Australian Government
Australian Maritime Safety Authority

Exercise Kunawarra

National Oil Spill Response Exercise Evaluation Report

4–6 October 2022 | Geelong, Victoria

Version Control

Version	Date of issue	Comments
V1.0	08/09/2023	1st Draft - Prepared by AMSA for comment by DTP
V2.0	20/10/2023	2nd Draft - Prepared by DTP for AMSA's consideration
V3.0	11/04/2024	3rd Draft - Consultation version for discussion between AMSA and DTP
V4.0	16/04/2024	4th Draft - Agreed version of Executive Summary after consultation between AMSA and DTP
V5.0	07/08/2024	5th Draft - Abridged Public Report
V6.0	13/09/2024	6th Final Draft - Abridged Public Report (for final clearance)
V7.0	13/09/2024	Final Report - Published on AMSA & DTP websites

Contents

Acronyms

Acronym	Meaning
AFAC	Australasian Fire and Emergency Service Authorities Council
AIDR	Australian Institute for Disaster Resilience
AIIMS	Australasian Inter-Service Incident Management System
AMOSC	Australian Marine Oil Spill Centre
AMSA	Australian Maritime Safety Authority
CFA	Country Fire Authority
COP	Common Operating Picture
DTP	Department of Transport and Planning Victoria (Previously DoT)
EM	Emergency Management
EMLO	Emergency Management Liaison Officer
EMV	Emergency Management Victoria
EPA	Environmental Protection Agency
EST	Environment, Science and Technical
ExCon	Exercise Control
FOB	Forward Operating Base
FRV	Fire Rescue Victoria
GIS	Geographic Information System (mapping system)
IAP	Incident Action Plan
iaw	in accordance with
IC	Incident Controller
ICC	Incident Coordination Centre / Incident Control Centre
IEMT	Incident Emergency Management Team
IMT	Incident Management Team
JSEA	Job Safety Environmental Analysis
JSOP	Joint Standard Operation Procedures
LM	Lessons Management
LO	Liaison Officer
MENSAR	State Maritime Emergencies (non-search and rescue)
NEBA	Net Environmental Benefits Analysis
NEMA	National Emergency Management Agency
MPR	Marine Pollution Response
NPSCC	National Plan Strategic Coordination Committee
NRT	National Response Team

Acronym	Meaning
OILL	Observation, Insight, Lesson Identified, Lesson Learnt
ORCA	Oil Response Company Australia
OSTM	Oil Spill Trajectory Modelling
KPIs	Key Performance Indicators
PIU	Public Information Unit
PPE	Personal Protective Equipment
REMT	Response Emergency Management Team
RPAS	Remotely Piloted Aircraft Systems
SAR	Search and Rescue
SCAT	Shoreline Clean-up and Assessment Team
SCME	State Controller Maritime Emergencies
SEM	State Emergency Management
SEMP	State Emergency Management Plan
SEMT	State Emergency Management Team
SitRep	Situation Report
SME	Subject Matter Expert
SMPC	State Marine Pollution Controller
SOP	Standard Operating Procedures
SRT	State Response Team
T.O.	Traditional Owner
Vic Pol	Victorian Police Force
VICSES	Victorian State Emergency Services
VIP	Very Important Person
VLSFO	Very Low Sulphur Fuel Oil
WH&S	Work Health & Safety

Glossary

control agency	The agency or company assigned by legislation, administrative arrangements or within the relevant contingency plan, to control response activities to a maritime environmental emergency. The legislative or administrative mandate should be specified in the relevant contingency plan. The Control Agency will have responsibility for appointing the Incident Controller.
comment	a statement derived from the qualitative information sources which does not indicate whether it is a positive or negative observation; comments were included in some of the analyses (as indicated)
Day 1	1st day of Exercise Kunawarra (4th October 2022)
Day 2	2nd day of Exercise Kunawarra (5th October 2022)
Day 3	3rd day of Exercise Kunawarra (6th October 2022)
EM-COP	Victoria's electronic emergency management system
MARCO	Class V oil skimmer used in containing oil and hazardous material
Functional Lead	Person in charge of a functional unit set up under the AIIMS structure; synonymous with Team Lead
MARPOL	The International Convention for the Prevention of Pollution from Ships (1973)
MPR	Marine Pollution Response
observation	a statement derived from the qualitative information sources which does indicate whether it is a positive or negative; observations were included in all analyses
P^2OST^2E	People, Process, Organisation, Support, Technology, Training, Exercise Management
participants	Refers to all persons who took part in Exercise Kunawarra, from the government, private and NGO sectors
PESTLEO	Considerations in undertaking a risk assessment (Political, Environmental, Social, Technological, Legal, Economic and Operational)
qualitative information sources	Refers to all qualitative data collected via the online observation forms, open-ended survey questions and interviews
respondents	Refers to all participants who agreed to respond to the online survey, make an online observation or be interviewed post Exercise Kunawarra
responder	Member of the NRT/SRT who has been trained in responding to pollution as per the National Plan.
SMARTA	Principles by which incident objectives should be set (Specific, Measurable, Achievable, Realistic, Time-Framed, Agreed)
statement	Collective term used for any comments and observations derived from the qualitative information sources
support agency	An agency or company that provides essential services, personnel, material or advice in support of the Control Agency during the response to a maritime environmental emergency

1. Executive Summary

Major maritime environmental emergencies are low-probability, high-consequence events that require the rapid deployment of significant resources to mitigate impacts. Due to their relative infrequency, exercises are critical for ensuring preparedness and for observing, understanding and improving our response capability. This is particularly so in the maritime environment, where major incidents may require personnel from different organisations and jurisdictions, who do not usually work together, to mount an effective and coordinated response.

Exercise Kunawarra was conducted in Victoria in October 2022 and was the first National Plan exercise for maritime environmental emergencies conducted since 2018 due to restrictions imposed in response to the COVID-19 pandemic.

The exercise focused on state and national response arrangements to manage a large-scale marine oil spill resulting from a vessel grounding at the entrance to Port Phillip Bay Victoria.

Around two hundred exercise participants and control staff from across Australia were deployed over the three-day period with many commenting the exercise felt like a real incident.

The exercise involved an Incident Management Team (IMT) operating from the Geelong Level 3 incident control centre with field operational functions planned for shoreline, marine, aviation and wildlife forward operating bases.

The exercise incorporated an observer program on day two with several senior management personnel attending from across Australia.

Whilst there are areas of improvement found in Kunawarra, as is normal for large scale national exercises, there are also many areas that demonstrate how effective national response arrangements are in responding to incidents of national significance. Benefits to the host state include opportunities to review state arrangements and plans for major incidents that do not occur often, and to conduct further state exercises based on the findings of Kunawarra.

Benefits to National Plan partners include reinforcing collaborative partnerships between all jurisdictions and industry, strengthening response mechanisms and allowing individuals to practice joined up incident coordination and field operations.

National Plan exercises require investment in human and financial resources. AMSA recognises the significant time provided in the planning and preparation of Kunawarra by the Department of Transport and Planning Victoria in hosting this exercise. AMSA would also like to recognise the important contribution by AMOSC in the conduct of Kunawarra. National partnerships by government and industry are critical in preparing for and responding to major marine pollution events.

The Steering Committee for Exercise Kunawarra recommends that all parties involved in maritime environmental emergencies make use of the findings to continuously improve national and state arrangements to ensure Australia is well place to respond to such emergencies.

2. Background to the Evaluation of Exercise Kunawarra

Exercise Kunawarra was conducted in Geelong and the Bellarine Peninsula region of Victoria between 4–6 October 2022. The exercise name came from the Wadawurrung name for the Black Swan, an iconic local species, and the origin of the name of nearby Lake Connewarre. It was jointly led by the Australian Maritime Safety Authority (AMSA) and the Department of Transport and Planning Victoria (DTP).

The National Plan for Maritime Environmental Emergencies (2019), referred to as the 'National Plan', is an integrated arrangement between the Commonwealth, State and Northern Territory governments and industry that enables effective response to marine pollution incidents. This plan requires that the national response capability is exercised annually, with the exercise location changing each time. However, there was a four-year gap since the last national marine pollution exercise because of the disruptions caused by Covid-19.

