Australian Government
Australian Maritime Safety Authority

National Plan for Maritime Environmental Emergencies

Year in Review 2015-16

National Plan for
Maritime Environmental Emergencies

Year in Review
2015-16

Mission

To maintain a national integrated government and industry organisational framework capable of effective response to pollution incidents in the marine environment and to manage associated funding, equipment and training programs to support National Plan activities.

ISSN: 1323-7772

Copy/design/cover/typeset: Australian Maritime Safety Authority

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AMSA's foreword

The 2015-16 year has been yet another busy period for National Plan stakeholders. In July 2015 an oil spill occurred 30 nautical miles from Cape Upstart, in the Whitsunday region, which affected a number of Queensland beaches. Maritime Safety Queensland led the response, which involved the on-ground mobilisation of a number of Queensland State Government and local government agencies and GBRMPA. AMSA assisted with aerial surveillance, spill trajectory modelling and identifying and sampling potential source vessels, both in Australia and overseas.

The Commonwealth and state and Northern Territory governments have, in cooperation with industry, developed the National Maritime Places of Refuge Risk Assessment Guidance, to inform and expedite decisions on places of refuge for vessels in distress. The guidance provides for a nationally consistent approach and is designed to ensure that there is adequate and timely consultation between relevant stakeholders and that all risks are identified and addressed where practical.

Annual National Plan exercises are hosted in turn by each jurisdiction, with the 2016 National Plan exercise hosted by New South Wales. The exercise was held in two phases. Phase one, dealt with a chemical incident occurring on board a container vessel at sea and a subsequent request from the vessel's master for a place of refuge in the Port of Newcastle. The aim of phase one was to practice the deployment of the newly-developed Hazardous and Noxious Substance (HNS) response capability and the application of National Maritime Places of Refuge Risk Assessment Guidance. This phase was held in the Port of Newcastle with AMSA, Port of Newcastle, Transport for New South Wales and Fire and Rescue New South Wales (FRNSW) personnel forming a Maritime Casualty Control Unit to manage the potential maritime casualty and to assess an appropriate place of refuge. The second phase of the exercise considered the community impacts and cost recovery implications of a chemical incident in the Port of Newcastle.

Finally, Spillcon was held in early May 2016 in Perth. A broad range of industry exhibitors coupled with high calibre presenters, including Air Chief Marshal Sir Angus Houston AK, AFC (Retd), resulted in yet another successful Asia-Pacific oil spill preparedness and response conference. Our thanks to everyone that contributed to its success.

Toby Stone
General Manager, Response
Australian Maritime Safety Authority

Snapshot of the history of the National Plan

1973 - National Plan established with $1 million contribution from Commonwealth

1974 - *Sygna* oil spill, Newcastle NSW (700 tonnes)

1981 - *Anro Asia* oil spill, Bribie Island QLD (100 tonnes)

1986 - Trajectory modelling introduced (originally On Scene Spill Model - OSSM)

1987 - *Nella Dan* oil spill, Macquarie Island TAS (125 tonnes)

1988 - *Korean Star* oil spill, Cape Cuvier WA (600 tonnes)

1988 - *Al Qurain* oil spill, Portland VIC (184 tonnes).

1991 - Australian Marine Oil Spill Centre (AMOSC) established in Geelong, Victoria as a subsidiary of the Australian Institute of Petroleum (AIP)

1991 - *Sanko Harvest* oil spill, Esperance WA (700 tonnes)

1991 - *Kirki* oil spill, off WA coast (17,280 tonnes)

1992 - *Era* oil spill, Port Bonython SA (300 tonnes)

1993 - First National Plan Review, outcomes include purchase of $5.6m equipment

1995 - Entry into force for Australia of the *International Convention on Oil Pollution Preparedness, Response and Cooperation 1990*

1995 - *Iron Baron* oil spill, Hebe Reef TAS (325 tonnes)

1997 - Fixed Wing Aerial Dispersant Capability introduced, jointly funded by AMSA and AIP

1998 - National Plan extended to deal with hazardous and noxious substances spills

1999 - Mobil Refinery oil spill, Port Stanvac SA (230 tonnes)


Sygna


Nella Dan


Korean Star


Kirki


Iron Baron

1999 - Introduction of Oil Spill Response Atlas (OSRA) with $1 million provided by the Commonwealth as part of the Natural Heritage Trust

1999 - Implementation of the Incident Control System (ICS)

1999 - *Laura D'Amato* oil spill, Sydney NSW (250 tonnes)

2000 - Second National Plan Review, outcomes include establishment of the National Plan Management Committee

2001 - MOU on the National Plan signed by AMSA and AIP

2002 - Inter-Governmental Agreement signed by State/NT and Commonwealth Ministers of the Australian Transport Council

2006 - *Global Peace* oil spill, Gladstone QLD (25 tonnes)

2007 - Entry into force for Australia of the *Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances 2000*

2008 - Chemical Spill Trajectory Model (CHEMMAP) introduced

2009 - *Pacific Adventurer* oil spill, Cape Moreton QLD (270 tonnes)

2009 - Montara Wellhead platform release, Timor Sea (est. 4,736 tonnes)

2010 - Grounding of the *Shen Neng 1*

2011 - Third National Plan Review

2012 - Expanded to include maritime casualty response, retitled *National Plan for Maritime Environmental Emergencies*

2012 - Wreck removal of MV *Tycoon* from Flying Fish Cove, Christmas Island

2014 - 2014 edition of the National Plan for Maritime Environmental Emergencies endorsed by the National Plan Strategic Coordination Committee.

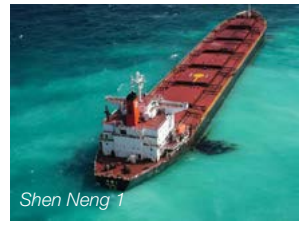

Port Stanvac

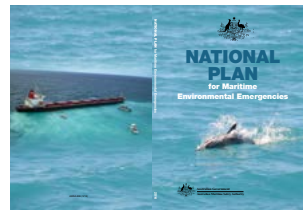

Laura D;Amato


Global Peace


pacific Adventurer


Montara Wellhead Platform


Shen Neng 1



Key events and highlights

Cape Upstart oil spill

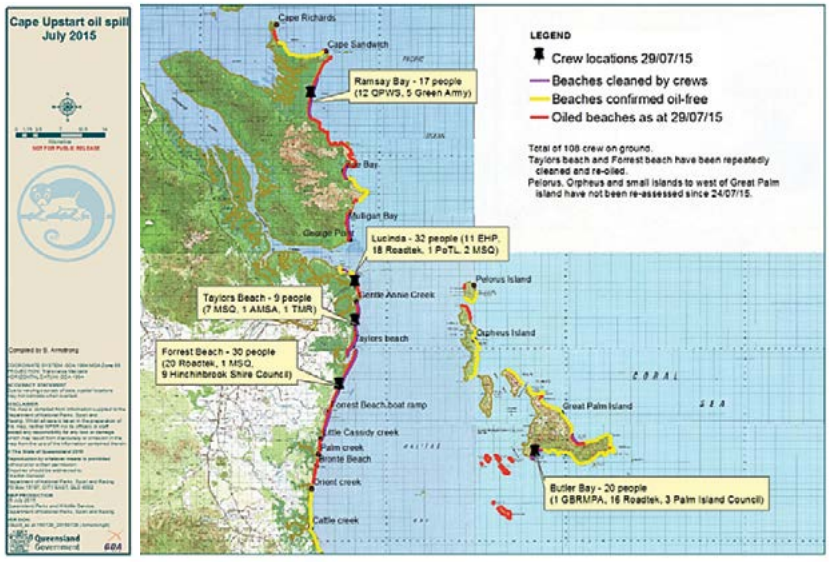
On 17 July 2015 AMSA Search and Rescue contacted AMSA's Marine Environment Pollution Response (MEPR) Duty Officer regarding the report of a possible oil spill approximately 30 nautical miles from Cape Upstart, Queensland.

A fisherman had traversed through what he thought was an oil slick early on the morning of 16 July and then traversed through it again on his return to shore that evening. Maritime Safety Queensland (MSQ) was informed of the spill the following morning and relevant agencies were notified. MSQ arranged for personnel to speak to the fisherman and to visually assess the fisherman's vessel, as there was residue on its hull. MSQ advised that there was a high probability that the substance covering the vessel's hull was oil and a sample was taken for further analysis and investigation. AMSA's MEPR Duty Officer requested further clarification on the location and size of the slick and advised that AMSA resources were available if required.

MSQ worked with Great Barrier Reef Marine Park Authority (GBRMPA) officers in Townsville to manage the incident and further investigate the source of the spill. A helicopter was put up over the area by MSQ and a sheen was identified and the location verified, Queensland Water Police (QWP) was deployed to the location to take samples of the oil.

MSQ requested assistance from AMSA for Oil Spill Trajectory Modelling and the use of the Dornier aircraft to do a visual search of the area the next morning.

Location of oil on shoreline and cleanup effort on 29/07/2015



A request was put forward to AMSA for a historical surface picture (SURPIC). The SURPIC was run to identify all vessels that were in the vicinity of the spill in the 24 hours prior to the incident being reported. A number of vessels were identified as having been in the area at the time of the spill. AMSA surveyors undertook oil sampling from these vessels as they came into port however, two vessels had already left Australian waters and AMSA coordinated the collection of samples from those vessels while they were at international ports.

The National Plan stockpile in Townsville was placed on 'lean forward' alert and the contractor remained on standby in the event the equipment was required to be deployed.

On 18 July the AMSA Dornier aircraft undertook line scans using UV detection, which failed to pick up any sign of the oil slick.

As there were no further sightings of the oil, incident control moved into standby mode in the event of the oil washing up on beaches. AMSA participated in daily teleconferences between MSQ, GBRMPA and the Queensland Government authorities to maintain a situational awareness.

On 23 July MSQ received a report of oil patties in the water near Fantome Island. This was the first of many sightings along several beaches. An Incident Control Centre in Townsville was stood up and a multi-agency activation was initiated.

On 26 July two AMSA officers were deployed to Townsville to assist with the incident in the roles of AMSA liaison/ advisor to the Incident Management Team and shoreline assessment operations in Ingham. A third officer was later deployed to assist MSQ with shoreline clean-up operations. Throughout the operation AMSA continued to provide GBRMPA and MSQ with intel information in order to maintain up-to-date status of suspect vessels.

On 31 July AMSA personnel were stood down, as the incident wound down and moved into 'monitor and watch; status. MSQ personnel continued to clean beaches and offshore islands in the weeks following. The incident officially ceased on 10 August 2015.

National Maritime Places of Refuge Risk Assessment Guidance

For vessels in distress or in need of assistance there can be, at times, a need to find an appropriate 'Place of Refuge', where steps can be taken to stabilise or repair the vessel and prevent the situation from worsening.

The Commonwealth and state and Northern Territory governments have, in cooperation with industry, developed the National Maritime Places of Refuge Risk Assessment Guidance, to inform and expedite decisions on requests for a Place of Refuge. The guidance provides for a nationally-consistent approach, and is designed to ensure that there is adequate and timely consultation between relevant stakeholders and that all risks are identified and, where practical, addressed.

AMSA, on behalf of the Commonwealth, state and Northern Territory governments, has the authority to assess and grant a Place of Refuge. A Place of Refuge request for a vessel located within internal waters or coastal waters of a state or the Northern Territory (that is waters to three nautical miles seaward) could be assessed by the respective state or Northern Territory government agency. A Place of Refuge request for a vessel located within internal waters or coastal waters of a state or the Northern Territory (that is waters to three nautical miles seaward) could be assessed by the respective state or Northern Territory government agency. A Place of Refuge request for a vessel located in any other waters, including waters beyond coastal waters within Australia's Exclusive Economic Zone, waters of the external territories and, in some cases, on the high seas should be considered by AMSA.

The guidance was formally endorsed by the National Plan Strategic Industry Advisory Forum and the National Plan Strategic Coordination Committee in November 2015. The guidance was published in January 2016 and is available on the 'Forms and publications' section of the AMSA website.

Calculator for shipowners limit of liability for oil pollution damage

AMSA has a website tool which allows the user to calculate the shipowner's limit of liability under the *International Convention on Civil Liability for Oil Pollution Damage 1992* (CLC92) and the *International Convention on the Civil Liability for Bunker Oil Pollution Damage 2001* (Bunkers Convention). The tool was updated to reflect increased liability limits, which came into force in June 2015.

The conventions define the shipowner's liability as a function of the ship's gross tonnage. The calculator allows the user to enter tonnage and identify whether or not the ship is an oil tanker. For non-oil tankers, the calculator provides the Bunkers Convention limit, and for oil tankers it provides both the Bunkers and CLC92 limits. The conventions use the International Monetary Fund currency known as 'Special Drawing Rights'. Therefore, the calculator also converts Special Drawing Rights to Australian Dollars based on the Reserve Bank of Australia exchange rate of the day. The time- and date-stamped output can be printed.

The calculator can be found via the Environment Protection Measures and Legislation page of the Environment section on the AMSA website.

AMSA and Tangaroa Blue working together for clean seas

AMSA and the Tangaroa Blue Foundation (Tangaroa Blue) have joined forces to prevent marine debris from ships. AMSA is the national maritime agency whose responsibilities include protecting the marine environment from shipping related impacts and is committed to maintaining a safe and clean marine environment. Part of AMSA's role in ensuring clean seas, is the administration of the *International Convention for the Prevention of Pollution from Ships* (MARPOL). MARPOL prevents marine pollution by managing the discharge of waste from ships.

Tangaroa Blue is an Australian registered charity that coordinates the Australian Marine Debris Initiative (AMDI). AMDI is a network of community groups and government agencies focused on reducing the amount of marine debris washing into our oceans. Their work includes beach clean-up activities, marine debris monitoring and administration of the Australian Marine Debris Database.

A Memorandum of Understanding signed by AMSA and Tangaroa Blue in May 2016 will promote cooperation and information sharing and contribute to community awareness of marine pollution prevention. A marine debris education program is currently being prepared and will be delivered to school students on Thursday Island in August 2016. This will be the first community education activity delivered under the MoU and will provide students with a better understanding of the impacts of marine debris and the work AMSA and Tangaroa Blue do in preventing and managing marine debris in Australian waters.

Spillcon 2016

The Asia-Pacific oil spill preparedness and response conference, Spillcon, was held from 2-6 May in Perth, Australia. Spillcon 2016 brought together local, regional and global environmental and shipping representatives from across industry, government and non-government organisations to provide a forum for discussion on topics such as oil spill cause and prevention, preparedness, response management and environmental issues.

