Commercial	Other (private, volunteer, etc)
AMSA DAWE DITRDC ATSB DFAT Home Affairs BoM	Police Ambulance Fire Health Transport Fisheries TAS Environment & Science	Rescue Aircraft Port operators Shipping operators Tourism operators Fishing operators	Marine Rescue Community groups Vessel owners NGOs



5 PREPARDNESS AND LESSONS MANAGEMENT

Capabilities for the management of emergencies are maintained through Commonwealth, state and local governments and are supported by a diverse network of non-government agencies, private providers and community organisations. Together stakeholders provide a range of expertise, experience and resources that form the capability to plan for, respond to and recover from CMEs. This capabiliity must be maintained and built upon as maritime emergencies become for complex.

5.1 TRAINING AND EXERCISES

Each jurisdiction is responsible for ensuring their personnel are adequately trained and equipped to deliver an effective and timely response to their legislated emergency management responsibilities. AMSA can work collaboratively with jurisdictions to build capability for managing CME events through an agreed training and exercise program.

A schedule for the rehearsal of CMEs will be developed and shared nationally. To ensure they are adequately prepared, all jurisdictions and stakeholders should develop and maintain their own plans and complementary exercise programs.

The following principles should be considered in developing exercises and workshops for CME decision-makers and responders:

- Workshops to explore the wider issues of complex emergency events including the cross-sectoral and cross-jurisdictional responses
- Exercises should seek to cultivate the leadership, capability, relationships and operational rhythm required to effectively manage a CME
- Exercises should act as a mechanism to test and validate planning arrangements on an ongoing basis, in line with the principle of continuous improvement
- Exercises should prepare responders for the possibility of multi-jurisdictional, cross-sectoral, international and multi-disciplinary engagement, with the corresponding requirement of resource and responsibility sharing

5.2 LESSONS MANAGEMENT

Lessons management provides opportunity to maintain and continuously improve the effectiveness of plans and capabilities. It ensures that preparedness is regularly measured, reviewed and evaluated against past performance and future needs. It provides a mechanism to continually build capability, maturity and allows stakeholders to adapt to changing requirements.

The sharing of lessons analysis is critical in building joint capability. This stakeholder-wide visibility should encourage evaluations that are underpinned by a better-practice approach. Lessons

management can facilitate learning and improvement resulting in more efficient and effective practices, improve safety and improving the capture and mobilisaiton of knowledge.

In the context of CMEs it is important to have a real time lessons capability enabling lessons identified to be learnt during the operation.

AMSA utilises the OILL lessons management process. OILL stands for:

- **Observations** a record of a noteworthy fact or occurrence that someone has heard, seen, noticed or experienced as an opportunity for improvement or an example of good practice
- **Insights** A deduction drawn from the evidence collected (observations), which needs to be further considered. Insights occur when there are multiple observations which are similarly themed. Insights can be positive or negative, and can contribute to reinforcing positive behaviour or changing practices. An insight defines the issue, not the solution.
- **Lessons Identified** a conclusion with a determined root cause based on the analysis of one or more insights and a viable course of action that can either sustain a positive action or address an area for improvement.
- **Lessons Learned** A lesson is only learned once the approved change is implemented and embedded in the organisation. Depending on the changes required, it may take several years for the change to be institutionalised across the organisation.