The exercise was designed to practice strategic and operational decision-making for a major oil spill in Victorian state waters. Aside from the National Plan and associated Aide-Memoire for Marine Pollution Response, the exercise was guided by the Victorian Marine Pollution Contingency Plan and the Australasian Inter-service Incident Management System (AIIMS-2017). Appendix A lists the guidance documents used in the conduct of Exercise Kunawarra.

Over the course of three days, nearly 200 people participated from 43 agencies including government, the private sector and non-government organisations (NGOs). As outlined in Appendix B, participants were drawn from AMSA, Victorian maritime response agencies, the National Response Team (NRT), industry and the non-government sector.

2.1 Exercise Location and Scenario

Exercise Kunawarra was established at four locations. The Incident Management Team (IMT) was situated at the Geelong Incident Control Centre (ICC) at the premises of the Victorian State Emergency Services (VICSES). Forward Operating Bases (FOBs) were set up at Queenscliff (Shoreline), Corio Quay (Marine) and Barwon Heads airfield (Aviation).

According to the exercise scenario, the pollution was triggered by a vessel running aground at Point Lonsdale and spilling 200 tonnes of intermediate fuel oil (IFO180). The oil was predicted to come ashore on beaches to the east and west of the entrance to Port Phillip Bay, the western shores of the bay around Queenscliff and south of Werribee Beach some 40-48 hours post-impact. The affected region included environmentally sensitive wetlands and areas of significance to Traditional Owners (TOs).

Exercise participants were given a broad outline of the exercise scenario as part of their briefing paper ahead of Exercise Kunawarra. However, the exact nature of the simulated oil spill was not released until the morning of Day 1 via an exercise inject and a briefing by the Incident Controller. As the exercise progressed, injects were received from ExCon about newly emerging situations. Appendix C provides are more detailed outline of the exercise program in terms of the scheduled activities across the three days and expected outcomes.

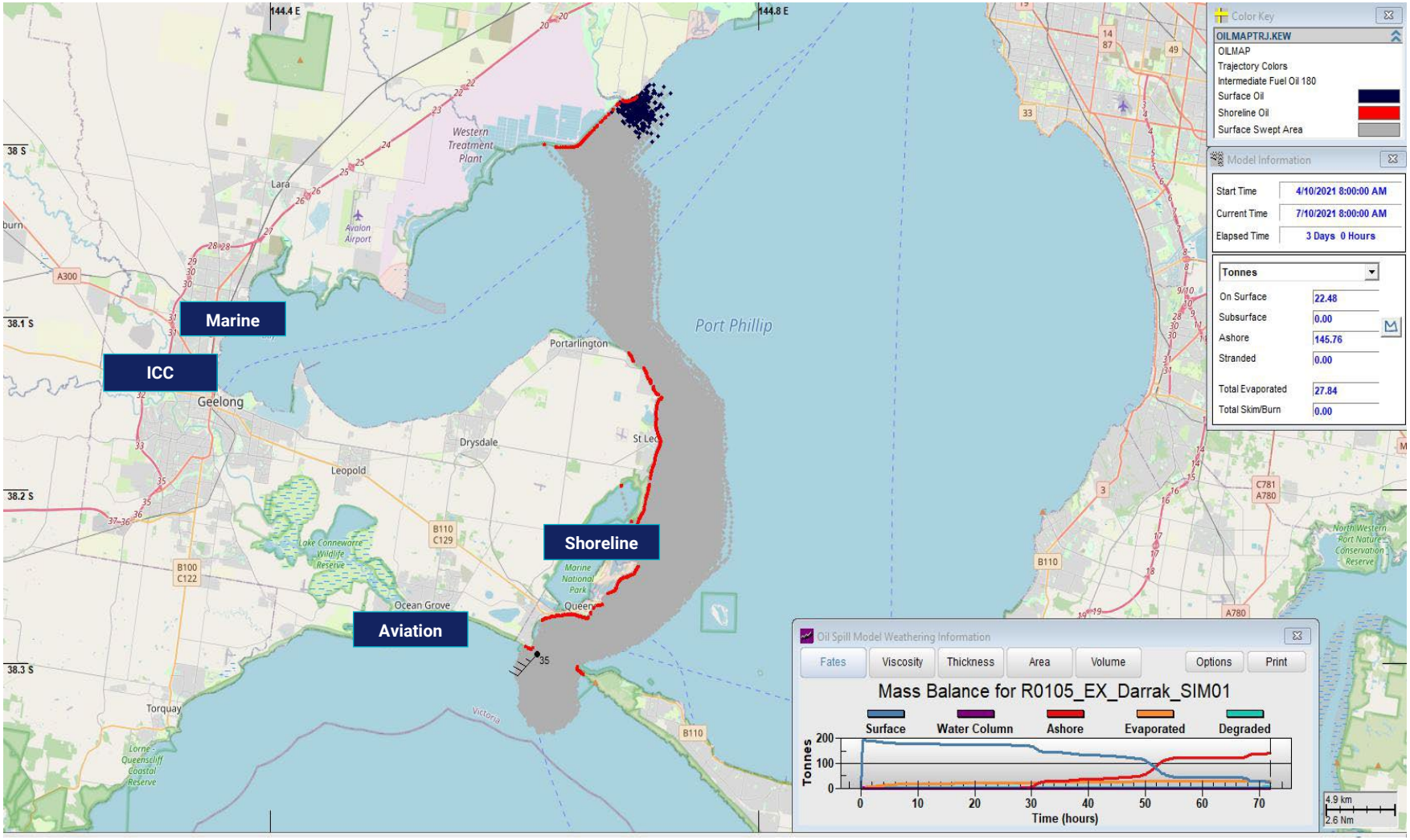

Figure 1: Map of the area of Exercise Kunawarra and simulated oil spill

2.2 Exercise Structure and Governance

Exercise Kunawarra was managed by an Exercise Steering Committee on behalf of the National Plan Strategic Coordination Committee (NPSCC), which is responsible for the strategic coordination of the National Plan. The Steering Committee was made up of representatives from the Control Agency (DTP) and the Support Agency (AMSA). Exercise Control (ExCon) was provided by a team of Subject Matter Experts (SMEs) from the private and government sector (including DTP and AMSA). Figures 2 and 3 below provide the structure for the governance and evaluation of the exercise.

Figure 2: Governance Structure for Exercise Kunawarra

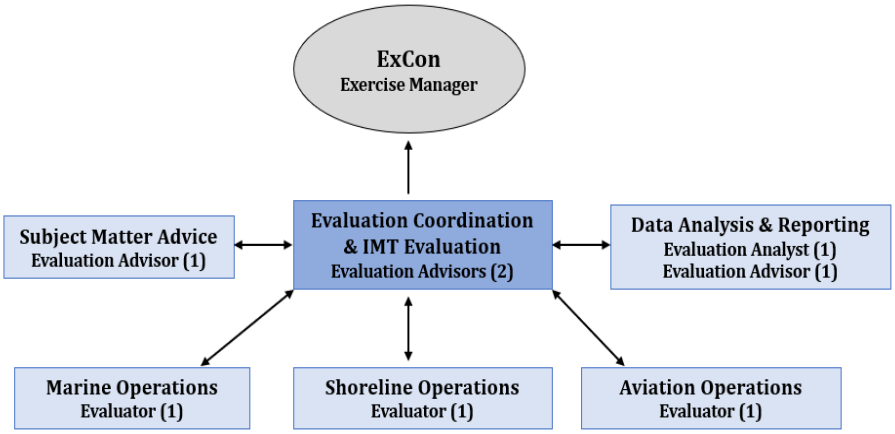

Figure 3: Composition of Evaluation Team

Exercise Kunawarra was practising the establishment of an IMT with its supporting structures and integration of NRT members in the response action. As outlined in figure 4 below, its design accorded with the command structure for different levels of maritime emergencies prescribed under the State Maritime Emergencies (non-search and rescue) (MENSAR) Plan and those for large and complex incidents prescribed under AIIMS 2017.

Due to the poor weather conditions at the time, the scheduled marine activities were modified, and aviation activities were restricted to Remote Piloted Aircraft Systems (RPAS), also known as Drones.

This was the first time that drones were deployed on a trial basis to provide aerial surveillance during a National Plan exercise.