Benjamin Brooks

Some 370 participants from 29 countries attended the conference. The conference provided the opportunity for participants to attend a range of sessions, exhibitions and functions over the five-day event. A total of 53 exhibition stands were occupied by 32 companies.

Paul Bailey

The conference program was made up of 12 sessions which focused on oil spill prevention; preparedness and response; and recovery. The final day of the conference program included two master classes which ran in conjunction with one and other and covered behavioural change through social media, and science and innovation in oil spill response.

Juliette Kayyem

Trefor Munn-Venn

Three keynote speakers opened the days' proceedings as part of the conference program. Day one saw Juliette Kayyem, President Barack Obama's former Assistant Secretary for Intergovernmental Affairs at the Department of Homeland Security, who described her management of the BP Deepwater Horizon oil spill response in 2010. Day two welcomed Air Chief Marshal Sir Angus Houston AK, AFC (Retd) who spoke about his efforts to recover Australians killed in the Malaysia Airlines MH17 crash. Sir Angus also spoke about his time heading up the Joint Agency Coordination Centre for the missing aircraft, MH370. Day three saw Trefor Munn-Venn, an international social media expert, speak about the importance of two-way communication during public incidents.

A highlight of the week was the on-water display on the Swan River, which demonstrated Australia's capability for responding to an oil spill. The display was well received by delegates as it allowed them the opportunity to observe a response in practice and view the oil spill response equipment that would be utilised in a real life pollution response incident.

Offshore Petroleum Incident Coordination Framework

The Department of Industry, Innovation and Science is conducting a review of the Offshore Petroleum Incident Coordination Framework (OPICF) to update the framework and incorporate the recommendations of Exercise Westwind, the 2015 National Plan Exercise, and provide an administrative update. The review is due to be finalised by late 2016.

The review is considering the role and responsibilities of the Offshore Petroleum Incident Coordination Committee (OPICC) and the OPICC Secretariat, incorporating guidelines for a formal learning and development and exercise program to support the OPICF, and seeking to better integrate the OPICF with other existing Australian Government capabilities for crisis management and crisis communication.

National Plan meetings throughout 2015-16

Marine Pollution Prevention Technical Group, Marine Pollution Preparedness and Response Technical Group, Marine Pollution Recovery Technical Group

Since the publication of the National Plan in 2014, the focus for the National Plan Technical Groups has continued to be the development and redrafting of supporting policies and procedures.

In November 2015, the Marine Pollution Technical Groups were tasked by the National Plan Strategic Coordination Committee (NPSCC) to develop a joint guidance document to assist with the investigative process for mystery spills. Once developed, the guidance is expected to assist in addressing issues such as the requisite burden of proof, the method(s) of investigation, and may allow for stronger relationships between regulatory and investigative entities. The guidance is expected to be presented to the National Plan Strategic Industry Advisory Forum (NPSIAF) and NPSCC for their consideration in the second half of 2016.

Australian Government National Plan Committee (AGNPC)

The AGNPC met in October 2015 and April 2016. The meetings discussed a number of items that directly relate to Australian Government arrangements in support of the National Plan including IOPC Funds Guidelines on fisheries closures and restrictions, the extension of the Great Barrier Reef PSSA, the implementation of recommendations arising from the 2015 National Plan exercise 'Exercise Westwind', and the development of contingency plans to address Commonwealth responsibilities for shipping incidents within the Australian Antarctic Territory and the external territories of Christmas Island and Cocos- Keeling Islands.

National Plan Strategic Industry Advisory Forum (NPSIAF)

The main focus for the NPSIAF in the last 12 months has been strategic issues that may be considered under the National Plan and in particular, the NPSIAF. The forum identified a number of key issues which will be addressed as a recurring item as part of the agenda for the forum. Some of the strategic issues identified include risk, harbour tugs and emergency towage vessel capabilities, National Plan exercises, research and development, and ships in distress/salvage.

Following the retirement of Ms. Sue Fryda-Blackwell - NPSIAF Deputy Chair (Ports Australia) in early 2016, Mr Paul Barrett (Australian Institute of Petroleum) was appointed as the new Deputy Chair of the NPSIAF.

National Plan Strategic Coordination Committee (NPSCC)

In accordance with the National Plan, the NPSCC is responsible for ensuring that the National Plan remains current and effective. On behalf of the NPSCC, AMSA is responsible for conducting an annual review of the National Plan by no later than 31 October each year for the NPSCC's consideration. At their November 2015 meeting, the NPSCC endorsed the revised National Plan for Maritime Environmental Emergencies. The changes made were largely editorial in nature and primarily relate to legislative or organisational changes that have taken place since the National Plan was endorsed in 2014. The next review is scheduled to take place by 31 October 2016.

In May 2016, the NPSCC and NPSIAF met at a joint 'blue sky' meeting in the margins of the Perth Spillcon Conference.

The purpose of the joint meeting was to discuss important strategic issues that might influence the future direction of the National Plan. An issues paper was presented to the NPSIAF and NPSCC pulling together ideas and issues identified by AMSA and various National Plan partners. Six broad issues were presented for discussion:

- governance of the National Plan
- National Plan Risk Assessment
- the national exercise program and lessons management
- learning and development
- level 3 incident controllers
- the National Response Team.

The outcome of the discussion from the 'blue sky; meeting will form the basis of a further discussion paper for presentation at the next meeting of the NPSIAF and NPSCC at their respective November 2016 meetings.

Response capability

AMSA maintains nine strategic equipment stockpiles of marine pollution response equipment around the Australian coastline. Stocks of dispersant are stored at these stockpiles as well as other key locations. During the 2015-16 reporting period, AMSA upgraded the boom reels of some of the older stocks of Ro-Bay Boom and positioned a new NOFI Current Buster in the Brisbane Stockpile. Contract extensions for the maintenance of the National Plan equipment were also executed ensuring continuity through to June 2018. The Adelaide stockpile also moved to a larger more suitable facility which will ensure ease of maintenance and fast response times.

The Fixed Wing Aerial Dispersant Capability (FWADC) under the National Plan continues to function as a jointly-funded capability in partnership with the Australian Marine Oil Spill Centre (AMOSC). The capability requires six aircraft that are maintained in strategic locations to respond to oil spills on a 24/7 basis. The current capability provides a capacity to respond to an incident within short time periods.

Some of the requirements of the FWADC include:

- six primary aircraft located around Australia
- availability to fly within a specified time period from activation
- suitably equipped to undertake aerial dispersant application activities in the marine environment
- the ability to operate offshore (up to 200 nautical miles from the coast)
- provision of adequately-trained personnel to support contract requirements.

In addition to the six contracted aircraft, there are an additional 12 aircraft available to the contractor. In the event of a significant incident, and subject to availability, these aircraft could be called upon to assist in a response.

During the reporting period, several modifications were made to the asset management system within the National Environmental Maritime Operations (NEMO)—AMSA's web-based incident management system used for the management of marine pollution and salvage incidents—to assist AMSA in better managing assets.

Some of the modifications include:

- the ability to assign equipment to an incident
- on the completion of an incident, the ability to run a report on the equipment utilised and for the period of time it was in use
- attach user guides and standard operating procedures to items
- the inclusion of a daily availability register for the FWADC.

Planning and response decision support programs

Satellite surveillance for spills detection and response

AMSA uses satellite-based radar surveillance systems to assist in 24/7 oil spill detection and response. Satellites provide an effective, reliable and timely way to monitor large areas through cloud and inclement weather. In surveillance mode, AMSA will receive a report from its contractor (KSat) of a possible oil spill within 60-90 minutes of acquisition. Reports are assessed and the relevant jurisdiction alerted soon after. During mid-2016, AMSA's satellite surveillance program targeted three areas of heavy shipping with the potential for oil spills within the Great Barrier Reef and Coral Sea. The areas identified reflect the increasing threats from coastal development and ship traffic, which increases the risk of casualties and spills in sensitive areas. During the program, AMSA received five alerts, which indicated that anomalies had been detected. Due to the anomalies being relatively small, a long way offshore and not associated with an identifiable source, validation was logistically difficult. Had the reports been verified as oil, natural degradation would have been the most appropriate clean-up response.

AMSA and GBRMPA are supporting a CSIRO program to develop an automated, early detection and alerting system for oil spills in the Great Barrier Reef, using newly available satellite data. This pilot program commenced in June 2015 and will run over three years, until April 2019. It will seek to integrate the newly launched (2014) Sentinel suite of radar, ocean colour and thermal satellite sensors for monitoring marine surface pollution (and possibly ship traffic) and identifying possible spills. AMSA's contribution will be mainly informing project direction and supplying Automated Identification System (AIS) and other shipping data. If successful, this program could be applied in other locations to augment existing surveillance and detection systems.

National Environmental Maritime Operations (NEMO) systems

NEMO provides AMSA with an integrated tool for managing and monitoring all National Plan pollution and maritime casualty incidents, and for managing National Plan capabilities, assets and services (covering equipment, assets, contracts, records and other technical resources). Along with incident management team members and responders, NEMO provides up-to-date information to the AMSA Executive and media team. To improve equipment maintenance management and documentation, contractors now also have a customised portal for their needs.

As part of the drive for national efficiency and consistency, some state jurisdictions (Western Australia (WA), Tasmania and Victoria) are actively assessing or adopting a version of the NEMO system for their use, across marine pollution incident and asset management. In 2016, WA successfully used and tested their NEMO capability during a desktop component of their state exercise.

Drift modelling

AMSA has a new maritime casualty response modelling tool to address drifting vessels and potential groundings. DHI Australia has provided AMSA with a new online tool to improve predictions of large vessel drift, once the vessel loses power.

By separating local wind-driven waves from regional and oceanic swells, DHI has improved existing modelling of wind, wave and swell behaviour around large parts of Australia. Unlike oil slicks or smaller vessels (i.e. fishing vessels), container ships, bulk carriers and tankers are very large, heavy, high and long, and react quite differently to winds, waves and swell. The new tool will improve AMSA's ability to predict drift direction, speed and time to intercept by emergency towage vessels. The tool will eventually cover all Australian coastal areas. AMSA is also working on complementary tools to identify ships at risk of engine failure or displaying behaviour indicating they may have engine or navigation problems.

Marine Incident Geospatial Support (formerly OSRA)

AMSA is supporting jurisdictions using their GIS and web-GIS capabilities to integrate their oil spill response atlas information and processes (OSRA) into their all hazards approach to emergency management. This includes using value-added data specific in support of all types of maritime emergency response (not just oil spills), and broadening the use of geographic tools in planning and response.

The Marine Incident Geospatial Support Working Group, with full jurisdiction representation, is undertaking a full review of the previous OSRA policy. Renamed from the OSRA Working Group, to better reflect the job to be done, it is recognised that the previously narrow concept of an 'oil spill response atlas' is no longer appropriate.

The working group will produce a set of nationally-agreed guidelines that propose and promote best practices, standards and principles in creating, preparing, coordinating, and disseminating geospatial services and products during a marine oil spill incident. This will include standardised templates, symbology, and processes designed to streamline the management of geospatial incident data and output delivery. These guidelines will serve as a shared foundation, encouraging improved communication and collaboration amongst GIS and other emergency staff responding to an incident.

Oil Spill Monitoring Handbook

AMSA's well-considered 2003 Oil Spill Monitoring Handbook has been given a significant refreshing by an expert team led by the CSIRO. The 2016 Oil Spill Monitoring Handbook is being published in late 2016.

The revised handbook will be available in hard-copy and online, to allow it to evolve with best practice. It contains an overview of the chemical and physical properties of oil, the toxicological impacts of oil exposure, and the impacts of oil exposure on difference marine habitats with relevance to Australia. It also provides context to monitoring by showing how it should integrate into an oil spill response and organisation, and how it supports decision-making, such as Net Environmental Benefits Analysis. It contains significant general guidance on spill monitoring approaches and technologies and is supplemented by in-depth discussion on both response-phase and recovery-phase monitoring design and delivery. Appendices deliver detailed standard operating procedures for practical observation, and sample and data collection. AMSA would like to acknowledge the CSIRO and Mike Holloway of Victoria for their contributions.

Response, assessment and termination of cleaning for oil contaminated foreshores

The National Plan Guidance on Response, Assessment and Termination of Cleaning for Oil Contaminated Foreshores is now available on the AMSA website. Foreshores are the most likely places oil will collect and affect and are also likely to feature highly in public perception of response success. The new guidance provides advice on three interconnected issues: the foreshore response plan; the foreshore inspection and sign-off process; and impact and recovery monitoring. The document emphasises the consensus nature of the activity, so that it is effective, efficient, and cost-effective, and brings the stakeholders along with the responders. Thanks to Dr Peter Scanes of NSW for his leadership in the review.

Dispersant response capability

The National Plan, under AMSA, maintains a dispersant response capability as a primary response strategy for maritime incidents. AMSA assesses and accepts suitable dispersants for use in Australia; buys and maintains acceptable dispersants; has storage and delivery arrangements for field application; and implements a scientific assessment of their effectiveness once used. A more open and transparent approach to sharing information about Australia's dispersant strategy has led to the development of a new dispersant-focussed webpage (www.amsa.gov.au/environment/marine-pollution-response/scientific-info/dispersants/index.asp).

The new page contains information about dispersants acceptable for use in Australia, the constituents and test results, as well as scientific papers, presentations and training material. Also on the page are links to independent advice on the risks and hazards of dispersant chemicals, authored by the Department of Health National Industrial Chemicals Notification and Assessment Scheme (NICNAS) and CSIRO, and information on how AMSA manages its dispersants. AMSA already has many best practice processes and practices, but still found ways to improve, including the need for a new knowledge of effects on local ecosystems processes.

The CSIRO on-water dispersant effectiveness monitoring array has completed testing and is now operational. Its unique design provides real-time feedback to operations about oil and dispersant plumes, and the effectiveness of dispersant application. Reporting formats will be tested at the 2016 Environment, Science and Technical (ES&T) Workshop to complete operating procedures and protocols.

Environment, Science and Technical Network (ES&T) professional development

The August 2015 ES&T Workshop in Port Lincoln was well attended and successful. There were 70 attendees at the Dispersant Masterclass held in Sydney in November, which was jointly presented by AMSA and CSIRO. This was the first time the Dispersant Masterclass had been held in the eastern states.

Spillcon 2016 in Perth also provided ES&T development opportunities this year. The range and quality of speakers at the main Spillcon event, as well as the range and quality of the spill response science session speakers and topics, was a highlight. The CSIRO/ the Australian Institute of Marine Science (AIMS)/AMSA workshop on Friday called Science and innovation in oil spill response, with over 70 participants, heard recognised international experts give in-depth and new presentations on a range of science topics. AMSA also sought to raise the profile of the ES&T Network and its contribution to spill response through an exhibitor's booth at Spillcon that provided a venue for discussion and exchanging cards, ideas and stories. Responders could gain an appreciation of the decision support work that often happens behind the scenes in the Incident Management Team (IMT).

