Evaluation Report

Exercise *Thalassarche 2023*

2024

Acknowledgement of Country

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands and waters we live and work on, their culture, and their Elders past and present.

Contents

Executive summary

Exercise *Thalassarche* was held in Hobart and the D'Entrecasteaux Channel region of Tasmania on 14-16 November 2023. The exercise practiced the implementation of the National Plan, TasPlan, WildPlan and First Strike Plan for the D'Entrecasteaux Channel.

This was a large-scale field exercise conducted in a live environment across seven locations. The activities and scale introduced a complex risk profile, including safety, operational, reputational, community, financial, legal and technological risks.

Even though improvement opportunities have been identified, the overall exercise was overwhelmingly rated by participants as a success, executed as per the schedule and met the exercise objectives, without adverse impacts.

Parameter	Details	
Duration	10 months planning by a core planning team of 11 members from 4 organisations	
Number of exercise management staff	49	
Number of participants	163	
Agencies involved	26 government and non-government agencies/companies	
Operational locations	• Incident Coordination Centre – IMT 70 Collins St, Hobart • Dru Point FOB Tas Ports Mac2/3 FOB	
Vessels deployed	7	
Capabilities practiced	• Shoreline assessment • Shoreline clean up • Protection booming • Shoreline booming • Containment booming • Wildlife collection, cleaning, rehabilitation • Waste management On water containment and recovery using V-sweep System and Marco skimming vessel	• Establishment of FOB • Decontamination/hygiene stations • Establishing and operating a multi-agency IMT in a State Control Centre • Public communications • Application of environmental science and technical knowledge Application of Aboriginal cultural knowledge and values

The philosophy behind the exercise design was to create a constructive learning environment that allowed for building capability, strengthening relationships and exploring technology applications and processes.

The exercise was also designed to learn from previous responses and exercises and trial improvement opportunities.

With that in mind, the strategic objectives that were set for Exercise *Thalassarche* were to:

1. Practice the transition from initial state response to a level 3 marine pollution response.

2. Apply plans, processes, tools and technology to formulate an effective response.
3. Demonstrate good/better practice in information sharing and communication.
4. Determine if lessons identified in previous exercises and after-action reviews have been addressed.
5. Identify opportunities to improve future responses and exercises.

Exercise overview

The scenario involved a spill from a ship in Storm Bay and in the vicinity of the entrance to the D'Entrecasteaux Channel. At commencement of the exercise, the First Strike Plan was enacted, and the incident level was rated as Level 2, which rapidly escalated to Level 3 with subsequent deployment of the National Response Team.

Day 0 Notional 13 November 2023	Day 1 14 November 2023	Day 2 15 November 2023	Day 3 16 November 2023
• At 2100, communication between ship's master and TasPorts occurs • Further comms between TasPorts, Tas EPA and AMSA occurs overnight • Operations focus is on shoreline assessments and initial establishment of wildlife operations and planning	• STARTEX • Establishment of the ICC between TasPorts and Tas EPA at the SCC • TasPorts IC brief • SCC/response induction • Commencement of the response activities • Escalation • Preparation for arrival of NRT members to integrate into the response • NRT member induction and IC brief	• NRT team members integrated in the IMT. The focus points for this day were: • Demonstrate best practice hand over • Demonstrate sound briefing and communication processes between response areas and key stakeholders • Deploy and manage field operations and practice two-way communication/ coordination	Activities included: • Continuation of the IMT and field activities in the morning • Monitoring and evaluation of the response strategies • ENDEX • Exercise debriefs

Implementing improvement initiatives

One of the key innovations to enhance coordination, communication and shared situational awareness was the custom-built Incident Response site in SharePoint, supported by the Microsoft suite.

All exercise participants could be easily provided access to this system and the majority were already proficient as they use it in their daily work. Adjustments could be made by IT support as well as IMT members. The integration with various applications allowed for the development of incident management outputs. To ensure everyone was familiar with the site's navigation, a pre-exercise training session was provided.

Relevant plans, workflows, duty statements, procedures and templates were made available through this platform. It was also deployed as the virtual Common Operating Picture to enable shared situational awareness across the range of operational locations.

Due to the nature of SharePoint, the response activities could be constantly monitored, and performance/evaluation statistics were generated. For example, the assessment of the documents uploaded onto the SharePoint site demonstrated that sitreps and an Incident Action Plan were developed in adequate cadence.

Even though improvement opportunities were identified in relation to accessibility and user-friendliness in the field, it has proven to be a valuable, agile and cost-effective platform for achieving incident response outcomes.

Learning as you go

Various exercise management techniques were adopted to monitor performance and adjust as required. Two key methods stood out that demonstrated significant additional value that can be transferred to actual responses:

1. Mentors drawn for the NP Training Program and NRT were available for the IC and Function Leads in the IMT and field. This contributed to a psychologically safe environment where decisions and actions could be explored with peers. Participants consistently reported this as a positive measure across the three days and it addressed a previous exercise finding.
2. Daily short, end-of-day online surveys across the response were conducted. The format allowed for immediate interpretation of the data, and, through exercise management, this provided the IC with information regarding challenges on the previous day and enabled them to be addressed in the morning brief and by implementing adjustments.

Capability building

The local jurisdiction used the opportunity to trial the recently drafted WildPlan and managing wildlife impacts was a major component of the activities in the field. This included setup of a Primary Care Facility, induction, reconnaissance, capture and treatment.

The local jurisdiction introduced several elements to simulate the wildlife impacts to the scenario, which added to the realism.

Exercise evaluation

Exercise evaluation was conducted through daily surveys, daily debriefs, evaluators at each strategic location and review of incident management outputs, actions and decisions.

The report outlines the findings and recommendations in the order of the objectives, followed by the exercise management evaluation.

Consolidated list of recommendations

Objective 1

R1. TRAINING: Share the exercise lesson in relation to communicating the escalation/incident level decision-making, outcome and related response implications across the response with the AMSA National Plan Training Team to enable trainers to incorporate it in the training program where appropriate. (ICL2, ICL3).

Objective 2

R2. PROCESS: Expand the induction process and induction template to include a short description of the relevant plans at the current stage of the response, how they relate and the expectations in line with those plans.

R3. TRAINING: Provide additional training in safety management processes for Wildlife responders.

R4. PEOPLE/TRAINING: Increase awareness of the Wildlife Advisor and the need for this role to remain at the IC advisor level.

R5. TRAINING: Develop and deliver a WildPlan training program.
R6. SUPPORT: Identify and source required equipment to meet operational requirements of WildPlan.
R7. TRAINING: Explore opportunities to increase awareness of risk assessments and how to apply them. Opportunities could be through the National Plan training program or an online risk assessment workshop.
R8. PROCESS: Standardise the process and templates for risk assessment and incorporate these on the AMSA SharePoint response site, AMSA website, and alternate/relevant incident response sites.
R9. TECHNOLOGY: Incorporate standardised risk assessment templates/process on the AMSA Response SharePoint site.
R10. TRAINING: Provide training opportunities for Planning and Intelligence personnel to gain further experience in the development and use of the NEBA.
R11. PEOPLE: Consider the inclusion of a marine subject matter expert in Intelligence from the onset.
R12. TRAINING: Include Intelligence as a separate function in the MPR Training Program.
R13. TRAINING: Include procedural guidance on the planning cycle and feedback loops in the AMSA Aide Memoir.
R14. PROCESS: Develop protocols for operating the SharePoint response site, including approval processes for the Impact/Risk Assessment, Incident Action Plan, SitRep, messaging and sub-plans. Also see R28.
R15. TECHNOLOGY: Develop measures that can be easily implemented in future responses to ensure logs are consistently maintained and filed.
R16. TECHNOLOGY/PROCESS: Continue using SharePoint as the incident management system and COP, supported by an ongoing program of performance monitoring, maintenance and improvement.
R17. PROCESS: Develop usage protocols for the SharePoint response site, which include document and record control, file structures and workflows.
R18. PROCESS: Explore the practical applicability/limitations of SharePoint use in the field for sharing information.
R19. TRAINING: Develop online modular training packages for the use of the SharePoint site.
R20. SUPPORT: Ensure the IMT is resourced with laptops dedicated to the COP.
R21. TECHNOLOGY: Through a workshop process, list the improvement opportunities for the Collector App then identify and secure resources to implement these.
R22. TECHNOLOGY: Secure funding to implement improvement opportunities to the Collector App.
R23. TRAINING: Provide Collector App training prior to the next exercise.

Objective 3

R24. TECHNOLOGY/SUPPORT: Set a Statement of Requirements for communication resources in the field to support the increased use of technology for situational awareness. This should include additional laptops, redundancies for connectivity (internet and communication channels), radios, satphones and phones that can connect to the COP on SharePoint.
R25. TECHNOLOGY/PROCESS: Implement practices around briefing schedules with the field via Teams or phone link.
R26. PROCESS: Embed practices for rotating between the field and IMT to enhance mutual understanding of local challenges and build relationships.
R27. PROCESS: Display key contact lists at central locations and improve access to the contact phone list.
R28. PROCESS: Ensure the situation, response objectives and key actions are clearly displayed in the FOB and other central operational locations.

Objective 4

R29. TECHNOLOGY/PROCESS: Provide standard templates for the IC briefs on the AMSA SharePoint response site. Include examples of SMEACS and STICC briefs (exercise products can be used as examples).
R30. TECHNOLOGY/PROCESS: Standardise an AMSA template and process for induction then incorporate them on the AMSA SharePoint response site.
R31. PROCESS: Develop and incorporate daily online surveys to inform IMT decision-making in relation to response safety, compliance and overall approach to the response.
R32. TRAINING: Consider including the Public Information Function in the MPR training program.
R33. TECHNOLOGY: EPA to share the technology operating challenges of the visual displays with the ICC management for consideration.

Objective 5

R34. PROCESS: Standardise the quick survey based daily performance monitoring processes and incorporate them in marine pollution response protocols and exercises.
R35. PEOPLE: Sustain the use of mentors and consider adopting a mentor program in the response structure.

Exercise management

R36. ExMan: Establish 'business rules' for the use of SharePoint for project management, including document management roles and responsibilities, version control, management of draft documents, storage of superseded versions and notification of documents for review.
R37. ExMan: Ensure the Risk Plan is an agenda item on the first exercise planning meeting and first steering committee meeting. Use the existing Risk Plan as the basis and adjust to the context of the new exercise as required.
R38. ExMan: Form the Steering Committee at the start of the project.
R39. ExMan: Ensure the planning team has at least one member that was on the core planning team of the previous year.
R40. ExMan: Ensure the previous year's exercise report is published prior to the first planning meeting.
R41. ExMan: Provide baseline training, or at minimum an awareness session, in the AIDR exercise management methodology to all exercise planning team members prior to them joining.
R42. ExMan: Provide a detailed description for each of the planning team members on their remit, roles, responsibilities and expected deliverables at project inception.
R43. ExMan: Lock in the operational locations, oil spill trajectory modelling and timeline at least three months prior to the exercise date.
R44. ExMan: Lock in key timings at least a month prior to the exercise date.
R45. ExMan: Make the draft Master Schedule of Events for all three days available to the exercise management team as early as possible for familiarisation.
R46. EXMan: Continue using WhatsApp for safety updates and notifications.
R47. EXMan: Consider the safety recommendations from the field for the next exercise:

- Provide a forklift on-site to prevent manual handling of ISO palletised gear.
- Minimise traffic in the staging area, with a separate boat launch area.
- Provide clear comms to base and in/out procedure.

R48. ExMan: Continue using an EXCON WhatsApp group to confirm the status of injects.
R49. ExMan: Develop a logistics brief that explains exercise vs scenario logistics and how the various processes work.
R50. ExMan: Maintain the support measures taken during this exercise to ensure continuity of the positive learning environment during future exercises and responses.

R51. ExMan: Continue the mentor concept in future exercise with the mentors being selected from the marine pollution training program and National Response Team.

R52. ExMan: Retain this evaluator model in future exercises (i.e the use of qualified (SME) assessors who have an IMT & field presence and who report against a pre-agreed evaluation framework and KPIs.

R53. ExMan: Clarify with evaluators that they must not engage in mentor-like conversations.

R54. ExMan: Ensure sufficient staff are available to separate the mentor role from then evaluator role.

R55. ExMan: Follow the Exercise Thalassarche observer program model in future exercises.

R56. ExMan: Ensure through exercise design that all staff joining the exercise receive a situation briefing.

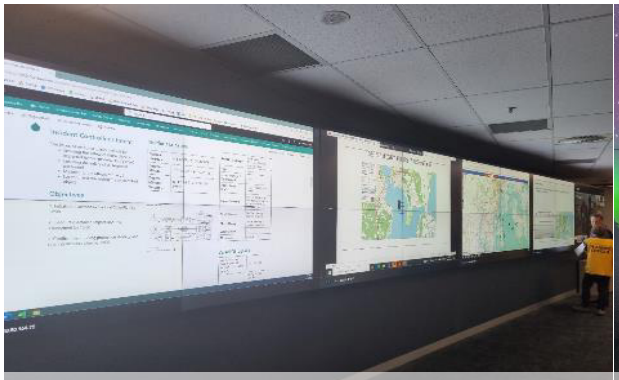
R57. ExMan: Continue the model of conducting daily surveys that are assessed by the exercise management team at the end of each day to inform actions on the next day.

R58. ExMan: Develop protocols for the use of SharePoint in exercise management, including workflows for key processes.

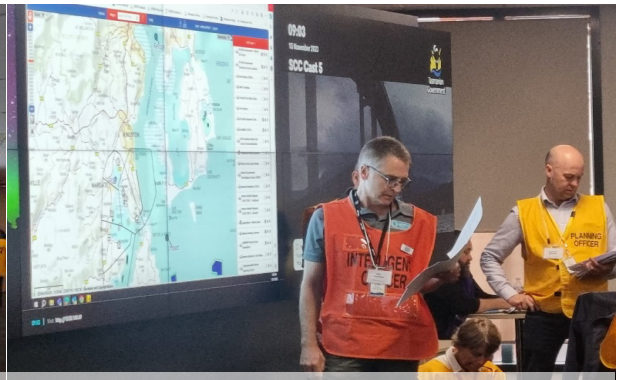
R59. ExMan: Resolve the issue with role-based email addresses with the host state for future exercises.

R60. ExMan: Establish a list of requirements for the IMT venue, appoint a venue liaison role in the planning team (representative from the host agency) and ensure sufficient technical support is provided by the venue owner.

R61. ExMan: Test technology several weeks prior to exercise delivery to allow time for initiating workarounds.



Shoreline cleanup

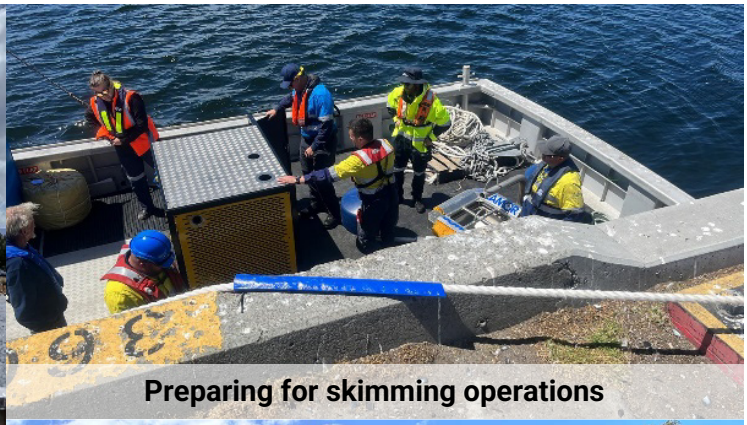


Intel brief IMT

Forward operating base

Forward operating base

Carrying rescued wildlife



Preparing for skimming operations

Brief by the wildlife coordinator

Simulated oil on the beach (rubber mat)

Decontamination station

Introduction

The annual Australian Maritime Safety Authority (AMSA) National Plan Exercise *Thalassarche* (pron. *Thal-as-arc*) was held from 14-16 November 2023 and hosted by the Tasmanian Environment Protection Authority (EPA) and the Tasmanian Ports Corporation (TasPorts) in Hobart.

The AMSA National Plan exercise is an annual event but was temporarily suspended during COVID. This was the second National Plan exercise since the COVID hiatus. The exercise was conducted to practice all strategic and operational activities of a marine pollution response, including the incident control centre, field-based activities, pollution response aviation elements and on water (marine response elements). It also included a fully resourced wildlife Primary Care Facility.

The planning, development, delivery and evaluation of Exercise *Thalassarche* was a collaborative effort between AMSA, the EPA, TasPorts and the project manager, Phoenix Resilience.

Exercises are conducted and evaluated to build capabilities and identify where improvements can be made. A lessons management process ensures due diligence within the data collection, processing, analysis and interpretation.

This document outlines the evaluation methodology and outcomes of the three-day, multi-agency, functional and field exercise called Exercise *Thalassarche*.

The evaluation methodology complies with the requirements outlined in:

- Australian Institute for Disaster Resilience (AIDR) – Managing Exercise Handbook
- AIDR – Lessons Management Handbook
- AMSA Lessons Management Guidelines 2022

Background

Each ship moving in Australian waters represents a marine pollution hazard. While the likelihood of a large marine pollution incident is low, the results can be catastrophic, with impacts across environment, human/social, economic, transport and infrastructure dimensions.

Tasmania's marine and coastal environments contain some of the most distinctive flora and fauna in the world in terms of composition and diversity. Several major international and domestic shipping routes operate across the coastline.[1] Additionally, Tasmania hosts increasing cruise and expedition ship activity and has numerous aquaculture farms that service global markets.

To ensure a coordinated response to a marine pollution incident, several arrangements are in place ranging from local to state and national. The *National Plan for Maritime Environmental Emergencies* (National Plan) sets out national arrangements, policies and principles for managing maritime environmental emergencies. In operation since 1973, the National Plan has been the foundation for creating a collaborative network between governments and industries, which has provided timely and effective response to maritime pollution incidents in Australia.

The arrangements for marine incidents in Tasmania are outlined in the Tasmanian Oil Spill and Chemical Spill Contingency Plan (TasPlan) 2022. TasPlan is aligned with the National Plan. To enable protection of known vulnerabilities in a timely manner, the First Strike Plan for the D'Entrecasteaux Channel is in place. The wildlife response is described in the draft Tasmanian Wildlife Response Plan (WildPlan).

[1] Tasmanian Marine and Oil Spill Contingency Plan, January 2022 V5.

Purpose of the exercise

Practicing a response in a controlled environment, with support and guidance, provides favourable conditions for learning. This exercise was designed to familiarise participants with the latest coordination arrangements, plans, response resources, information and technology, and provide an opportunity for the National Response Team to work together on a significant simulated level 3 incident. Through the scenario, awareness of the local context and consequences of marine pollution incidents could be raised. Activities were structured to demonstrate current best practice incident management and marine pollution response techniques. Additionally, the collaboration over three days-built relationships and mutual understanding between stakeholders. The knowledge, skills and relationships gained will be of tremendous value under the pressure and stress of a future actual marine pollution response incident.

The National Plan (section 4.6) requires that the national response capability is exercised annually, with the exercise location changing each time. The last National Plan Exercise (Exercise Kunawarra) was held in Geelong in October 2022.

Exercise *Thalassarche* was held in Hobart and the D'Entrecasteaux Channel region of Tasmania on 14-16 November 2023. The exercise was the first opportunity to comprehensively practise implementing the National Plan, TasPlan and First Strike Plan for the D'Entrecasteaux Channel.

The exercise name – *Thalassarche* – is the genus name for the Shy Albatross. The Shy Albatross is listed as endangered and is endemic to Tasmania, breeding exclusively on three offshore islands. It frequents Storm Bay and parts of the D'Entrecasteaux Channel.[2] The Shy Albatross is slow to mature and has a low reproductive output, meaning even slight increases in mortality, such as may be caused by an oil spill, can have significant consequences for the population.

Exercise drivers

The last exercise held in Tasmania was in 2006 (Exercise Van Diemen) in the Mersey River in Devonport. Since 2006, no level 3 incident exercises have been held in Tasmania to test existing arrangements nor have any level 3 incidents occurred. In 2022, a level 2 incident occurred in the Mersey River requiring coordinated response between the Tasmanian Environment Protection Authority (Tas EPA), TasPorts, Marine and Safety Tasmania (MAST), Department of Natural Resources and Environment Tasmania (NRE) and Devonport City Council. However, there was minimal involvement from a national perspective, and it did not require activation of the National Response Team.

Exercise *Thalassarche* was designed to meet the following needs:

- Validate and refine participants' understanding of the National Plan, TasPlan, First Strike Plan for the D'Entrecasteaux Channel and WildPlan.
- Reinforce how these plans should be applied and rehearse operating from a state coordination centre and managing field operations, including a large-scale FOB.
- Practice the use of impact and risk assessment technology, tools and data.
- Practice the deployment of marine, shoreline and wildlife response resources.
- Address and validate agreed lessons from the AMSA and EPA after-action reviews and produce an exercise evaluation report to demonstrate

[2] "Shy Albatross," Department of Natural Resources and Environment Tasmania, viewed June 20, 2023, https://nre.tas.gov.au/conservation/threatened-species-and-communities/lists-of-threatened-species/threatened-species-vertebrates/shy-albatross.

- continuous learning.

Exercise philosophy

This exercise philosophy was based on setting people up for success into the future by:

- Building capabilities and confidence.
- Providing context, time and space for learning.
- Demonstrating and validating good/better practice.
- Providing reasonable stretch opportunities (that do not push people beyond their limits).
- Focussing on the key success factors of a response, including inductions, communication within and between response functional units, and development and maintenance of a common operating picture (COP).