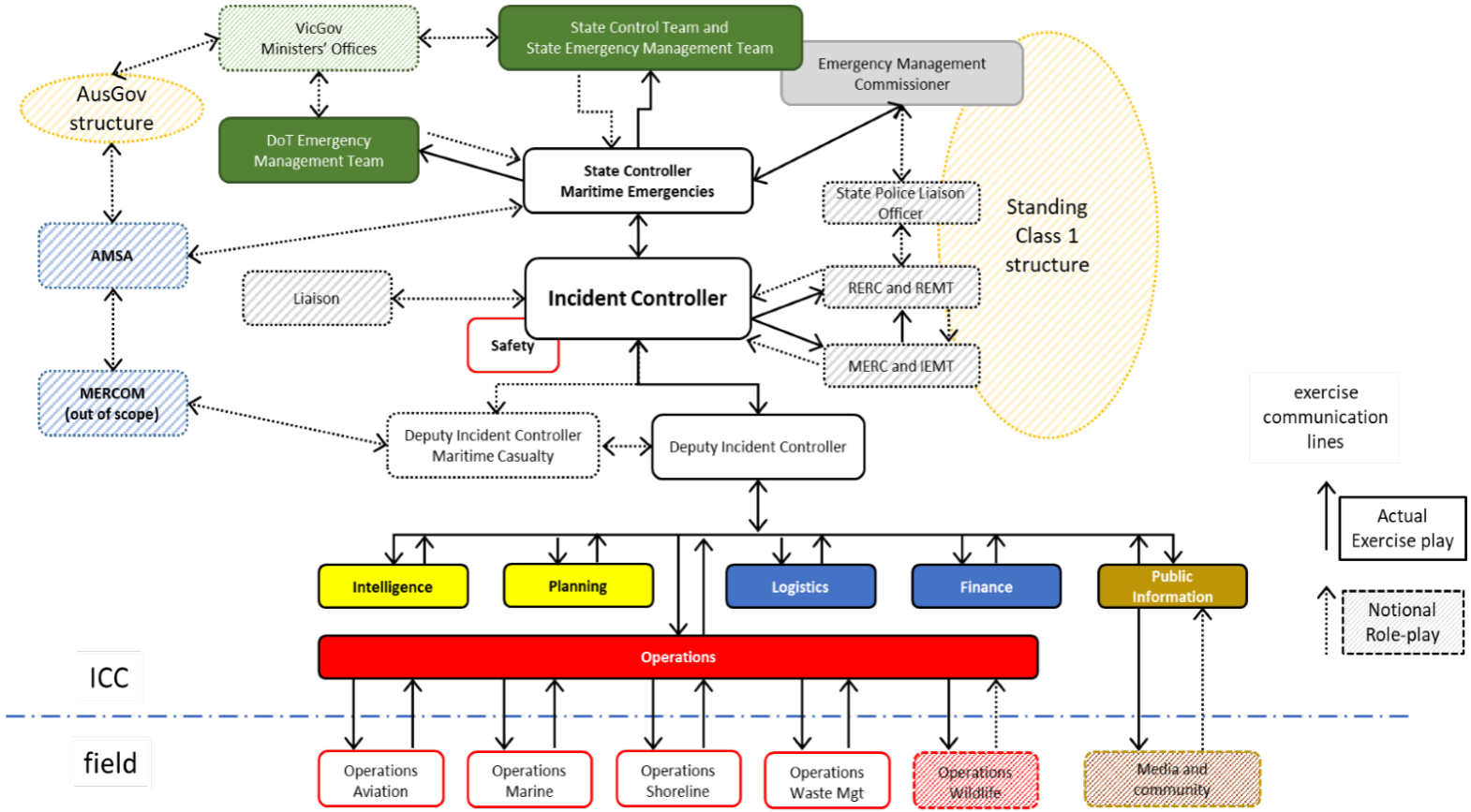

Figure 4: Exercise Incident Management Structure

2.3 Exercise Evaluation

The evaluation of Exercise Kunawarra was a systematic and multifaceted process, based on data collection from numerous sources. It was designed to lend robustness to the findings of the exercise evaluation. Both qualitative and quantitative techniques were used as outlined below.

Data Source	Delivery	Provided by	Status	Data Type
Evaluators' observations	Hard copy	Evaluators	Mandatory	Qualitative
Participants' observations	Online	Respondents	Voluntary	Qualitative
Survey responses	Online	Respondents	Voluntary	Qualitative Quantitative
Hot debriefs	Verbal	Teams	Mandatory	Qualitative
End-of-exercise debrief	Verbal	All	Mandatory	Qualitative
Face-to-face interviews	Verbal	Selected interviewees	Voluntary	Qualitative
Documents	Hard copy and online	Evaluators and teams	Mandatory	Qualitative

Table 1: Data sources used in the evaluation of Exercise Kunawarra

Evaluation of Exercise Kunawarra mainly involved qualitative assessment methodology, which refers to the process of schematising descriptive data collected through interviews, surveys, and observations and interpreting these. In this case the data were based on comments received from exercise participants via the online observations form, text fields in the survey questionnaire, hot debriefs, whole-of-exercise debrief and post exercise interviews. This process was supplemented with documentary information from the Evaluators' notes and other sources, such as the input and output documents generated by the exercise. The only quantitative (i.e. numeric) data used in the exercise was generated by the survey questions that asked for a rating response.

Schematisation was based on the Observation, Insight, Lesson Identified, Lesson Learned (OILL) process. As shown in figure 5 below, the evaluation was conducted within an overarching LM framework, which was a modified version of the one commonly used within emergency and disaster management. The approach used in evaluating the outcome of Exercise Kunawarra is consistent with the assessment of past exercises conducted under the National Plan.

2.4 Exercise Evaluation Report

Organisational and individual learning through marine pollution incidents and exercises is fundamental to ensure a coordinated and strategic response to maritime emergencies as outlined in the National Plan for Maritime Environmental Emergencies (the National Plan). It is only through critical evaluation of the response management that improvements can be

achieved. The application of a Lessons Management (LM) process is a core component of the national response arrangements to ensure that continuous improvements are achieved. Findings from the evaluation of this and past exercises may also inform the review of the National Plan currently being undertaken.

The Evaluation Report for Exercise Kunawarra was conducted in accordance with AMSA's policy requirements (NP-GUI-004) and the principles of the Australian Institute of Disaster Resilience (AIDR) guidance documents relating to lessons management.

This Evaluation Report outlines the key findings and recommendations arising from Exercise Kunawarra and provides a background on how the exercise was conducted and evaluated.

The aim of the Evaluation Report was to evaluate the effectiveness of the exercise response, and to examine the conduct of the exercise against the objectives.

The findings and recommendations arising from this report will assist with the planning and conduct of future exercises under the National Plan and help build organisational capability for real-life pollution events.

The evaluation of Exercise Kunawarra adopted a 'mixed method' approach, which means that both quantitative and qualitative assessment methods were used to determine key findings and insights. With respect to the latter methodology, a process known as OILL (Observation, Insight, Lesson Identified, Lesson Learnt) was adopted. All report findings are corroborated through several information sources.

A detailed outline of how the evaluation was conducted is provided in the Exercise Kunawarra Evaluation Plan, which was prepared and agreed to by the exercise Steering Committee.

3. Key Findings and Insights

The aim of Exercise Kunawarra was to build national marine pollution capability by undertaking a combined Commonwealth, Victorian and NRT response to a simulated Level 3 marine pollution emergency in Victorian state waters. This involved activating the Victorian emergency management arrangements (state arrangements) under the National Plan and state legislation.

This section outlines how well Exercise Kunawarra was executed, and it provides a high-level overview of the key insights and associated recommendations. In formulating the findings of this report, all data sources were considered. Results were corroborated through a process known as 'triangulation', which provided a robustness to the conclusions contained in this report

3.1 Performance against Exercise Objectives

Five (5) key objectives and 14 sub-objectives were developed for the Exercise Kunawarra during the planning phase. These objectives were subsequently operationalised through 37 individual key performance indicators (KPIs). A team of Evaluators was assigned to follow the proceedings of the IMT and FOBs for the duration of the exercise and to present their collated findings at the end of the exercise. The assessment of how well the objectives were met during Exercise Kunawarra is shown in table 2 overpage. A more detailed evaluation is provided in Appendix D.

It is worth noting that field operations during the exercise were severely hindered by poor weather conditions. This prevented some of the scheduled field activities, particularly on Day 1, when the aviation response was planned to occur. Furthermore, some planned activities involving state arrangements and intergovernmental relationships were not done due to the unavailability of appropriate senior personnel.