AMSA and GEMS Pty Ltd (consultants) have produced a draft guide to the professional development needs of National Plan Environment, Science and Technical (ES&T) Network members. Some elements were trialled as part of the 2015 ES&T Workshop program, to critical praise. AMSA will be rolling out further elements over coming months to develop a more streamlined, cost-effective and practical means to support ES&T Network members.

The 2016 ES&T Network Development Workshop will be held in St Kilda, Melbourne, from 9-11 August. As well as the usual content, the program will have a distinct focus on monitoring and decision support. There will be a full-day Monitoring Masterclass, a demonstration by CSIRO and the Department of Economic Development, Jobs, Transport and Resources Victoria of the dispersant monitoring kit, and other related activities. An intensive half-day net environmental benefit analysis (NEBA) exercise is also planned.

Oil Spill Control Agents (OSCA)

The 2015 Policy for Oil Control Agents has been finalised. Although the changes from the previous protocol were not radical, the changes to the test oils and processes for efficiency enabled one new internationally-available dispersant product to be added to the OSCA Register in October 2015. One other application (for another internationally-available dispersant) was received in 2015-16 and is still in the process of awaiting final test results from the applicant.

Internationally, new types and classes of spill response chemicals are being developed, but most are the test-tube and bench-top level, with some reworking of existing concepts, such as herders and loose sorbents. AMSA is assessing whether there is a requirement for Australia to re-assess some of its testing regimes, to ensure acceptable and effective new tools can be accommodated, while others are kept out.

CSIRO/AMSA/National Plan science partnership

Over the past five years the relationship between AMSA and the CSIRO has developed significantly. This has been demonstrated by the support CSIRO has provided in many areas of ES&T professional development and decision-support. Of particular note are the CSIRO contributions to the Monitoring Handbook, the Dispersant Masterclass, the ES&T Workshops, Spillcon 2016 and the Science Workshop, the unique dispersant monitoring kit and capability, and their maritime incident support capability.

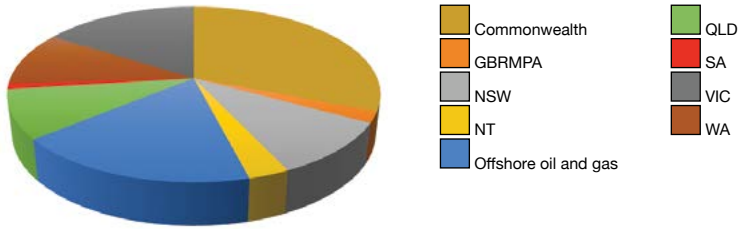
While many others have made significant contributions, AMSA would particularly like to acknowledge the inspiration, leadership and personal contribution of Dr Kenneth Lee, as Director of the Atmosphere and Oceans Research Flagship, to what has become an effective and powerful blend of science and maritime emergency response.

Pollution/salvage incidents

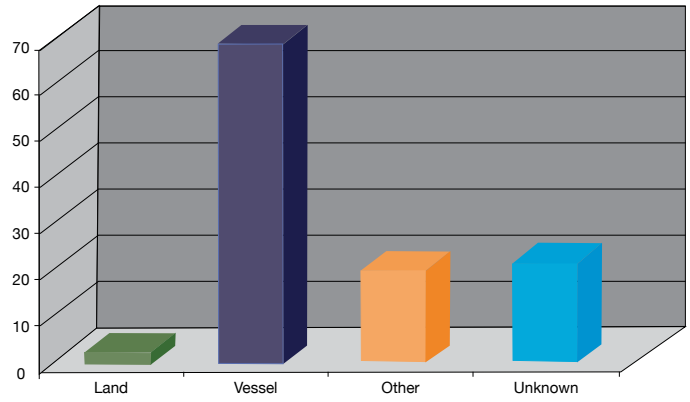
Accurate statistical data required for spill response strategic planning provides a valuable resource to assist in responding to enquiries from the media, interest groups and the general public. This data also provides valuable input for risk assessment, government projects and can provide an indication of the effectiveness of the pollution prevention measures being progressively implemented.

'Oil discharges' refers to any discharges or suspected operational discharges of oil from a vessel or vessels in excess of the permitted discharge rate under the MARPOL Convention (generally 15 parts per million oil in water). 'Oil spills' refers to accidental spills resulting from incidents such as groundings or collisions, as well as spills during bunkering resulting from overflow of tanks, burst hoses, etc. The completeness of the information included in this database cannot be guaranteed, as only those incidents reported to AMSA are included, however, every effort is made to ensure the data is as comprehensive as possible.

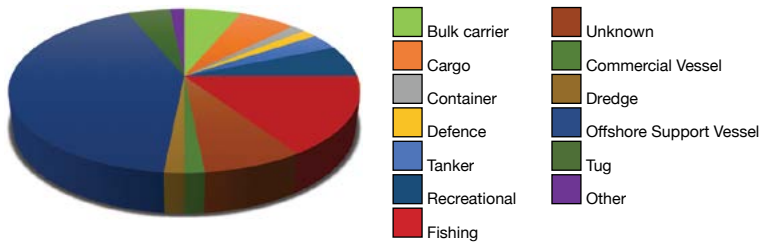
Reported spill locations for 2015-16



Number of reported discharges by source for 2015-16



Reported spills by vessel type for 2015-16



Significant salvage, intervention incidents and near misses

Month	Reported incidents	Machinery failure	Main engine breakdown	Unscheduled repairs/ other[1,2,3]	S&I action initiated	S&I action undertaken	Geographical locations of reported marine incidents							
							QLD	NSW	VIC	TAS	SA	WA	NT	Commonwealth waters & high seas
June 2016	76	59	10	1 flooding 6 collisions	6	3	7	6	1	2	4	11	3	42
May 2016	60	55	2	2 collisions	2	2	13	1	1	0	1	19	1	24
April 2016	79	64	10	2 fires 3 collisions	3	3	14	3	2	3	3	19	0	35
March 2016	67	57	8	2 collisions	7	5	9	8	4	0	4	14	1	27
February 2016	51	42	4	1 flooding 2 fires 2 groundings	3	2	9	2	3	0	1	13	0	23
January 2016	52	36	15	1 fire	1	1	8	6	4	0	2	6	1	25
December 2015	86	52	29	1 flooding 1 collision 1 grounding 2 fires	2	0	11	1	4	2	6	27	1	34
November 2015	68	44	19	2 fires 3 collisions	1	1	9	6	3	0	3	9	0	38
October 2015	28	15	8	1 fire 1 flooding 3 collisions	4	3	3	3	2	2	0	7	1	10
September 2015	69	45	15	1 fire 1 flooding 7 collisions	2	1	16	5	3	0	0	14	3	28
August 2015	76	58	13	2 collisions 3 fires	4	0	14	1	5	1	2	10	1	42
July 2015	70	46	15	3 groundings 3 collisions 3 fires	3	1	14	7	4	2	4	17	0	22
Year to date	**782**	**573**	**148**	**60**	**38**	**22**	**127**	**49**	**36**	**12**	**30**	**166**	**12**	**350**

[1]Collisions – in addition to 2 vessels being involved in a collision, it also includes when a vessel touches the berthing jetty or a stationary object during manoeuvring.

[2]Grounding – in addition to power grounding, it also includes when a vessel touches the seabed whilst alongside.

[3]Fire – it includes both major and minor fires, such as galley fire controlled by a fire blanket.

Casualty response

There was an increase in the number of incidents responded to by salvage and intervention duty officers in 2015-16 compared to 2014-15. There are three main factors AMSA considers behind this:

- The duty officers respond to the incidents that are reported. AMSA has no control of the types of incidents which vessels incur and report, and base their response on the specifics of each report.
- There has been an improvement in the timeliness of reports from most providers, which means AMSA is made aware of an incident potentially before it has been rectified, and is, therefore, more likely to become involved.
- AMSA's experience suggests that earlier involvement in reported incidents is beneficial in achieving the best outcome. Therefore, when an incident is reported or AMSA is made aware of an incident, an increasingly proactive approach is being taken, to ascertain the details rather than wait for the information to be provided.

From 1 July 2015 to 30 June 2016, AMSA's Salvage and Intervention section received:

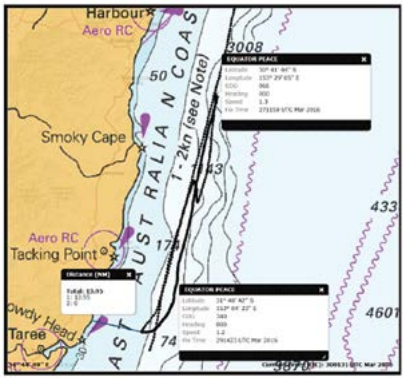
- 573 reports of vessels that had machinery failure
- 148 reports of vessels that had main engine breakdowns
- 32 reports of collision
- 17 reports of fire
- 6 reports of grounding
- 5 reports of flooding.

On 38 occasions, the salvage and intervention duty officer initiated actions which included discussions and liaison with relevant state authorities, the subject vessel and other parties requesting further details on the nature and estimated time for completion of repairs and confirmation of the ship's status and the master's intentions.

Salvage incidents

Further to the above, the following incidents were of particular interest and concern to the salvage and intervention team.

MV *Equator Peace*



The fully loaded bulk carrier MV *Equator Peace* was reported as drifting 20 nautical miles off the NSW coast on 27 March 2016. AMSA monitored the situation and was in constant communication with the vessel via the AMSA Joint Rescue Coordination Centre (JRCC) and AMSA's Salvage and Intervention section.

The vessel had suffered a problem with the lube oil cooler due to seawater contamination by leaking sea water side gaskets, which required the main engine to be disabled. The vessel was requested to provide three hourly updates of the repair status and weather conditions, which were completed satisfactorily.

The vessel drifted consistently at 1 to 2 knots for a total of 74 hours and on 30 March notified the JRCC that repairs were complete.

Aside from monitoring the vessel, the salvage and intervention duty officer provided a 'heads-up' notice to the Level 2 Emergency Towage Vessel (the tug MV *Wickham*) based out of Newcastle to ensure that they had situational awareness of the incident. The recently-developed drift modelling tool was also activated and provided a forecasted drift of the vessel, which proved to be accurate, when compared against the actual drift pattern. Throughout the incident, the AMSA Marine Environment Protection Response Duty Officer, the Maritime Emergency Response Commander (MERCOM) and Transport for NSW representatives were kept informed of the incident as it unfolded.

MT *Black Pearl*

The MT *Black Pearl* suffered a main bearing defect on 26 April 2016. The vessel drifted for 70 hours, in a north-westerly direction, for 110 nautical miles at an average drift rate of 1.6 knots. The Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS) contacted the vessel at 2:29 am on 29 April to ascertain the condition and intentions of the vessel. AMSA duty officers were notified and subsequently began monitoring the situation.

MV Black Pearl

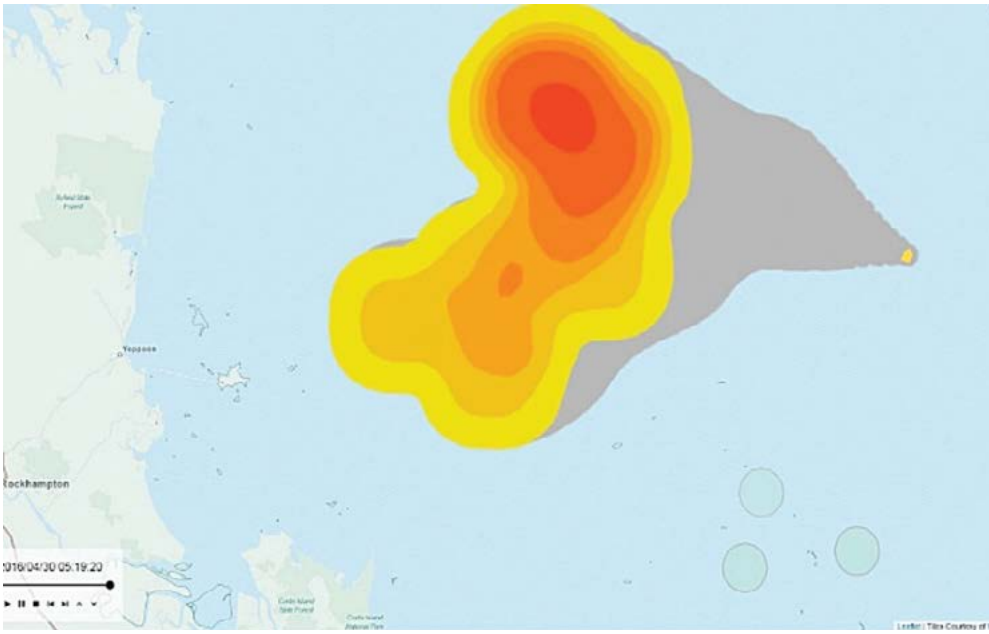
The vessel first began drifting 140 nautical miles east of Gladstone and at 1:30 pm on 29 April 2016, was 70 nautical miles north-east of Gladstone, with the nearest navigational hazard, Goodwin Shoal, being 25 nautical miles west of the vessel's location.

At 8:00 am AMSA gave the emergency towage capability level 2 provider out of Gladstone a 'heads up' notice of the incident, and instructed them to prepare for a possible activation of the Emergency Towage Vessel (ETV), *SL Targinnie*.

At 9:00 am the AMSA Crisis Management Team met and discussed the incident. The team discussed the various options available for dealing with the incident should it worsen, as well as identifying the additional information that needed to be sourced, to make future decisions.

The vessel was requested by AMSA, through the JRCC, to provide more complete details of the current failure, repair efforts and subsequent plans to ensure the safety of the crew and the vessel given that it had no means of propulsion.

Drift modelling was commissioned by AMSA and indicated there was a high probability the vessel would come into potential navigational dangers within 24 hours.