Aim

The aim of Exercise *Thalassarche* was to practise and continue to build a national marine pollution capability by implementing a combined Commonwealth, Tasmanian and National Response Team response to a level 3 marine pollution emergency in Tasmanian state and port waters.

Objectives

The strategic objectives for Exercise *Thalassarche* were to:

1. Practice the transition from initial state response to a level 3 marine pollution response.
2. Apply plans, processes, tools and technology to formulate an effective response.
3. Demonstrate good/better practice in information sharing and communication.
4. Determine if lessons identified in previous exercises and after-action reviews have been addressed.
5. Identify opportunities to improve future responses and exercises.

Exercise scope

The scope of Exercise *Thalassarche* was limited to managing the consequences of marine pollution, specifically oil, in Tasmanian port and state waters, meeting the triggers for a level 3 incident under TasPlan:

> *Level 3 incidents are generally characterised by a high degree of complexity that requires the Tasmanian Marine Pollution Controller to use resources and expertise of the State Marine Pollution Committee and may trigger activation of the State Control Centre to manage the complex consequences surrounding the oil spill incident. The IC continues to manage the incident directly with a large Incident Management Team (IMT) concentrating on strategic leadership for the team. This level of response will require agencies from across government and industry and will require national or international resources.*

Lessons for objective 4 have been drawn from:

- Mersey River Marine Incident Response 2022
- National Plan Exercise 2022, Exercise Kunawarra Evaluation Report (Victoria)
- National Plan Exercise 2018, Exercise Torres Evaluation Report (Queensland)

The local jurisdiction used the opportunity to practice local aspects; however, this was not included in the formal exercise evaluation and is not part of this report:

- Explore how to incorporate Aboriginal cultural insights and values into marine pollution incident response.

- Practice the development of public messaging, including in response to media and public enquiries and exercise the new Public Information Unit sub-plan.
- Exercise the new waste management sub plan

Several areas were determined to be out of scope for this exercise:

- The initial response to an oil spill. The exercise commences 12 hours post-impact.
- Widespread deployment of national resources.
- Actual engagement with Ministers' Offices and State Coordination Centre.

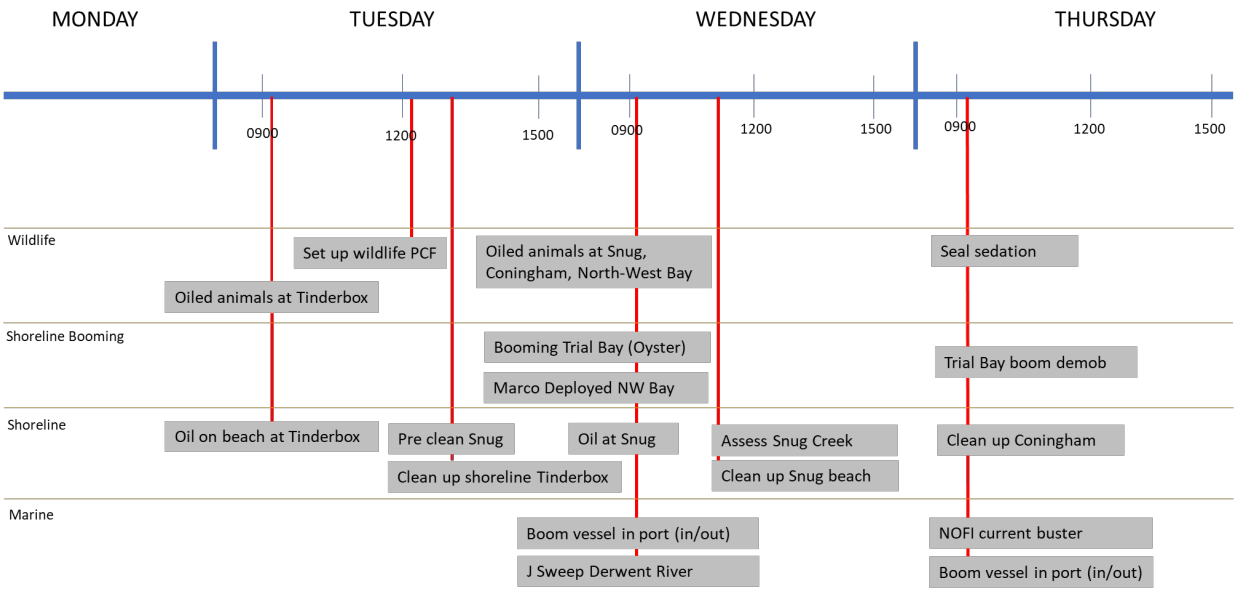
Exercise approach

The exercise ran over three days. On the morning of Day 1, participants received a briefing from the Incident Controller. From that point until the end of Day 3, the exercise was fully functional with field elements and conducted in real time. The IMT operated from the Tasmanian emergency operations centre. The exercise included managing people and equipment, arriving in progression, through the inclusion of injects. Field deployment occurred, with aviation, marine, wildlife and shoreline elements working in real time. Overnight shifts were notional, with a morning handover briefing provided by exercise control role players.

Table 1. Purpose of the activities

Area	Purpose
IMT	Manage the incident as per the relevant plans; practice induction/briefings and information flows
TasPorts Hobart Port Control Tower	Practice the collation and provision of situational awareness from the port to the IMT; and practice coordination/briefing/information flows
Marine Response	Practice briefing/instructions/induction; deploy crew/boats/equipment/ booms to execute the marine response strategy; and practice sharing information
Shoreline Response	Practice briefing/instructions/induction; deploy crews/shoreline cleaning equipment and resources to execute the shoreline response strategy; and practice sharing information
Wildlife Response	Practice briefing/instructions/induction; deploy crews/wildlife cleaning equipment and resources to execute the wildlife response strategy; and practice sharing information

Impacts occurred at various locations across various disciplines.



Evaluation methodology

The intent of the National Plan is to ensure that training and exercises support a culture of learning from experience and capability development.

The evaluation plan has been developed in collaboration between AMSA and Phoenix Resilience.

The evaluation methodology is outlined below.

Data collection

Day 1 and 2
- Participant survey day 1 and day 2
- Participant hot debrief day 1 and day 2
- Exercise management debrief day 1 and day 2 (including mentors and evaluators)

Day 3
- Participant full exercise survey day 3
- Participant full exercise debrief field and IMT day 3
- Products and records developed and collected during the exercise
- Safety data

Post-exercise
- Evaluator reports
- Exercise Planning team debrief
- Exercise Management team debrief

Analysis
- Process all data
- Colour categorise themes
- Analyse what happened vs what should have happened
- Analyse decisions vs outcomes
- Identify lessons based on insights derived from related sets of observations
- Indicate if the lesson identified relates to People, Process, Organisation, Support, Technology, Training or Exercise Management

Validation

Validate findings through consultative committee: mentors, evaluators and exercise planning team

Report
- Executive summary
- Exercise background
- Aim and objectives
- Exercise structure
- Scenario summary
- Evaluation methodology summary
- Themed observations, insights and lessons identified from this exercise
- Previous lessons validated through this exercise
- Conclusion and roadmap

Data gathering

Facilitated reflective discussions and debriefs during the exercise

At the end of days 1 and 2, a debrief was led by the facilitators for the participants. Following that, debriefs were held with the exercise management team that focussed on incident management as well as exercise management. Key questions were:

1. What went well?
2. What did not go so well?
3. What can we do to improve?

Participant feedback forms (surveys)

At the end of days 1 and 2, exercise participants were issued a QR code for a quick survey with questions and performance indicators for that day to assess the performance and inform the need for any correctve action on the following day.

On the final day, a detailed questionnaire was provided covering qualitative and quantitiative indicators against the exercise objectives, as well as exercise management.

List of surveys:

- Day 1 IMT – Quick Survey
- Day 1 Field – Quick Survey
- Day 2 IMT – Quick Survey
- Day 2 Field – Quick Survey
- Day 3 IMT – Final detailed survey
- Day 3 Marine – Final detailed survey
- Day 3 Shoreline – Final detailed survey
- Day 3 Wildlife – Final detailed survey

Evaluator reports

Each of the evaluators completed their report using the respective templates. The lead evaluator compiled the evaluator reports into a consolidated report.

Facilitated reflective discussions and debriefs after the exercise

Two weeks after the exercise, a debrief was held for the exercise planning team, followed by a debrief for the exercise management team.

P^2OST^2E evaluation method

The evaluation methodology considers the categories of the P^2OST^2E evaluation method.[3] In this report, each lesson identified will mention through its relationship to the below categories.

[3] Australian Institute for Disaster Resilience (AIDR) - Managing Exercises Handbook

People	Practice the collation and provision of situational awareness from the port to the IMT; and practice coordination/briefing/information flows
Process	Practice briefing/instructions/induction; deploy crew/boats/equipment/ booms to execute the marine response strategy; and practice sharing information
Organisation	Practice briefing/instructions/induction; deploy crews/shoreline cleaning equipment and resources to execute the shoreline response strategy; and practice sharing information
Support	Practice briefing/instructions/induction; deploy crews/wildlife cleaning equipment and resources to execute the wildlife response strategy; and practice sharing information
Technology	Equipment, systems, standards, security, interoperability
Training	Capability qualifications/skill levels
Exercise management	Exercise development, structure, management, conduct

Exercise evaluators

Exercise management, including evaluation and the IMT's activities, was run from the Tasmanian State Control Centre at: Level 3, 70 Collins St, Hobart TAS 7000.

Shoreline and wildlife activities were coordinated from the Forward Operating Base (FOB) at Dru Point.

Marine booming activities were coordinated from Macquarie Wharf.

All activities within the exercise were coordinated by two Exercise Coordinators.

For each of the key hubs where activities were taking place, evaluators were present. That is, in the IMT, as well as areas where marine, aviation (drone), shoreline and wildlife activities were taking place.

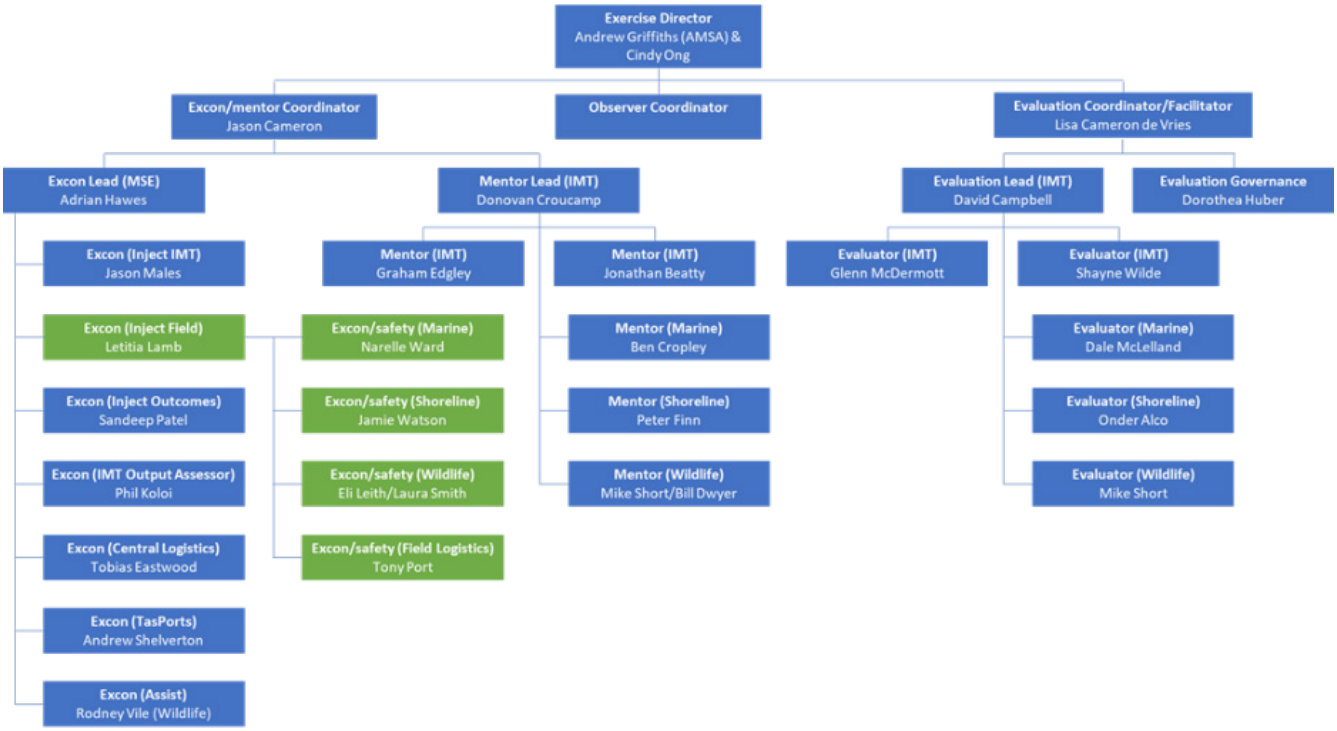


Figure 1. Exercise management structure

Exercise deliverables and evaluation criteria

The following exercise design and evaluation criteria were identified against the objectives.

1. Practice the transition from initial state response to a level 3 marine pollution response

Exercise context	Evaluation criteria
The scenario and exercise schedule ensure each stage in the escalation process is followed as outlined in the Tasmanian Marine Oil and Chemical Spill Contingency Plan (TasPlan).	Participants apply the appropriate incident escalation process.

2. Apply plans, processes, tools, and technology to formulate an effective response

Exercise context	Evaluation criteria
The scenario and exercise design includes application of the below elements.	Participants conduct the required activities and the products[4] developed enable effective implementation.
Plans: National Plan, TasPlan, First Strike Plan, Wildlife Plan (in draft).	**Plans:**

[4] Products: IAPs, SitReps, response plans, instructions, etc.

Exercise context	Evaluation criteria
	Day 1 participants undertake immediate action as per the First Strike Plan. On Day 1, participants apply the escalation, notification and response processes outlined in TasPlan. On Day 1, WildPlan is effectively implemented, including setup of the Primary Care Facility, induction, deployment of wildlife personnel into first Air Ops (Nominal) and SCAT teams, and receipt of information to the IMT. **WildPlan:** On days 1, 2 and 3, personnel can complete identified tasks, including reconnaissance, capture, treatment, and rehabilitation. On Day 2, the NRT is effectively integrated into the IMT, and response processes are in line with the National Plan.
Processes: Escalation, activation, resource deployment, risk assessment, response formulation, progress monitoring.	Processes: A due diligence process of crisis appreciation is applied, informing the escalation process. A Level 3 Incident Management Team is formed. Risks are assessed using the available technology and information sources, with results captured on the appropriate templates. Impacts and risks inform response objectives. The planning processes is followed and captured in an Incident Action Plan (IAP). Progress is monitored regularly through IMT meetings and objectives are aligned accordingly.
Tools: Briefing templates, incident classification guide, response plan templates.	**Tools** are used and confirmed as being useful.
Technology: Exercise design requires application of: • Visual displays to build the COP • Building of a SharePoint site for web-based management system for responders to use	Technology: Evidence is captured of the establishment and regular updating of the COP through visual displays. Logistics incorporate the NEMO system to identify resource availability. Intelligence deploys the sensitivity layers to conduct a NEBA. SCAT teams use the Collector App to capture impact data, subsequently the IMT uses the

Exercise context	Evaluation criteria
• National Environmental Maritime Operations (NEMO) system[5] • NEBA (Net Environmental Benefit Analysis): The natural sensitivity 2019 layer on the LIST • 'Collector App'[6] • Communication technology to enable effective communication between the various operational areas.	data for the impact assessments, planning, COP and SitRep. Technology is optimally deployed to communicate between the field and IMT.

3. Demonstrate good/better practice in information sharing and communication

Exercise context	Evaluation criteria

Participants achieve shared situational awareness and establish communications between the IMT and:
• Marine FOB
  ○ Marine operations
• Dru Point FOB
  ○ Air obs
  ○ Shoreline
  ○ Wildlife
• The TasPorts Hobart Port Control Tower
• Partner agencies in the response (simulated).
	Effective two-way written and verbal communication and shared situational awareness are established.
	IMT members actively seek updates from all operational areas and demonstrate a sound understanding of the situation in the field.
	Challenges in the field and operational areas are swiftly and collaboratively addressed.
	Quality and timeliness of the visual information display that contributes to the formation of a COP.

4. Determine if lessons identified in previous exercises and after-action reviews have been addressed

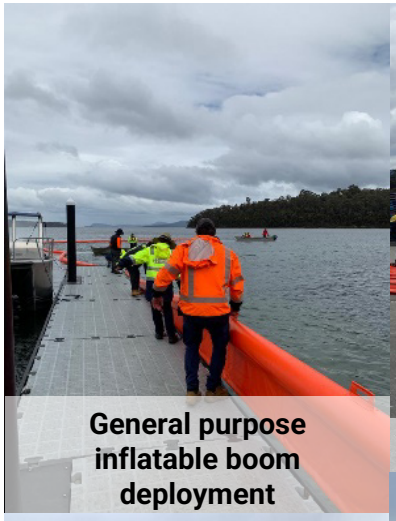
Exercise context	Evaluation criteria
The following improvement opportunities (lessons identified) are confirmed:	
Induction, briefing and handover.	Observation of: A daily SMEACS Brief by the IC. A daily brief from IMT Operations to the Field Commanders.

[5] Houses Tasmania's contact and equipment data as well as the necessary proformas for use during a response.
[6] This app is designed to upload shoreline assessments during a field assessment to enable more immediate situation reports and dynamic management of response activities.

Exercise context	Evaluation criteria
	A daily brief from the Field Commanders to the field teams. Induction for all response staff is provided. **KPI:** Demonstrated connection between the briefs and response performance.
Two-way communication between the IMT and field operations and/or other response partners is maintained throughout the exercise (measured in objective 3).	As above.
Stakeholder engagement.	Stakeholder maps are produced, stakeholder risk assessment is conducted, a process is set up for the development, approval and distribution of messaging. Stakeholder sentiment is monitored, and a stakeholder sentiment report produced.
Shared situational awareness and the COP.	To establish shared situational awareness, a COP is created in the IMT, using visual displays. A COP is developed in SharePoint to maintain shared situational awareness across the response. Regular IC briefings, IMT meetings, room briefs and STOP-ASSESS-ADJUST points are regularly conducted.

5. Identify opportunities to improve future responses and exercises

Exercise context	Evaluation criteria
Prepare an Evaluation Report that outlines the observations, insights and lessons identified in relation to the scope of this exercise, the participants response to the developing scenario and exercise management.	Through surveys and observations made by exercise evaluators, EXCON and the Exercise Management Team, the value of the exercises is assessed in relation to identifying improvements. The lessons identified are endorsed by the consultative committee.

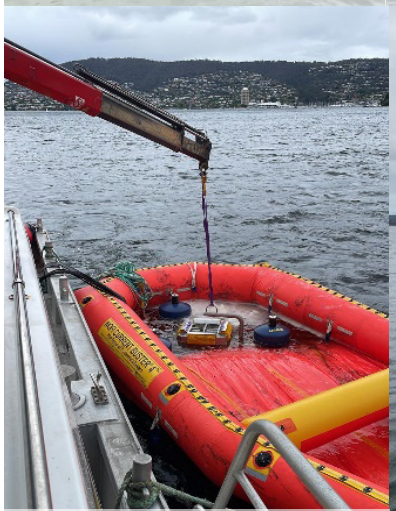


General purpose inflatable boom deployment

Booming the vessel

Shoreline booming

General purpose inflatable boom deployment



Skimming operations with current buster

Booming sensitive site

Operational task briefing

Exercise evaluation

OBJECTIVE 1: Practice the transition from initial state response to a level 3 marine pollution response

Background

The intent of objective 1 was to ensure each of the stages in the escalation process was followed as outlined in TasPlan.

As scenario development progressed and incident timings were finalised during exercise planning, it was decided that EPA would workshop parts of the escalation process prior to the exercise with the relevant local stakeholders through a facilitated workshop. This included decision making around the place of refuge, escalation from Level 1 to 2 and considerations for Level 3. The planning team agreed the outcomes of this workshop would be included in the initial SMEACS brief that described the situation.

EXTRACT FROM THE SMEACS BRIEF

As you may be aware by now, Tasmania is responding to a spill from a ship (Ace of Clubs) in Storm Bay and in the vicinity of the entrance to the D'Entrecasteaux Channel. We are currently confirming the severity.

This spill has the potential to have very serious consequences for the local environment, the community, heritage and cultural values, commerce and the economy. We currently assess the incident as a Level 2. We appreciate your involvement in this response.

What we know at this stage is that at 2100 ESST last night a vessel travelling from Melbourne to Hobart to load cargo (with a full load of ballast), impacted with an unknown floating object, resulting in damage to the hull on the port side and a loss of intermediate fuel oil spill of approx. 50,000 litres within the first hour following the impact (see incident report for vessel details). The vessel impact position is 43º 04.52'S 147º 24.516'E.

The impact was reported by the ship to Hobart VTS (TasPorts harbour control) at 2105, then reported to the SOPCO, Harbour Master, MAST and EPA by VTS. The EPA has informed the NRE Whale hotline and Aboriginal Heritage Tasmania. A POLREP (Form AMSA 197) was issued by the ship at 2130, which included some ship and pollutant details.

The State Marine Pollution Controller, Wes Ford, EPA, has advised the Tasmanian Government and is convening the State Marine Pollution Committee this morning at 0800.