Broadly speaking, Exercise Kunawarra achieved all its objectives, but several areas were identified that could benefit from improvement. One of the five objectives was fully achieved. The remainder were partially achieved.

Objective: (The objectives listed below are as stated in the Evaluation Plan for Exercise Kunawarra)	Overall Assessment
1. Practise implementing Victorian and National maritime pollution response arrangements by: (a) Exploring strategic and inter-government relationships; (b) Evaluating systems of information sharing between Victorian and Commonwealth agencies, including requests for assistance and information; and (c) Understanding jurisdictional requirements for national support during a marine pollution emergency.	Partially Achieved 👍👍
2. Establish and maintain incident control arrangements by: (a) Implementing the SEMP: Maritime Emergencies (NSR) Sub-Plan for a Level 3 incident, including deployment of the NRT; (b) Exploring participants' roles and responsibilities in responding to a marine pollution incident in state waters, including establishing an incident management team (IMT) and an incident emergency management team (IEMT); (c) Exploring the relationship between national and state emergency management governance arrangements; and (d) Maintaining effective situational awareness identifying risks and priorities enabling incident action and tactical plans to be developed and implemented.	Partially Achieved 👍👍
3. Activate and deploy national response capabilities to: (a) Test AMSA's activation and operation of marine pollution response arrangements, including the National Response Team, Fixed Wing Aerial Dispersant Capability and national equipment deployment; and (b) Explore the arrangements for integrating national capabilities into a state's established incident management structures.	Partially Achieved 👍👍
4. Practise field operations with forward operating bases (FOB) to: (a) Test Victorian Government plans for establishing forward control. (b) Practise developing and implementing aviation response plans. (c) Practise developing and implementing marine response plans. (d) Practise developing and implementing shoreline response plans. (e) Incorporating and using new shoreline assessment technologies (RPAS and mapping).	Partially Achieved 👍👍
5. Developing and implementing an effective public information and community engagement strategy, including media conferences.	Partially Achieved 👍👍

Table 2: Summary of achievements against exercise objectives

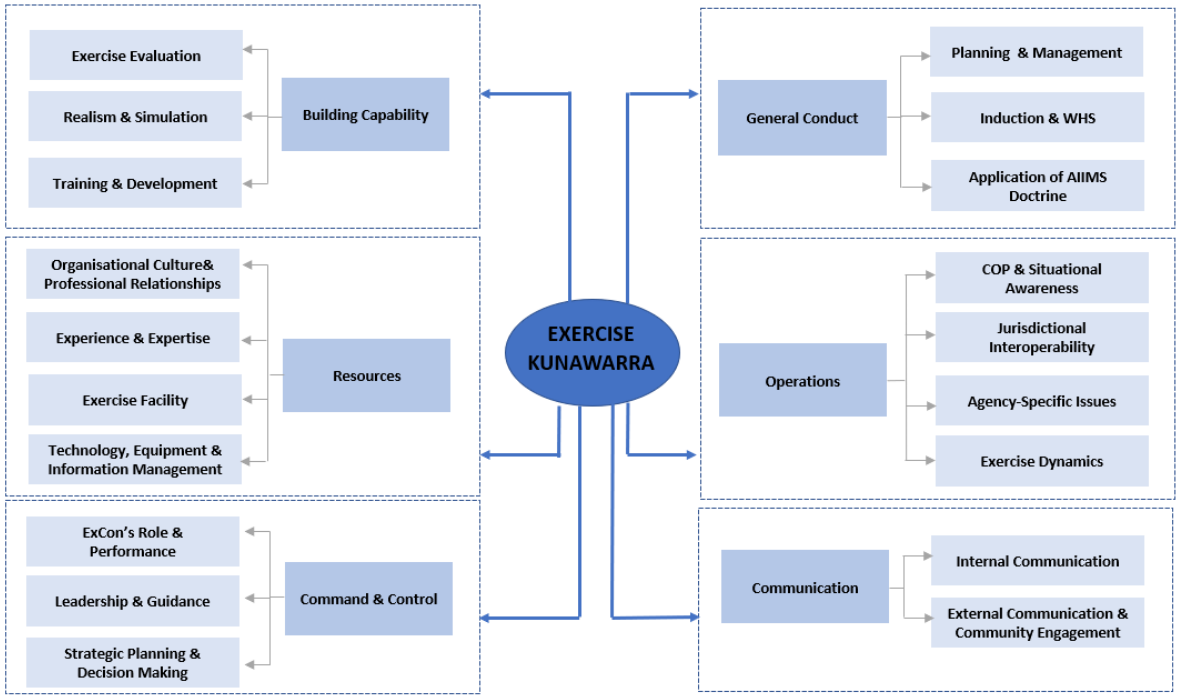

Figure 5: Themes used in the analysis of observations from Exercise Kunawarra

3.2 Achievements of Exercise Kunawarra

It was widely acknowledged by ExCon, the Evaluators, the Incident Controller (IC) and members of the IMT and FOBs, that Exercise Kunawarra was a success. Many participants reported feeling 'challenged' by the exercise because of the fast-paced environment and high expectations. There was also disappointment that field activities had to be curbed because of the poor weather. The biggest achievements of the three-day event are outlined below.

Improved Understanding, Skills and Knowledge

An overarching aim of the exercise was to build skills and improve capabilities at an individual and organisational level. Participant responses to the survey conducted by AMSA after the exercise reported strong outcomes in terms of learning. Survey respondents indicated improvements in their practical skills (96%), response capability (92%) and embedded learning (91%).

Improvements were observed in all key dimensions measured, including the participants understanding of legal and policy requirements, respective jurisdictional responsibilities, actions required in managing oil pollution, awareness of functions and roles, and awareness of stakeholder engagement.

The qualitative analysis showed that learning 'on the ground' was far more effective for most participants than through formal courses, although the latter is essential for establishing a basic understanding of pollution management measures and NRT requirements. There was also a significant improvement in understanding, skills and competence in dealing with the assigned tasks over the course of Exercise Kunawarra. This finding is particularly pertinent because of the low level of marine pollution response (MPR) specific training that many participants had coming into Exercise Kunawarra. Less than a quarter (23%) had past experiences with either National Plan exercises or real-life marine pollution emergencies.

The remainder had either no MPR training (64%) or had undertaken basic Marine Pollution Response (MPR) training through course work (23%)1.

Team and Individual perspectives

Survey results suggest a high level of satisfaction with team performance throughout Exercise Kunawarra. Nearly all respondents reported that their team worked well as a response unit within the overall exercise structure (92%). Most also reported that their team was efficient and effective in dealing with assigned tasks (85%). Satisfaction was generally high with team leadership (86%) and participant's sense of the importance of their own role within the team (85%).

Survey respondents agreed that having access to specialist advisors and technicians, played a critical role in strategic planning and sound decision making, noting their presence also enabled the formation of leadership groups.

While the Evaluators' assessment suggests room for improvement in team performance, they agreed that several positive outcomes were achieved. They commented that a good 'battle rhythm' had been achieved by Day 3 and that teams were performing well and achieving the necessary benchmarks. They also spoke highly of the performance of individual teams, such as Operations, where the experience of the team members showed in how they addressed their functional responsibilities. The Public Information Unit (PIU) also achieved good outcomes, despite being inexperienced in dealing with MPR situations. Instances of technical excellence were also noted, such as the predictive modelling of the oil spread, advice on wildlife handling and technical advice on oil dispersant properties.

The Evaluators agreed that the arrival of NRT members on Day 2 lifted team performance and exercise outcomes because of the additional skills and subject matter expertise (SME) that the team brought to the exercise. Insights from the qualitative findings supported this.

Professional Development and Networking

Exercise Kunawarra demonstrated the importance of having MPR trained and experienced people within functional units, who could set a high-performance standard and act as mentors and role models for others. This approach promoted learning for the less experienced participants and enabled better and quicker exercise outcomes. It also helped participants to establish connections with peers in the emergency management sector.

Different jurisdictional and organisational approaches in managing pollution events can become apparent when managing pollution events in a multi-jurisdictional or multi-agency context. Exercise Kunawarra acquainted participants with this context. By having NRT members and relevant Victorian agencies like Fire Rescue Victoria (FRV) and Victoria Police (Vic Pol) involved, it gave them an understanding of dealing with different cultural paradigms and different approaches to emergency management. This in turn enabled better team performance and paved the way for greater interoperability in the future under the National Plan.

