

4. RESPONSE SUPPORT

4.1. Oil Spill Response Atlas

4.1.1 About the Oil Spill Response Atlas

The Oil Spill Response Atlas (OSRA) identifies marine and foreshore ecosystems and biological resources for the determination of protection priorities and provides information to authorities on response options including:

- boom deployment
- chemical dispersant use
- foreshore cleanup techniques to be employed
- disposal sites for wastes generated.

4.1.2 Available Information

OSRA datasets include but are not restricted to:

- habitats, both coastal and near-shore marine
- high definition coastlines
- bathymetry
- nautical charts in scanned, georeferenced format
- scanned topographical charts for all of Australia (1:100 000)
- marine parks, reserves and national parks
- biological resources and conservation status
- fisheries and aquaculture
- coastal and marine wildlife resources
- recreational resources
- locations of National Plan equipment stockpiles
- aerial photography for selected regions; National LandSat remote sensing (colour 50m)
- oblique photography linked geographically for selected regions
- high resolution SPOT imagery for all harbours, ports and marine parks
- landmarks and features
- access (e.g. roads, airports, marinas and boat ramps)
- logistical and other infrastructure information.

4.1.3 Access to the Oil Spill Response Atlas

Access to OSRA and its tools is via the State/NT ESC, State/NT OSRA Coordinator or State/NT Chair. AMSA has holdings of the data for emergency purposes.

4.2. Oil Spill Trajectory Modelling

4.2.1 About Oil Spill Trajectory Modelling

AMSA manages the provision of the Oil Spill Trajectory Model (OSTM). The model identifies speed of movement, weathering and spreading characteristics of the oil under the influence of prevailing currents and weather conditions. This system models water movement in the coastal continental shelf region of Australia based on tides, bathymetry and wind. The movement of spilled oil is then modelled, taking into account the amount and type of oil spilled. On-scene visual observations obtained

from aircraft over flights should be used to confirm the accuracy of OSTM predictions. This information should then be entered into the model to update predictions.

4.2.2 Activation of Oil Spill Trajectory Modelling

Activation of OSTM is through the MEP Duty Officer, who can be contacted via the ERC. Requests for activation of OSTM should be accompanied by a completed OSTM Proforma (Appendix 11), which can be sent to AMSA by facsimile or e-mail (OSTM@amsa.gov.au). Predictions from OSTM can be returned by facsimile or supplied in the form of a .dbf file for incorporation into OSRA or other GIS applications. Note that at least four weeks notice must be given for OSTM runs requested as part of an exercise or for contingency planning purposes. Copies of the OSTM Proforma are also available from AMSA's web site at www.amsa.gov.au/Marine_Environment_Protection/National_Plan/General_Information/Oil_Spill_Trajectory_Model/Oil_Spill_Trajectory_Model_Request_Proforma.asp.

4.2.3 Weather and Spill Updates

During the response, periodic updates of the prevailing winds and confirmed observations of the movement of the spill should be reported, preferably by facsimile, to AMSA for inclusion, as necessary, in the continuing OSTM predictions. Additionally, AMSA obtains Bureau of Meteorology forecasts for comparative purposes.

4.3. Automated Data Inquiry for Oil Spills

The Automated Data Inquiry for Oil Spills (ADIOS) is a computer-based oil spill response tool that was developed by the US National Oceanic and Atmospheric Administration for emergency spill responders and contingency planners.

ADIOS integrates a library of approximately one thousand oils with a short-term oil fate and cleanup model, which is designed to estimate the time that spilled oil will remain in the marine environment and the amount of oil remaining.

ADIOS calculations combine real-time environmental data based on user inputs, such as wind speed and water temperature, combined with carefully researched information on chemical and physical properties of oils in its oil library. The program provides a prediction of possible ranges in the values of spill properties and oil fate. ADIOS can be accessed through the EPR Duty Officer, who can be contacted via the ERC.

4.4. Marine Oil Spill Equipment System

The Marine Oil Spill Equipment System (MOSES) is a computer database that lists the type, quantity, location, status and availability of pollution control equipment. The database contains listings of National Plan, State/NT and industry equipment available for use in response to a marine oil spill. It is also used to manage audits, maintenance and repair of AMSA owned equipment.

Procedures to gain access to equipment are outlined in part 2.11.

Copies of MOSES outputs are available in State/NT contingency plans or directly from MEP.

4.5. Charter and Hire Arrangements

4.5.1 Charter of Vessels

During an incident there may be the requirement to charter local vessels to assist in response operations. A Vessel Charter Agreement used by AMSA, Appendix 12, provides an example of an agreement, which may be amended for use by other agencies.

It is recommended that a formal agreement be used whenever there is a need for agencies to charter a vessel for use during oil pollution incidents and where the owner agrees to its use for such charter.

Whilst the IC may need to control the operation of a vessel to suit prevailing conditions and the particular circumstances of the incident, it shall be made clear that **THE NAVIGATION AND SAFETY OF THE VESSEL WILL REMAIN THE RESPONSIBILITY OF THE VESSEL'S MASTER AT ALL TIMES.**

When an owner is not prepared to accept the suggested agreement, but is prepared to make a vessel available, the charterer should ensure that:

- the vessel complies with all safety and equipment requirements; and,
- it is made clear by the charterer to the owner that the controls shall apply at all times.