The ship requested a place of refuge and at 2330 the Tasmanian Marine Pollution Controller, Harbour Master and AMSA decided to bring the vessel into the inner Harbour (off Howrah Point position 42° 53' 59.98"S 147° 23' 25.87"E) and then moved at first light to Macquarie Wharf 2/3 when the berth becomes available on Wednesday. A temporary boom was placed around the breach in the hull at first light. An initial assessment by the crew advised the vessel is holed approximately 500mm above the waterline on the port side. Overnight, the ship's crew was able to stop the spill, by internally transferring fuel oil from the port side bunker storage tank to the starboard side tank.

Since 0100 we stood up a small IMT and field presence, conducting the following activities:

1. *Undertook limited visual observations of the vessel from the water by First Strike Teams using spotlights only.*
2. *Placed a temporary boom around the breach at first light this morning.*
3. *Provided technical advice and support to the vessel on spill source control and containment planning.*
4. *Undertook initial assessments of local sensitivities based on the First Strike Plan for the Derwent River and D'Entrecasteaux Channel and produced an initial overview of the protection priorities.*
5. *Commenced the development of a basic Incident Action Plan with broad objectives.*
6. *Developed field task assignments for the protection priorities.*
7. *Deployed resources to Dru Point, Margate to set up the Oiled Wildlife Primary Care Facility and Forward Operating Base for wildlife, shoreline and marine operations.*

The resources for the FOB at Dru Point and the initial Wildlife Primary Care Facility resources have arrived and been set up.

We have initial observations from the First Strike Team confirming an oil spill in the area of the collision. We also have reports at first light from commercial vessels travelling in the area, who have reported to TasPorts VTS confirming the spill.

Initial vessel observations and modelling from vessels indicate the spill is travelling in a NW direction toward Dennes Point and Piersons Point. There are numerous sensitivities in this area, including the Tinderbox Marine Reserve. These sensitivities include high tourism values, aquaculture farms and recreational boating. Adjacent areas include economic, heritage and cultural sensitivities.

The SCAT Team sent to Bruny Island at 0630 by vessel did not identify any shoreline impacts and oil was observed well offshore heading away from the shoreline.

National Plan resources have been requested and some equipment has been mobilised and personnel placed on standby.

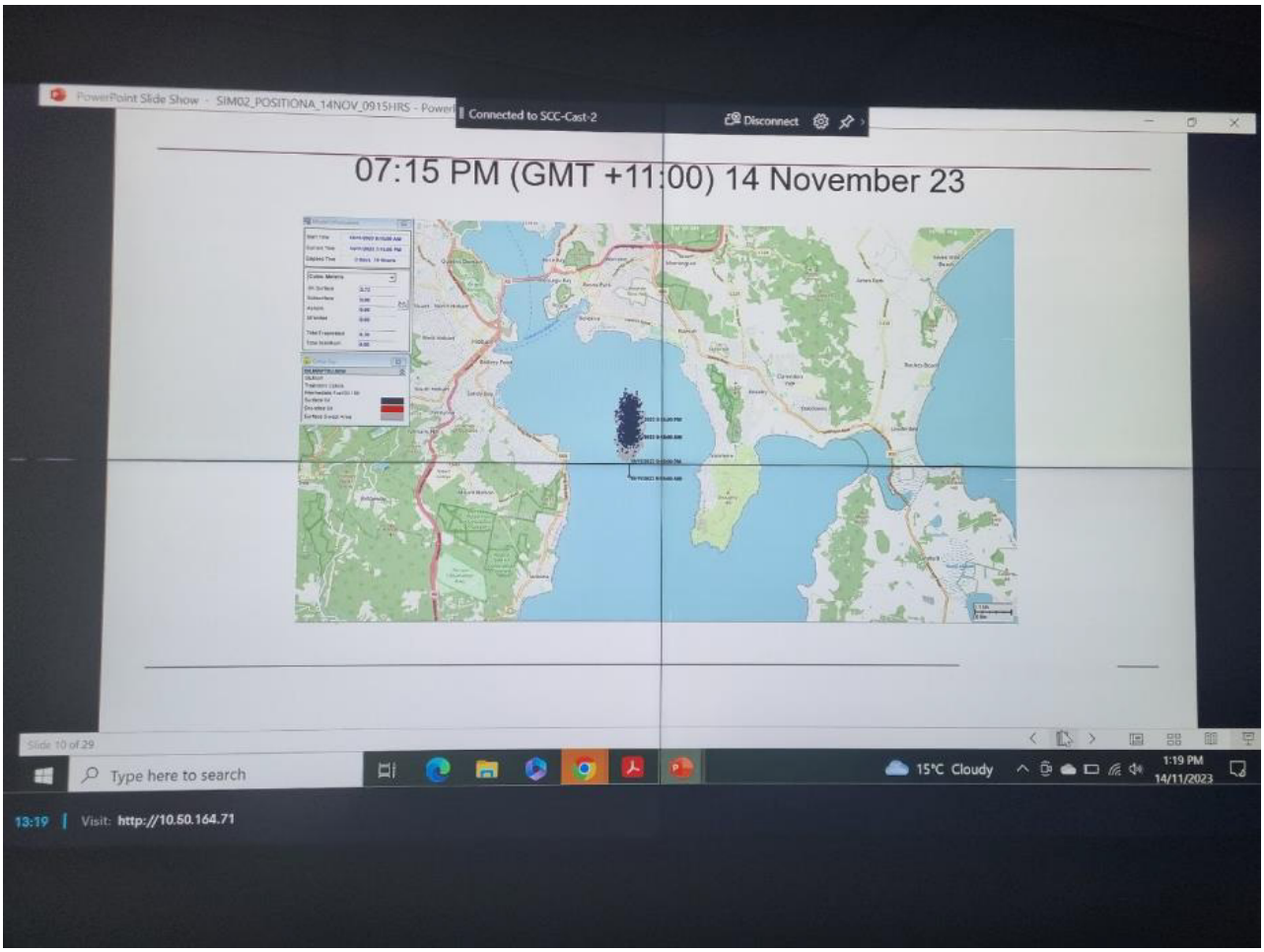


Figure 2: initial incident assessment

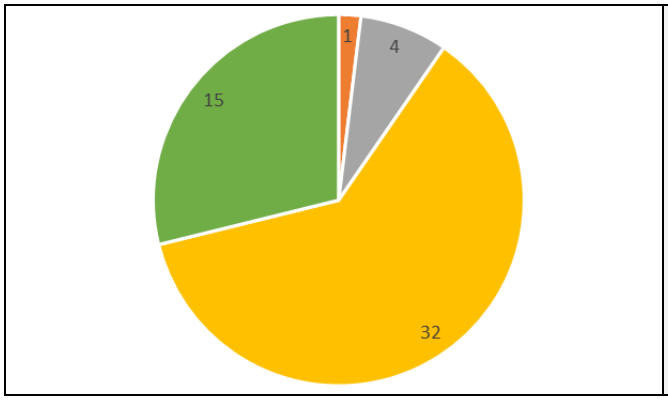
Participant feedback in relation to Objective 1

Questions were asked to exercise participants regarding objective 1 and their feedback is provided below.

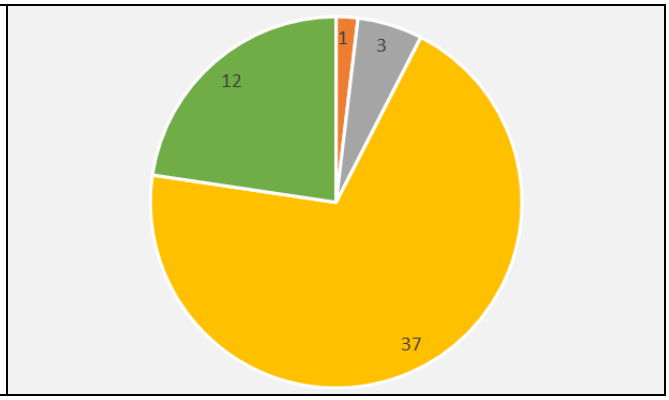
Day 3 Survey – Objective 1 Feedback – IMT

Key: Strongly disagree Disagree Neutral Agree Strongly agree

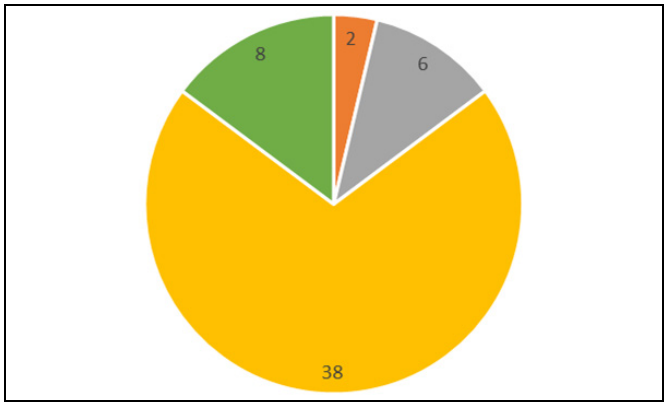
The exercise followed the process of escalation from a Level 2 to a Level 3 Incident



The exercise practiced the onboarding and induction of the NRT into a state response

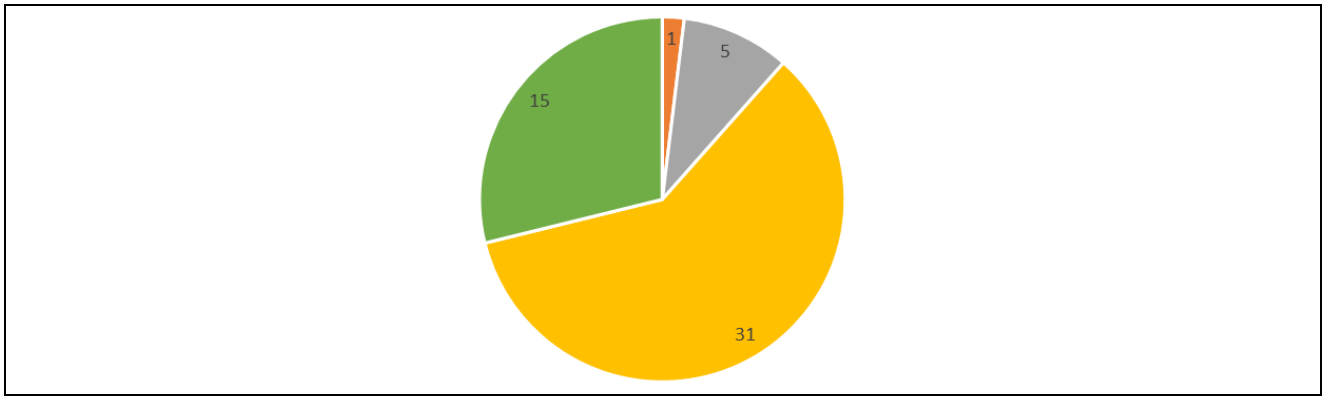


The incident level considerations were considered, captured and communicated



Day 3 Survey – Objective 1 Feedback – FIELD

The exercise practiced the onboarding and induction of the NRT



Observation: 90% of IMT survey responders felt the exercise followed the process of escalation from a Level 2 to Level 3 Incident. Only one respondent disagreed.

Observation: Aspects of the D'Entrecasteaux First Strike Plan and the Port of Hobart First Strike Plan, as well as escalation from Level 2 to Level 3 were practiced on day 1 of the exercise.

Observation: Evaluator consolidated findings indicate the integration of the NRT in the response was relatively seamless with interstate personnel stepping into a range of roles across all Sections.

Insight: NRT member integration occurred with minimal disruption to the response with all personnel demonstrating professionalism and understanding of roles and functions. Evaluator consolidated findings state this can be attributed to a standardised incident management system (AIIMS), training and sound relationships.

Observation: Feedback shows that not all responders felt clear on the incident level, escalation and onboarding of the NRT.

Insight: Decision making regarding incident level and escalation considerations could have been more acknowledged across the IMT and field. In addition, the NRT onboarding could have been more clearly acknowledged on day 2.

There could be stronger briefing points, structure and information sharing when the transition from state response to level 3 is initiated, including checking what first strike response strategies are in play and what strategies are being adopted in the transition.

Lessons identified:

R1.	TRAINING: Share the exercise lesson in relation to communicating the escalation/incident level decision-making, outcome and related response implications across the response with the AMSA National Plan Training Team to enable trainers to incorporate it in the training program where appropriate. (ICL2, ICL3).

Shoreline cleanup

IMT operations brief

IMT morning brief

Wildlife processing

OBJECTIVE 2: Apply plans, processes, tools and technology to formulate an effective response

Background

This exercise was an opportunity to trial recent improvement initiatives, and one major initiative is the development and implementation of the AMSA marine pollution response SharePoint site as the incident management system, COP and virtual coordination centre.

Relevant plans, workflows, duty statements, procedures and templates were made available on the Exercise Thalassarche Incident Management SharePoint site. To ensure everyone was familiar with site navigation, a pre-exercise training session was provided.

During this exercise, responders were expected to apply two plans:

- National Plan – sets out national arrangements, policies and principles for managing maritime environmental emergencies.
- TasPlan 2022 – is aligned with the National Plan. In addition:
    - To enable protection of known vulnerabilities in a timely manner, the First Strike Plan for the D'Entrecasteaux Channel is in place.
    - In Tasmania, the wildlife response is described in WildPlan (draft).

Observation: The participant feedback captured through the Incident Management Team Survey Day 3 – OBJECTIVE 2 questions identified that 92% of the IMT members felt that TasPlan and the First Strike Plan were correctly implemented. The remaining 8% was neutral.

Observation: Overall, the IMT participants indicated in the survey that the National Plan process was followed, and plans and sub-plans were prepared.

During the exercise, many actions from the First Strike Plan were incorporated in the SMEACS brief (see objective 1) of day 1 as actioned that had been conducted/planning in the preceding 12 hours. The IC and function leads referenced the plan in the development of their actions on day 1.

Observation: Even though the actions in the First Strike Plan were followed, the survey indicated not all IMT participants felt that the First Strike Plan's intent was clearly communicated on day 1 (survey).

Observation: Participants in the field indicated the First Strike Plan was not discussed at the briefing before operations took place.

Insight: It is beneficial in a response to specifically mention the relevant plans and how they relate to the response at that point in time. The IC mentioned in the SMEACS brief on activation of the ICC what the relevant plans were. From there, the induction process should highlight the relevance of the First Strike Plan and the various roles IMT members have in executing it.

R2.	PROCESS: Expand the induction process and induction template to include a short description of the relevant plans at the current stage of the response, how they relate and the expectations in line with those plans.

WildPlan - IMT

WildPlan was available as a review draft at the time of the exercise. The content was socialised on day 1 as the exercise participants arrived at the FOB.

At the FOB, the required resources were set up in alignment with the requirements set out in WildPlan and the process was simulated.

On day 1, the key components WildPlan were implemented, including set up of the Primary Care Facility, induction, deployment of wildlife personnel into SCAT teams and coordination of activities with the IMT. On days 1, 2 and 3, personnel were able to complete the identified tasks including reconnaissance, capture, treatment and rehabilitation.

For the exercise, the Wildlife advisor was placed in Operations in the IMT. WildPlan was in draft on commencement of the exercise and exploring details of the plan was affected by the limitations of an exercise environment. Any recommendations regarding WildPlan will require further analysis and refinement prior to actioning.

Observation: Testing of wildlife at the IMT level was not fully explored. Decisions stemming from this exercise in regard to finalising WildPlan need to be aware of the limitations that existed in this aspect of exercise (e.g. all experienced oiled wildlife leaders were stationed in the field).

Observation: In the field, nearly half the participants were neutral regarding the correct implementation of WildPlan.

Observation: A wildlife field team member mentioned they were not aware of WildPlan and were not familiar with the content.

Observation: It was mentioned that not all wildlife operators understood the importance of the incident response framework and more familiarity for conducting job safety assessment for wildlife operators was needed.

Observation: Overall, safety briefings and Job Safety Assessments were observed to be conducted regularly and to the appropriate standard. A Field staff member in Wildlife mentioned the safety briefings were good but did not observe Job Safety Assessments.

Insight: There needs to be stronger emphasis on raising awareness of the Job Safety Assessments in the field for Wildlife.

Observation: A Wildlife Advisor (OWA) was placed under Operations in the organisational structure of the IMT. In WildPlan, the structure shows Wildlife Advisors reporting direct to the IC and are relevant across all functional areas, not just Ops.

Insight: The Wildlife Advisor role provides strategic guidance across the response and should not be embedded in Ops.

Insight: Further socialisation of WildPlan would be beneficial once it is finalised

Observation: The wildlife evaluator identified that additional specialised wildlife response equipment is needed to meet the operational requirements identified in the SOPs.

Insight: Oiled wildlife response training based on best available practices is required, including how to meet political and community expectations.

Lessons identified:

R3.	TRAINING: Provide additional training in safety management processes for Wildlife responders.
R4.	PEOPLE/TRAINING: Increase awareness of the Wildlife Advisor and the need for this role to remain at the IC advisor level.
R5.	TRAINING: Develop and deliver a WildPlan training program.
R6.	SUPPORT: Identify and source required equipment to meet operational requirements of WildPlan

National Plan

At the commencement of a response, one of the first tasks is to conduct a risk assessment.[7] As part of the crisis appreciation process and planning cycle, the risks inform decision-making around objectives and strategies. The risk assessment should be a central feature in the COP and IAP. It should be mentioned at IMT meetings and be the critical input into sub-plans, including the Stakeholder Engagement Strategy.

Observation: Intel completed a NEBA. Evaluators identified that the NEBA appeared to be underdeveloped with information extracted from the First Strike Plan without further analysis or context. The NEBA did not consider all response options when assigning protection priorities.

Insight: The NEBA did not reflect the true intent of the assessment in what provides the best overall environmental outcome, which on occasion can be confused with protection priorities.

Observation: The evaluators observed a PESTLEO[8] risk assessment was developed at the end of day 1; however, this assessment was not reviewed, endorsed, shared or socialised. A clear relationship between a risk assessment and the response objectives could not be drawn. IMT feedback indicated that various IMT members were not aware of the risk assessment being conducted.

Observation: Finance discussed risk around the inject regarding the $20 million claim from a fish farm – this was included in the Finance sub-plan; however, a risk management plan was not established.

Insight: The processes around risk assessment and risk management plan development are not well embedded.

Lessons identified:

R7. TRAINING: Explore opportunities to increase awareness of risk assessments and how to apply them. Opportunities could be through the National Plan training program or an online risk assessment workshop.

R8. PROCESS: Standardise the process and templates for risk assessment and incorporate these on the AMSA SharePoint response site, AMSA website, and alternate/relevant incident response sites.

R9. TECHNOLOGY: Incorporate standardised risk assessment templates/process on the AMSA Response SharePoint site.

R10. TRAINING: Provide training opportunities for Planning and Intelligence personnel to gain further experience in the development and use of the NEBA.

R11. PEOPLE: Consider the inclusion of a marine subject matter expert in Intelligence from the onset.

Observation: The exercise evaluator observed challenges in the Intelligence function with understanding intelligence requirements, managing and processing information, applying intelligence technology (Oil Spill Trajectory Modelling etc) and providing intelligence outputs to enable effective decision-making i.e. Common Operating Picture and NEBA.

[7] AIIMS Planning Cycle – page 52.
[8] Political – Environmental – Social – Technological – Legal – Economic – Operational.

Insight: Currently, the MPR Training Program provides Intelligence as part of the Planning function. To build the skill and capability of the intelligence officers, it may be beneficial to include Intelligence as a separate function in the MPR training.

Observation: The evaluator consolidated findings state that response plans were not regularly monitored or used to circle back in monitoring response actions and outcomes against strategies.

Insight: The use of a strong planning cycle that prompts the monitoring and evaluation of strategies could be strengthened in IMT processes. Specific procedural SOPs for the IMT relating to feedback loops and progress assurance may be a good addition to the AMSA Aide Memoir.

Lessons identified:

R12. TRAINING: Include Intelligence as a separate function in the MPR Training Program.

R13. TRAINING: Include procedural guidance on the planning cycle and feedback loops in the AMSA Aide Memoir.

Tools and templates – IMT

During the exercise, the IMT developed five IAPs, six situation reports (SitReps) and several sub-plans.

Exercise Thalassarche sub-plans:

- Two iterations of a Resource Sub-plan
- Shoreline Sub-plan
- Bruny Island Disruption to Services Contingency Plan
- Demobilisation Strategy
- Demobilisation Sub-plan
- Recovery Sub-plan

Observation: The incident management products were developed, but the review and approval processes for these products were inconsistent. The filing structure was also inconsistently applied.

Insight: The approval process for the key response products should be agreed at the start.

Observation: The importance of keeping of logs of decisions and actions was mentioned by the IC at the start of each shift. However, it was observed to be taking place sporadically and the requirement was not consistently reinforced throughout the shift.

Insight: The keeping of logs should be closely monitored throughout a response. Not keeping logs can lead to lack of accountability and evidence to support cost recovery and an enquiry.

Lessons identified:

R14. PROCESS: Develop protocols for operating the SharePoint response site, including approval processes for the Impact/Risk Assessment, Incident Action Plan, SitRep, messaging and sub-plans. Also see R28.

R15. TECHNOLOGY: Develop measures that can be easily implemented in future responses to ensure logs are consistently maintained and filed.