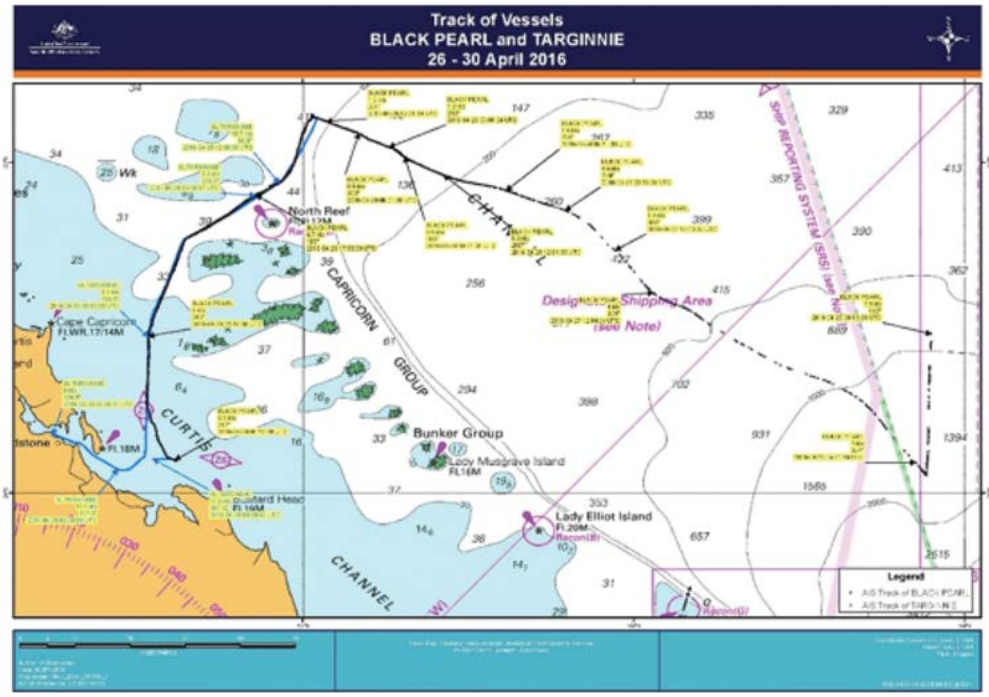


Drift Modelling current as at 1000hrs 29 April 2016 for the next 24hrs

Based on minimal action being undertaken by the master and owners of the vessel, and the lack of clear communication about the nature and extent of the failure, the acting MERCOM ordered the activation of the *SL Targinnie* at 11:03 am on 29 April 2016.

AMSA recommended to the owners and master of the MT *Black Pearl* that entering into a commercial towage agreement was the preferable option. This was agreed to by the owners of the *SL Targinnie* later that afternoon. The purpose of the contract was to establish a connection and to tow the vessel back to Gladstone. AMSA released the *SL Targinnie* from its ETV role to undertake the commercial agreement, at which point AMSA moved from the role of operational response to situational monitoring.

The *SL Targinnie* and the MT *Black Pearl* established a tow connection at 11:58 pm on 29 April. The vessels proceeded without incident to the Port of Gladstone anchorage where the MT *Black Pearl* was safely anchored on 30 April to continue undergoing repairs.



AIS Track of the MT Black Pearl and the ETV SL Targinnie during the incident

Training, exercises, workshops and conferences

Under the National Plan, AMSA delivers competency-based training courses through the National Plan Training school. In 2015-16, AMSA ran 32 courses with a total of 545 participants, covering the following roles:

- Incident Management Team
- Incident Controller
- Planning Officer
- Operations Officer
- Shoreline Response
- Basic Equipment Operator
- Advanced Equipment Operator.

Specialist and technical courses are under a process of continuous improvement, with the redesigned model of 70-20-10 (see below overview of the 70:20:10 model).

Facilitation and mentoring is working well, particularly in respect to the support provided to personnel participating in National Plan facilitated courses.

Operational courses, such as Shoreline Response, Basic Equipment Operator and Advanced Equipment Operator courses continue to be popular with state/NT-based personnel, which assists in building a strong national response capability.

The 70:20:10 Framework

The 70:20:10 Framework is an internationally-respected framework which has been adopted by National Plan Training as part of its continuous improvement program, and adoption of educational best practice.

The 70:20:10 Framework is a learning and development reference model which captures the three types of learning—experiential, social and formal—and explains their relationship to one another. The numbers provide a contextual indication of the required response of each component of learning, while also making it possible to communicate, explain and provide a guide for the frequency of each part.

The 70: Experiential/Experience – learning and developing through day-today tasks, challenges and practice. For example, scenarios replicating actual events.

The 20: Social/Exposure – learning and developing with and through others from coaching, exploiting personal networks and other collaborative and cooperative actions.

The 10: Formal/Education – learning and developing through structured courses and programs.

2016 National Plan exercise *Exercise Nautical Twilight*

The annual National Plan Exercise is a key component of capability development and is useful in allowing National Plan partners the opportunity to train, practice and reinforce their skills and the application of National Plan procedures in a controlled environment.

Annual exercises are hosted in turn by each jurisdiction with the 2016 National Plan exercise being hosted by New South Wales. Phase one of the exercise was conducted on 7 June 2016 and was based on a chemical incident occurring on board a container vessel at sea, which resulted in a request from the vessel's master for a place of refuge in the Port of Newcastle.

The aim of phase one of the exercise was to practise the deployment of the newly-developed Hazardous and Noxious Substance (HNS) response capability and to practice the application of National Maritime Places of Refuge Risk Assessment Guidance. This phase included participation from AMSA, Port of Newcastle, Transport for New South Wales and Fire & Rescue New South Wales personnel.

An at-sea deployment of the AMSA/Fire & Rescue New South Wales HNS team, was scheduled to be conducted off-shore of Port Macquarie as part of phase one of the exercise, however, this was postponed due to the low pressure system that impacted much of the Australian East Coast between 5 and 6 June. The HNS team was simulated by exercise managers in Newcastle allowing the strategic component of the exercise to be conducted as scheduled.

Phase two of the exercise will be held in the second half of 2016 and will focus on community impacts and cost recovery implications of a chemical spill in the Port of Newcastle. An exercise report covering the entirety of the exercise will be published following the completion of phase two of the exercise. Details of phase two of the exercise will also be published in the 2016-17 National Plan Year in Review.


NO SMOKING
POLICE

NRT Incident Management workshop

For the past two years AMSA has been conducting a series of developmental workshops for National Response Team Incident Management Team personnel (NRT IMT). These developmental sessions are conducted in conjunction with a functional exercise and have covered subjects such as human factors and crew resource management.

In March 2016, AMSA hosted a workshop for the NRT IMT. The key objective for the 2016 workshop was to demonstrate to NRT IMT personnel the characteristics of a high performing Incident Management Team. AMSA staff and exercise contractors adapted an existing AMSA exercise scenario which was used to drive the activity for more than 35 AMSA and NRT IMT Personnel over the course of two days.

The workshop was held from 8-10 March 2016 at AMSA head office in Canberra. The workshop was well received by all participants.

Arrangements have commenced for the 2017 NRT IMT Workshop which will follow a similar format and is scheduled to take place in the first half of the year.

National Response Team annual workshop

From 21 to 23 June 2016, AMSA's Marine Environment hosted a Shoreline Response Course in Adelaide, South Australia. Participation consisted of NRT personnel from Queensland, New South Wales, Victoria, South Australia, West Australia, Tasmania and AMSA.

The aim of the course is to provide personnel with the skills and knowledge required to lead and participate in a team tasked with an oiled shoreline assessment and clean up response.

On successful completion, shoreline supervisors or coordinators will be able to:

- lead a team in shoreline assessment and clean up
- collate data to estimate the extent and degree of oiling
- establish teams, plan and implement worksite management zones
- coordinate, supervise and manage oiled shoreline clean-up activities.

HNS capability

As part of the ongoing response capability development for the Hazardous and Noxious Substances (HNS) Reconnaissance Team, Fire and Rescue NSW (FRNSW) Hazmat technicians took part in a two-day helicopter safety and familiarisation course. The nationally-recognised training, which was funded by AMSA, and conducted between October and December 2015, was delivered by the Westpac Lifesaver Helicopter Service based out of Sydney's Little Bay.

The first day of training included a morning of theory, which covered the various types of aircraft, emergency procedures (including ditching in and out of water), aircraft safety and legislation. The afternoon session was based around Helicopter Underwater Escape Training (HUET). This session was carried out with the assistance of a roll cage training prop, which is designed to show participants how to safely exit a submerged and upside down helicopter.

Day two of training consisted of learning how to work safely on the end of a winch wire firstly, through the use of a training rig, followed by a live winching session from a hovering helicopter in an area of National Park. During these exercises, crews also practised exiting and entering the aircraft whilst in a hover, as well raising and lowering equipment from the helicopter.

From a FRNSW point of view, the helicopter training was invaluable as building familiarity through training helps to remove uncertainty and builds capability. In the event of a deployment at-sea, confidence around aircraft operations will ensure officers are able to focus more on the task at hand. Adding this training to the previously completed maritime boarding training broadens the options available to deploy a recon team and their equipment.

Marine Casualty Officers (MCO) workshop

AMSA's Marine Environment Salvage and Intervention Team hosted a Marine Casualty Officers (MCO) workshop in Brisbane from 9-11 February 2016. Nine AMSA surveyors from each of the level two emergency towage capability regions participated in the workshop.

The first day of the workshop consisted of presentations by AMSA's in-house experts covering a range of subjects related to dealing with maritime casualties including legal, administrative and system tools. Day one concluded with a group exercise which was based on a real life incident involving an LPG Tanker, 11 nautical miles off the coast at Mallacoota (NSW/VIC border). Participants were divided into three groups—representing coastal state authorities, vessel and cargo insurers, and vessel and cargo owners—and were requested to provide an action plan to protect their respective interests.

The second and the third day of the workshop was held at the CareFlight helicopter winch training facility in Archerfield which covered theoretical, occupational health and safety, contingency planning and practical components of helicopter winching.

MCO Workshop participants

AMSA hosts salvage and wreck workshop

From 15-16 June 2016 AMSA hosted a salvage and wreck workshop at the Australian National Maritime Museum in Sydney. Approximately 140 delegates attended the workshop representing Commonwealth and state governments, overseas maritime regulators, ship owners and operators, cargo owners, ship and cargo insurers, port authorities, the Royal Australian Navy, salvors, towage providers, legal practitioners and consultants.

This was the first time in many years that a group of this nature had gathered to workshop potential issues arising from an incident involving a maritime casualty.

AMSA's Manager for Salvage and Intervention outlined the following objectives of the workshop during his welcome speech. In the event of an incident involving a maritime casualty in our waters:

- Are we prepared?
- Are we clear about our roles?
- Does the current model operate effectively and efficiently?
- Are there any gaps in our current model?
- Are we talking to each key player?
- Any lessons to be learnt from stakeholders?

The workshop was formally opened by AMSA's CEO Mick Kinley, who stated that although most of the industry behaves well and operates safely, and that the incident rate in recent years has been low, we must be prepared for the worst. The workshop commenced with a keynote speech by Maritime Emergency Response Commander (MERCOM) Toby Stone who set the scene in relation to risk mitigation from shipping (as outlined in the National Plan for Maritime Environmental Emergencies).

Salvage and Wreck workshop group exercise

The workshop was facilitated by Antony Maxwell from the Australian School of Applied Management and provided an excellent opportunity to network with some of the key industry stakeholders who are likely to be directly involved in a maritime casualty incident.

Other topics discussed during the workshop included:

- the role of Commonwealth, state and NT maritime safety and investigation authorities during a maritime casualty incident
- forecasting large vessel drift
- managing passenger ship casualties
- working with stakeholders during an incident
- dealing with mega ship casualties
- dealing with a place of refuge request received from a maritime casualty
- salvage contracts and the Nairobi International Convention on the Removal of Wrecks
- intervention powers under the Commonwealth and state/NT legislations.

The workshop was deemed a great success based on the positive feedback received from the delegates.

Toby Stone providing a presentation on mitigating the Risks from Shipping

ETV *Coral Knight* conducts exercises in North Queensland

From 28-29 May 2016 AMSA coordinated emergency towage, medical evacuation, and search and rescue exercises on board our emergency towage vessel (ETV) *Coral Knight*.

The *Coral Knight* deployed approximately 450 metres of her main emergency towing wire, towing pendants and Dyneema messenger rope in the seas of Cape Upstart, to connect to the simulated dead casualty vessel MV *RTM Wakmatha*.

The medical evacuation exercise was carried out on board the *Coral Knight* four nautical miles south of Little Fitzroy Island with the assistance of a Queensland Government air rescue team using rescue helicopter 'Rescue 510', an air rescue stretcher and a dummy. The air rescue team landed on the vessel and briefed the ship's crew about patient handling techniques and safety precautions during helicopter operations.

As part of the exercise, AMSA Search and Rescue tasked the Coral Knight to conduct a search of a single-person yacht, which had activated its distress beacon approximately five nautical miles north-east of Little Fitzroy Island. The rescue helicopter dropped a floating beacon at the distress position to simulate the distressed yacht. The exercise was completed after recovering the floating device by the fast rescue boat crew.

Throughout the exercises, the *Coral Knight* followed the emergency communication protocols by involving AMSA Search and Rescue, Townsville Vessel Traffic Service, as well as alerting nearby shipping, and displaying the appropriate navigation signals.

Emergency Towage Vessel exercise

Building relationships with National Plan partners

Ms Letitia Lamb, Marine Pollution Officer for the Tasmanian Environmental Protection Agency, spent three weeks at AMSA during November and December 2015 on a relationship building exercise.

During the time spent at AMSA, Letitia worked alongside the Marine Environment team to experience how the team works.

Letitia, who works with most of the Marine Environment team on a regular basis, had the opportunity to sit next to them and understand more fully what their capacities and roles are and how that best fits into the state response.

Some of the highlights included getting to work on more nationally-focused reports and learning more about AMSA's National Environmental Maritime Operations (NEMO) system.

One of the highlights for Letitia was having access to learn NEMO. Letitia would like to implement NEMO fully into Tasmania and spending time at AMSA provided the opportunity to rapidly come up to speed on the platform.

Having Letitia was of great benefit to the AMSA team, providing a great opportunity to exchange knowledge and experience with an important National Plan partner. The visit represents a successful trial of a program which AMSA hopes to extend to other jurisdictions and National Plan partners.

Adelaide Fixed Wing Aerial Dispersant Capability exercise

On 29 June 2016 AMSA conducted a Fixed Wing Aerial Dispersant Capability exercise south of Adelaide. The aim was to exercise functions of the capability including:

- establishing a functioning operational airbase and crew consistent with the Joint Standard Operating Procedures (JSOPs)
- developing a Fixed Wind Dispersant Operations Plan
- simulating dispersant spraying operations consistent with the JSOPs
- establishing effective offshore operational support.

Participants in the exercise included representatives from AMSA, Australian Marine Oil Spill Centre, South Australian Department of Planning Transport and Infrastructure, Aerotech 1st Response, Environment Protection Authority South Australia, and South Australian Community Fire Service.

Overall the exercise was deemed a success with the full establishment of an airbase and ten simulated dispersant spraying runs.