[1] The training figures add to more than 100% because some survey respondents ticked more than one box for past pollution management training.

Exercise Management

There was a high level of satisfaction with the way that Exercise Kunawarra had been planned and conducted. Most participants agreed that the exercise was well organised (86%), provided a good opportunity for participation (95%) and that the scenario was a realistic simulation of real-life events (89%). There was also a high level of satisfaction with the resources and logistics of the event (81%), the exercise coordination (85%) and the perceived outcome (81%). In terms of individual contributions, many participants reported that the exercise made good use of their skills (81%) and that their role allocation was commensurate with their skills and knowledge (88%).

IMT Facilities, FOBs and Exercise Support

The facilities at the Geelong Incident Control Centre (ICC) were typical of what would be available in a real-life pollution event. The accessibility of a SharePoint site for information sharing and record keeping was widely praised. Comments were generally favourable about the arrangements for getting to and from the event and the catering over the course of the three days. The Work Health Safety (WHS) aspects of the exercise were considered prior to and during the exercise and no injuries were sustained during the event in either the ICC or the FOBs.

Due to poor weather conditions, many of the planned field activities were unable to occur. Marine field-based crews undertook drills and gear familiarisation sessions in lieu of gear deployment and reported that great benefits had been achieved by doing this.

The deployment of RPAS during the exercise proved innovative and useful as a tool for surveillance of oiled shorelines and providing visual displays of impact into the IMT.

Exercise Evaluation

Exercise was evaluated by an external contractor and subcontractors with extensive experience in MPR. This provided the necessary independence of process. The Evaluators were professional and unobtrusive to participants as they made their assessments throughout the exercise. A report was provided to AMSA summarising the evaluators' observations from the exercise. The evaluation team also led the main end-of-exercise debrief sessions, which corroborated the findings from the other evaluation sources.

The survey was completed by 38% of exercise participants and nearly all respondents (98%) indicated they would be happy to be involved in follow-up interviews. Contribution to the evaluation process was voluntary and these response rates show that participants were invested in the exercise and keen to support future improvements.

Exercise participants were also encouraged to make observations of any noteworthy events that occurred before and during the exercise and 18% responded with 138 observations. A further 10 post-exercise interviews were conducted with people who held key roles during the exercise, and this provided valuable additional insights about the exercise.

Using several evaluation methods to assess Exercise Kunawarra and seeing a consistency in the observations made by participants, gave validity to this report's findings.

3.3 Opportunities for Improvement

During the Covid 19 outbreak the usual face-to-face training conducted by AMSA was unable to be provided, which meant that there was an almost 4-year break in MPR training. Despite this break in National Plan training, the outcomes achieved from Exercise Kunawarra were

sufficient to meet the objectives set for the exercise. Some key areas have been identified where there may be opportunities to make improvements to procedures and processes in future exercises and response. These are summarised under the subheadings below and reflected in the recommendations arising from Exercise Kunawarra.

Activation and Incident Escalation under the Victorian state arrangements

In a real-life Level 3 pollution event, the incident would be managed by DTP as the Victorian control agency with AMSA providing support. Some pollution management functions might have been handled from the State Control Centre (SCC) rather than an ICC.

During Exercise Kunawarra there was limited involvement by the State tier of Victorian emergency management and the State Emergency Management Team (SEMT) was largely notional. This did not allow for testing of these full jurisdictional arrangements, such as the communication that would have occurred between the SEMT and ICC. The Evaluators felt that this was a missed training opportunity as the IMT was not subject to the normal level of strategic and political scrutiny. The Evaluators advised that there may have been an exchange of strategic information between the SCME and MERCOM, but they were not privy to all briefings within the IMT.

Understanding the Requirements for Jurisdictional Support

Exercise Kunawarra demonstrated that there was limited awareness of AMSA's role in a Level 3 pollution event from IMT leadership. This was further exacerbated by the AMSA Liaison Officer (LO) not being very proactive in communicating AMSA's role and opportunities for support. Active engagement by the LO did not occur until Day 3 of the exercise. The Operations and Logistics units therefore seemed unaware of AMSA's stockpile of equipment and available resources as they were not mentioned in Sub-plans developed by Operations.

This limited communication between the AMSA LO and rest of the IMT is likely to have impacted on the speed with which contractual arrangements with Australian Marine Oil Spill Centre (AMOSC) were activated. There was also no discussion observed about the ongoing NRT support required for such an incident. According to the Evaluators this was an oversight, but it may also reflect the artificiality of a National Plan exercise. In a real-life Level 3 event, requests for NRT support may take several days to be formulated as the need for resources and additional support are identified.

Establishment of Control Arrangements

Control arrangements consistent with the AIIMs doctrine were established during Exercise Kunawarra. As with most exercises of this size, the evaluators noted that it took time for the functional units to 'find their stride' and settle into a 'battle rhythm'. There was initial confusion about roles and functions during the early stages of the exercise in the Planning and Intelligence teams and ownership of the Incident Action Plan (IAP). It took time to establish a Common Operating Picture (COP) on Day 1. Initially the Logistic and Finance units underestimated the need for continuous supplies of equipment and other resources in its planning.

ExCon's Role and Location

During the exercise, the ExCon team was in a different building from the ICC. The Evaluators and participants noted that this may have limited ExCon's oversight of what was happening within the ICC. Future exercising should consider the location of the ExCon team and if possible, co-locate ExCon within the ICC.

At one point in the exercise the IMT had concerns over the hazardous properties of IFO180, which resulted in a cessation of response actions. Albeit with some delay, Excon provided advice regarding the nature of the hazard. This allowed the exercise and response to continue after some significant delay.

The occurrence highlighted the need for input from Subject Matter Experts (SMEs) in such situations of uncertainty. It also demonstrated the need to educate stakeholders on how the properties of oil change due to weathering factors during marine pollution oil spills.

Communication and Briefings

Briefings are fundamental for participants to understand the exercise objectives, scenario, IC expectations, response structures and one's individual role within an IMT. While a majority of survey respondents gave positive feedback around communications and briefing processes, several comments suggested areas for improvement. This included having more detailed briefings at the start and throughout Exercise Kunawarra. These survey responses were strongly supported by online observations, the evaluators' reports and interviews.

Regular functional unit briefings were also seen as essential for keeping participants informed, especially as there was a high daily rotation of staff across different functional areas. Some participants stated they initially felt 'siloed' within their functions, but noted that by the afternoon of Day 2, functional unit meetings occurred more frequently, allowing for exchange of ideas and collaboration across functional units to occur.

As with communication between functional units in the IMT, suggested improvements to communications between the IMT and field teams were also made by several survey respondents, interviewees and the evaluators. The Evaluators noted that field visits by IMT representatives to the FOB did not occur. This is a good learning opportunity from the exercise, as field teams can often feel isolated when direct engagement with IMT representatives does not occur.

Maintenance of a Common Operating Picture and Situational Awareness

Evaluators and respondents alike agreed that participants struggled to establish a COP and maintain situational awareness during the early stages of Exercise Kunawarra. However, the situation improved by the afternoon of the second day with some guidance from ExCon and other SMEs. This occurrence demonstrated that the exercise design and injects can play an important role in bringing about situational awareness and the preparation and display of a COP.

Several other factors contributed to this situation. Aside from the relative inexperience of most participants with MPR exercises and real-life events, the lack of communication and briefing described above were a limiting factor. The configuration of the ICC also did not allow for the optimal display of relevant information in shared areas of the response facility. A better display of maps, charts, GIS and modelling displays could have improved situational awareness and generated a better COP, especially during the early stages of the exercise.

The Evaluators noted that whiteboards were set out according to sub functions, namely shoreline, marine, aviation and waste. They suggested that the boards could have been better structured to reflect the plans and sub-plans and respective leads could have used them as briefing tools.

The Victorian electronic incident management system (EM-COP) was used extensively during the exercise. The system has particularly well designed for the display of hazards such as fires or floods. However, its use could be explored further by the State authority to train users in the functionalities available for a marine pollution incident.

Field-based Evaluators reported that FOB teams demonstrated a task-focussed situational awareness around the roles they were undertaking, but had limited understanding of the wider incident COP. The Forward Command Vehicle (FCV), provided by VicSES to assist field teams with communication, could have been better utilised to achieve broader situational awareness between field teams and the IMT.