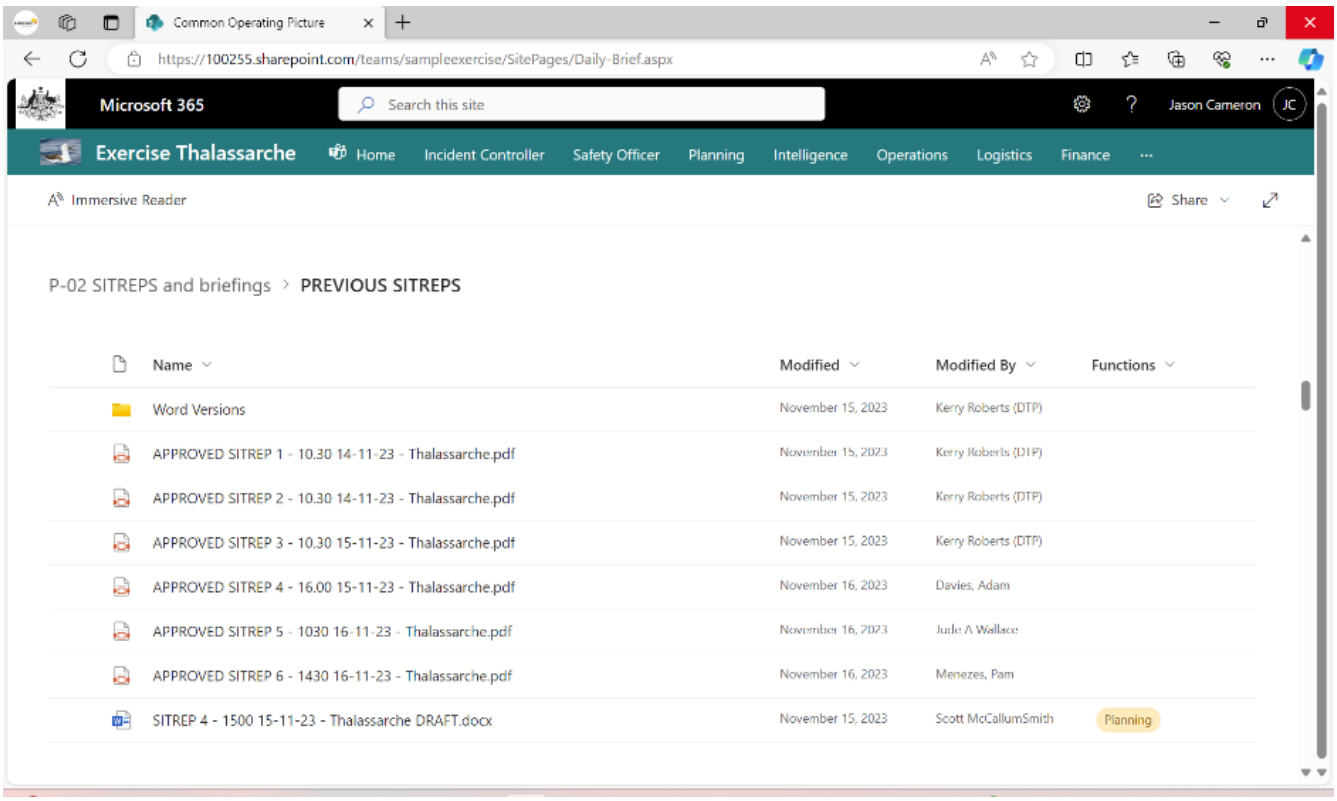
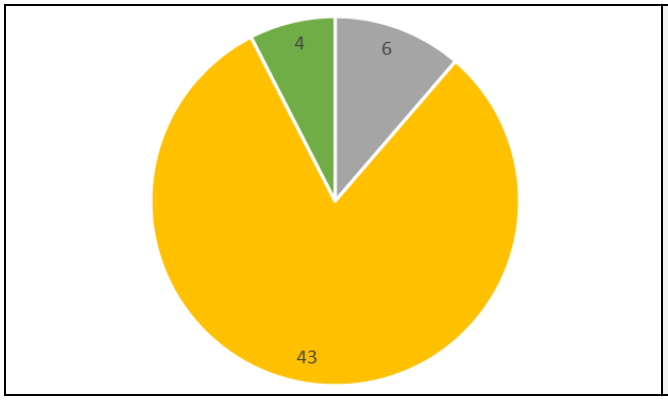


Figure 2. Screenshot of the SharePoint folder containing the SitReps

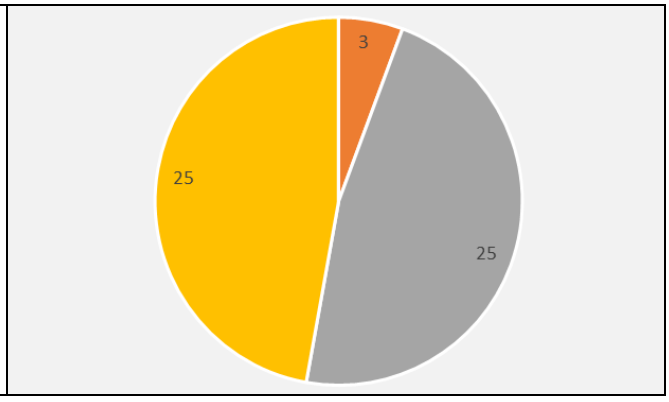
Day 3 Survey – Objective 2 Feedback – IMT

Key: Strongly disagree Disagree Neutral Agree Strongly agree

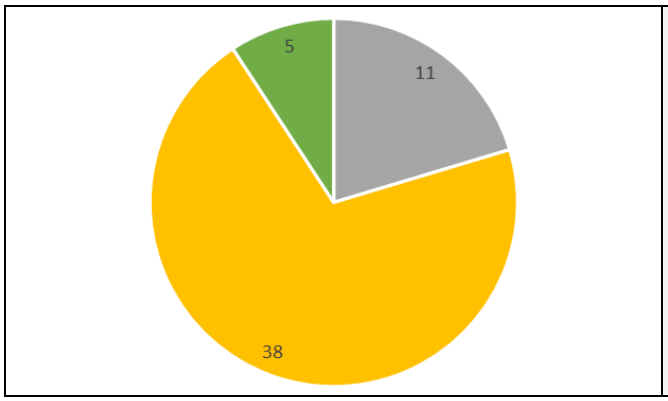
The structures, processes and response instructions in TasPlan and the First Strike Plan were correctly implemented



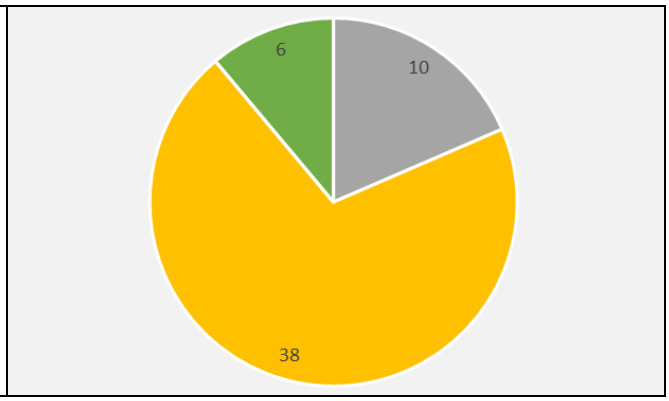
The structures, processes and instructions in WildPlan were implemented correctly



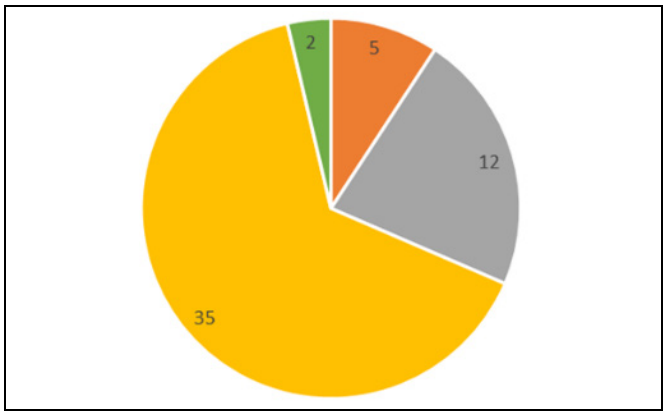
The structures, processes and instructions in the National Plan were implemented correctly



Plans and subplans were prepared in accordance with the requirements under the relevant Commonwealth and State legislation and protocols

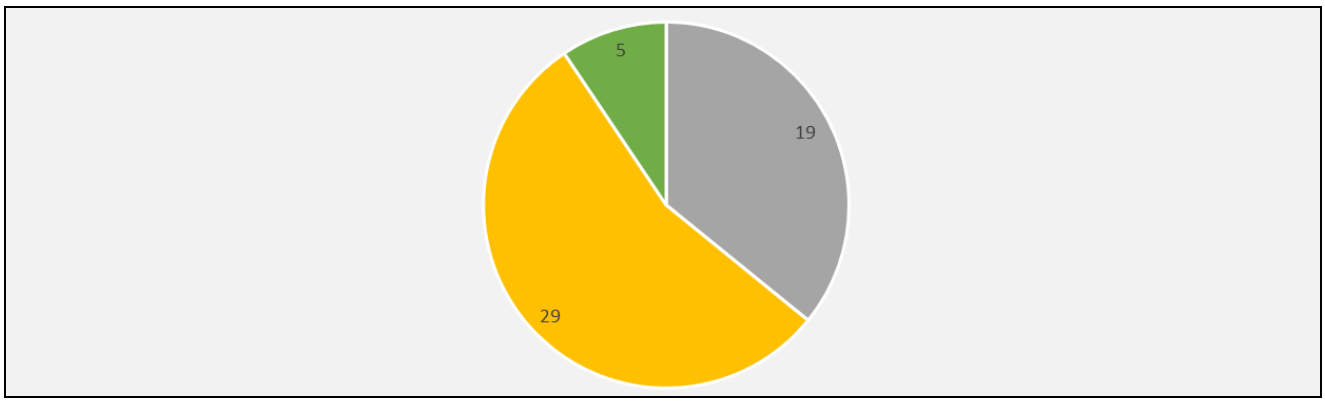


A risk management plan was established, reviewed and followed by all functional units throughout the exercise

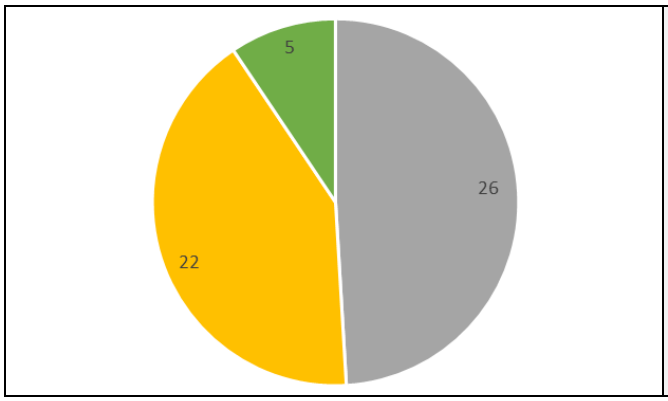


Day 3 Survey – Objective 2 Feedback – FIELD

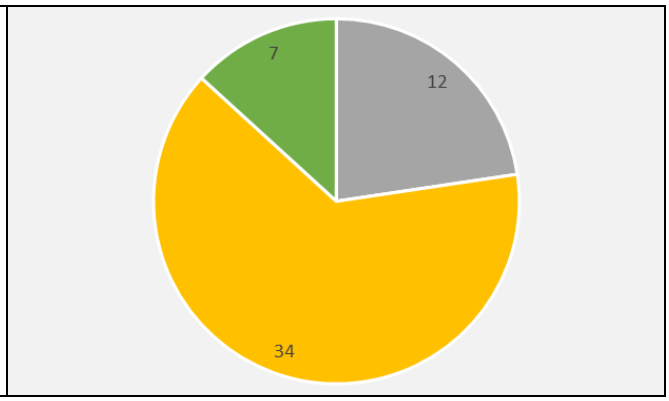
The structures, processes and response instructions in TasPlan and the First Strike Plan were correctly implemented



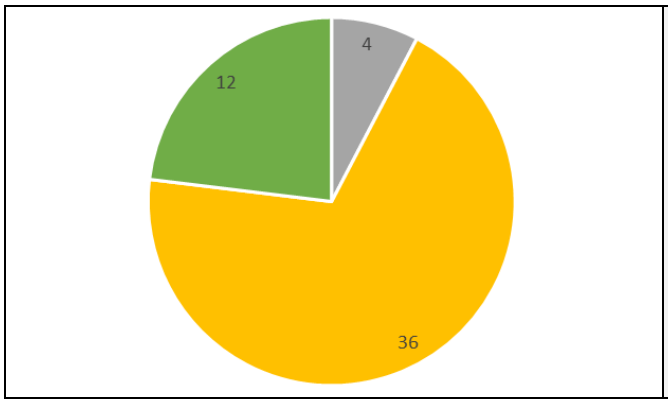
The structures, processes and instructions in WildPlan were correctly implemented



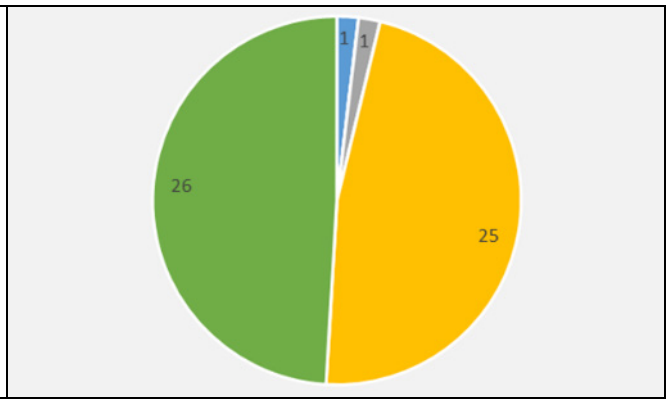
The structures, processes and instructions in the National Plan were correctly implemented



Field task assignments and other relevant task instructions were provided to guide activities in the field



Job Safety Assessments, risk assessment, induction and safety briefs were conducted/communicated in the field



Technology

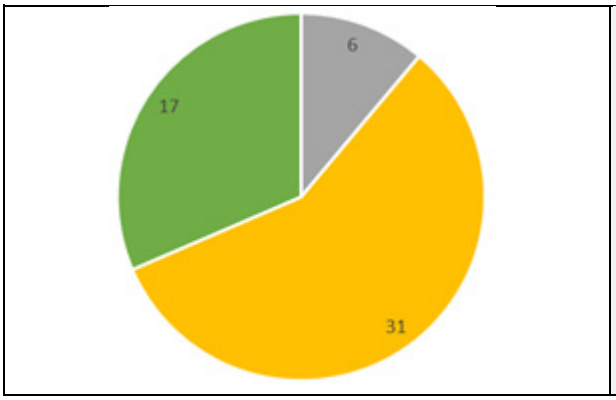
Several aspects of the application of technology were evaluated:

- Visual displays to build the COP.
- Use of SharePoint as an incident / document management system
- NEMO system – asset tracking and equipment data
- NEBA: The natural sensitivity 2019 layer on the LIST.
- 'Collector App' (designed to allow shoreline assessments to be uploaded during a field assessment to enable more immediate situation reports and dynamic management of response activities).
- Communication technology to enable effective communication between operational areas.

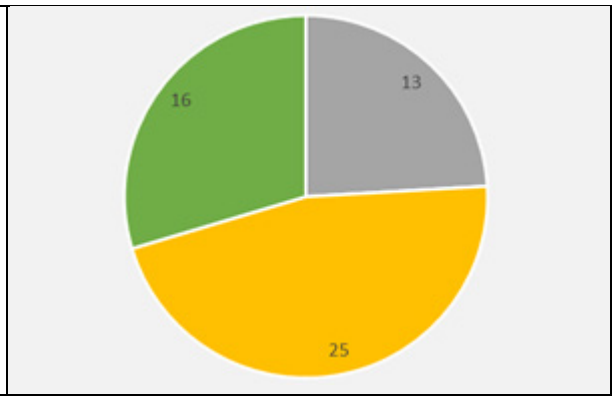
Day 3 Survey – Objective 2 Technology Feedback – IMT

Key: Strongly disagree Disagree Neutral Agree Strongly agree

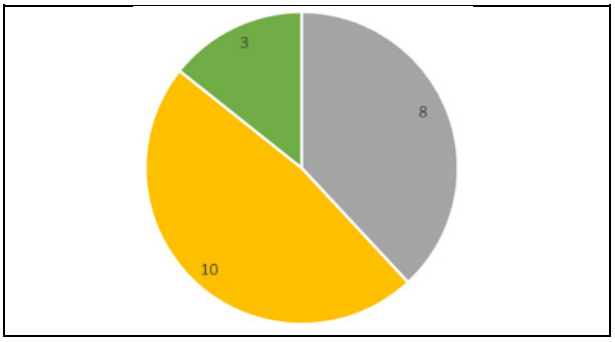
The response SharePoint site allowed for the establishment of shared situational awareness (COP), central record keeping and collaboration on documents



SharePoint is the appropriate platforms for managing a Level 3 marine pollution response incident with some refinement



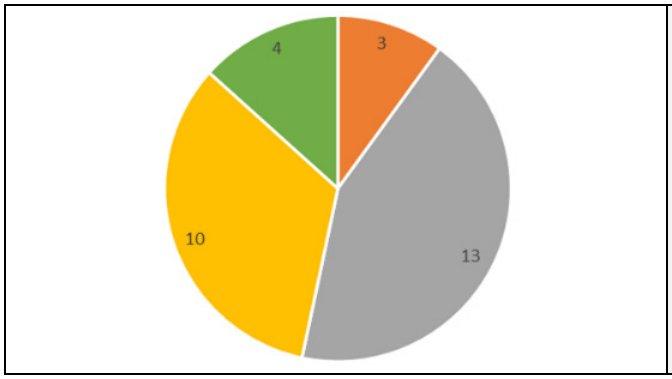
The Collector app provided the required situational awareness of the extend, scale and type of contamination



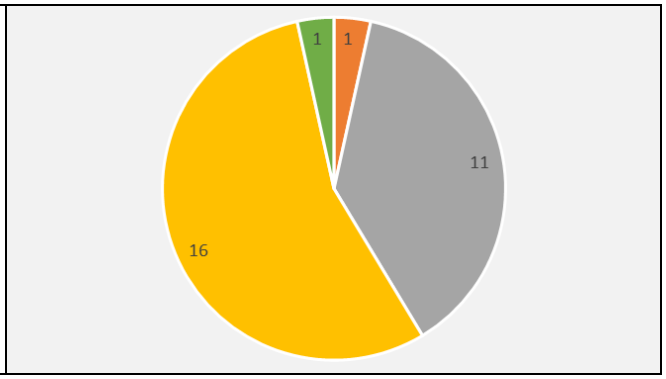
Day 3 Survey – Objective 2 Technology Feedback – FIELD

Key: Strongly disagree Disagree Neutral Agree Strongly agree

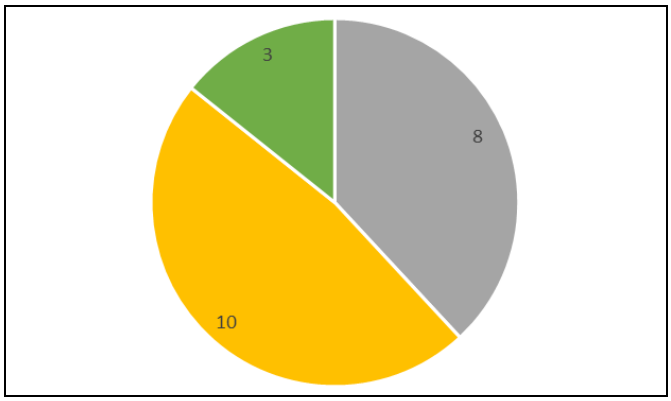
The response SharePoint site allowed for the establishment of shared situational awareness (COP), central record keeping and collaboration on documents



SharePoint is the appropriate platforms for managing a Level 3 marine pollution response incident



The Collector app allowed us to capture and share shoreline and wildlife impacts



Common Operating Picture

The COP is a key component of effective incident management. It is the means for establishing and maintaining shared situational awareness. It provides direction across all operational areas of a response. This is part of the processes in AIIMS and is reinforced in the various AMSA marine pollution training programs.

The challenge with the COP in the past has been that responders outside the IMT have limited visibility. Issues were around the limitations of technology, communication channels and two-way reporting.

During this exercise, the concept of a SharePoint site that holds all the latest response information was trialled. SharePoint is accessible for anyone that has been provided access and has a device that is connected to the internet.