APPENDICES

Appendix A: Glossary

Arrangements	A high-level, scalable overview of how states and territories address the risks and impacts of hazards through a collaborative approach to the prevention of, preparedness for, response to and recovery from emergencies.
Built Environment	"Those human-made assets that underpin the functioning of a community." (Community Recovery Handbook, 2018: 92)
Capability	Capability is the collective ability and power to deliver and sustain an effect within a specific context and timeframe.
Collaboration	Individuals and / or organisations working together to achieve a common goal or purpose.
Complex Maritime Emergency	A complex maritime emergency is an occurrence that: • contains multiple hazards • crosses multiple jurisdictions • beyond the mandate and capacity of a single agency or organisation.
Law of the Sea	The law of the sea is a body of customs, treaties, and international agreements by which governments maintain order, productivity, and peaceful relations on the sea. The key instrument is the 1982 Law of the Sea Convention (National Ocean Service).
National Plan	National Plan means the National Plan for Maritime Environmental Emergencies, and all policy, guidance and advisory documents produced and published in support.
Planning	The collective and collaborative efforts by which agreements are reached and documented between people and organisations to meet their communities' emergency management needs. It is a sequence of steps which allows emergency management planning to take place.
Port	An area of water, or land and water (including any buildings installations or equipment situated in or on that land or water) intended for use either wholly or partly in connection with the movement, loading, unloading, maintenance or provisioning of vessels and includes: (a) areas of water, between the land of the port and the open waters outside the port, intended for use by vessels to gain access to loading, unloading or other land-based facilities; and (b) areas of open water intended for anchoring or otherwise holding vessels before they enter areas of water described in paragraph (a); and (c) areas of open water between the areas of water described in paragraphs (a) and (b).
Resilience	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

Severe to Catastrophic Disasters	A disaster that may be beyond our current arrangements, thinking, experience and imagination, that may overwhelm our technical, social systems and resources, degrading or disabling governance structures including strategic and operational decision-making functions.

Appendix B: Legislation

To assist with understanding the scope of legal influences in this environment see the below two tables**.** Table 1: Sources of Law, provides the sources of law, the function and examples relevent to the CME context. Table 2: Types Of Legislation Relevant to A Complex Maritime Emergency: summarises the types of legislation potentially relevant to the management of a Complex Maritime Emergency.

TABLE 1: SOURCES OF LAW

LAW AND CONVENTIONS	AFFECT	FUNCTION	EXAMPLES
INTERNATIONAL	Australia is bound by various legal and moral obligations under international laws and conventions. International laws are likely to affect responders' powers to direct, detain, board, and scuttle a vessel under certain circumstances. For example, Government vessels used in non-commercial service are entitled to sovereign immunity under International Law. The recovery of costs may also be affected by International Law, depending on the incident, which may affect the availability of response mechanisms.	Broadly, the functions of International Law include: • Creating maritime obligations and liabilities to aid the prevention of and recovery from CMEs • Empowering States to act within and beyond their territory boundaries to respond to CMEs • Enshrining sovereign rights of vessels	• *International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990* • *Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRCHNS Protocol)* • *International Convention for the Prevention of Pollution from Ships (MARPOL)* • *United Nations Convention on the Law of the Sea, 1982* • *International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969* • *Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other Than Oil, 1973* • *Convention for the Safety of Life at Sea (SOLAS)*

LAW AND CONVENTIONS	AFFECT	FUNCTION	EXAMPLES
COMMONWEALTH	Australian law at the Federal level may have externally-facing implications related to border, trade and immigration law. Commonwealth Law may also dictate legal areas such as work health and safety and criminality. Additionally, procedural and administrative guidance may be provided at the commonwealth level.	Amongst other functions, Commonwealth Laws: • Establish AMSA and other agencies • Incorporate international law into domestic legislation • Provide for intervention powers in Australia's economic exclusion zone, internal waters, and territorial sea • Provide for the administration and enforcement of Australian laws in maritime areas	• *Australian Maritime Safety Authority Act 1990* • *Protection of the Sea (Powers of Intervention) Act 1981* • *Navigation Act 2012* • *Maritime Powers Act 2013*
STATE / TERRITORY	Areas of law that intersect with the maritime context at the state level may include health and coronial law, as well as criminal and other investigative functions.	• Provide for State Hazard Plans operating concurrently with the AMSA National Plan • Enforce maritime rights and liabilities on State coastlines • Regulate maritime safety	• *Marine (Drug, Alcohol and Pollution Control) Act 1988 (Vic)* • *Western Australian Marine Act 1982 (WA)* • *Emergency Management Act 2005 (WA)* • *State Emergency and Rescue Management Act 1989 (NSW)* • *Emergency Management Act 2004 (SA)* • *Transport Operations (Marine Pollution) Act 1995 (Qld)* • *Maritime Safety Queensland Act 2002 (Qld)* • *Marine and Safety Authority Act 1997 (Tas)*