Preparation of Plans and Sub-Plans

As a result of ExCon feedback, the quality of the Incident Action Plan (IAP) improved over the course of the exercise and met the requirements set for the exercise. However, Evaluators noted that the development of the sub-plans seemed to feed into the development of the IAP, rather than the IAP being used to provide strategic direction for the sub-plans.

Field teams developed appropriate sub-plans for their components of the exercise. The Evaluators commented that the content of the field subplans could have been improved if there was a better situational awareness between field teams and the IMT. This supports earlier comments about better communication and briefings between the IMT and the FOB.

Planning and Management of Exercise Kunawarra

The final theme flagged for improvement relates to the certain issues with the planning and conduct of Exercise Kunawarra. While exercise planning commenced at an early stage, some elements of the exercise planning should have been addressed earlier according to the Evaluators and some ExCon members, as highlighted during the interviews. Areas that were hurried included the appointment of the ExCon team, the allocation of key roles within the exercise, script writing for the scenarios and injects, development of induction procedures and the preparation of the Exercise Evaluation Plan. Earlier preparation could have avoided a last-minute rush and some important omissions.

The Evaluators and several interviewees noted that the exercise objectives could have been rationalised and reviewed throughout the planning process. This would have addressed some of the complexities experienced in the analysis and writing up the findings of Exercise Kunawarra. The Evaluation Plan was narrowly focussed on achieving KPIs and benchmarks. It could have benefitted from some wider considerations, such as the practical training and development achieved by the participants through Exercise Kunawarra. It was also suggested by the Evaluators that Victoria's objectives for the exercise should have been reflected to a greater extent in the Evaluation Plan.

There were also opportunities for further improvements in the induction planning and exercise administration. Sign-in procedures for both the IMT and FOBs could have been better handled, as it was unclear who participated in the exercise at any one time. There was inconsistent use of team identifiers such as tabards, vests or arm bands. Reports varied on whether this gear was missing or just not readily available. A lack of proper identification

further added to the confusion at the start about team location, membership and allocated roles.

The VIP visit on Day 2 could have benefitted from better planning. Greater control should have been exercised because the event resulted in a distraction and delay to the exercise's proceedings when the guests freely mingled with exercise participants and had unchaperoned access to the ICC.

As for the field activities, greater familiarity with the Collector App ahead of the exercise may have enabled better usage by the shoreline crew of a potentially highly useful app. More provisioning was also required of some basic field supplies, generator fuel and procedure manuals for field equipment.

3.4 Conclusion

Given Exercise Kunawarra was the first National Plan exercise to be conducted since the start of the Covid pandemic and considering the extensive gap in training during the intervening time, the overall achievements of Exercise Kunawarra were undeniably positive. Participants displayed great enthusiasm, dedication and good will throughout the exercise.

The exercise provided an excellent opportunity for participants to refresh their MPR knowledge in the IMT and field. With many attendees inexperienced in MPR but experienced in other areas of emergency management, the exercise was extremely valuable in educating the broader Victorian EM sector about maritime emergencies. The NRT members, once they arrived, were able to mentor and guide those less experienced throughout the exercise, lifting the profile of both the SRT and NRT. This demonstrated that National Plan exercises could formally incorporate mentoring to enhance participant learning.

The challenges faced over the course of the three days were not uncommon in exercises of this nature and they were largely addressed by the end of Day 3. The gap in face-to-face training over the past four years has resulted in a reduction of capability and knowledge in the MPR space. Exercising state and national arrangements is therefore critically important in building and retaining jurisdictional preparedness and practising interoperability.

Building Capability: Theoretical Training
AMSA's training courses in emergency and oil pollution management provide an essential basis for participating in exercises under the National Plan and being deployed as responders under the NRT or SRT.

Building Capability: Practical Training
Regular training under the National Plan is critical to maintaining the skills and battle readiness of staff likely to be deployed during a real-life pollution event. Even though field activities were limited, gear familiarisation and drills were highly regarded as a means of training during Exercise Kunawarra.

Building Capability: Mentoring
Trained members of the NRT, SRT and other relevant SMEs are an important resource during an exercise, because they act as mentors and role models for less experienced exercise participants, provide strategic direction and help achieve expected outcomes.

Building Capability: Networking
The presence of trained NRT / SRT members and other relevant SMEs at Exercise Kunawarra presented an important opportunity for establishing professional networks, which can be called upon during a real-life pollution event.

Building Capability: Interoperability
Exercise Kunawarra exposed different organisational paradigms and variations in jurisdictional approaches. Insights into these differences helped participants gain a better understanding of cultural differences and supports interoperability under the National Plan.

Exercise Kunawarra 2022

National Oil Spill Response Exercise

Insights suggesting areas to be sustained

Team Performance: Collaboration
Interactions between functional units are important enablers of sound decision making. Processes which contribute to greater interactions (such as regular meetings, briefings and other forms of information exchange) promote better outcomes.

Exercise Conduct: Planning & Management
A well-planned, realistic and well-conducted exercise is important to staff morale and a desire to stay engaged throughout the event. Exercise Kunawarra excelled in logistical arrangements and catering for the exercise's duration. It was also very realistic in most aspects.

Resources: Facilities
Good visual display and dedicated spaces for team meetings, enable team collaboration and better communication. This in turn helps build a better COP and leads to better outcomes in terms of delivering on the necessary plans and sub-plans.

Resources: Information Management
A centralised information management system (such as SharePoint) enhanced the ease and efficiency with which assigned exercise tasks can be undertaken. It also promotes a better COP and situational awareness by making information available to the relevant officers.

Building Capability: Exercise Evaluation
Different assessment methods provide slightly different findings. In order to obtain a comprehensive and less biased view of the way an exercise was conducted it is best to use qualitative and quantitative assessment techniques and to triangulate those findings.

Building Capability: Exercise Evaluation
The work by the Evaluation team during Exercise Kunawarra was integral to the real-time assessment of the exercise's proceedings. This enabled interventions if required in a timely manner and helped steer the end- of-exercise debrief sessions.

Figure 6: Insights gained from Exercise Kunawarra about achievements.

Building Capability: Theoretical Training
AMSA's training courses in emergency and oil pollution management provide an essential basis for participating in exercises under the National Plan and being deployed as responders under the NRT or SRT. The majority of survey respondents reported they had little or no marine pollution training.

Building Capability: Practical Training
Training opportunities for pollution responders should be maximised where possible to improve their practical understanding of national response equipment and oil pollution management.

Communication: ExCon Briefing
A thorough induction briefing of all exercise participants by ExCon at the start of an exercise is important for establishing expectations and keeping participants informed of required processes and procedure. This would also reduce any subsequent confusion about participants' roles and responsibilities.

Communication: IC Briefings
Regular briefings by the IC (preferably with all exercise participants) helps with maintaining focus on the IAP objectives, developing a COP, framing expectations and motivating teams. There could have been more IC-led IMT meetings (especially at the start of Exercise Kunawarra) to establish such a joint understanding.

Communication: Team Meetings
Regular team meetings should focus on achievements, new priorities, status of work and the attribution of roles and responsibilities. They are essential in keeping teams on track and aligned with exercise outcomes. Most teams failed to meet on a regular basis during Exercise Kunawarra.

Exercise Kunawarra 2022

National Oil Spill Response Exercise

Insights suggesting areas for improvement

Team Performance: Collaboration
A lack of collaboration between teams leads to decision-making that is siloed, reactive and fails to take account of all relevant considerations. During Exercise Kunawarra, most teams did not truly collaborate until Day 3. This led to a slow start, deviations from the program and sub-optimal outcomes.

Exercise Conduct: Planning & Management
Earlier planning for Exercise Kunawarra could have improved certain aspects of the exercise's conduct. This included the allocation of functions and roles, script writing, induction planning and exercise evaluation.

Operations: Information Displays
Information in support of the COP and situational awareness was displayed in the ICC and updated throughout the exercise. However, a better display of maps, charts, GIS and modelling displays could have improved this understanding, especially during the early stages of the exercise.

Operations: Interaction with Field Units
Notwithstanding the bad weather, there was limited interaction between the ICC and the field units. Relevant IMT representatives failed to visit the field crews for briefings. Access to visual displays and the information management system was also quite restricted resulting in poor situational awareness.