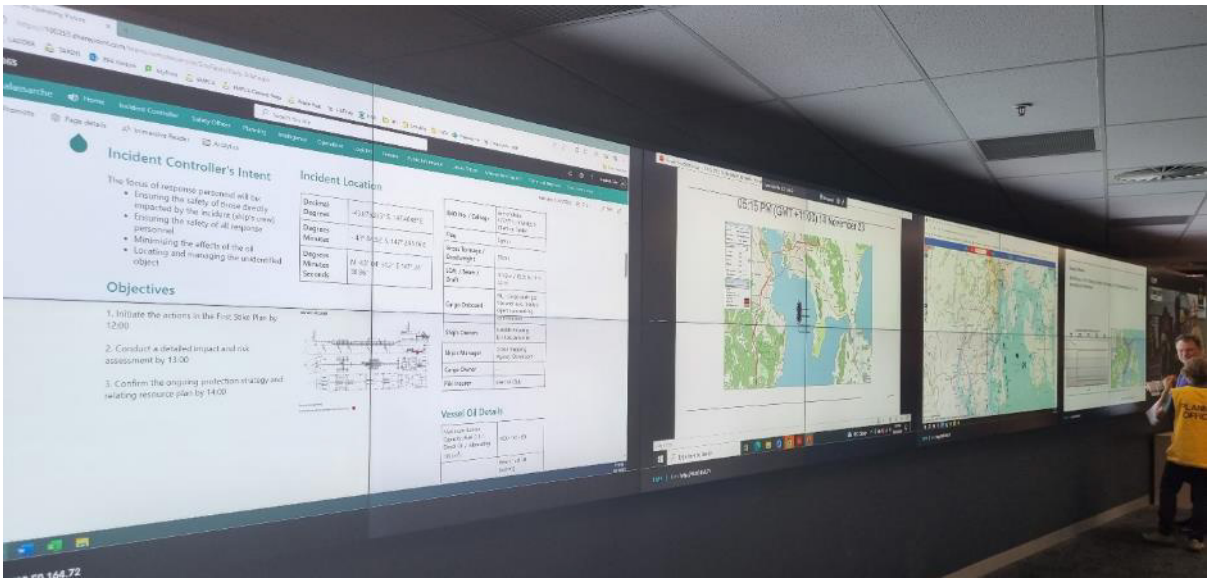


Figure 3. The COP provides strategic direction

Observation: The AMSA staff member that developed the SharePoint site was present for the duration of the exercise, but IMT members could adjust the SharePoint site and make daily improvements. This level of agility and flexibility cannot be achieved with dedicated incident management software, which requires provider technicians to process adjustments that can often be complex, expensive and time consuming.

Observation: In the ICC, displaying information was challenging as a laptop that is being used to display screens cannot be used for other activities. Dedicated laptops for the COP in the IMT are required.

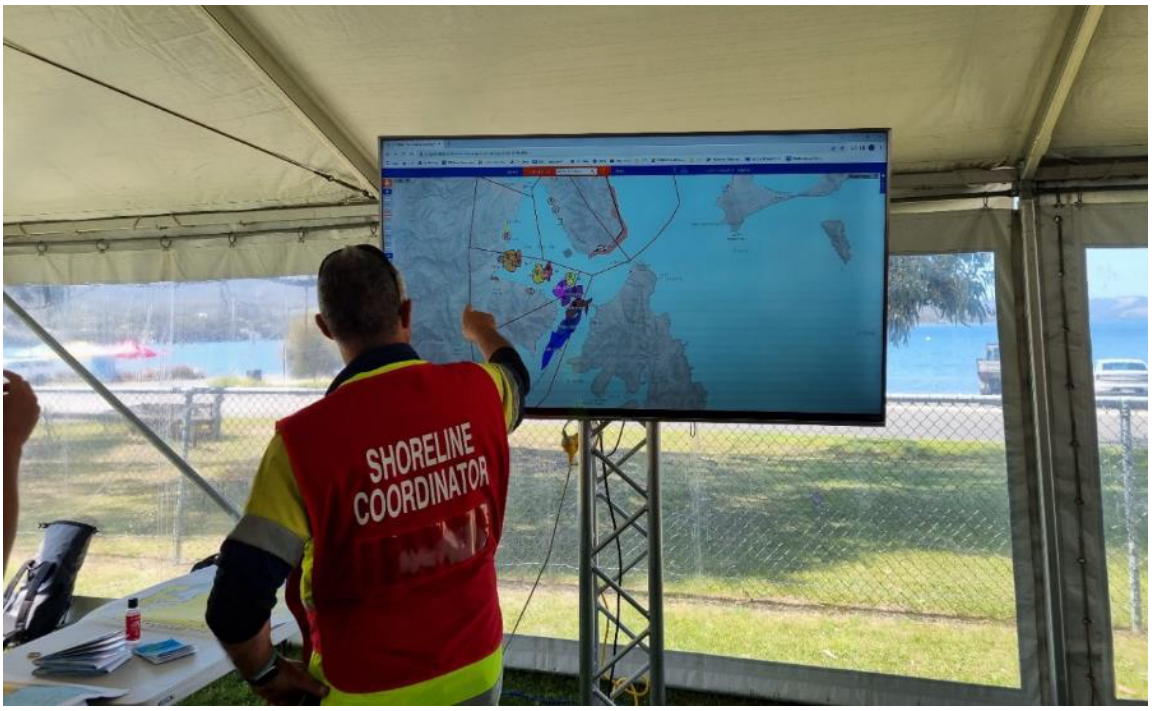


Figure 4. LISTmap COP shared in the field

Responders in the field mentioned that using SharePoint for the COP is a good initiative; however, further work is required to improve the application, access/connectivity issues and usability in the field.

Observation: Not all participants in the field could access the SharePoint site and COP on their phone due to access restrictions or due to the limitations of their operational work.

Observation: Protocols and information flows for inserting data into the COP from the field were unclear. Clarification was needed on what information is processed from the field through Intelligence and what can be uploaded directly (i.e. images, reports or similar).

Observation: Field roles and resourcing for interacting with the SharePoint COP have not yet been agreed.

Observation: Due to SharePoint's features, activities could be constantly monitored and statistics obtained, as shown below.

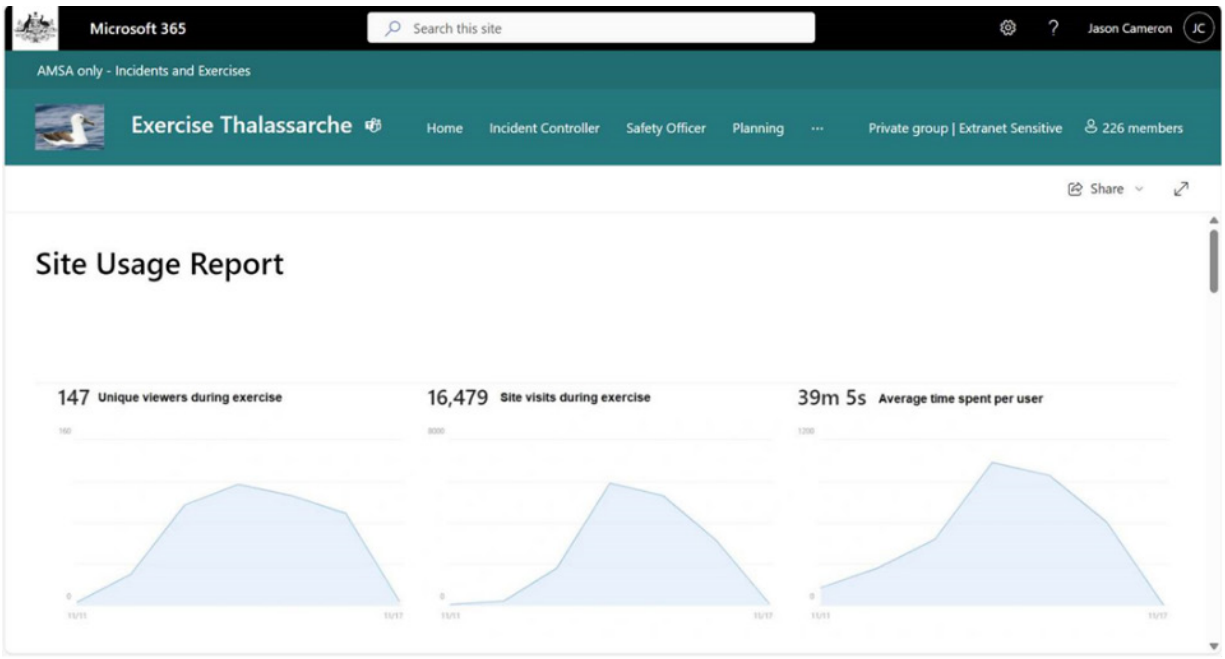


Figure 5. SharePoint site usage report

Observation: Participants indicated in their feedback and during debriefs that the SharePoint file structure needs to be standardised.

Observation: Various challenges with version control and approval workflows were observed.

Insight: It would be beneficial to develop SharePoint protocols that include agreements in relation to document and record control, as well as workflows for SitRep/IAP approval and Logistics.

Lessons identified:

R16. TECHNOLOGY/PROCESS: Continue using SharePoint as the incident management system and COP, supported by an ongoing program of performance monitoring, maintenance and improvement.

R17. PROCESS: Develop and practice usage protocols for the SharePoint response site, which include document and record control, file structures and workflows.

R18. PROCESS: Explore the practical applicability/limitations of SharePoint use in the field for sharing information

R19. TRAINING: Develop online modular training packages for the use of the SharePoint site.

R20. SUPPORT: Ensure the IMT is resourced with laptops dedicated to the COP.

Collector App

The person who developed the Collector App was present during the exercise and indicated that any improvement recommendations need to be planned and funded under a project, as there is currently no capacity to process adjustments.

Observation: The Collector App uses LISTmap COP. It was used effectively; however, is a restricted access service.

Observation: Not all the applications of the Collector App were clearly communicated, for example the ability to migrate data into Excel was not known to all users.

Insight: Field teams need to be trained in how to use the Collector App to collect better data.

Observation: The Collector App was missing key information, such as units of measure. It also was not fully completed by SCAT teams, which meant the data was challenging to analyse.

Observation: A date filter on Collector data would be a good enhancement.

Lessons identified:

R21. TECHNOLOGY: Through a workshop process, list the improvement opportunities for the Collector App then identify and secure resources to implement these.

R22. TECHNOLOGY: Secure funding to implement improvement opportunities to the Collector App.

R23. TRAINING: Provide Collector App training prior to the next exercise.

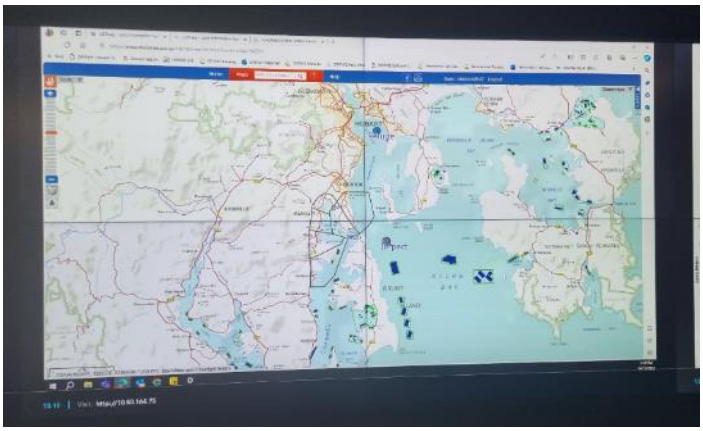


Figure 6. LISTmap COP

Figure 7. Drone footage displayed at the FOB

OBJECTIVE 3: Demonstrate good/better practice in information sharing and communication

The purpose of objective 3 was to analyse the success of the various communication methods that were applied to achieve shared situational awareness.

In previous after-action reviews and exercises, two-way communication was mentioned as lacking. The reports indicated that field responders felt the IMT would push information down but was not actively seeking situational information from the field to inform decision-making.

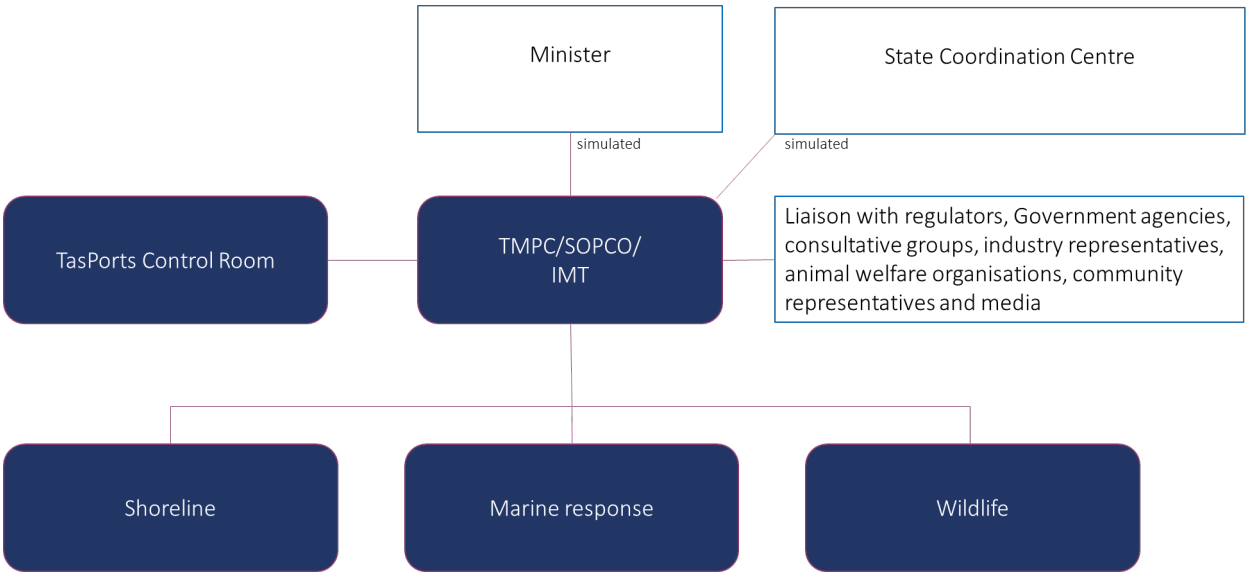


Figure 8. Operational areas between which communication and coordination was taking place

The scale and design of Exercise Thalassarche ensured that communication between all operational areas could be trialled and practiced. All operational areas were provided with information updates at set time intervals that needed to be shared with the IMT and subsequently across the response. These included the TasPorts Hobart Port Control Tower, shoreline assessment/wildlife and marine response teams. Engagement of the Minister and other stakeholders was simulated through Exercise Control.

Observation: 72% of IMT responders felt that two-way information sharing between the IMT, field (marine, shoreline and wildlife) and TasPorts Hobart Port Control Tower was taking place at appropriate intervals, with the remaining 28% was neutral. In the field, only 58% agreed, 29% was neutral and 13% disagreed.

Observation: Even though the importance of two-way communication was continuously reiterated in exercise and IC briefings, field responders still felt it was inconsistently implemented. Tools like the Collector App and drone imagery were used to receive information from the field in relation to the location of the spill; however, updates in relation to the on-the-ground situation for responders plus resourcing or safety issues were not consistently pursued. Also, field staff felt the technology was hindering two-way communication with common feedback regarding lack of access to the COP.

Observation: IMT responders mentioned that Teams calls or video conferencing with the field would have been beneficial, as well as a schedule of regular field briefings and IMT field visits to gain situational awareness and build relationships.

Observation: The TasPorts Hobart Port Control Tower provided regular updates, and as new information came in. Once the points-of-contact were confirmed, the processes of two-way communication with the IMT were smooth.

Observation: Field staff in Logistics mentioned they were expected to self-serve information and did not have briefings with IMT Logistics.

Observation: The availability of more visual mapping for staff in the field to ensure boom deployment and positioning would be appropriate.

Observation: On day 2, the SCAT teams reported they had not received instructions from the IMT and had to develop plans on the ground.

Observation: Not all requests from the field regarding resources and support were acknowledged or actioned by the IMT, to the point that Exercise Control had to step in to provide supplies.

Observation: A team of responders initiated a WhatsApp group and indicated this significantly improved communication between their operational areas.

Observation: It was mentioned that the shoreline teams did not provide regular updates to the FOB.

Observation: Relevant contacts and contact details were not clear across the responses. Displaying this in the field could assist.

Observation: During the exercise, the exercise management team had access to a WhatsApp channel for safety updates. The application and benefit are highlighted in the Safety management section of this report. This was a valuable way to establish two-way communication and could be deployed in responses.

Lessons identified:

R24. TECHNOLOGY/SUPPORT: Set a Statement of Requirements for communication resources in the field to support the increased use of technology for situational awareness. This should include additional laptops, redundancies for connectivity (internet and communication channels), radios, satphones and phones that can connect to the COP on SharePoint.

R25. TECHNOLOGY/PROCESS: Implement practices around briefing schedules with the field via Teams or phone link.

R26. PROCESS: Embed practices for rotating between the field and IMT to enhance mutual understanding of local challenges and build relationships.

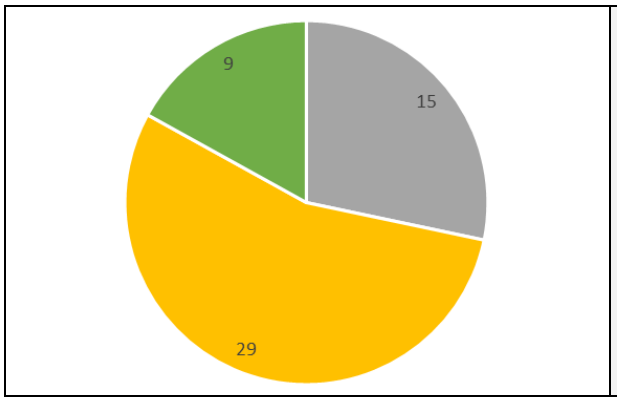
R27. PROCESS: Display key contact lists at central locations and improve access to the contact phone list.

R28. PROCESS: Ensure the situation, response objectives and key actions are clearly displayed in the FOB and other central operational locations.

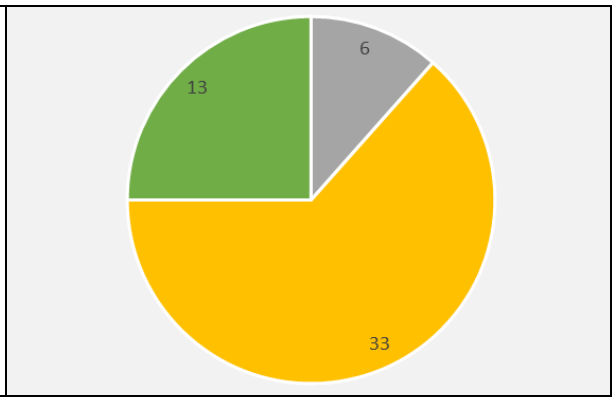
Survey Day 3 – Objective 3 Feedback – IMT

Key: Strongly disagree Disagree Neutral Agree Strongly agree

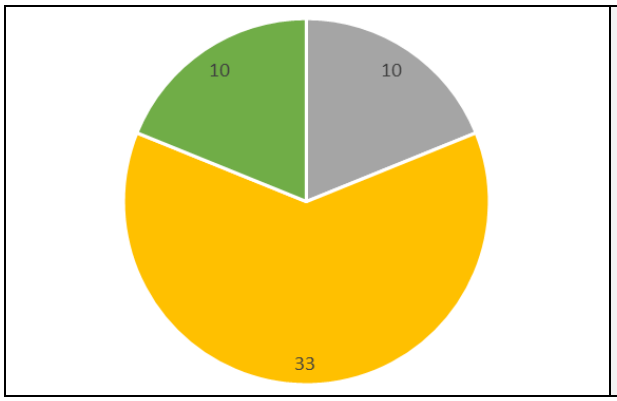
Two-way information sharing between the IMT, the field (marine, shoreline and wildlife), TasPorts Hobart Port Control Tower was taking place at appropriate intervals



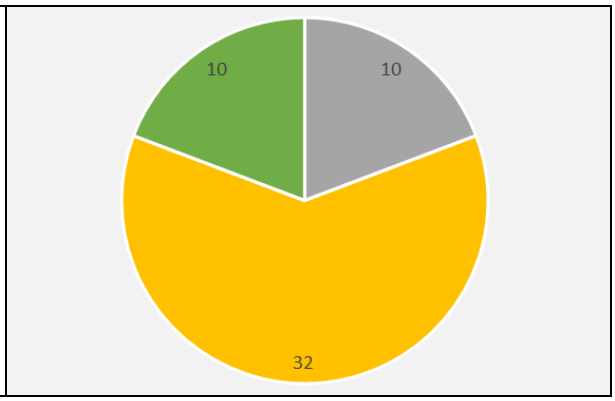
IMT members actively sought updates from all operational areas and demonstrate a sound understanding of the situation in the field



New, important information was shared in a timely and effective manner



Challenges in the field and operational areas are swiftly and collaboratively addressed by the IMT



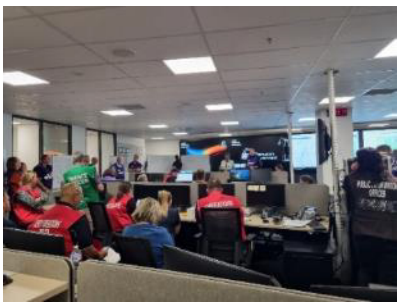


Figure 9. End of the day hot debrief led by the IC

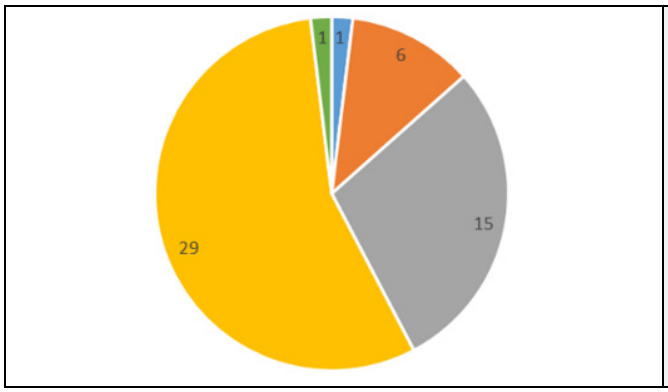
Figure 10. Field brief by the Operations officer

Figure 11. Situational awareness in the field

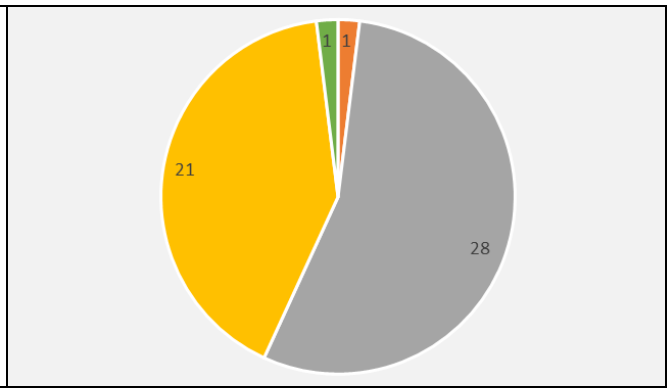
Survey Day 3 – Objective 3 Feedback – FIELD

Key: Strongly disagree Disagree Neutral Agree Strongly agree

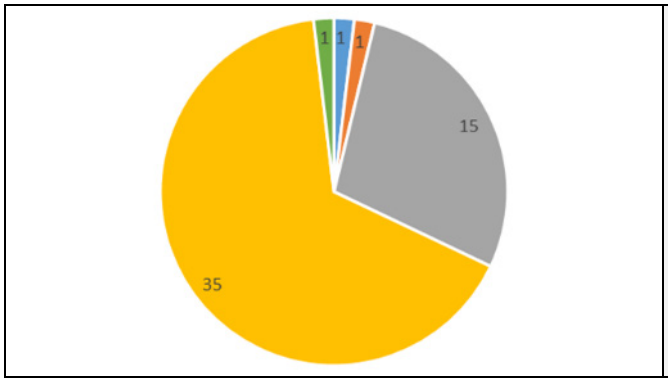
Two-way information sharing between the IMT, the field (marine, shoreline and wildlife), TasPorts Hobart Port Control Tower was taking place at appropriate intervals



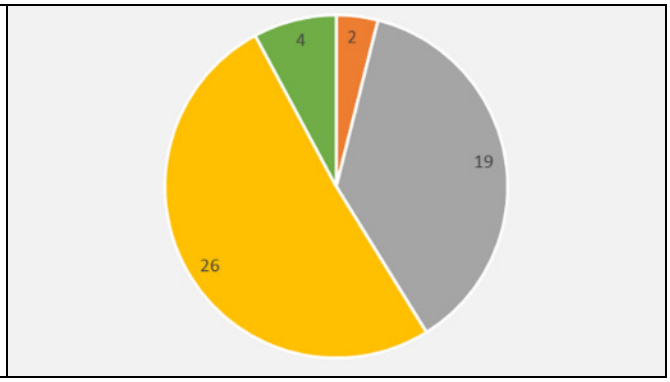
IMT members actively sought updates from all operational areas



New, important information was shared in a timely and effective manner



Challenges in the field and operational areas are swiftly and collaboratively addressed by the IMT



OBJECTIVE 4: Determine if lessons identified in previous exercises and after-action reviews have been addressed

Validation of lessons identified from previous responses and exercises was a key objective of this exercise.