NOPSEMA

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is the national regulator for offshore petroleum activities and an active participant in the Australian Government Crisis Management Framework and Australia's preparedness and response arrangements under the National Plan for Maritime Environmental Emergencies. In these roles, NOPSEMA is responsible for the oversight of response actions by duty holders to oil pollution events from offshore petroleum activities in areas of Commonwealth jurisdiction, including compliance monitoring and enforcement by direction or other powers of intervention where necessary; and the gathering and dissemination of incident specific information within the Australian Government's incident coordination arrangements.

NOPSEMA has regulatory functions provided for under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act). The Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Environment Regulations) made under the OPGGS Act give effect, in part, to the *International Convention on Oil Pollution Preparedness, Response and Co-operation 1990* (OPRC) in Australia. It is a requirement that all environment plans (EP) prepared for petroleum activities contain an oil pollution emergency plan (OPEP) that includes adequate arrangements for responding to and monitoring oil pollution. NOPSEMA does not have any control agency function.

Data reports and statistics

NOPSEMA collects and publishes a range of data on the safety, well (structural) integrity and environmental management performance of the offshore petroleum industry, as well as its own regulatory performance. NOPSEMA's annual offshore performance report is the authority's yearly stocktake of industry performance and summarises:

- submissions received and assessed by NOPSEMA
- industry activities and incidents
- NOPSEMA's compliance and enforcement activities.

Notable findings in the 2015 offshore performance report included that, after three consecutive years of increases, uncontrolled hydrocarbon releases decreased by 28 per cent in 2015 compared to 2014 (18 in total). Environmental reportable incidents reduced by 40 per cent on the number reported in 2014. No reportable incidents warranted a major investigation by NOPSEMA in 2015.

The annual offshore performance report and other NOPSEMA data and statistics are available for download from the NOPSEMA website (nopsema.gov.au).

Publications

The NOPSEMA 'Oil Pollution Risk Management' information paper was published in September 2014. To ensure the information paper continues to meet its purpose, NOPSEMA sought feedback from titleholders (through a targeted questionnaire in early 2016) on any areas for improvement or requiring further clarification. Following a review of this feedback, a revised information paper will be published in the second half of 2016.

NOPSEMA published a new brochure on the offshore petroleum environmental regulatory process in Commonwealth waters. For more information see NOPSEMA's Brochure - Offshore petroleum environmental approvals - April 2016. NOPSEMA also published and updated several policies, guidance notes and information papers relating to the preparation of environment plans and oil pollution emergency plans. For the most up-to-date information regarding NOPSEMA's environmental publications, please refer to their website nopsema.gov.au >Environment > Resources.

NOPSEMA also provided continued support to state agencies to communicate expectations for engagement and response planning with offshore petroleum titleholders.

Contribution to the National Response Team

NOPSEMA contributes trained and competent oil spill and environment specialists to the National Response Team (NRT) who are available to assist in vessel-based spill responses. During the 2015-16 reporting period, a number of NOPSEMA personnel successfully completed competency-based training in Planning, Operations and Incident Management Team (IMT) Support. NOPSEMA personnel also participated in the NRT IMT workshop held in Canberra and the Environment, Science and Technical workshop in Port Lincoln.

Spillcon 2016

NOPSEMA actively participated in Spillcon 2016, which included presentations from Michael O'Brien on 'How much is enough? Regulating preparedness for Oil Spill Response in the Offshore Petroleum Industry' and from Cameron Grebe on 'From assurance to inspection regulating offshore petroleum incident response'.

NOPSEMA also co-hosted a special pre-conference workshop for industry and regulators on the oil spill preparedness topic of 'How much is enough?' This half-day workshop was a joint initiative with the International Offshore Petroleum Environment Regulators (IOPER), of which NOPSEMA is a member, and the Australian Petroleum Production and Exploration Association (APPEA).

The workshop discussed national and international perspectives on how much preparedness and response is appropriate in the context of offshore oil and gas activity. The workshop followed and built on the work undertaken by IOPER members to develop a number of internationally-recognised 'guiding principles' for regulating oil spill response preparedness in the offshore oil and gas industry.

Joint industry regulator workshop

International Offshore Petroleum Environment Regulators

The International Offshore Petroleum Environment Regulators (IOPER) is a collaborative group of national regulators from nine countries whose members share a common goal of raising environmental performance standards within the offshore petroleum exploration and production industry, including standards applicable to the industry's normal operations, as well as environmental emergency prevention, preparedness and response.

The IOPER 2016 mid-year meeting was held in conjunction with Spillcon 2016 in Perth and focused on the priority issue of oil spill preparedness and tracking progress on important IOPER work program items including establishing environmental performance indicators to enable offshore petroleum jurisdictions to benchmark and compare performance. Details of IOPER, its members and current work program are available on the IOPER website (ioper.org).

AMOSC

The 2015-16 reporting period was busy for AMOSC, also tempered with the low oil prices suffered by the petroleum industry. The period started well with AMOSC fresh from the delivery and participation in Exercise Westwind Phase II. This involvement progressed into the APPEA HSE Awards for 2015 where AMOSC received a finalist ranking.

In the second half of 2015, AMOSC became heavily involved with preparedness work around the Great Australian Bight which involved the production of tactical response plans and shoreline treatment plans for an extensive area throughout the Bight. This work continued into 2016 and has expanded into the considerations for treating oiled wildlife who may be effected as result of an offshore spill. Other significant events for AMOSC during the 2015-16 reporting period have included:

- IMO I courses in Geelong and Perth
- IMO II and III courses in Geelong and Perth
- Aerial Surveillance courses in Perth and Exmouth
- coordination of the Spillcon 2016 on-water demonstration
- participation and provision of the oiled wildlife container to Exercise Bunker oil – Phillip Island.

Staff movements

There have been several staff movements within AMOSC during the reporting period. Neil Rowarth, Karl Waddell and Rowena Bucklow have left AMOSC. Lee Mould (oiled wildlife) and Michael Simm (operations) have since joined the AMOSC team.

Lee has a background in environmental science and has been extensively involved in the North West Shelf area petroleum developments. Michael has a very extensive nautical background and was more recently involved in rigging and wire rope inspections and compliance.


Lee Mould


Michael Simm

Drills and exercises

AMOSC has again been highly engaged with member exercises during the reporting period, with involvement in more than 22 individual exercises ranging from Duty Officer notification and participation through to design, delivery and facilitation of large exercises spanning several days.

In support of an increasing number of petroleum industry exercises, AMOSC has been active in planning, organising and controlling these drills/exercises as well as providing the AMOSC response into the exercise framework. AMOSC was also involved in a Liquefied Natural Gas shipping-based exercise which was based on an overseas location—this heralds a shift by companies into their activity based risks and exercising to ensure they have an effective response system for all petroleum activities.

The increasing importance of petroleum industry exercises is welcomed and the key areas of observing lessons and then operationalising these lessons into plans or tactics is more noticeable than in previous years.

Equipment and operations

AMOSC was visited by the equipment manufacturer 'Elastec' in late 2015 to discuss several areas of equipment development including the AMOSC containerising of the dispersant boom vane system. AMOSC has more recently procured a speed sweep system to complement the on water recovery suite of equipment.

Deployed speed sweep

Training

The tempo of training at AMOSC has decreased following a decline in petroleum-based exploration activity. There has, however, been an increase in the total number of personnel for the AMOSC Core Group (which now sits at 125 personnel). Regular workshops are run for core group personnel, which serve to update members on the latest trends. The workshop program also includes a field-based exercise. The involvement of the industry participants is encouraging and becoming more developed within the constructs of the core group.

AMOSC offers revalidation courses for IMO level II and III training through a two-day course designed to update and re-test participants. This revalidation is relevant after the three-year period and enables the accreditation for the IMO courses to be upheld. AMOSC also now offers a spilt IMO I course of three days each module (two modules) with the completion of both modules enabling IMO I to be achieved. AMOSC is also tailoring IMO II and III training to an individual organisation's needs and integrating individual company plans into the scenarios being used for the competency assessments. Other training packages such as Shoreline Clean-Up and Aerial Observation are well established.

Total numbers of participants who went through AMOSC's programs during this period are shown below.

AMOSC Training 2015-16

Course name	Number of courses	Number of participants
Course in oil spill response Operations (IMO1)	3	46
Course in oil spill response Management (IMO2)	6	48
Course in oil spill response Command & Control (IMO3)	6	12
Aerial Surveillance Course	2	20
Core Group Workshop (Operations)	2	30
Core Group Workshop (Management)	1	10
Reval IMO I	1	3
TOTALS	1	1
TOTALS	**22**	**170**

Activities in states and the Northern Territory

Tasmania

Significant pollution incidents

The Environment Protection Authority (EPA) received 16 reports of oil spills in maritime waters during 2015-16. All of the reported occurrences were reasonably small diesel spills, with quite a number of them being from unidentified sources. The most significant spill occurred in Hobart Port from a fishing vessel in November 2015. Approximately 500 litres of diesel was lost due to a bunkering incident. The incident was followed up by officers from the EPA and an investigation into the spill was conducted.

New or updated contingency plans

Tasmania's Oil Spill Contingency plan review is still in progress, with three officers working on various aspects of the review on a part-time basis.

Planning is underway for six new First Strike Plans. The Tasmanian Oil Spill Response Atlas—value prioritisation, oil sensitivity and oil spill likelihood layers—were used to determine areas for this purpose.

Training conducted and exercises

Tasmania participated in the six regular National Plan training courses during the reporting period. The following courses were also attended by Tasmania during the period:

Course	**Number of Tasmanian representatives**
Advanced Equipment Operator (November 2015)	4
Shoreline (November 2015)	24 (local council/EPA personnel)
Basic Equipment Operator (March 2016)	16

State training opportunities included two workshops for responders in the Operations area which took place in October and November 2015. The main focus for these workshops was to enhance working relationships between agencies by working on a better understanding of roles and responsibilities and jointly developing an Incident Action Plan. Development in response areas coordinated by the Operations unit included marine, waste, wildlife, shoreline and administrative functions. Participation included officers from TasPorts, EPA, Maritime and Safety Tasmania, Council, Wildlife Management Branch, and AMSA surveyors.

Shoreline group assessing intertidal zone – Shoreline Course November 2015

Two one-day workshops on equipment familiarisation were held on 18 and 19 August 2015. Officers from the EPA and TasPorts jointly organised and presented the containment and collection for equipment familiarisation, providing vital on-ground information for those in management positions of a response. The workshops were aimed at personnel who are most likely to be involved in an Incident Management Team in the event of a response. The workshops proved particularly useful to logistics team members who gained a better understanding of operational on-ground requirements.

Operations Group workshop – breakout groups detailing scenario responses

Tony Port and Mark Williams introducing oil spill equipment to IMT members at Familiarisation course

A National Plan exchange between AMSA and Tasmania resulted in Marine Pollution Officer, Letitia Lamb's visit Canberra for three weeks throughout November and December 2015 (see page xx). The program focused on relationship building, exchanging knowledge on operating environments, and particular programs, including NEMO implementation details for Tasmania.

Prosecutions

In September 2015 Tasmania had two successful marine pollution prosecutions. Both prosecutions were in accordance with the *Environmental Management and Pollution Control Act 1994* and its associated regulations.

The first prosecution related to the vessel *Meridien* which resulted in the issue of an Environmental Infringement notice in the amount of $1540 for the discharge of oily bilge water from a recreational vessel.

The second prosecution resulted in the issue of an Environmental Infringement Notice in the amount of $770 for the discharge of approximately 20 litres of diesel from a bilge causing environmental nuisance (odour).

New South Wales

State arrangements

Transport for NSW (TfNSW) is the overall managing (statutory) agency for marine oil, chemical spills and ship accident emergencies in NSW State waters.

Combat agency roles are undertaken in accordance with the NSW State Waters Marine Oil and Chemical Spill Contingency Plan. Combat agencies include Roads and Maritime Services and the Port Authority of New South Wales for incidents in port areas and designated adjacent State waters. This includes the Port of Yamba (Clarence River) and Port of Eden (Twofold Bay).

Legislation

The *Marine Pollution Act 2012* and *Marine Pollution Regulation 2014* commenced on 1 September 2014. The amended legislation incorporates Annexes III, IV and V of MARPOL in to NSW law. Other changes included specifically limiting State waters to three (3) nautical miles, provision for directions to be given verbally, clarification of technical details for transfer operations and increased powers of entry and provision for issuing Penalty Notices.

Significant incidents

There were no significant spills during the reporting period in NSW. Combat Agencies (the Port Authority of New South Wales and Roads and Maritime Services) have responded to numerous minor incidents or reports of oil on the water or ashore. This included a number of grounded or sunken fishing and recreational vessels. These incidents have either resulted in the vessel breaking up and small amounts of pollution entering the water or salvage of the vessel without a pollution incident.

A number of chemical incidents occurred during the period which have been a result of leaking containers in ports. These were responded to by Fire and Rescue NSW in conjunction with the Port Authority and the EPA.

Training

Approximately 820 NSW personnel attended training and exercises during the 2015-16 reporting period. This included NSW-coordinated training and exercise as well as AMSA-facilitated National Plan training.