Resources: Facilities
Having ExCon located in another building away from the ICC limited ExCon's overview of the exercise and impeded their ability to rapidly intervene when required. Isolation was also experienced by the Finance & Logistics teams who were situated in an ante-room.

Communication: Use of Standard Templates
The use of standard templates for the preparation of exercise documents in a centralised location and which can be accessed by the relevant officers would improve the efficiency of exercise processes and facilitate the communication flow within and between teams.

Figure 7: Insights gained from Exercise Kunawarra about improvement opportunities

Recommendations for future exercises

1. That opportunities are maximised for key SRT members to attend training courses, refresher activities or exercises to supplement and maintain their practical competencies and gain familiarity with a wider range of equipment and practices.

2. That in future exercises the activation and deployment of the national response capabilities be fully tested, where consistent with the aim of the exercise, through the inclusion of any relevant State emergency management arrangements and escalation procedures pertaining to pollution management.

3. That in future exercises the following elements are enhanced:
   a) regular briefings and communication are established between the ICC and FOBs to ensure a shared understanding of the COP and IAP;
   b) standard templates and forms are used for the exchange of information between the ICC/IMT and the field crew;
   c) testing / refamiliarization is carried out on new equipment and applications (e.g. Collector app) before it is deployed in the field and field crew are familiarised with its use; and
   d) FOB and field crew be fully equipped with all the necessary material required (such as charts, imagery to discharge their field functions effectively, efficiently, and safely).

4. Where exercises are planned around hypothetical weather conditions, they need to be carefully managed and communicated to avoid confusion.

5. That in future exercises:
   a) the regular review of the exercise's objectives and KPIs be part of the planning process; and
   b) that objectives be clearly articulated throughout the exercise documents (such as the Exercise Plan, Evaluation Plan and Participant Handbook), the induction process and displays within the ICC and FOBs during the exercise.

6. That in future exercises Excon and the exercise planners ensure that time is set aside for effective briefings, debriefs and handovers to occur regularly within the IMT and FOB units to enhance a common understanding of the exercise objectives and situational awareness.

7. That future exercises are enhanced by:
   a) deploying experienced participants, with the right background and training, into team lead positions at least in the early stages of the exercise to encourage learning through shadowing and observations by others; and
   b) ensuring less experienced participants, under the mentorship of a more experienced team lead, are given an opportunity to act in a senior position after receiving some initial training during the first stage of the exercise.

8. That in future exercises, an induction meeting is held by ExCon at the start of the exercise, which explains the aims and objectives for conducting the exercise and outlines general exercise procedures if the exercise seeks to maximise outcomes rather than emulate a real incident.

9. That in future exercises, participants receive a briefing at commencement which outlines the current situation and the proposed incident management approach and familiarises participants with team structures, roles and responsible officers if the exercise seeks to maximise outcomes rather than emulate a real incident.

Recommendations for future exercises
10. That in future exercises: a) established templates are used for recording required exercise information; b) that these are centrally located and accessible by the relevant ICC and FOB members; and c) that their location and usage be explained to participants at the start of the exercise.
11. That in future exercises local Traditional Owner representatives continue to be included within an ICC and field setting to provide advice as appropriate.
12. That there be a review and update of the Aide-memoire for Marine Pollution Response, which takes account of the changes that have occurred to marine pollution management procedures since 2016.
13. Where feasible, relevant Executives from the response agency continue to be involved at a level that would be indicative of corporate responsibilities in a real-life pollution event.
14. That in future exercises, where possible, ExCon be co-located with the ICC to allow for quicker and more direct interventions.
15. If possible, that in future exercises: a) dedicated spaces or rooms are provided for teams which are big enough to accommodate the workstations of all team members; and b) whole-of-IMT briefings are held in the main part of the IMT, where visual displays can be accessed to help build a COP and situational awareness.
16. That in future exercises: a) exercise specific surveys continue to be used to obtain quantitative feedback on the conduct of the exercise and to validate qualitative findings; b) participants be asked to complete this survey before they depart the exercise and that time be allowed for its completion to encourage a higher response; c) the data from these post-exercise surveys be used to establish a time-series data base of the evaluation of successive annual exercises; and d) The evaluation report should be completed in draft form in a timely fashion, to allow for implementation of any recommendations prior to the commencement of planning for the next National exercise.

Table 3: Recommendations for future exercises

Appendices

Appendix A – Reference list of guidance documents

Australian Institute for Disaster Resilience (2012) Managing Exercises 2nd edition. (Handbook Collection).

Australian Institute for Disaster Resilience (2019) Lessons Management, 2nd edition. (Handbook Collection).

Australasian Fire and Emergency Service Authorities Council (2017) Australasian Inter-Service Incident Management System.

Australian Maritime Safety Authority (2019) National Plan for Maritime Environmental Emergencies.

Australian Maritime Safety Authority (2016) National Plan for Maritime Environmental Emergencies: Aide-memoire for Marine Pollution Response 2nd edition.

Australian Maritime Safety Authority Policy (NP-GUI-004).

Department of Transport, Victoria (2021) State Maritime Emergencies (non-search and rescue) Subplan 2nd edition.

Department of Transport, Victoria (2020) DoT Emergency Management Framework.

Emergency Management Victoria (2021) Framework for Managing Exercises in Victoria.

Appendix B – Participating organisations in Exercise Kunawarra

List of entities and participants which participated in Exercise Kunawarra by jurisdiction.

State	Organisation	Participants
ACT	AMSA	11
VIC	Agriculture Victoria	1
	AMOSC	3
	AMSA	1
	Borough of Queenscliffe	2
	CFA Victoria	4
	City of Greater Geelong	2
	DELWP	5
	DJPR Local Government of Victoria	1
	Department of Transport Victoria	16
	Emergency Management Victoria	7
	EPA Victoria	9
	Exxon Mobil	2
	Fire Rescue Victoria	6
	FLEXOR Pty Ltd	2
	Geelong Ports	5
	Gippsland Ports	1
	Inspector-General for Emergency Management	1
	Oil Response Company of Australia	5
	Parks Victoria	19
	Port of Melbourne	2
	Port of Portland	2
	Ports Victoria	5
	Safe Transport Victoria	2
	VICSES	6
	Victoria Police	8
	Viva Energy Australia Pty Ltd	2
	Traditional Owner Representative	1
QLD	AMSA	1
	GBRMPA	2
	Gold Coast Waterways Authority	1
	Maritime Safety QLD	9
	OPEC Systems	2
NSW	Port Authority NSW	8
	TigerTail Australia	3
	Transport for NSW	4
WA	Oil Response Company of Australia	7
	WA Department of Transport	7
TAS	EPA Tasmania	10
	TasPorts	4
	Maritime and Safety Tasmania	1
SA	Department of Infrastructure and Transport SA	3
	Oil Response Company of Australia	1
	TOTAL	**193**

Appendix C – Exercise schedule indicating main events and expected outcomes

Tuesday, 4 October 2022	
Scheduled Activities	
0700	• Incident occurs • Notification and escalation protocols enacted
0900	• Level 3 Incident Controller appointed • ICC location determined
0930 – 1030	• ICC IMT participants arrive progressively at the Geelong ICC between 0930-1030 for registration, role allocation and initial briefings
1100	• Formal handover of control from Ports Victoria to Level 3 Incident Controller at ICC • Full ICC operations commence • Aviation preparations begin, limited operations occur • Select activities occurring at field sites to prepare for next day operations
1800	• Completion of observation forms • Day one shift concludes
Expected Outcomes	
• Establishment of control and governance arrangements for the event • ICC will focus on getting set-up, assessment and planning, including trajectory modelling • Intelligence will focus on developing a Net Environmental Benefit Analysis (NEBA) to identify and prioritise valued resources at risk • Operations will focus on dispersants to activate the fixed wing dispersant capability • Logistics, Finance and Administration will focus on establishing procurement and accounting systems, including liaison with AMSA for national stockpile equipment and NRT personnel, and establishing FOB) • Public Information will focus on stakeholder identification and community engagement planning, including developing talking points, holding statements, simulated live to air radio interviews and one televised media conference	

Wednesday, 5 October 2023	
Scheduled Activities	
0800	• Exercise day 2 shifts start in the ICC and at all field locations (marine, shoreline and aviation) • Registrations, role allocations and briefings at all locations • IMT significantly increases in size as National Response Team (NRT) personnel arrive
1000 – 1600	• Executive Observer Program (Does not affect exercise schedule)
1800	• Completion of observation forms • Day two shift concludes