The four key lessons selected for validation were:

1. Induction, briefing and handover processes:
   - A daily SMEACS Brief by the IC.
   - A daily brief from IMT Operations to the Field Commanders.
   - A daily brief from the Field Commanders to the field teams.
   - Induction for all response staff.
2. Two-way communication between the IMT and field operations and/or other response partners is maintained throughout the exercise (measured in objective 3).
3. Stakeholder engagement.
4. Shared situational awareness and the COP.

To trial best practice, the IC SMEACS brief was pre-populated by exercise management. The intent was to assess the benefit and value of a concise and succinct IC brief.

Another improvement initiative to improve two-way communication and enhance shared situational awareness was the SharePoint site.

Induction, briefing and handover

Each day started with an IC brief. On day 1, this was a SMEACS[9] format as a lot of information needed to be conveyed to effectively set up the response. On day 3, the IC adjusted the brief to a STICC[10] format as that was more suitable now the response was well-established.

Observation: 90% of IMT survey responders felt the structure and content of the IC brief at the start of the day provided constructive guidance for the rest of the day. The remaining 10% was neutral. None of the responders had adverse comments regarding the IC brief.

An IC brief is one method of conveying key information; another is induction. The induction process is to ensure that all responders have received the same information to effectively contribute to the response prior to commencing activities. It provides additional information to the IC brief and includes a checklist to confirm the information has been received and understood. This is important for the responders as well as the responding authority under their duty of care.

Observation: In the IMT, the induction template was provided by the local jurisdiction, which focused strongly on health and safety. The form was not consistently provided to participants and some IMT participants indicated in the feedback that they had still not received an induction on day 3.

Observation: The evaluator consolidated reports state there is opportunity for improvement to induct the NRT members into a response, from an AMSA perspective and by the local jurisdiction. The National Plan includes Induction of the National Response Team, Guidance Reference:NP-GUI-002[11] outlining roles for AMSA, as well as the jurisdiction. This format was not observed to be followed.

[9] Situation, Mission, Execution, Administration, Coordination/Communication, Safety.
[10] Situation, Task, Intent, Concerns, Calibration.
[11] https://www.amsa.gov.au/sites/default/files/np-gui-002-induction-of-the-national-response-team.pdf

Observation: In the field, the responders were not briefed on the situation by the field leads on day 1. The field leads assumed that field staff had received a briefing on the situation as part of the morning exercise brief. An induction template would have mitigated this assumption.

Insight: An induction template should cover a checklist that confirms the person has received a brief on the situation, incident level and response objectives. It should also include a short description of the organisational structure and processes in the IMT, relevant plans, templates and where they can be found, connectivity and use of resources, what systems are being used and how to access them, shift arrangements, safety protocols and conflict resolution.

Lessons identified:

R29. TECHNOLOGY/PROCESS: Provide standard templates for the IC briefs on the AMSA SharePoint response site. Include examples of SMEACS and STICC briefs (exercise products can be used as examples).

R30. TECHNOLOGY/PROCESS: Standardise an AMSA template and process for induction then incorporate them on the AMSA SharePoint response site.

Two-way communication

Even though two-way communication was consistently enforced in exercise briefings, challenges were still identified that are described in various sections of this report.

A valuable learning from the exercise was how to assess and adjust two-way communication in an actual response.

Each day, responders were asked to complete a quick survey that asked if they felt that information was effectively shared between the field and IMT, with the option to clarify their response. This information was used to make adjustments for the next day, which was communicated in the IC brief.

Observation: The information from this quick survey was a valuable tool in identifying potential strategies for enhancements. Additionally, it keeps a record that can be used for after-action reviews, enquiries, investigations and lessons management programs.

Insight: A daily online quick survey can provide the IC and function leads with valuable information in relation to safety, compliance and other response aspects that can be improved for the next shift.

Lessons identified:

R31. PROCESS: Develop and incorporate daily online surveys to inform IMT decision-making in relation to response safety, compliance and overall approach to the response.

Stakeholder engagement

In the National Plan Training Program, Marine Pollution Response Training (IMT) and the Incident Controller Level 2, the importance of stakeholder mapping is emphasised. The training provides the processes and templates for stakeholder mapping.

The stakeholder profile of a marine pollution response is vast and diverse, with a complex risk profile. At the start of every event, it is essential to make time to list all stakeholders, understand their communication/information needs, determine the best communication channel to use for each, identify the stakeholder/communication risks and implement risk controls. The effectiveness of stakeholder engagement should be regularly monitored to identify if corrective action is required.

Observation: While a Stakeholder Engagement Plan was developed, it was light in detail and did not include a "proactive" engagement but was applied when a stakeholder engaged with the IMT. The focus was on reactive communication to requests and further consideration could be given to pro-active communication

Observation: The Stakeholder Engagement Plan listed stakeholders as 'detailed in the IAP'.

Insight: Further training is required in the requirements, benefit, purpose and requirements of the Stakeholder Engagement Plan.

Lessons identified:

R32. TRAINING: Consider including the Public Information Function in the MPR training program.

Shared situational awareness and the COP

Several issues were identified in relation to the visual displays in the ICC:

- Inability to share displays onto screens as they are locked to people with Tasmanian government laptops. No mechanism for external people to share visuals.
- The process for screen sharing was complex and many responders deployed workarounds and used whiteboards instead.
- The screens required dedicated laptops, as they cannot be used for anything else once they are projecting.
- There were too many layers to switch on and off in the COP. One member managed to get the simple briefing picture that was wanted. Many of the screens in the IMT could not be cast to and were never used.

Insight: The ICC is new, and this was the first time a national, multi-agency response was run from this facility. These learnings will contribute to

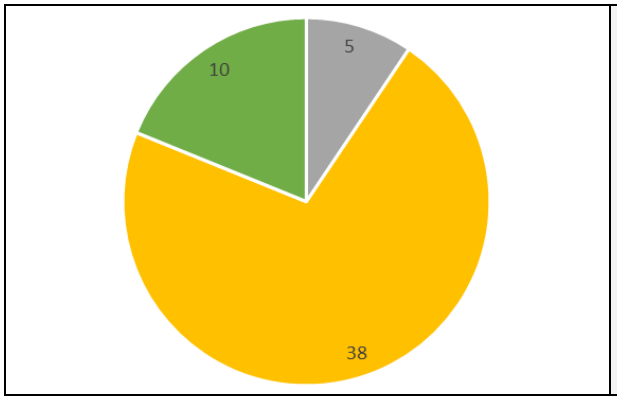
Lessons identified:

R33 TECHNOLOGY: EPA to share the technology operating challenges of the visual displays with the ICC management for consideration.

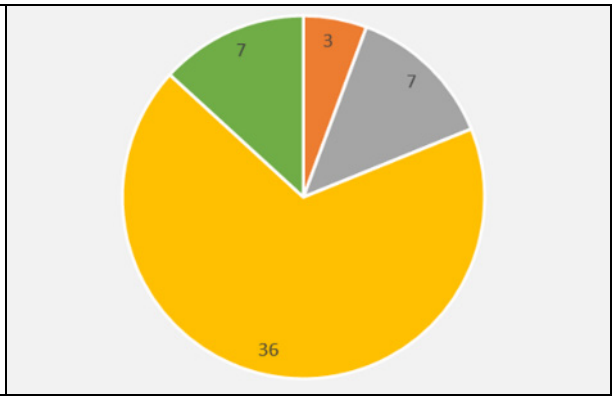
Day 3 Survey – Objective 4 feedback - IMT

Key: Strongly disagree Disagree Neutral Agree Strongly agree

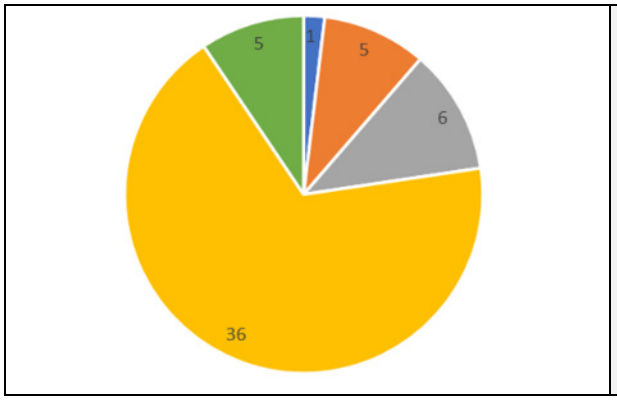
The structure and content of the Incident Controller brief at the start of the day provided constructive guidance for the rest of the day



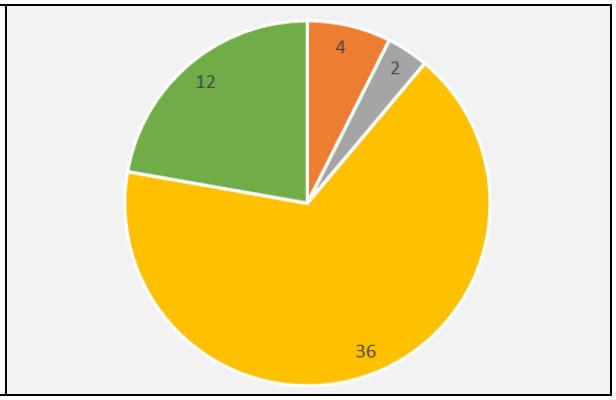
Structured briefings (SMEACS, induction, room briefs, operational instructions) were provided at the appropriate intervals and times



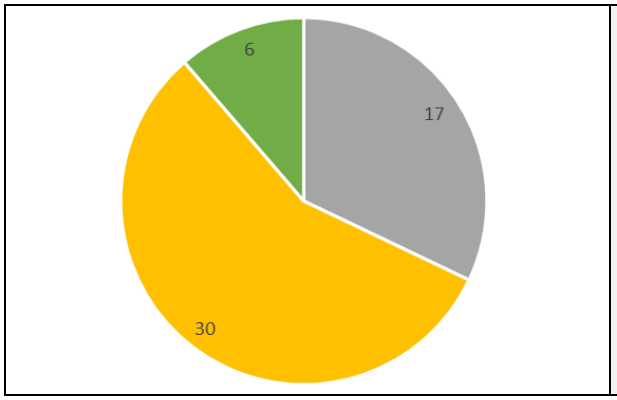
All staff received an induction



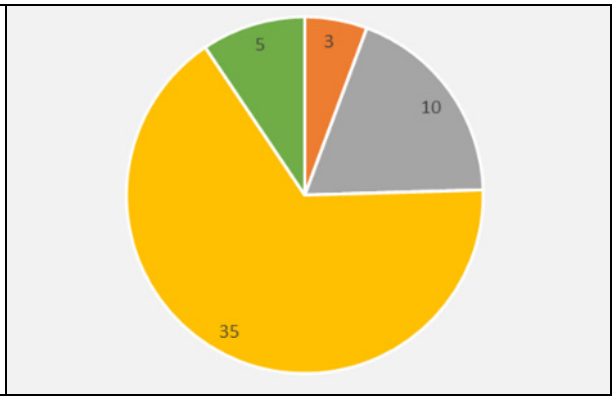
I was clear on my role and my tasks



Key stakeholders were identified and adequately engaged

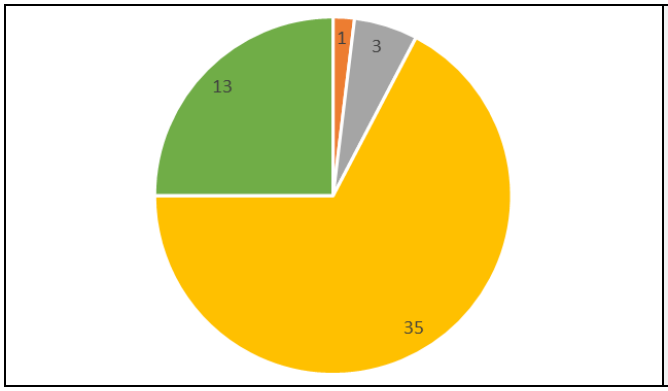


The quality and timeliness of the visual information displayed contributed to the formation of a COP and was adequate

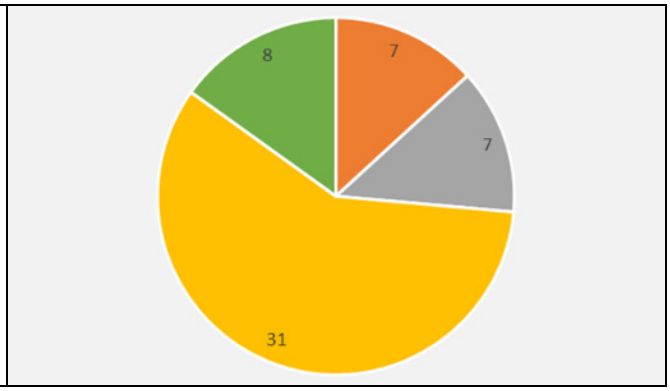


Day 3 Survey – Objective 4 feedback - FIELD

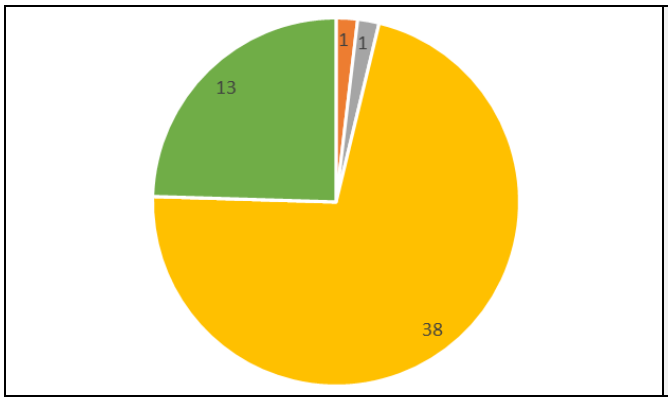
The structure and content of briefings at the start of the day provided constructive guidance for the rest of the day



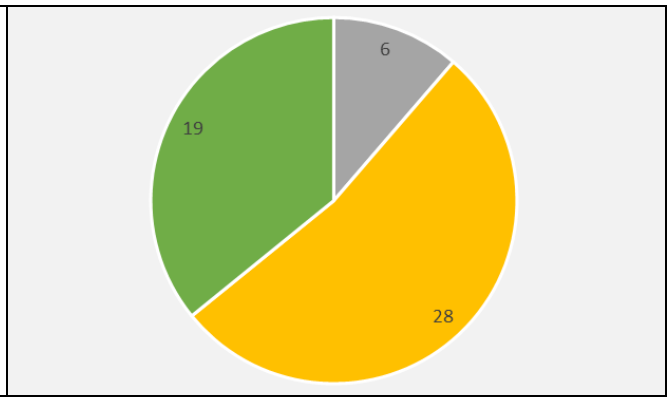
Structured briefings were provided at the appropriate intervals and times throughout the day



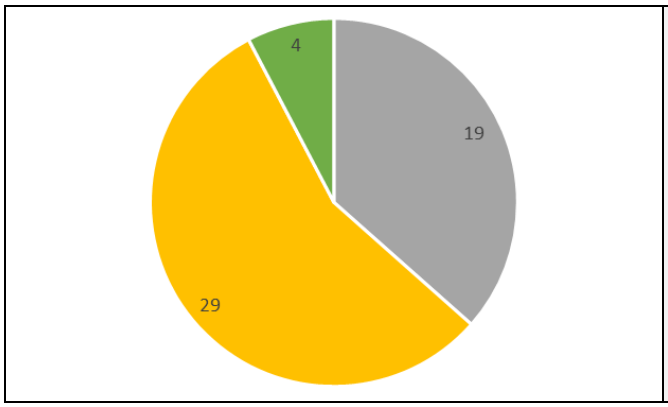
All staff received an adequate induction



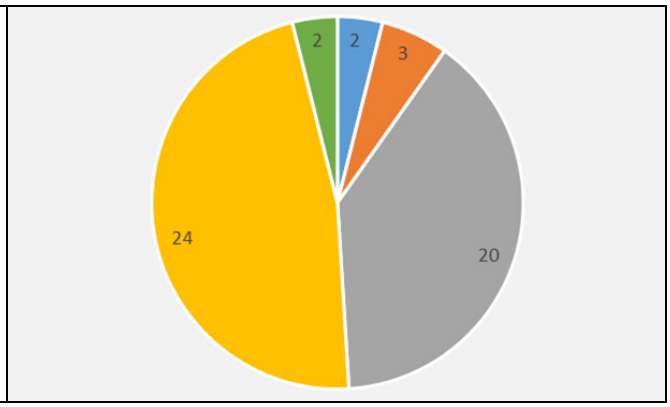
I was clear on my role and my tasks throughout the exercise



Key stakeholders were identified and adequately engaged



The quality and timeliness of the visual information displayed that contributed to the formation of a COP was adequate



OBJECTIVE 5: Identify opportunities to improve future responses and exercises.

The processes implemented by exercise management to monitor and improve daily performance could be highly beneficial in a response. At the end of each day, a quick survey was conducted to check that everyone was clear on their role, if they felt that safety was maintained and what they think should be changed. This informed what adjustments needed to be made for the next day. This was partly related to exercise management, but mostly aspects of the response needed to be adjusted. The information from the surveys was passed onto the IC and incorporated in the IC briefs for the next day.

Observation: The monitoring and control processes implemented by exercise management were demonstrated to be beneficial for monitoring and improving response performance.

Insight: Exploring how these processes can be embedded in a response would add value.

Lessons identified:

R34. PROCESS: Standardise the quick survey based daily performance monitoring processes and incorporate them in marine pollution response protocols and exercises.

A new idea relating to improved safety practices was introduced by Tasmania for field participants joining the exercise from other states. Tasmania provided a two-hour manual handling workshop delivered by a physiotherapist using new innovative lifting techniques focusing on practical lifting stances and team communication.

This added module was designed to target individuals likely to conduct manual handling and be a reminder how to safely lift as a team.

As a trial event, participation was encouraged from all and required from NRT field team leader members. Flight arrival times prevented all visitors from attending and Tasmanian NRT members were already in the scheduled activity.

Safe lifting observation: The safe lifting practices event delivered by a physiotherapist provided a commitment to safe lifting practices by teams and an opportunity to highlight safety as an exercise feature.

Insight: The inclusion of a safe lifting practices event should be considered as a part of bringing NRT members together at the beginning of exercises.