401 participants attended NSW coordinated training, as below:

Activity	Date	Location	Agency	Numbers
Introduction to Marine Incident Management (IMIM) Course	8-9 July 2015	Lake Macquarie, NSW	TfNSW	26
Low level CRM Course	27 July 2015	Sydney, NSW	RFS	1
NSW Basic Equipment Operators (BEO) Course	5-6 August 2015	Port Kembla	TfNSW	15
State Response Team (SRT) Workshop	12-13 August 2015	Lake Macquarie, NSW	TfNSW	56
Introduction to Oiled Wildlife Response Course	8-10 September 2015	Port Macquarie, NSW	TfNSW	22
Wildlife Responders Course	13-15 October 2015	Port Kembla	TfNSW	15
NSW Shoreline Response Course	27-29 October 2015	Port Stephens, NSW	TfNSW	12
Managing Emergencies Course	3-5 November 2015	Blacktown, NSW	OEM	1
Chemical Spill Awareness Course	10-11 November 2015	Mascot, NSW	TfNSW	30
Wildlife Responders Course	17-19 November 2015	Coffs Harbour, NSW	TfNSW	14
Introduction to Marine Incident Management (IMIM) Course	1-2 December 2015	Sydney, NSW	TfNSW	29
NSW Cost Recovery Workshop	11 February 2016	Sydney, NSW	AMSA	10
Managing Emergencies Course	16-18 February 2016	Coffs Harbour, NSW	OEM	1
NSW Shoreline Response Course	23-25 February 2016	Kiama, NSW	TfNSW	22
Helicopter Underwater Escape Training	8 March 2016	Sydney, NSW	TfNSW	8
Introduction to Marine Incident Management (IMIM) Course	9-10 March 2016	Sydney, NSW	TfNSW	27
Media Officers Workshop	7 April 2016	Sydney, NSW	TfNSW	12
NSW Basic Equipment Operators (BEO) Course	27-28 April 2016	Newcastle, NSW	TfNSW	16
Managing Emergencies Course	10-12 May 2016	Albury, NSW	OEM	1
Marine Pollution Response – overview workshop - ferry wharf project	11 May 2016	Sydney, NSW	TfNSW	12
Aerial Radio Operators Course	13-15 May 2016	Goulburn, NSW	RFS	3
Refresher Aerial Observation Course	17-18 May 2016	Taree, NSW	TfNSW	11
Designing & Managing Exercises Course	31 May – 2 June 2016	Sydney, NSW	OEM	1
Introduction to Marine Incident Management (IMIM) Course	21-22 June 2016	Sydney, NSW	TfNSW	TBA (30)
Aerial Observation Course	20-24 June 2016	Mudgee, NSW	OEH	2
NSW Incident Management Team (IMT) Course	27 June – 1 July 2016	Katoomba, NSW	TfNSW	TBA (24)
TOTAL (NSW training)				**401**

Basic Equipment Operators Course – Newcastle NSW – April 2016

Wildlife Responders Course – Port Kembla NSW – October 2015

Port of Yamba Exercise – Yamba NSW – July 2015

365 personnel attended marine pollution response specific exercises, which included:

Activity	Date	Location	Agency	Numbers
State Exercise - Bro-Ken Arrow	14 July 2015	Sydney & Botany Bay, NSW	TfNSW	81
Cross-border NSW/QLD Exercise	28-29 July 2015	Ballina, NSW	TfNSW	33
Port of Yamba Exercise	30 July 2015	Yamba, NSW	Port Authority	65
Lord Howe Island Exercise	14-15 September 2015	Lord Howe Island, NSW	TfNSW	16
South Coast Exercise	16 September 2015	Bermagui, NSW	RMS	36
Newcastle Port Exercise – Equipment Deployment	25 November 2015	Newcastle, NSW	Port Authority	6
Newcastle Port Exercise - Desktop	1 December 2015	Newcastle, NSW	Port Authority	8
Gore Cove Exercise	14 March 2016	Sydney, NSW	Viva Energy	13
South Coast Equipment Deployment Exercise	16 March 2016	Nowra, NSW	RMS	21
SpillCon 2016 – NRT Exercise Deployment	2-6 May 2016	Perth, WA	AMSA	1
Port Kembla Exercise	24 May 2016	Port Kembla, NSW	Port Authority	TBA (20)
State Exercise – Phase 1	7 June 2016	Newcastle, NSW	AMSA & TfNSW	TBA (20)
North Coast Exercise	8 June 2016	Coffs Harbour, NSW	RMS	TBA (20)
North Coast Equipment Deployment Exercise	10 June 2016	Tweed Heads, NSW	RMS	TBA (15)
Port Authority Exercise	June 2016	Sydney, NSW	Caltex	TBA (10)
TOTAL (NSW exercises)				**365**

State exercise – Bro-ken Arrow

The NSW State Exercise 'Bro-ken Arrow' was held on 14 July 2015 in Sydney and was attended by over 80 personnel from across the state. The exercise consisted of a desktop incident control centre component, which was held in Sydney, and a field deployment component, which was held in Port Botany.

The exercise was attended by personnel from a number of agencies including:

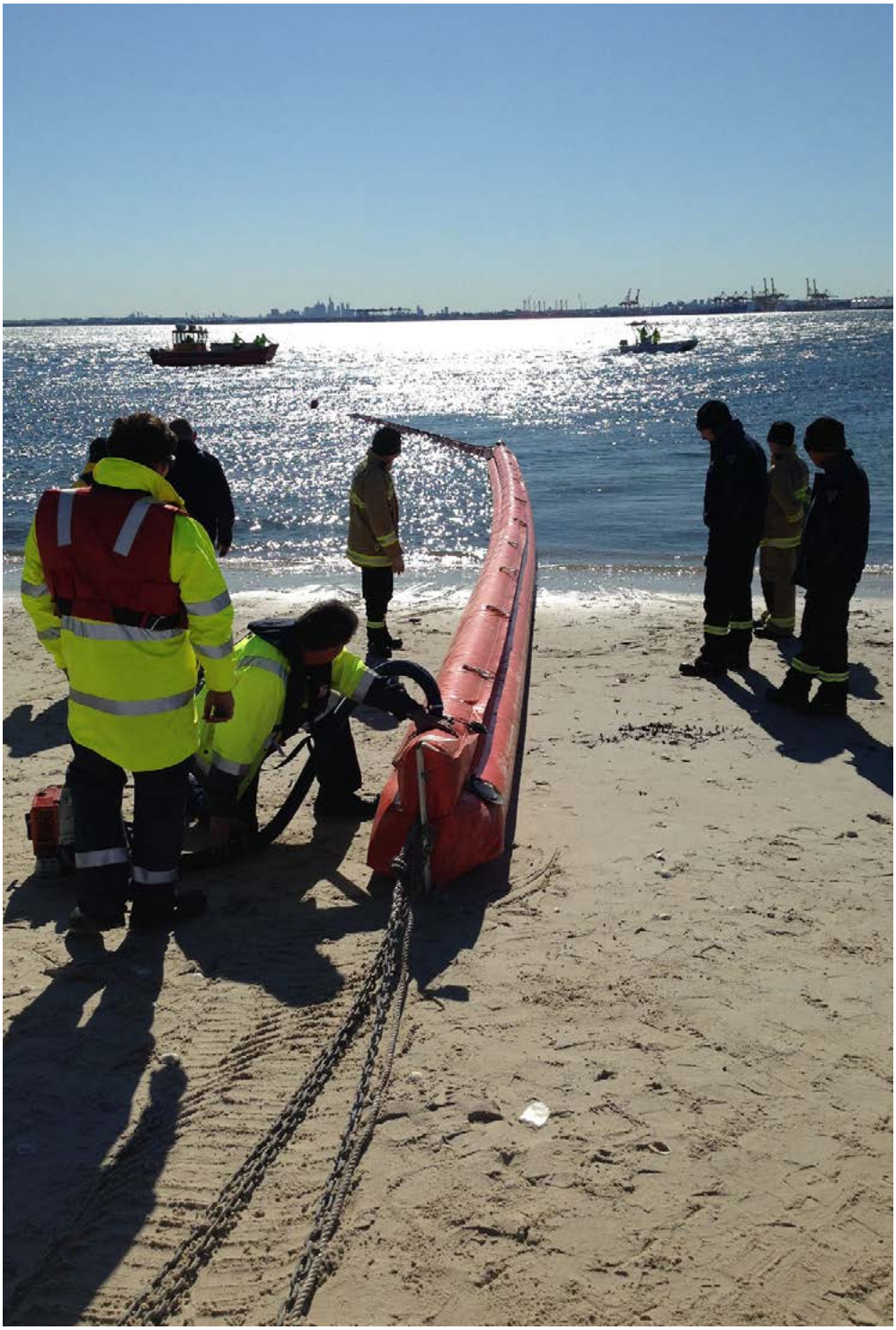
- Transport for NSW
- Roads and Maritime Services
- Port Authority of NSW – Sydney, Newcastle and Port Kembla
- Fire & Rescue NSW
- Department of Primary Industries
- Office of Environment and Heritage
- Environment Protection Authority.

The aim of the exercise was to test the 'NSW State Waters Marine Oil and Chemical Spill Contingency Plan' and related MOUs and guidelines, which would be applied in the event of a level one or two incident that crosses State waters and inland waters jurisdictions. The scenario was based on an oil spill off the coast of Broken Bay, approximately 50 kilometres north of Sydney.

A major feature of the exercise was the use of less experienced personnel, who had completed training but not had the opportunity to apply the skills learnt in an exercise, or a real life incident. Participants were also provided with mentors throughout the exercise which was well received by those involved in the exercise. Overall the exercise reinforced the value of training and the ability for participants to apply these skills during an exercise while also strengthening NSW's response capability.

National – State Exercise 2016 'Exercise Nautical Twilight' – see page 27 for overview of exercise.

State Exercise 2015 - Multi-agency Incident Management Team working hard in the incident control centre in Sydney



State Exercise 2015 - Multi-agency deployment teams deploying equipment in the field at Port Botany

State Response Team workshop

The State Response Team (SRT) workshop is for personnel who are part of the state's first strike capability to respond to marine pollution incidents. This two-day workshop brings together all state response team members to exchange ideas, review outcomes and learnings from recent incidents, workshop issues, undertake skills maintenance and development, build relationships and ultimately increase the preparedness of the state to respond to a marine pollution incident. The workshop was held in Lake Macquarie and received very positive feedback.

As part of the workshop, participants took part remotely in an ExxonMobil exercise being conducted in Victoria involving up to 50,000 tonnes of crude oil from a platform in Bass Strait towards Gabo Island off the NSW far south coast. The exercise provided the opportunity for the SRT to assess the considerations for the state and how NSW would coordinate responding and managing the impacts of such an incident and feed this live into the exercise.

The most favoured sessions of the workshop included media in a response, incident reports, exercise overviews, a demonstration of the state-based online Emergency Management Operating System, a Regional Emergency Management Officer talk, and arrangements and legislation updates. Feedback indicates that the workshop was of great benefit both from a networking and educational point of view. The calibre of the speakers was also very impressive, with all presentations being relevant and useful.

State Response Team Workshop – Lake Macquarie

NSW and QLD cross-border exercise

The cross-border NSW/QLD Exercise 'Exercise Dumaresq' was held in Ballina from 28-29 July 2015. The exercise was to test the arrangements for responding to a marine pollution incident on the border of New South Wales and Queensland, and to develop a protocol for dealing with a marine pollution incident that impacts both jurisdictions. The exercise was held following the success of the joint NSW and Victoria exercise in 2015.

Day one was a discussion-based exercise which focused on the development of cross jurisdictional protocol; and day two was a desktop exercise which focused on operational issues when responding to oiled shorelines and wildlife cross-border areas.

The exercise was deemed a success and involved numerous productive discussions and outcomes which are summarised in the post exercise report. A follow-up cross-border exercise with Victoria is scheduled to take place in 2016-17 as part of NSW's training and exercise program.

Oil Spill Response Atlas

Transport for NSW is continuing to progress the ongoing development of a Geographic Information System (GIS) based Oil Spill Response Atlas (OSRA).

The Spatial Systems Team at TfNSW is currently finalising Phase II of the OSRA web-based application development. This involves incorporating live Automated Identification System (AIS) data from AMSA, weather reports and links to web based cameras, and importantly the ability to overlay oil spill trajectory modelling (OSTM) outputs over environmental sensitivity data layers.

Once Phase II is complete, it is intended that the TfNSW Spatial Systems Team will progress Phase III with delivery of OSRA as a tablet based application, allowing responders to enter and upload data from the field. This will also include photos and an enhanced draw function.

As part of the annual OSRA update, the NSW Office of Environment and Heritage are collecting seabird and shoreline classification data sets for the NSW South Coast.

Victoria

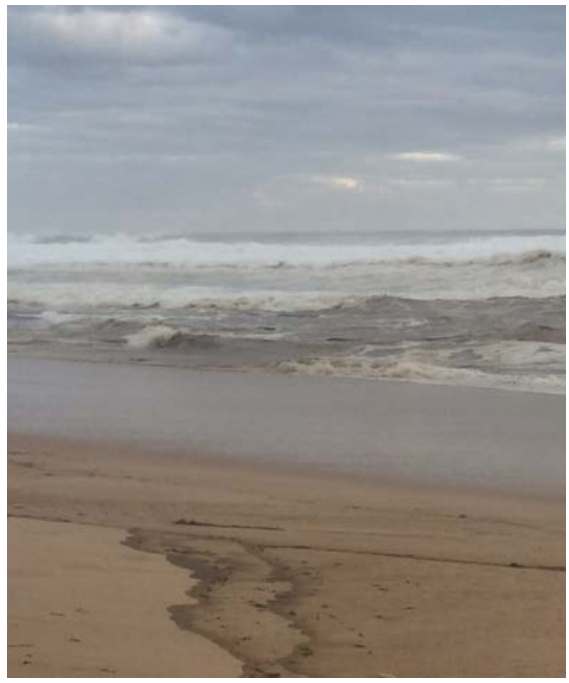
Responses during 2015-16

There were 64 minor (level 1) marine pollution incidents reported in Vitoria during 2015-16. Most of these incidents occurred in the Port Phillip Region and came from unknown sources. Common pollution incidents included non-commercial and uninsured vessels; spills that, upon investigation, were found not to be oil (i.e. degrading algae, seaweed and algal blooms); sheens; or truck accidents which had resulted in the loss of fuel.

There were three notable responses in Victoria during 2015-16 (detailed below).

On 5 May 2016 a potential pollution event was reported at Portsea Back Beach. Parks Victoria sampled the unknown substance which stretched approximately two kilometres along the beach. Testing confirmed the substance was decomposing algae and seaweed. Due to the time of the year, rough sea conditions broke down the material and there was minimal impact. The response included personnel from the Port of Melbourne Corporation; the Department of Economic Development, Jobs, Transport and Resources (DEDJTR); Environment Protection Authority; and Victoria Police.

EPA taking samples for testing



Decaying algae on the beach and in water at Portsea

On 17 November 2015, a vessel was reported to be on fire in a mooring pen on Progress Jetty, Paynesville. Fire agencies attended the blaze and extinguished the fire. Gippsland Ports, being the coastal response agency, responded to contain the pollution and moved the vessel from the pen to a nearby boat ramp. The pollution from the vessel was contained with absorbent boom.

The vessel was retrieved from the water during the day and remaining contaminant was drained from the hull, contained and cleaned up prior to the vessel being transported to the local municipal tip.

Boomed vessel at Paynesville

Lifting operation

On 5 November 2015, Port of Melbourne Corporation received a report that a 30-metre fishing trawler had partially sunk at its mooring at the Royal Geelong Yacht Club, Corio Bay. The trawler was estimated to be carrying 900 litres of diesel fuel and a small quantity of other hydrocarbon lubricants.

As the Control Agency, the Port of Melbourne Corporation, formed an Incident Management Team to manage the containment and clean-up response, which took place over five days.

Stricken vessel at Geelong

State arrangements

During 2015, DEDJTR developed a State Marine Oil Pollution Plan to outline Victoria's arrangements to prepare for, respond to, and recover from marine oil pollution incidents in Victorian coastal waters. The State Marine Oil Pollution Plan is a sub-plan of the State Emergency Response Plan under the *Emergency Management Act 2013*.