TABLE 2: TYPES OF LEGISLATION RELEVANT TO A COMPLEX MARITIME EMERGENCY

TOPIC	THEMATIC CONSIDERATIONS (NON-EXHAUSTIVE LIST)	RESPONSIBLE AGENCIES
Aviation Specific	Damage caused by Aircraft Air transport security and safety Air accidents acts Carrier liability	CASA, ATSB, Air Services
Criminal	Transnational crime Criminal cause of disaster Peripheral criminal activity Accident investigation Crimes at sea	AFP, ACIC, ABF (limited), State/Territory Police
Communications	Undersea cables Infrastructure supporting national and industrial communications	ACMA, State/Territory communication authorities
Dangerous Goods	Carriage / storage / use Disposal / clean-up / reporting Exclusion zone / safety / response	AMSA, AFP, State/Territory Police & bomb disposal, State/Territory work safety organisation HAZMAT & Fire authorities
Defence and National Security	Counter Terrorism National Security, Foreign interference and sabotage Attacks on Australia's defence systems Attacks on critical infrastructure	ASIO, ASIS, AFP, State/Territory Police, Australian Defence Force, ABF, ASD, Home Affairs and Attorney Generals Department
Emergency Management and Services	Formation, management and powers of Emergency Management agencies Services, functions and limitations	HAZMAT & Fire, volunteer agencies, State/Territory emergency services, Emergency management authorities and coordination staff
Environmental	Environmental impact, cleanup and recovery Special or sensitive areas and organisations Widllife	AMSA, EPA, NOPSEMA, State/ Territory Environmental Authorities, HAZMAT, State/ Territory Maritime Authorities

TOPIC	THEMATIC CONSIDERATIONS (NON-EXHAUSTIVE LIST)	RESPONSIBLE AGENCIES
Exploration, Drilling and Natural Resources **Offshore windfarms, tidal and novel energy generation**	Offshore energy and natural resources platforms The vessels / aircraft supporting them. Critical infrastructure	NOPSEMA, AMSA, Energy authorities (Federal, State and Territory)
Fisheries	Fisheries Fishing Vessels Licencing Offshore aggregating devices Nets	AFMA, State/Territory fishing authorities, State/Territory maritime authorities
Immigration	Entry and exit of individuals from Australian borders Detention / processing / location restriction and control	Immigration, ABF, Home Affairs, ASIO, AFP
Insurance	Insurances and cost recovery Protection and Indemnity Clubs (P&I) General average declaration and total loss	AMSA, State/Territory maritime authorities, legal areas of agencies involved
Customs, Duties and Taxation	Taxes Transnational boundary costs if foreign source of voyage	ABF, ATO
Marine	Marine Powers – criminal Marine Powers – other Navigation and controlling powers Intervention powers (MERCOM) State/Territory waters versus federal / EEZ / Search and rescue regions	AMSA, ABF, AFP, State maritime authorities, Fisheries
Quarantine and controlled substances	Biological materials Controlled substances Reporting, removal, clean-up Quarantine of people, infection and disease control	AQIS, AFP, ABF, State/ Territory police

TOPIC	THEMATIC CONSIDERATIONS (NON-EXHAUSTIVE LIST)	RESPONSIBLE AGENCIES
Ports	Delay, control, closure and use Costs and cost recovery Special port powers Transport planning and contingency use Channel management authorities	Port Authorities, Maritime Safety Authorities, Channel Authorities, Harbour Masters and other controlling authorities, AMSA, ABF
Shipping Specific	Cargoes - storage and handling Owner, master, operator, insurer obligations Domestic commercial vessels	AMSA, ABF, AFP, State/Territory maritime authorities
Transport	Safety Security Critical infrastructure and State/Territory transport plans Contingency planning	ATSB, AMSA, Department of Transport – Federal, State and Territory and State/Territory transport authorities, State/Territory maritime authorities
Workplace Health & Safety (WHS)	WHS investigation Reporting	State/Territory WHS organisations