Mentors Observation: As a learning from previous exercises, mentors were appointed during this exercise. The role guide stated the mentor's role was to ensure:

1. The participants have a point of contact for questions about marine pollution response
2. The intended outcomes of the injects as per the Master Schedule of Events are achieved
3. Participants are deploying a response in line with TasPlan and the National Plan
4. Participants apply best practice incident management
5. Supportive and constructive behaviour is maintained across the whole response

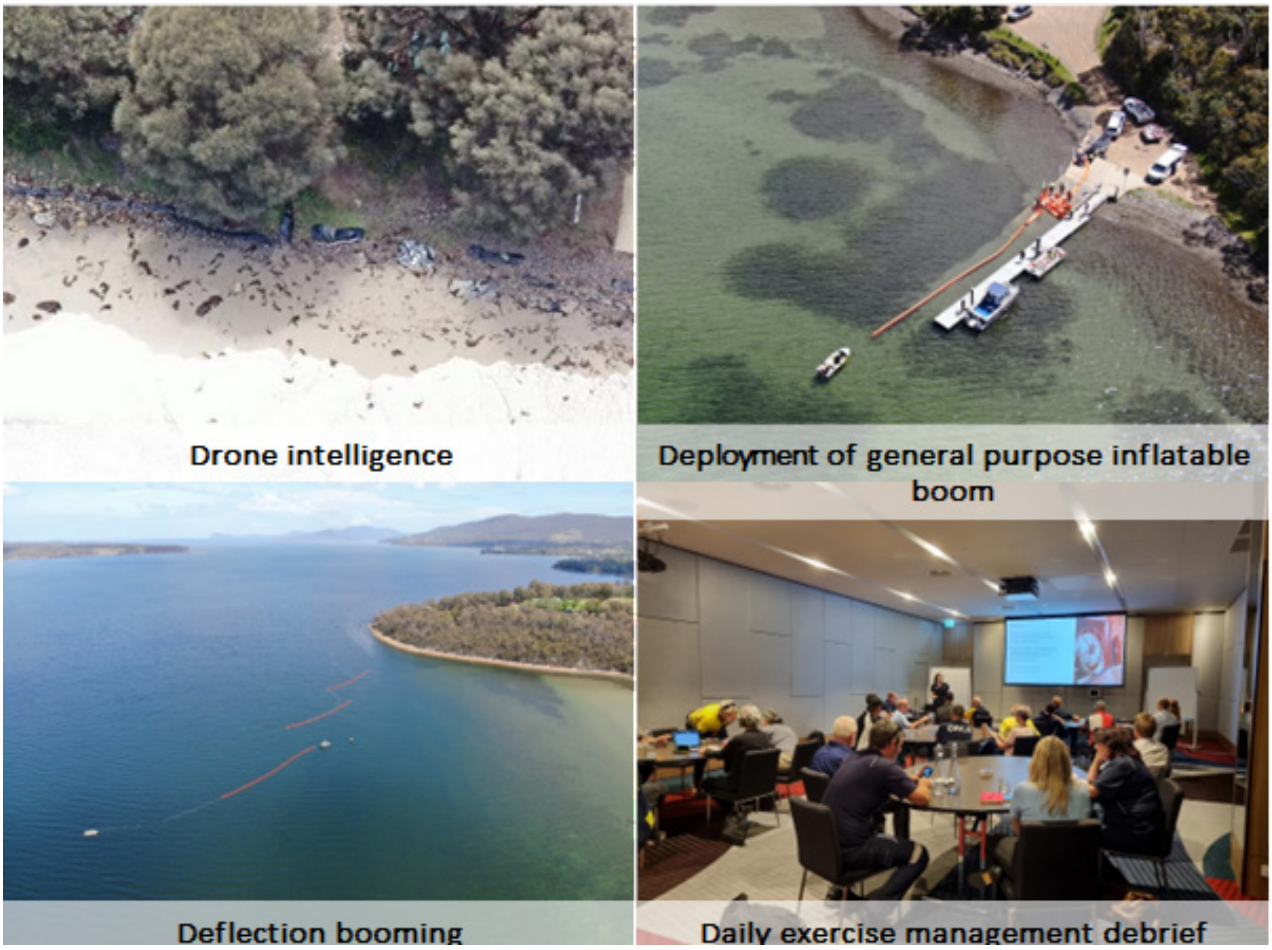
The mentor provides a safe and supportive environment for learning.

Observation: Mentors were actively used to seek clarification and guidance on response performance and team management. The use of mentors had a positive effect on the response performance.

Insight: The use of mentors for exercises should be retained and there should be consideration of how to engage and deploy mentors as part of a response. This will aid in the retention of industry knowledge especially as people begin to retire or move on from jurisdictional agencies.

R35. PEOPLE: Sustain the use of mentors and consider adopting a mentor program in the response structure

Observation: No NRT Wildlife representatives were present as participants during the exercise, despite the focus on wildlife response. There was also no Wildlife mentor or evaluator present in the IMT.



Exercise findings and recommendations

Exercise management context

The exercise planning team comprised members of AMSA, the Tasmanian EPA, TasPorts and Phoenix Resilience as the core, with various representatives contributing throughout the project.

Governance was provided by the AMSA Manager Response Planning, The EPA Director Environmental Regulation and the GM Assets and Technical Services of TasPorts.

Observations, insights and lessons identified

This section outlines the observations, insights and lessons identified in relation to exercise planning, development, delivery and evaluation of Exercise *Thalassarche*.

The observations were gathered from the daily exercise management debriefs, participant survey, planning team debrief, exercise management debrief and subject matter expert consultation post-exercise. Planning team and steering committee meeting minutes were consulted for verification.

Each section is structured to describe:

- Observation: What did we see/what happened?
- Insight: What did/does it mean?
- Lessons identified: What do we need to do/can we do about it?

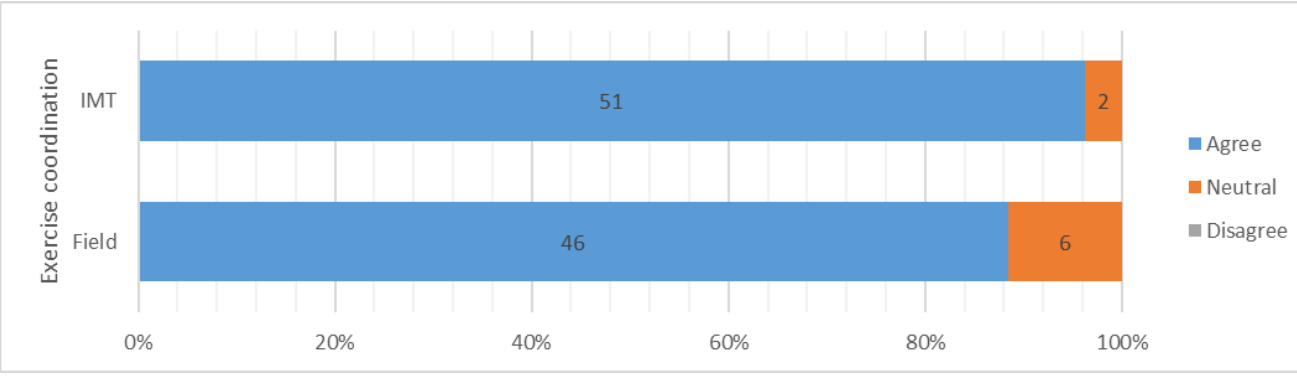
Overall exercise management

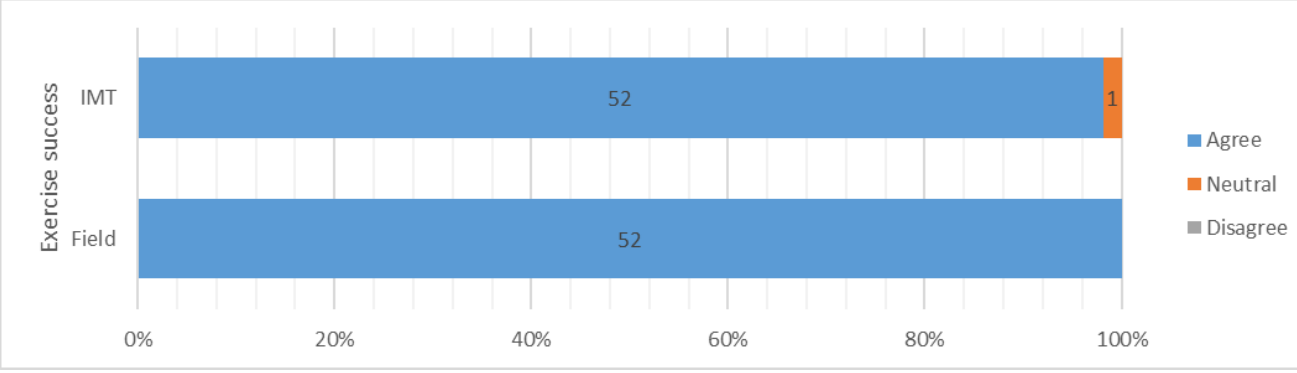
Participant feedback

The survey provided on day 3 requested participants to comment on the exercise's overall coordination and success, which demonstrated that participants overwhelmingly were positive. From the surveys, 98% of IMT respondents and 100% of field survey respondents felt the exercise was successful.

Field: What did you like best about the exercise?

Day 3 final survey





Exercise planning, development, delivery and evaluation documents

A wide range of documents were developed to manage the exercise planning, development, delivery and evaluation.

The document suite included: exercise concept, stakeholder engagement document, Exercise Plan, project management Gantt chart, exercise planning team task checklist, Risk Plan (included risk register and controls), Exercise Incident and Safety Management Plan, Communication Plan, Transport Plan, Evaluation Plan, joining instructions for participants, Observer Program, Administration Instructions and various role guides for exercise management staff. Where required, documents were supported with templates to enable successful implementation.

To effectively manage the scenario, a Master Schedule of Events was developed, with oil spill trajectory modelling, weather forecasts and injects sheets.

The *exercise planning* documents were stored and maintained in a SharePoint folder by AMSA and these documents could be accessed by the *exercise planning team*.

Observation: The exercise evaluators stated in their consolidated evaluation outcomes that the exercise documents were overall well-prepared, they provided sufficient information to conduct the exercise, and the exercise was successfully delivered.

Observation: The exercise document design complied with the AIDR exercise management manual.

Observation: Planning team member feedback indicates that throughout the project, version control on the SharePoint site was not always maintained. Additionally, a process for notifying planning team members of new documents and associated required actions was not agreed. 'Business rules' for the use of SharePoint were not set at the start, which contributed to version control challenges and duplication of work. Finally, the rapid pace of document refinement/development and last-minute changes to the schedule adversely affected version control.

Insight: Confirming the SharePoint site business rules at the start of the project would have provided the required instructions to maintain version control.

Lessons identified:

R36. ExMan: Establish 'business rules' for the use of SharePoint for project management, including document management roles and responsibilities, version control, management of draft documents, storage of superseded versions and notification of documents for review.

Exercise delivery documents were made available to all *exercise management* staff in a separate, access-controlled SharePoint folder.

Observation: The exercise management debrief indicated that the final Master Schedule of Events was only issued on the morning of each day. (See the Scenario section for further analysis and related lessons learned.) This did not provide sufficient time to become familiar with the content.

Exercise risk and safety management

The Risk Plan included an overview of all identified risks, potential consequences, proposed controls, status of implementation and an indication of priority. This Risk Plan was developed with input from all planning team members and discussed/adjusted in the Steering Committee meetings.

The Risk Plan was divided into exercise planning and development risks, exercise delivery risks and field operations risks. Consequences that were considered in the risk assessment included safety,

welfare, security, environment, financial, reputational, legal, operational and technological consequences.

Observation: The risk context and controls were regularly discussed in the planning meetings; however, the first official risk meeting was held on 1 September, with the Risk Plan to be published in the following week.

Insight: To effectively manage strategic and operational risks, it would be beneficial to prepare the Risk Plan at the start of the project.

Lessons identified:

R37. ExMan: Ensure the Risk Plan is an agenda item on the first exercise planning meeting and first steering committee meeting. Use the existing Risk Plan as the basis and adjust to the context of the new exercise as required. .

Governance

Observation: The first steering committee meeting was held on 23 August 2023. During this meeting and the subsequent meetings, expectations were set that would have been beneficial to agree at the start of the project.

Insight: To ensure alignment of expectations, it is beneficial to form and implement the exercise governance structure at the start of the project.

Lessons identified:

R38. ExMan: Form the Steering Committee at the start of the project.

Planning knowledge

For this exercise, an existing AMSA contractor was engaged that was experienced in exercise management, the marine pollution training program and marine pollution response, but new to the National Plan Exercise. Even though the AMSA team had experience in previous National Plan exercises, it was not as a member of the core planning team of the previous exercise. The Tas EPA team was new to the methodology of exercise planning and development, as well as the planning of a National Plan exercise. There was no representation on the planning team from the core planning team of the previous exercises.

Observation: Even though the exercise delivery documents from the previous year were available, no core planning team members from the previous year were available to inform the planning process nor was the 2022 exercise report available in the planning stages. The first excerpt from the draft evaluation report from the 2022 Exercise Kunawarra was made available on 25 September 2023. With a new team, this led to extra time being spent on trying to determine what went well, what did not go so well in Exercise Kunawarra and what we needed to do differently.

Insight: The lack of access to lessons from previous exercises added extra research time and reduced the efficiency of the initial planning meetings.

Lessons identified:

R39. ExMan: Ensure the planning team has at least one member that was on the core planning team of the previous year.

R40. ExMan: Ensure the previous year's exercise report is published prior to the first planning meeting.

Exercise management experience

Observation: During the planning team debrief, several planning challenges[12] were raised by Tas EPA planning team members for which a contributing factor was unfamiliarity with the exercise management methodology of the Australian Institute for Disaster Resilience, Managing Exercises Handbook prior to joining the planning team.

Insight: An understanding of the methodology in the AIDR Managing Exercises would assist planning team. Alternatively, recent experience working on planning teams in large scale exercises would be beneficial.

Insight: Detailed role descriptions and related deliverables for exercise planning team members at the start of the project could have further mitigated this challenge.

Lessons identified:

R41. ExMan: Provide baseline training, or at minimum an awareness session, in the AIDR exercise management methodology to all exercise planning team members prior to them joining.

Scenario

The sequence of scenario development for any marine pollution field exercise is shown below.

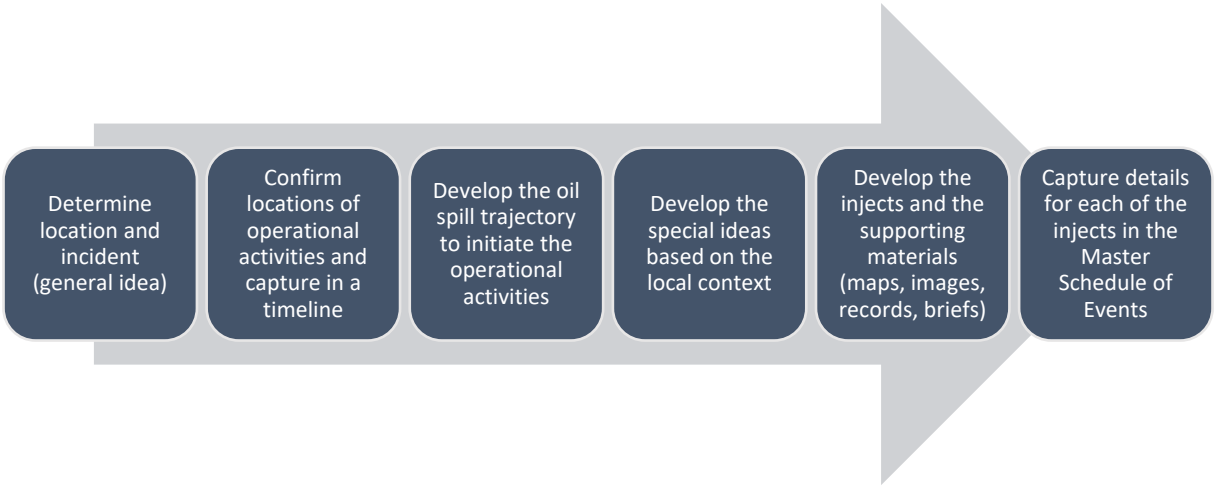


Figure 12. Marine pollution response exercise – scenario development flowchart

The general idea was confirmed by 25 May 2023 during an onsite planning meeting in Hobart with the respective representatives of the four planning team organisations. Subsequently, regular scenario planning meetings were held.

Observation: Considerable time was spent by the members of the planning team on assessing the optimal locations for the operational activities. Many factors were considered, including scenario implications, staff safety, accessibility and other risks. The locations were not finalised until a few weeks prior to the exercise and, even then, small adjustments were made up until exercise day.

[12] These challenges included understanding of the various exercise documents and their application, as well as scenario design and delivery.

Observation: Even though it was identified as a necessity, a timeline was not developed until later in the planning process.

Observation: The representatives from the local jurisdiction stated there was not enough support within the planning team for planning the Wildlife Response components of the exercise. Representatives from the state wildlife response agency occasionally attended meetings, but as they were intended to be participants in the exercise, their ability to contribute as exercise staff was limited. An expert mentor and evaluator were present in the field during the exercise, but there was no specific wildlife exercise planning expertise present in the planning team. There was also no dedicated time during planning meetings to discuss the practicalities of the wildlife component, which were significant in terms of equipment, personnel, logistics and the deployment of practical injects (props).

Observation: In the final stages, several changes were made that had flow on effects to other aspects of the scenario. Discussing, analysing, confirming and processing these changes was time-consuming and labour intensive for all members of the exercise planning team.

Observation: Regular changes were made to the timings of exercise management activities, briefings, people movements and EXCON activities, which introduced delays and version control challenges with the Master Schedule of Events.

Observation: Some of the special ideas and supporting injects were not completed until the evening prior to the exercise day.

Observation: Draft Master Schedules for the three days were available for the exercise planning team in the weeks leading up to the exercise in the SharePoint site; however, the final Master Schedule of Events was only made available to the exercise management team on the morning of each day.

Insight: More detailed descriptions of the remit, roles, responsibilities and expected deliverables for the exercise planning team members in scenario development and delivery at the start of the project would have assisted with resource planning, document development and scenario delivery preparation.

Insight: This situation was partly unavoidable for days 2 and 3, as the day's activities inform the injects for the next day. However, day 1 should have been finalised the week prior and days 2 and 3 could have been made available to the exercise management team in draft with options/alternatives already planned.

Lessons identified:

R42. ExMan: Provide a description for each of the planning team members on their remit, roles, responsibilities and where possible expected deliverables at project inception.

R43. ExMan: Lock in the operational locations, oil spill trajectory modelling and timeline at least three months prior to the exercise date.

R44. ExMan: Lock in key timings at least a month prior to the exercise date.

R45. ExMan: Make the draft Master Schedule of Events for all three days available to the exercise management team as early as possible for familiarisation.

Exercise delivery

Safety management

For this exercise, a safety and incident management plan was developed and socialised across the exercise management team. This plan provided the arrangements to manage incidents that may occur in the State Control Centre or field, including shoreline, marine and wildlife activities, while participants are in transit between exercise locations or at the exercise accommodation. The plan also covers hazards that may impact the operational continuity of the event, like an extreme weather situation or security threat.

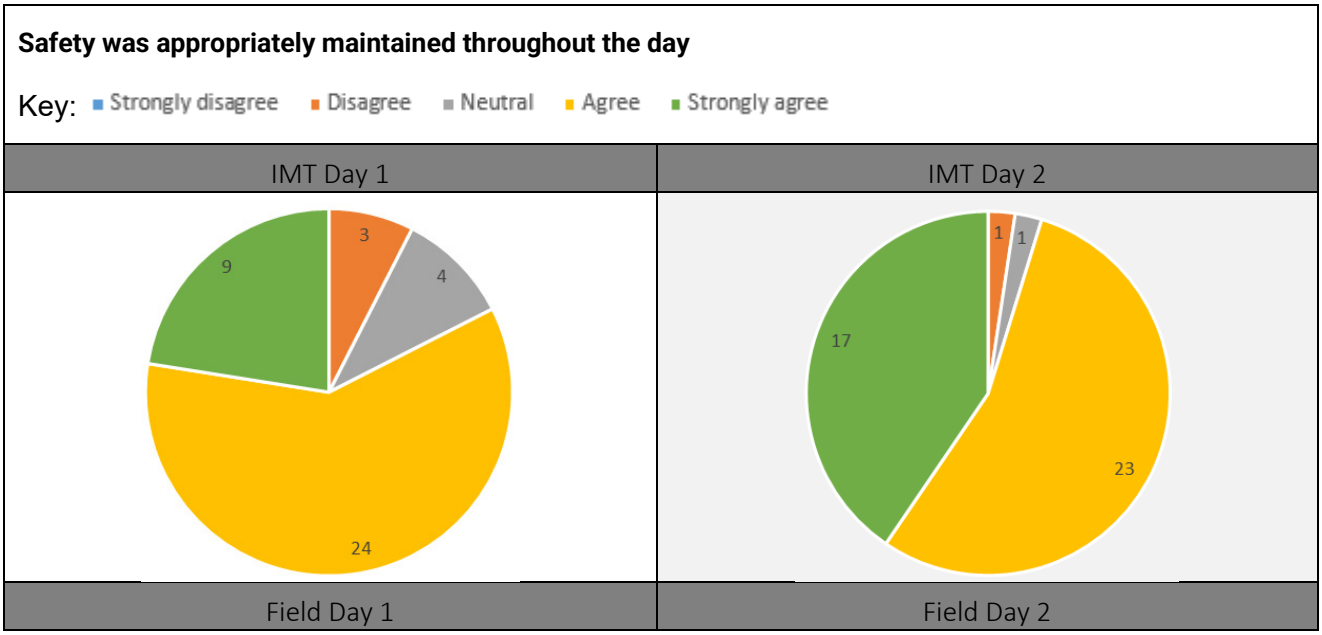
Another safety measure included embedding a safety officer in the incident management structure.