DEDJTR is reviewing Victoria's maritime emergency arrangements, including the strategies, control and operational arrangements to manage significant and complex maritime emergencies for oil pollution, hazardous and noxious substances, non-oil pollutants, and marine casualties (non-search and rescue), and potentially wildlife impacts. The review will refresh the state arrangements in line with the state legislation and obligations under the Inter-Governmental Agreement on the National Maritime Emergency Response Arrangement.

Agencies involved in the revised plan include: DEDJTR; Department of Environment, Land, Water and Planning; Victoria Police; Metropolitan Fire Brigade; Country Fire Authority; Transport Safety Victoria; Emergency Management Victoria; and the Coastal Response Agencies.

Capability building

DEDJTR continues to build the state's marine pollution incident management and response capabilities. DEDJTR's analysis of the response requirements for personnel responding to Level 1 and 2 marine oil pollution incidents is being used to develop a model of cover the key functions. This will inform the development of the State Response Team training program for 2016-17. The State Response Team includes approximately 100 personnel from government and industry organisations.

DEDJTR hosted and participated in a number of learning and development events during 2015-16. These included:

- AMSA's Basic Equipment Operators course in Gippsland in October 2015
- Incident Management Team workshop in Canberra in March 2016
- Shoreline Clean-up course in Portland in May 2016
- Spillcon (Oil Spill Prevention and Preparedness) Conference in Perth in May 2016 attended by DEDJTR, Metropolitan Fire Brigade and Port of Melbourne Corporation
- Shoreline Clean-up course in South Australia in June 2016.

Exercises

DEDJTR supported in the development of, facilitation and participation in a number of marine pollution exercises during the 2015-16 reporting period. These are detailed below.

NSW and QLD cross-border exercise

Gippsland Ports, as the local Coastal Response Agency, facilitated a cross-border exercise with New South Wales in October 2015. The exercise focused on establishing a Victorian Incident Management Team and testing the information flows and communication between the two states in the event that an incident was to occur across state jurisdictions. Victoria's State Response Team, Australian Maritime Safety Authority, Transport for New South Wales, and New South Wales Maritime Division, were amongst the participants.

Participants at the cross border exercise at Lakes Entrance

State maritime response exercise

In May 2016, more than 100 participants from 30 agencies, including the Commonwealth and state governments, private sector and industry groups, attended a state strategic marine emergencies exercise, jointly delivered by Emergency Management Victoria and DEDJTR.

The state maritime response aimed to 'proactively explore the strategic consequences posed by a complex marine emergency within State waters'. Working in syndicates, participants responded to two incidents which were supported by a pre-formed strategic coordination group which included the Victorian Emergency Management Commissioner, the Maritime Emergency Response Commander and the Victorian State Marine Pollution Controller.

The objectives of this exercise were to:

- review and validate Victorian control
- coordinate and support arrangements for a complex marine emergency
- assess the integrated response to a complex marine emergency affecting both land and water; and to identify the likely consequences of a large-scale marine emergency on the Victorian community.

Tim Wiebusch, Craig Lapsley and Toby Stone participating in the state exercise

Coastal response agency exercise

In November 2015, the Port of Hastings led an equipment deployment exercise to test occupational health and safety arrangements, including developing job safety analysis and deployment of land sea boom. The exercise successfully met essential skills and maintenance requirements.

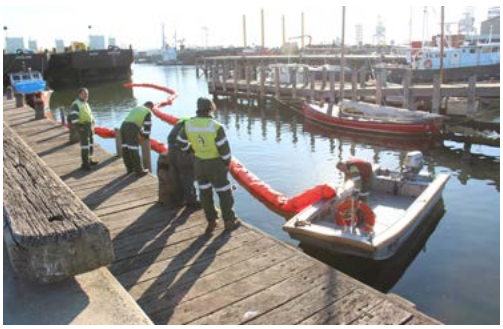
Marine Pollution Equipment Project

DEDJTR is upgrading and replacing marine pollution equipment to ensure that the state can respond effectively to marine pollution incidents.

Phase one of the marine pollution equipment project has been completed with the purchase of 1700 metres of shoreline (land-sea based), 40 lengths of curtain (self-inflating), 600 metres of curtain (general purpose inflatable), and 1200 metres of fence boom. The boom has been distributed to the high risk areas, including Portland, Geelong, Paynesville, Lakes Entrance, Port Welshpool, Port of Hastings and Williamstown.

New boom for Victoria

Phase two of the project is now underway which will focus on response equipment. It will include the purchase of containment systems, storage devices, shoreline and decontamination kits, transport (vessels) and Incident Control Centre equipment.



Deployment of new boom for testing

Acceptance testing of new boom

Phase three of the project will see the integration of an Information Management System (IMS). Currently Victoria is running the Emergency Management Common Operating Platform (EM-COP) as an interactive site for tracking incidents on a state map. The project will facilitate access to eMAP which interfaces with EM-COP as the primary state mapping tool and will become the new home for Oil Spill Response Atlas (OSRA) maps. DEDJTR will also be working with AMSA to create an instance of the NEMO system as the state's IMS. The third part of the project will be the development of a shoreline response application that can be used on androids and iPhones. A project manager will be engaged to roll out the four components of the IMS across 2016-17. Training in the new system will then be conducted with all users.

Staffing movements

Over the past 12 months there have been a number of staff changes to the Marine Branch within the Emergency Management Division at DEDJTR:

- Donovan Croucamp (Director of Capability and Response and SMPC) finished with the department in January 2016.
- Anna Silvestri (Project Support Officer) moved on to a role in Corrections in September 2015
- Rebecca Harper (Project Support Officer) commenced in December 2015.
- Tim Wiebusch filled the role of Director Capability and Response and State Marine Pollution Controller as part of a secondment from the Victoria State Emergency Service, finishing in September 2016.

South Australia

Significant pollution incidents

There were no significant spill events in SA during 2015-16. There were, however, a small number of vessel sinking incidents and a minor waste pollution incident that required the attendance of a marine pollution officer.

Responses during the reporting period included:

- 40 foot wooden vessel burnt to waterline resulting in the loss of approximately 800 litres of oil. Majority of oil captured by boom and the remainder left for natural wave energy
- two vessels sank in St Kilda marina
- steel ex pilot boat sank at Kingscote
- vessel sank in Glenelg marina
- vessel sank in north arm marina
- stolen vehicle dumped in Port River
- oil-based paint dumped in a drain at snapper point Port River.

Training conducted

Two DTPI personnel attended the BP Incident Management Team training during the reporting period. DPTI has also been working closely with BP and other title holders in the Great Australian Bight, to prepare and develop multi agency response plans.

Negotiations are well underway to engage the Country Fire Service (CFS) and State Emergency Service (SES) for aerial observer and air attack supervision services. During the reporting period, AMSA conducted an exercise to test the operational functions of the Fixed Wing Aerial Dispersant Capability in SA. The Country Fire Service assisted by providing personnel to undertake roles in aerial observations and air attack supervision as well as providing command and control facilities.

The South Australian Marine Spill Contingency Plan (SAMSCAP) was updated and endorsed during the reporting period.

Administrative changes in response arrangements

DPTI key maritime contacts are:

Manager Marine Operations
Clare Heathcote

Principal Navigation Specialist
Gordon Panton

Oil Spill Coordinator
Marilyn Hood

State Marine Pollution Controller
David Rogers

EM Project Officer
Abbigail Walters

Queensland

Significant incidents

During the year Maritime Safety Queensland (MSQ) received reports of 59 marine pollution incidents. Of these, 36 incidents occurred within ports and 23 occurred outside of ports but within Queensland or Great Barrier Reef waters.

The most significant incident during the period was a bunker fuel oil spill from a ship. The incident first came to the attention of MSQ when it was reported by the crew of a fishing vessel near reefs north of Cape Upstart on 16 July 2015. The report was later confirmed by aerial and on-water surveillance. The oil impacted Forrest and Taylor's beaches north of Townsville, beaches on Hinchinbrook Island, and islands and reefs in the Palm Islands group.

MSQ coordinated a multi-agency response to the incident which involved 330 personnel from various state and local government agencies including the Great Barrier Reef Marine Park Authority (GBRMPA) and AMSA. The response ran over the course of 26 days and officially ceased on 10 August 2015.

For further information, refer to the overview of the incident on page 5.

Decontamination station at Forrest Beach

Oil on exposed reef off Townsville

New or updated contingency plans

The Queensland Coastal Contingency Action Plan is a living document that is regularly updated and adapted to reflect contemporary response management principles and thinking. Proposed changes as a result of recommendations coming out of the Cape Upstart Oil Spill Response Debrief Report are being progressed with the relevant Queensland response agencies.

Training and exercises

Interest and participation in National Plan oil spill response courses remains high in Queensland with a total of 232 personnel successfully completing either management or operations level courses during the financial year. As well as the various incident management and advanced equipment operator courses organised by AMSA, MSQ delivered accredited basic equipment operator and shoreline response courses in Brisbane, Townsville and Mackay and organised the delivery of equipment familiarisation training in the remote ports of Cooktown, Cape Flattery and Weipa during 2015-16.

Course type	Courses	Participants
Advanced Equipment Operator Course	1	13
Basic Equipment Operator Course	3	45
Equipment Familiarisation Course	3	19
Finance and Cost Recovery Workshop	2	51
Incident Controller Course	1	3
Incident Management Team Course	2	41
Logistics Officer Course	1	3
Operations Officer Course	1	2
Planning Officer Course	1	2
Shoreline Response Course	2	53
Total	**17**	**232**

MSQ participated in a joint QLD/NSW exercise with Transport for NSW in July 2015. For further information on this exercise refer to page 55.

On 24 November 2015 MSQ conducted a field exercise in Brisbane which involved the deployment of oil spill equipment and activation of the incident control centre.

Oil spill response training Brisbane

A multi-agency discussion exercise was conducted in Mackay on 9 June 2016. Regional exercises were also conducted to provide responders with the opportunity to retain familiarity with the deployment and operation of oil spill response equipment.

Queensland's incident control centre was successfully exercised on four occasions to give responders the opportunity to rehearse the centre's activation and operating procedures.

Five officers from MSQ and the Gold Coast Waterways Authority attended Spillcon 2016 in Perth; three as delegates at the conference and two as members of the National Response Team tasked with setting up the equipment display.

Prosecutions

No prosecutions for marine pollution offences under the *Transport Operations Marine Pollution Act 1995* were recorded during 2015-16. A number of offences are being investigated that may result in prosecution by MSQ.

Administrative changes in response arrangements

Queensland's marine pollution management arrangements remain current and continue to interface effectively with the National Plan and Queensland's disaster management arrangements.

Northern Territory

Significant pollution incidents

There were no significant incidents in the Northern Territory during 2015-16. There were however, a number of small diesel spills and slicks observed in Northern Territory waters. Two vessels also sank on their moorings which resulted in the loss of small amounts of diesel. These incidents were attended to by authorised officers where possible, and appropriate action taken on a case by case basis.

Alfred Nobel sinking on its mooring at the Francis Bay Mooring Basis in Darwin Harbour

New or updated contingency plans

The Northern Territory Oil Spill Contingency Plan (NTOSCP) is currently being overhauled for a complete restructure and update to ensure the contingency plan reflects National Plan arrangements and is in line with the Northern Territory Emergency Management procedures. The new NTOSCP will also incorporate changes to reflect the privatisation of the Darwin Port and include other ports and responsible parties around the Northern Territory coastline.

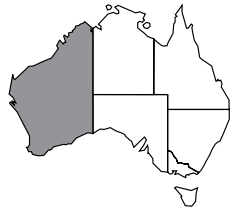
Training conducted/attended

- 26 personnel attended the Shoreline Response Course in Darwin in June 2016.
- 4 personnel attended the NRT Shoreline Response Course in Adelaide in June 2016.
- 9 personnel attended AMSA funded National Plan training.

Administrative changes in response arrangements

Following the departure of Paul Rajan, the Northern Territory welcomes Simon Saunders into the role of State Chair. Simon has been exposed to pollution response for many years in his previous roles within the Department of Transport and brings years of transport experience to the team.

Western Australia

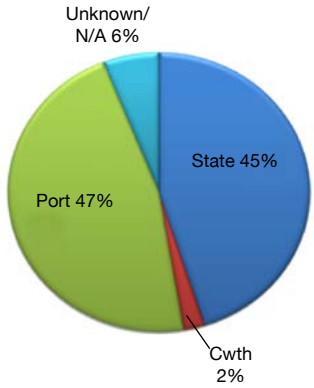


Incident summary

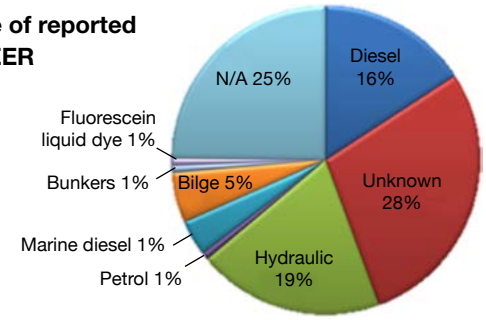
During 2015-16, the Department of Transport (DoT) received a total of 133 notifications of possible incidents.

The 24-hour pager recorded 90 notifications and a total of 43 Pollution Reports (POLREPs) were received. Oil was spilt on 102 occasions. No major events were reported however, one event was considered a serious potential.

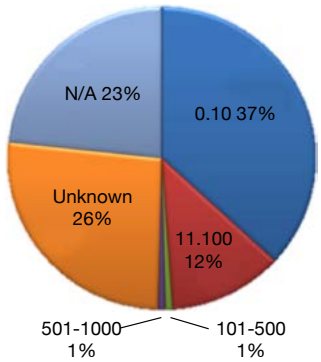
Distribution by waters jurisdiction of reported incidents to MEER



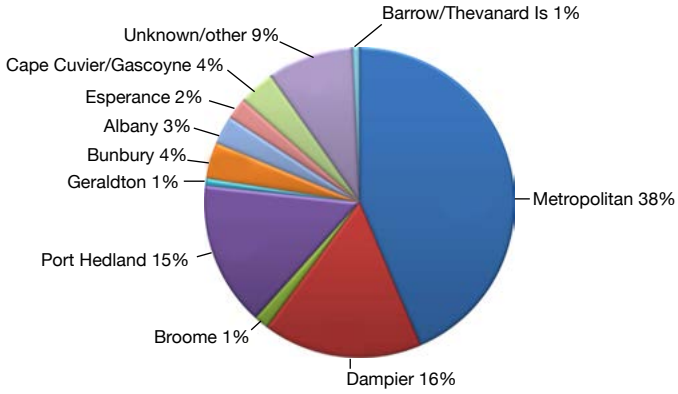
Distribution by oil type of reported confirmed spills to MEER



Distribution by volume (L) of reported confirmed spills to MEER



Distribution by region of reported incidents to MEER



On 29 February 2016 the Fremantle Port Authority responded to capsizing of the vessel *Margharita* a 11.9 metre steel tug/workboat.