Expected Outcomes

- Planning will focus on protection strategies and waste management planning
- Operations will focus on protective marine / on-water activities, including:
  - shoreline protection booming at key locations
  - shoreline pre-cleaning
  - collection (current buster system)
  - pre-impact shoreline assessment and reporting using new technology tools
- Logistics will focus on resourcing the response with local and NRT personnel, medium-term resource planning and waste management capability
- Public information and community engagement will ramp up with a media conference to end the day

Thursday, 6 October 2023

Scheduled Activities

0800	• Exercise day 3 shifts start in the ICC and at all field locations (marine, shoreline and aviation) • Registrations, role allocations and briefings as required
1200 – 1230	• Exercise activities ending, save all exercise data and records. Demobilise ICC and field locations, clean and restore equipment.
1300 – 1430	• Hot debriefs at ICC and field locations, online survey activated, hand in last minute observation forms. • Travel to main debrief location: Sphinx Hotel 2 Thompson Rd North Geelong Vic 3215
1500	• Formal Exercise debrief at Sphinx Hotel conference centre
1630	• Exercise close and depart

Expected Outcomes

- Planning will focus on developing end-point criteria
- Operations will focus on:
  - Volunteer management
  - Wildlife response (functional only; no field deployment)
  - Recording impact extent with shoreline app
- Public information focus on health and safety messages, community impact and recovery.

Appendix D – Achievement of objectives against KPIs

A key aim of Exercise Kunawarra was to assess how well maritime pollution response arrangements could be implemented, should the situation arise. This was particularly important given the break in exercise training under the National Plans since 2019. The tables below show the Evaluators' assessment of how well each of the objectives were achieved as measured against pre-agreed KPIs.

Table 4: Achievement of Objective 1

Objective 1		Overall Assessment: Partial Achievement			
Practice implementing Victorian and National maritime pollution response arrangements by: • Exploring strategic and inter-government relationships. • Evaluating systems of information sharing between Victorian and Commonwealth agencies, including requests for assistance and information. • Understanding jurisdictional requirements for national support during a marine pollution emergency.					
		Fully	**Partially**	**Not**	**N/A**
KPI 1.	State Controller Maritime Emergencies receives regular, accurate and timely briefings.	✓			
KPI 2.	Victoria State Control Team and State Emergency Management Team receive regular, accurate and timely briefings.			×	
KPI 3.	Requests to AMSA are timely, comprehensive and actionable iaw/wrt National Plan Guidance.			×	
KPI 4.	Strategic communication is established and maintained between Victorian agencies and Australian Government agencies iaw/wrt National Plan.			×	
KPI 5.	Australian Government agencies are provided with relevant, timely information to inform the National Emergency Management Agency (NEMA) of a potential event of national significance.			×	
KPI 6.	Victorian Government agency participants improve their knowledge of marine pollution emergency response.	✓			
KPI 7.	Develop a strategy to manage the effective utilization of community and spontaneous volunteers. The strategy should include:				
	(a) Induction and registration			×	
	(b) Training requirements			×	
	(c) Equipment and PPE			×	
	(d) Welfare management			×	
	(e) Insurance coverage			×	

Table 5: Achievement of Objective 2

Objective 2	Overall Assessment: Partial Achievement

Establish and maintain incident control arrangements by:

- Implementing the SEMP: Maritime Emergencies (NSR) Sub-Plan for a Level 3 incident, including deployment of the NRT;
- Exploring participants' roles and responsibilities in responding to a marine pollution incident in state waters, including establishing an incident management team (IMT) and an incident emergency management team (IEMT);
- Exploring relationship between national and state emergency management governance arrangements; and
- Maintaining effective situational awareness identifying risks and priorities enabling incident action and tactical plans to be developed and implemented.

		Fully	Partially	Not	N/A
KPI 1.	DoT internal arrangements were activated iaw/wrt SEMP ME Sub-Plan and DoT EM Plan.	✓			
KPI 2.	DoT notification and escalation protocols are followed.			×	
KPI 3.	Control was established at the appropriate level.	✓			
KPI 4.	Instruments, delegations and authorities were issued in an appropriate timeframe.	✓			
KPI 5.	An IMT was established iaw AIIMS and DoT principles.	✓			
KPI 6.	An operational rhythm was established, including regular IMT planning meetings and briefings.	✓			
KPI 7.	An accurate common operating picture was established and maintained throughout the exercise.		×		
KPI 8.	An actionable incident action plan (including relevant sub-plans) was prepared and updated at least daily.	✓			
KPI 9.	An accurate situation report was prepared at least daily, or as required.	✓			
KPI 10.	Communication between the IMT and broader Victorian emergency management arrangements were established and maintained iaw/wrt SEMP.			×	

Table 6: Achievement of Objective 3

Objective 3	Overall Assessment: Partial Achievement

Activate and deploy national response capabilities to:

- Test AMSA's activation and operation of marine pollution response arrangements, including the National Response Team, Fixed Wing Aerial Dispersant Capability and national equipment deployment; and
- Explore the arrangements for integrating national capabilities into a state's established incident management structures.

		Fully	Partially	Not	N/A
KPI 1.	Timely requests for appropriate National Response Team capabilities were made iaw/wrt National Plan requirements.			×	
KPI 2.	AMSA deployed NRT capabilities as requested.			×	
KPI 3.	AMSA operational capabilities were integrated into Victorian Government EM structures.	✓			
KPI 4.	NRT members were integrated into the Incident Management Team.	✓			

Table 7: Achievement of Objective 4

Objective 4	Overall Assessment: Partial Achievement			
Practise field operations with forward operating bases (FOB) to: • Test Victorian Government plans for establishing forward control. • Practise developing and implementing aviation response plans. • Practise developing and implementing marine response plans. • Practise developing and implementing shoreline response plans. • Incorporating and using new shoreline assessment technologies (RPAS and mapping).				
	Fully	**Partially**	**Not**	**N/A**
KPI 1. Forward operating bases were established iaw/wrt Victorian EM arrangements.	✓			
KPI 2. Communications between ICC and FOBs effective and timely.	✓			
KPI 3. Field staff prepared for deployment, including registrations, briefings, tracking of personnel and WHS requirements	✓			
KPI 4. A safety management approach was developed and applied including processes for managing injured personnel in the field	✓			
KPI 5. All activities are executed in a safe and coordinated manner, use of JSOPs, equipment SOPs, field task assignments, PPE, take5's and clear delineation of site-specific requirements (hot, warm, cold zones etc).	✓			
KPI 6. A marine operations sub-plan was developed and implemented with booms and associated marine.	✓			
KPI 7. An aviation operations sub-plan was developed and implemented, including: (a) effective airbase management structure established; and (b) fixed wing aircraft dispersant operations were planned and conducted as per IAP objectives.				✓
KPI 8. A shoreline operations sub-plan was developed and implemented including: (a) effective site assessments (b) sectors established as required (c) appropriate shoreline clean-up techniques identified (d) correct deployment of shoreline land sea boom iaw SOPs	✓			
KPI 9. A waste management sub-plan was developed and implemented, including where appropriate site-specific waste plans for shoreline and marine activities, including: (a) government approvals (b) management of oiled PPE & equipment (c) management of oiled sand, vegetation, oily waste (marine) (d) suitable storage and disposal arrangements	✓			
KPI 10. A wildlife management sub-plan was developed that considered: (a) land and marine based search & rescue requirements for assessment, treatment, cleaning and rehabilitation (b) injured wildlife transport arrangements (c) establishment of a treatment and rehabilitation centre (d) effective records & financial management process	✓			

Table 8: Achievement of Objective 5

Objective 5		Overall Assessment: Partial Achievement			
Developing and implementing an effective public information and community engagement strategy, including media conferences.					
		Fully	**Partially**	**Not**	**N/A**
KPI 1.	A public information sub-plan was developed, consistent with Victorian Government arrangements.	✓			
KPI 2.	A stakeholder engagement strategy was developed.	✓			
KPI 3.	Talking points were prepared and made available to relevant staff as required.	✓			
KPI 4.	Spokespeople were appointed and supported during media conferences.	✓			
KPI 5.	Victorian and Australian Government public information teams develop consistent public messages		×		
KPI 6.	Community liaison and media contact arrangements are established for FOB and field sites.	✓			

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