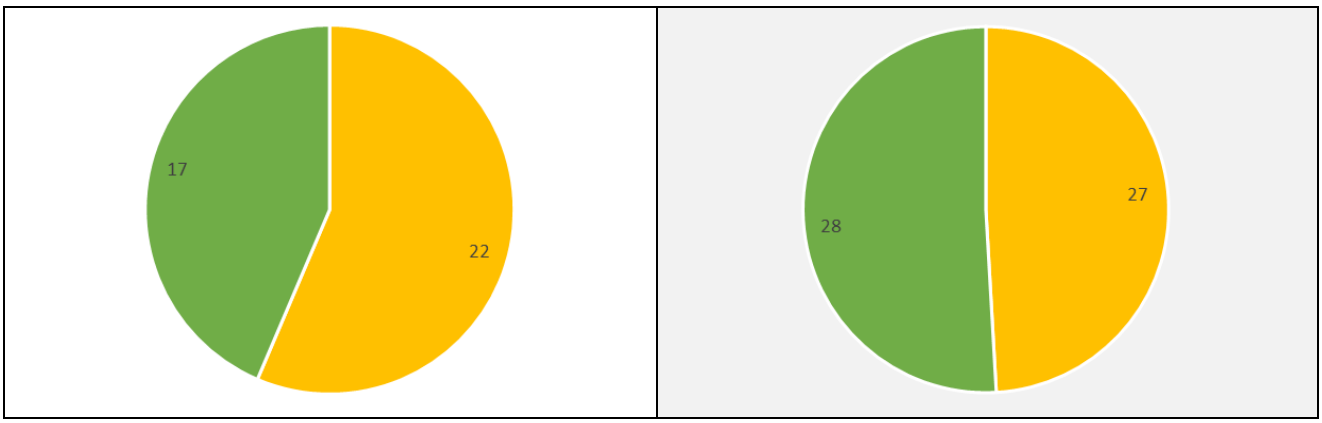
Safety performance was measured daily through surveys in the IMT and field. The survey outcomes were discussed with the wider exercise management team to determine if any corrective actions were required. The use of WhatsApp as a communication tool identifying safety matters was a good inclusion into the exercise enabling exercise management staff to communicate safety concerns more broadly quickly and effectively.

100% of field staff felt that safety was appropriately maintained, with an increase to strongly agree on day 2. From the IMT survey respondents on day 1, 82.5% felt safety was appropriately maintained and 95% of IMT survey respondents on day 2, which demonstrates the improvement.

The three adverse comments regarding safety in the IMT on day 1 involved a person not having received an induction, one person not being briefed on the emergency evacuation and one person unable to locate a first aid kit.

Safety was appropriately maintained throughout the day





Safety performance was strong with few incident reports. There was one reported COVID case in the IMT with Intel and two first aid incidents occurred during the exercise, as detailed below.

Patients treated:

Case No	Date	Time	Sub-location	Diagnosis	Outcome
331267	2023-11-15	09:09		Mild Allergic Reaction/Hayfever	Treated on site, and returned to event.
331283	2023-11-15	13:25		Eye Irritation	Treated on site, and returned to event.

Total: 2 Patients

Figure 13. Extract from the first aid report

Reported near misses included a yacht that would not change course, a curious paddler near the vessels, water shortage for the marine team and a tiger snake at Coningham beach.

Observation: To manage safety during the exercise, a safety specific WhatsApp group was established for exercise management. A dedicated safety channel ensured that only safety information was shared on this platform, which resulted in a live safety log.

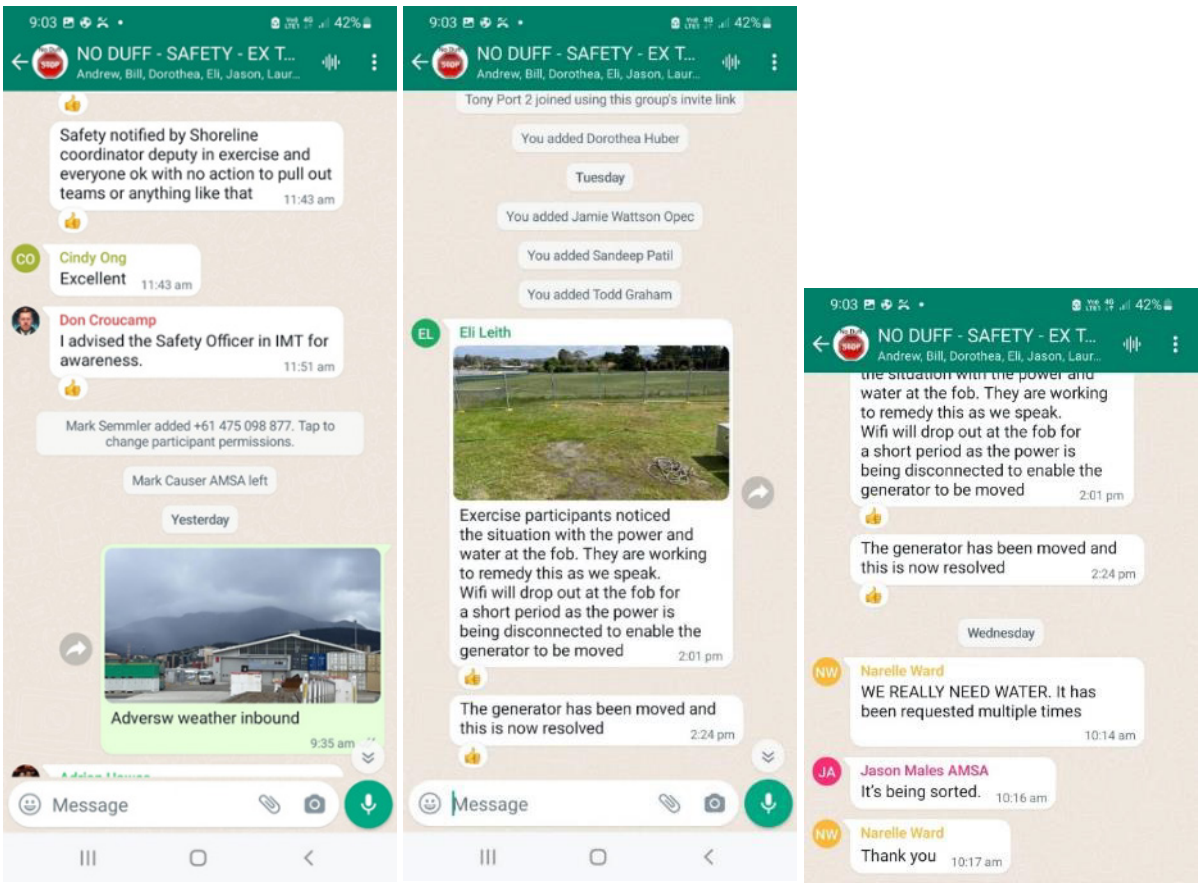


Figure 14. Extracts from the safety group on WhatsApp

Insight: The WhatsApp safety log provided a simple tool to communicate hazards, safety issues, incidents, near misses and corrective actions across a group of remotely located exercise management teams. It allowed for easy attachment of images to support the updates.

Lessons identified:

R46. EXMan: Continue using WhatsApp for safety updates and notifications.

R47. EXMan: Consider the safety recommendations from the field for the next exercise:

- Provide a forklift on-site to prevent manual handling of ISO palletised gear.
- Minimise traffic in the staging area, with a separate boat launch area.
- Provide clear comms to base and in/out procedure.

Logistics

The exercise planning team had a constant focus on ensuring the required logistics and resources were available to successfully deliver the exercise and provide a valuable experience for participants. The EPA team built a fully equipped FOB and Primary Care Facility with technology for coordination, presenting and debriefing. The setup of the FOB was informed by lessons from previous exercises.

The IMT was operating from the recently commissioned Tasmanian Control Centre from where Tasmanian emergency services operate and state incidents are managed.

Observation: The setup of the FOB and Primary Care Facility were executed to a high standard.

Observation: Identified logistics issues in the survey that reflect in the below pie charts pertained to operating technology in the field and the ICC. Technology is further analysed in the Technology section of this chapter.

IMT

33. The resources and logistics during the exercise were appropriate for this event.

More Details

Strongly agree	11
Agree	31
Neutral	10
Disagree	0
Strongly disagree	0

Field

30. The resources and logistics during the exercise were appropriate for this event.

More Details

Strongly agree	6
Agree	39
Neutral	5
Disagree	1
Strongly disagree	0

Exercise Control (EXCON)

Exercise Control was on the same floor as the IMT in the Incident Control Centre and staff moved regularly between EXCON and the IMT to ensure activities were on track. Additionally, the mentors moved between the IMT and EXCON to provide situational awareness and discuss corrective actions that may be needed.

The status of every inject was reported through the EXCON WhatsApp group.

Observation: The use of an EXCON WhatsApp group to maintain shared situational awareness of the scenario, challenges and corrective actions worked well.

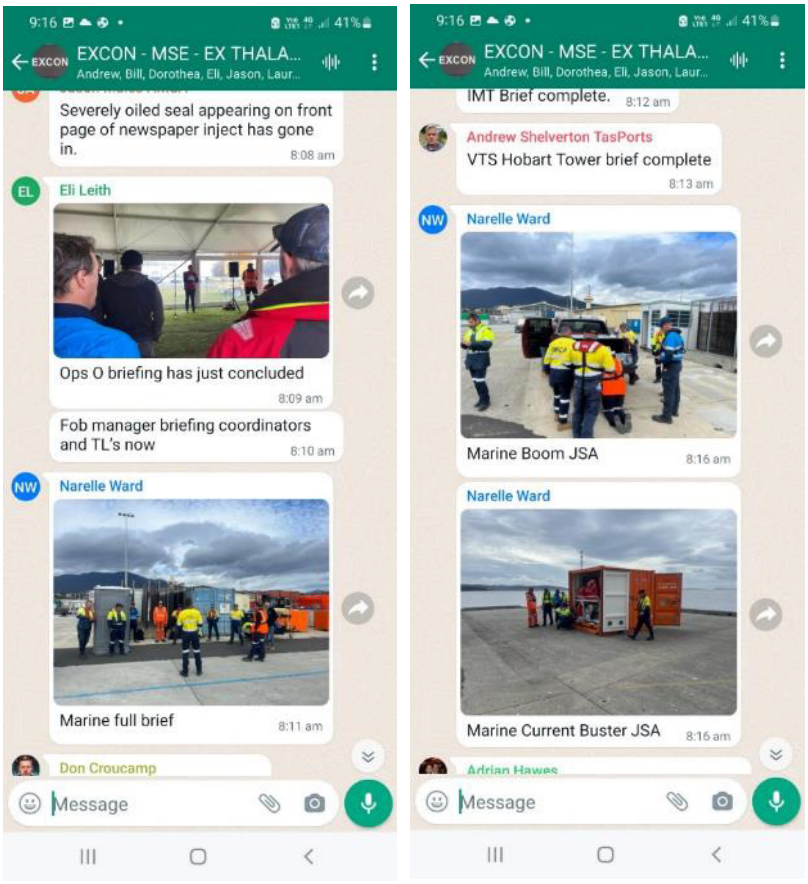


Figure 15. Extracts from the EXCON group on WhatsApp

Observation: During the day 3 IMT hot debrief, participants complimented the scenario and delivery.

Observation: Intel participants requested in the debrief if spatial files can be provided in a format that can be easily integrated into the system.

Observation: During the debrief it was mentioned that some operational injects could have benefitted from a bit more detail in relation to the circumstances of the situation.

> "Great injects for the IMT and wildlife injects were realistic."
>
> IMT Day 3 debrief

IMT
34. I felt usefully engaged throughout the exercise More Details Insights Strongly agree 14 Agree 32 Neutral 4 Disagree 2 Strongly disagree 0 

Field
31. I felt usefully engaged throughout the exercise More Details Insights Strongly agree 16 Agree 30 Neutral 3 Disagree 2 Strongly disagree 0 

Observation: There was some confusion in Logistics on exercise management vs exercise scenario logistics, especially around the approval of external equipment in the exercise environment.

Insight: To manage exercise risks and meet exercise timings, most resources were identified, sourced and deployed prior to the exercise, which can blur the lines between exercise and response logistics. Clear instructions and alignment of expectations is essential to avoid confusion for Logistics staff.

Lessons identified:

R48. ExMan: Continue using an EXCON WhatsApp group to confirm the status of injects.

R49. ExMan: Develop a logistics brief that explains exercise vs scenario logistics and how the various processes work.

Learning environment

The positive learning environment that was experienced by the participants and exercise management staff was commonly mentioned in feedback and evaluation data. Exercise Management Team feedback in the debriefs indicated this was achieved through:

- Clearly communicating the exercise culture of supporting each other and a 'no judgement' environment
- Exercise staff continuously reinforcing the exercise culture
- Providing a thorough exercise induction process
- Holding regular debriefs and start-of-day briefings
- Having mentors available at all locations
- Distributing and reviewing responses to the daily surveys to inform corrective actions

Insight: In a high-pressure working environment that deals with novel situations, it is important for people to know it is acceptable to be curious, explore and ask; therefore, a clear question pathway must be established.

Additionally, the purpose of exercising is to build capability in a supportive manner. Testing is only appropriate for highly repetitive, high risk response tasks for which there is only one right way of performing the task.

Lessons identified:

R50. ExMan: Maintain the support measures taken during this exercise to ensure continuity of the positive learning environment during future exercises and responses.

Mentors

To create a learning environment, it was decided to use mentors, similarly to the National Biosecurity Response Team – mentor program, who deploy in a biosecurity response. This is a concept that has been trialled and tested in other functional exercises and responses and has been consistently proven to be beneficial.

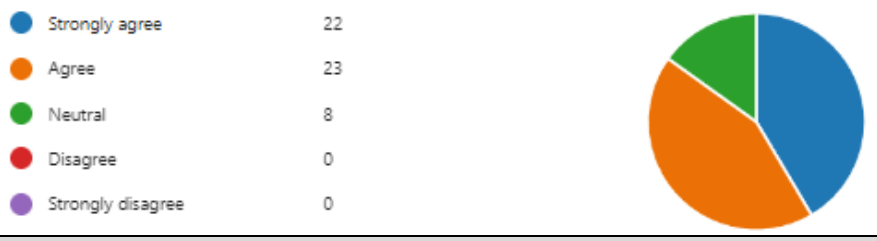
The mentors for the IMT were selected from the National Plan - Marine Pollution Response Training program and experienced AMSA National Response Team members. The wildlife mentors were selected based on their experience in oiled wildlife response.

Figure 16. Exercise mentors in the IMT

IMT

31. The mentors provided the right environment for learning and improving outcomes.

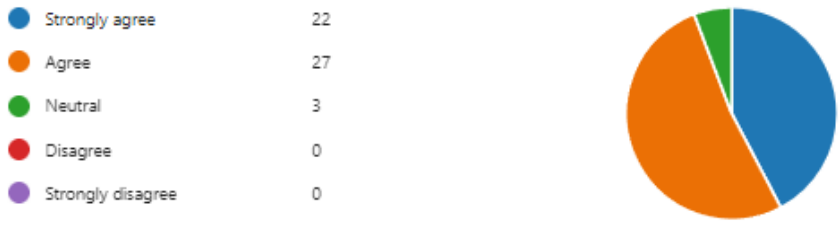
More Details



Field

28. The mentors provided the right environment for learning and improving outcomes.

More Details



Observation: The value of mentors was consistently mentioned in debriefs and surveys.

Insight: The mentors provided support, guidance and a safety net for the IC and Functional Leads.

Lessons identified:

R51. ExMan: Continue the mentor concept in future exercise with the mentors being selected from the marine pollution training program and National Response Team.

Evaluators

The evaluators that were selected for this exercise were highly experienced in marine pollution response, wildlife incident response evaluation and exercise management.

The evaluation reports were sound and provided valuable contributions to the evaluation outcomes.

R52. ExMan: Continue the mentor concept in future exercise with the mentors being selected from the marine pollution training program and National Response Team.

In developing the exercise management organisational structure, it was a deliberate decision to split the roles for EXCON, evaluation and mentors. This decision was based on experiences in previous exercises by planning team members. The intent was that EXCON focuses on the scenario, mentors focus on coaching and evaluators silently observe and only interact to clarify a potential observation.

It was agreed that the evaluators would share exercise observations with the mentors, who could subsequently address this with the IC/functional leads if required.

Evaluator duty statements were provided, and briefings were conducted on the evaluator role prior to joining and on commencement of the exercise.

Observation: The experienced and knowledgeable evaluators were observed to occasionally engage participants in a coaching manner, blurring the lines with mentors.

Observation: Due to the limited availability of wildlife expertise the wildlife mentor was also the wildlife evaluator, which caused role confusion.

Lessons identified:

R53. ExMan: Clarify with evaluators that they must not engage in mentor-like conversations.

R54. ExMan: Ensure sufficient staff are available to separate the mentor role from then evaluator role.

Observers

A customised observer program was developed for day 2 of the exercise with a guided tour around all the key activities.

Observation: This observer program format was found to work well, with positive feedback received from all observers.

Insight: A structured, controlled and coordinated observer program reduces exercise management risks, especially regarding reputational risks and the risk of disrupting exercise activities.

Lessons identified:

R55. ExMan: Follow the Exercise Thalassarche observer program model in future exercises.

Briefs and debriefs

Various virtual exercise briefings were provided a week prior to the exercise for exercise management staff, participants, mentors, evaluators and EXCON (scenario). These briefings were recorded, and a link provided to the group members that were unable to attend.

For exercise management, a full brief was again provided on arrival the day prior to the exercise and on each day of the exercise. An exercise management debrief was conducted at the end of days 1 and 2.

For exercise participants, the exercise brief was provided in stages across each day and a debrief was conducted at the end of each day.

Observation: The participant and exercise management feedback indicated that these briefings were adequate and valuable, excluding the field briefings on day 1 (see comments below).

IMT

32. The briefings and written material received at the start and during the exercise gave sufficient instructions to effectively participate in the exercise.

More Details

Strongly agree	11
Agree	37
Neutral	4
Disagree	1
Strongly disagree	0

Field

29. The briefings and written material received at the start and during the exercise gave sufficient instructions to effectively participate in the exercise.

More Details

Strongly agree	9
Agree	34
Neutral	6
Disagree	1
Strongly disagree	1

Observation: The exercise was designed to brief the field leads on the situation on day 1, who would then travel to the FOB and brief the field staff who were scheduled to arrive an hour later. The field leads, however, believed that field staff were briefed on the situation during their exercise management brief at the ICC and did not provide a situational brief to the teams arriving at the FOB.

The field feedback on day 1 indicated that field staff were not briefed on the situation, and this was corrected for day 2. The issue is reflected in the outcomes of the field survey.

Insight: It would be beneficial to include a check to confirm that all exercise participants have received a briefing on the situation.

Lessons identified:

R56. ExMan: Ensure through exercise design that all staff joining the exercise receive a situation briefing

Daily feedback surveys

Observation: Debriefs were held for exercise management staff on days 1 and 2. During this meeting, the daily participant survey results were presented, which informed decision-making around what needed to change the next day.

Insight: The exercise management debrief outcomes highlighted that exercise management staff found this highly valuable, as it allowed real time improvements to be implemented.

Lessons identified:

R57. ExMan: Continue the model of conducting daily surveys that are assessed by the exercise management team at the end of each day to inform actions on the next day.

Exercise coordination

Observation: The evaluator consolidated findings that stated the exercise was effectively coordinated and the appointment of one primary organisation to coordinate the exercise was positive and effective.

For this exercise, the contractor Phoenix Resilience was responsible for managing and coordinating the exercise and for the sub-contractors' contracts and management: OPEC, ORCA, Flexor, Tactical Maritime Solutions and Resilience Planning. This included:

- Developing the duty statements and supporting management and governance structure
- Liaising with sub-contractors and management of the planning, delivery and wrap up of the exercise
- Controlling sub-contractor risk and performance management
- Paying fees

Observation: This arrangement reduced the liaison points for AMSA to one contract and one contractor.

Technology and infrastructure

During the exercise planning, the idea was introduced to use SharePoint as the incident management system, as existing work was ongoing to develop this capability in AMSA. Testing the application of this capability became a strong focus point of the exercise, as it supported the objectives around communication, coordination and shared situational awareness.

Observation: Even though highly beneficial, the inclusion of SharePoint as the incident management system in the exercise added extra time in planning and development.

Observation: The use of role-based email addresses was a challenge as it is only possible in Gmail, due to an inability to develop agency email addresses across the response. This should be considered for all future exercises.

Observation: It was challenging to liaise with the venue in the lead up to the exercise and roles/responsibilities regarding venue liaison were not clear within the planning team.

Observation: Issues with technology/resources in the ICC venue and accessibility to the ICC venue were identified two weeks prior to the exercise, resulting in resource intensive activities to correct the issues.

Observation: There were various issues with the display screens and internet access during the exercise in this venue and insufficient technical staff were available to assist.

Insight: Testing technical capabilities at the venue should commence at least two months prior to the event.

Lessons identified:

R58. ExMan: Develop protocols for the use of SharePoint in exercise management, including workflows for key processes.

R59. ExMan: Resolve the issue with role-based email addresses with the host state for future exercises.

R60. ExMan: Establish a list of requirements for the IMT venue, appoint a venue liaison role in the planning team (representative from the host agency) and ensure sufficient technical support is provided by the venue owner.

R61. ExMan: Test technology several weeks prior to exercise delivery to allow time for initiating workarounds.

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