The vessel was being used to transfer a small hopper of cement (approximately 2m^3) from a berth in the port to a construction site at the road traffic bridge approximately 200 metres to the north-east of the berth. During the transit from the berth to the traffic bridge, the vessel experienced a shift of cargo, causing it to become unstable and capsize. The two crew on board managed to escape safely with no signs of injury.

The Fremantle Port responded and deployed oil containment booms. These booms were deployed at pre-identified locations within the Fremantle Port Oil Spill Contingency Plan (OSCP) as well as a containment boom around the capsized vessel. The vessel was stabilised during the day. Special markers were put in place to establish an exclusion zone and a support vessel assisted in lighting up the capsized vessel for night watch crew to monitor the situation.

A salvage operation was undertaken the following day. Quick action by the Fremantle Port staff in accordance with their OSCP prevented any major release of oil in the port and reduced the potential for the oil to flow up the Swan River.

Sunken vessel Margharita

Changes to marine oil pollution response arrangements

With the endorsement of the revised Westplan-Marine Oil Pollution (MOP) in October 2015, the arrangements for marine oil pollution responses in Western Australian State waters have changed. The Controlling Agency for a Level 2 and 3 MOP incidents in State waters resulting from an offshore petroleum activity is now the Department of Transport (DoT).

As a result of this change, DoT and Petroleum Titleholder representatives formed a working group to provide input to an Industry Guidance Note. The Industry Guidance Note was released by DoT on 1 April 2016 and provides an explanation of the new arrangements.

DoT is in the process of consulting with each Petroleum Titleholder to determine how the new response arrangements will be implemented. DoT has established interim arrangements until the review of each Petroleum Titleholder's response arrangements are complete. Consultation is expected to continue until June 2017.

Environmental and Scientific Coordinator

The Western Australian Parks and Wildlife has taken on the role of Environmental and Scientific Coordinator (ESC). Stuart Field was recently appointed to this position.

In addition to the Environment Liaison Group, which supports the ESC, several new systems to support the role have been identified:

- Deputy ESCs from the Department of Parks and Wildlife (DPaW) have been nominated and include regional personnel
- oil spill response material and online tools have been provided to the Deputy ESCs
- an ESC workshop involving DoT, DPaW and the Environment Liaison Group (ELG) personnel was conducted at Marine House, Fremantle in February 2016. The outgoing ESC, Ray Masini, provided valuable information on the role. The workshop gave the DoT State Marine Pollution Controller (SMPC), Deputy SMPCs and Incident Controller (IC) an opportunity to become acquainted with ESCs prior to an incident
- an ESC Manual was identified as a potential, useful support tool.

National Environmental Maritime Operations (NEMO)

The DoT Marine Environmental Emergency Response (MEER) team received training in AMSA's incident management system, NEMO, in February 2016. The system is now being used to record and manage oil spill incidents in WA.

Oil Spill Contingency Plans

In 2014-15, the Western Australian DoT revised the State Oil Spill Contingency Plan to reflect changes to the recently endorsed Westplan-MOP, and to augment information on volunteers, public information and dispersants.

The Western Australian DoT has also commenced a program to ensure that all DoT-managed boat harbours receive support to prepare a facility Oil Spill Contingency Plan. The initiative commenced with the preparation of the Two Rocks Boat Harbour Oil Spill Contingency plan with input from the Coastal Infrastructure Business Unit.

Western Australian Marine Oil Risk Assessment

Work is underway on the WA Marine Oil Pollution Risk Assessment. This project aims to identify the likelihood of oil spills and environmental values that are vulnerable to oil spills. Information will be used to compare the relative risk between geographic regions and provide a basis for resource allocation decisions during the preparation and response phases of an oil spill. The scale of this project is significant, given the length of the Western Australian coastline.

Contracts for the work were awarded in January 2016. Initial work components are a strategic level state-wide assessment that identified areas of high oil spill likelihood and an assessment of protection priorities in the Pilbara region.

The risk assessment is expected to continue into 2016-17, with completion of the risk assessment in the Pilbara region and commencement of the second region. Protection priority data collected during the risk assessment will be incorporated into the Oil Spill Response Atlas.

Dispersant application guidelines

The Western Australian DoT has reviewed its Dispersant Use Consent Framework in light of recent developments into dispersant decision making processes. The revised Dispersant Use Consent Framework also provides clarity on the consent process applicable in State and Commonwealth waters, and for shipping and petroleum activity related incidents. The framework was finalised on 30 May 2016 and will form an appendix of the State Oil Spill Contingency Plan.

Training courses

WA continues to deliver accredited Basic Equipment Operations for Oil Spill Response (BEO) and Oiled Shoreline Response (OSR) courses to increase the state's response capability. Other training conducted by MEER included the Oil Spill First Responder (OSFR) course and port operational equipment deployment days.

The following table lists training conducted by DoT during 2015-16 reporting.

Course Name	Month delivered	Location	Number of attendees
Basic Equipment Operator	July 2015	Broome	18
Basic Equipment Operator	August 2015	Port Hedland	13
Basic Equipment Operator	September 2015	Onslow	17
Oiled Shoreline Response	October 2015	Albany	8
Basic Equipment Operator	November 2015	Geraldton	16
Incident Management Team	November 2015	Perth	16
Incident Management Team Awareness	December 2015	Fremantle	5
Basic Equipment Operator	February 2016	Perth	19
Incident Management Team Awareness	February 2016	Fremantle	8
Incident Management Team	February 2016	Fremantle	10
Deployment Day	March 2016	Esperance	21
Incident Management Team (Level 2)	May 2016	Perth	15
Oiled Shoreline Response	May 2016	Fremantle	11
Deployment Day	June 2016	Broome	12
Basic Equipment Operator	June 2016	Fremantle	10

WA Maritime Incident Management Team

WA DoT formed a new group named the DoT Maritime Incident Management Team (MIMT). The team comprises dedicated DoT employees from across the entire transport portfolio who have been selected to receive both initial and ongoing specialist training to enable them to perform their assigned roles in the event of a maritime environmental emergency.

These roles are in line with an emergency management system Australasian Inter-Service Incident Management System (AIIMS).

Selected members will receive both initial and ongoing nationally-recognised training to enable them to perform their nominated roles in times of need, and to ensure adequate readiness levels and capabilities are maintained.

The Maritime Incident Management Team (MIMT) was formally launched on Thursday 26 November 2015 during the first WA AMSA Incident Management Course. Nina Lynne, Managing Director Transport Services, and Ray Buchholz, General Manager, Marine Safety State Marine Oil Pollution Committee (SMOPC) both attended the launch.

MIMT personnel.
This training was put to good use during Phase One of the state maritime emergency exercise, Exercise Beadon, in June 2016

WA State Response Team

The MEER unit conducted an audit on the State Oil Spill Response Team (SRT) members' availability. State Response Team (SRT) members come from state and local government agencies and industry sources that will be involved in environmental risk management and/or an oil spill response. Further to the audit, a formal registration processing of members was introduced to ensure that SRT members had the support of their organisation's management. There are currently 80 members in the SRT.

Eight SRT training sessions have been conducted throughout the year. Activities included deployment of shoreline boom, Boom Vane, the Marko vessel and an Incident Management Team awareness session.

Deployment Broome

A deployment day conducted in Broome Port highlighted how much shoreline boom would be required to cover large tidal movements in the Kimberley region. Tides can be up to 10 metres high and the intertidal zone around Broome is flat. These conditions make boom deployment challenging. This deployment was made easier by using DoT's specialised asset (Sealegs) to overcome the complexities of large tidal movements.

Auditing and data updating of equipment stocks throughout the state

DoT MEER continues to compile an up-to-date and accurate data set of all oil spill response equipment (OSR) (National, State, AMOSC and Industry) throughout the state.

The DoT-owned OSR equipment auditing process will continue throughout all state ports and boat harbours in conjunction with the MEER 2015-16 training and equipment deployment program. Equipment servicing and maintenance continues as per the various interdepartmental and interagency memoranda of agreement.

DoT has now finalised negotiations with each of the recently formed port authorities to take over ownership of the stockpiles of level 1 OSR equipment currently stored at their port facilities. DoT is also embarking on a HMA Readiness Program which incorporates a resourcing project to audit and enhance the response equipment capabilities of each of the state's shipping and pilotage ports and MEER is currently developing a business case to support this program and related sub-projects.

Equipment acquisition and replenishment

DoT MEER has continued to assist AMSA representatives in conducting close out audits on new National Plan equipment and has organised and facilitated manufacturer workshops in relation to specific items of level 2 and 3 equipment. This has proven to be an extremely valuable method of gaining first hand, up-to-date knowledge of these items of equipment and leads in to an ideal synergy with the newly developed Advance Operator Training Course.

Equipment capital works budget outlook

While budget restraints have continued throughout this period, MEER has acquired the following additional equipment:

- 2x response trailers each equipped with a multi-head skimmer and temporary storage units
- 1x fully equipped shoreline response trailer package
- an additional 500 metres of solid buoyance containment boom
- complete fit-out of dedicated situation room including digital smart boards, monitors and video conferencing equipment
- 1x "Phantom 4" Unmanned Aerial Vehicle (UAV) Drone.

The DoT Marine Safety Business Plan 2015-16 has once again identified 'the additional purchase of oil spill response equipment' as one of its key initiatives for the financial year. Acquisitions will align with the overall Hazard Management Agency Readiness Program.

Equipment asset management

While MEER continues to update and maintain its Maintenance Expert (MEX) database to include all of the state's oil spill response assets, the transition to integrating MEER equipment assets with AMSA's NEMO software system has begun and will be a priority in moving forward.

Exercise Beadon

As the Hazard Management Agency for Marine Transport Emergencies (MTE) and Marine Oil Pollution (MOP) incidents, DoT is responsible for ensuring that appropriate measures and arrangements are put in place to prevent, prepare, respond to and recover from these hazards in State waters.

The Department of Transport's ability to adequately respond to a maritime environmental emergency was recently put through its paces during phase one of the annual exercise held in Fremantle on 22 and 23 June 2016. The exercise scenario was a fictional incident involving the vessel *Beadon Star*, which had run aground on Ward Reef located in the Port of Onslow.

The aim in phase one was to practice, evaluate and enhance the preparation and response arrangements for a vessel based level 2/3 maritime environmental emergency event in State waters. As this was a functional exercise, the focus in this phase was on the first operational period of a State Marine Pollution Coordinator and an Incident Management Team (IMT) responding to an incident.

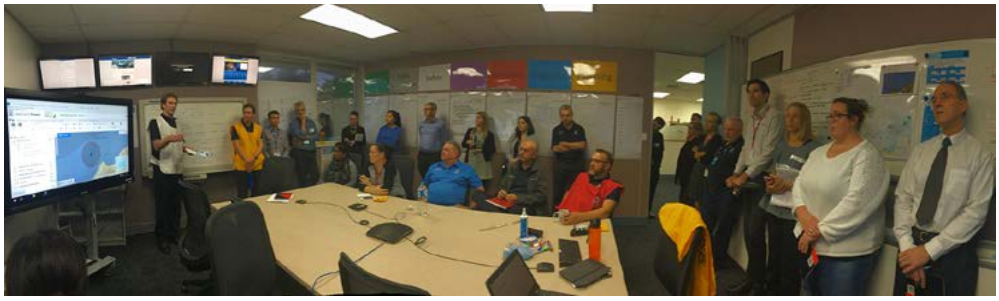
The expected outcome of phase one was to produce an Incident Action Plan which will be used as the basis for activities (including field deployment). Phase two of the exercise is expected to take place in September and will focus on preparing for what may occur in the event of a real incident.

The exercise was the first state exercise to be conducted in accordance with the proposed new WestPlan – Marine Transport Emergency (MTE) and newly endorsed WestPlan – MOP.

During phase one of the exercise, DoT Marine Safety established an Incident Control Centre at Marine House Fremantle - working in partnership with the Pilbara Port Authority and other Members of Marine Safety's Maritime Environmental Emergency Response Unit, the Maritime Incident Management Team (MIMT), port authorities, Department of Parks and Wildlife (DPaW) and Department of Mines and Petroleum (DMP) - who were allocated roles within the Incident Management Team. The General Manager Marine Safety, played the role of State Marine Pollution Coordinator, providing overall strategic management for the response.

It was with the participation of AMSA, DPaW, DMP, Pilbara Ports Authority, Kimberley Ports Authority and the DoT staff from many areas across the department that this exercise was possible. A total of 56 personnel were involved in phase one of the exercise.

Phase one of the exercise presented an opportunity for participants to debrief, share lessons learnt and identify measures that could further enhance response arrangements and capabilities. Phase two of the exercise will take place in Fremantle and Onslow.



Participants of day one (phase one) of Exercise Beadon getting a debrief at the end of the day from the Incident Controller

All the team leaders having a briefing with the State Marine Pollution Coordinator, Deputy State Marine Pollution Coordinator, Incident Controller and AMSA representatives in the Control Room

The Team Leaders of Logistics, Operations, Planning with the Incident Controller and representative from AMSA

Staff movements

In September 2015 two new positions were created in the Maritime Environmental Emergency Response Unit: Team Leader Operations, Logistics and Team Leader Planning, Public Information. Serkan Yakacikli was appointed as Team Leader Operations, Logistics in December 2015. Emily Gifford was appointed (in June 2016) as the Team Leader Planning, Public Information.

The Maritime Environmental Emergency Response Unit welcomes two new staff members: Phil Scanlan, who is currently acting Environmental Officer and Melissa Klasztorny who is currently acting Response Planning Officer.

Port activities

North Queensland Bulk Ports

On 24 May 2016, North Queensland Bulk Ports (NQBP), in collaboration with Maritime Safety Queensland (MSQ), undertook a live exercise for emergency response deployment at the Port of Mackay. The exercise was facilitated by NQBP's First-Strike Response Coordinator (and for this exercise, the On-scene Commander), Jeff Sadler, and involved MSQ representatives and NQBP's First-Strike Responder Team for Port of Mackay (11 members).

NQBP's Board members were able to observe the full exercise which also included an overview on the multi-tiered response to a marine spill and the responsibilities of NQBP to coordinate the response. The training exercise allowed for familiarisation of the equipment, question time, and the opportunity for NQBP and MSQ to work in collaboration for the benefit of environmental outcomes.


HYSTER 4.00