All other aspects of the charter shall be the subject of local negotiation at the time of the incident.

Details of craft availability, including port and State/NT Government craft, should be shown in appropriate regional and local contingency plans.

4.5.2 Hire of Spray Aircraft

AMSA in conjunction with the AIP through its oil spill centre, AMOSC, have put in place a Fixed Wing Aerial Dispersant Capability (FWADC) for the application of oil spill dispersants. This capability has been achieved by means of a contract with Australian Maritime Resources (AMR) based in Adelaide, SA.

Based on the concept of utilising large agricultural aircraft, the FWADC is designed to complement informal dispersant spraying arrangements using helicopters, which are confined to close inshore work. The aircraft have a dispersant capability of between 1850 - 3100 litres, depending on aircraft type and model.

AMR, as the contractor, is required to have available six (6) primary aircraft on any one day. These aircraft are located at Emerald (QLD), St George (QLD), Ballarat (VIC), Tintinara or Adelaide (SA), Batchelor (NT) and Ballidu (WA). Primary aircraft activation is on the basis of a four-hour response time, i.e. available to fly within four hours of being requested to respond to an incident.

AMR are contracted to provide a Liaison Officer and aircraft Loading Crew. The Liaison Officer is a representative of AMR and is responsible for supervising AMR aircraft and Loading Crew personnel. Each Loading Crew consists of two personnel. AMR are contracted to provide sufficient Loading Crew so as not to hinder aircraft operations. The Loading Crew is responsible for dispersant loading and refuelling of AMR aircraft. AMR are contracted to provide the Liaison Officer and Loading Crew at the nominated site within twenty-four hours of Activation by AMSA.

Activation of the FWADC is through the MEP Duty Officer, who can be contacted via the ERC. The MEP Duty Officer will make an assessment of the requirement and then contact AMR, who within 30 minutes will advise AMSA of the nominated aircraft and estimated arrival time.

As the FWADC Contract does not include a stand-by arrangement, it is important to note that a decision to activate the FWADC incurs a substantial daily charge. The daily charge is in addition to charges for actual flying time. Notwithstanding the absence of a stand-by arrangement, AMSA will advise AMR, for planning purposes (not an activation), of significant incidents where dispersant application may be considered as a major response option.

It should be noted that only National Plan approved dispersants are to be used in response to any incident involving dispersant use. Full details of approved dispersant can be obtained from MEP or www.amsa.gov.au/Marine_Environment_Protection/National_Plan/General_Information/Dispersants_Information/Approved_Oil_Spill_Dispersants.asp.

Further details of the FWADC are available through MEP.

4.5.3 Surveillance Aircraft

Where the source of an incident is not identified and thus recovery of costs is unlikely, or where it is intended to claim reimbursement of costs from AMSA under the IGA arrangements, then the MEP Duty Officer or Manager, MEP must approve the use of aircraft for surveillance or investigation.

Procedures for the identification and charter of appropriate aircraft should be shown in appropriate State/NT, regional and local contingency plans.

4.5.4 Hire of Other Equipment

In a cleanup operation the hire of other equipment, including earthmoving equipment, storage, and transport will be arranged under the direction of the IC as required.

4.6. Defence Force Assistance

Requests for Defence Force assistance, including the use of military transport are to be directed to MEP.

After assessing and approving any requests, MEP will seek the assistance of the Defence Forces through EMA, Canberra. EMA will arrange for Defence Force assistance once all avenues of utilising commercial resources have been exhausted, or where timeframes are such that it is impractical to use commercial resources. Following approval of a request by the Defence Force, MEP will continue to liaise with EMA regarding transport details.

Costs associated with the engagement of Defence Force resources, will be charged against the incident and recovered from the polluter. These costs are determined by the Defence Forces in accordance with Government cost recovery directions and, therefore, may exceed normal commercial rates.

4.7. Salvage Arrangements

4.7.1 Salvage Involvement

In the event of an incident involving a damaged or disabled ship, salvage action may be needed to take the vessel in tow, refloat, reduce or stop a discharge of oil. The vessel's Master/Owner will normally appoint a salvor by signing a Lloyds Open Form Agreement. However, in cases where this does not occur, AMSA may use its powers under the Protection of the Sea (Powers of Intervention) Act 1981 in accordance with Australia's National Maritime Emergency Response Arrangement.

4.7.2 Salvage Liaison

During an incident requiring the salvage of a vessel, consideration should be given to the appointment of a Casualty Coordinator (CC). The role of the CC is to enable continuing exchange of information regarding the salvage operation between the IC, the Salvage Master and Statutory/Combat Agencies. This will enable the Salvage Master to limit briefings to one person, whilst at the same time providing for continuity in information flow. A number of trained senior AMSA marine surveyors are available to act as CCs.

4.7.3 Independent Salvage Advice

During a major casualty it may be necessary to obtain independent salvage advice. AMSA has identified suitable companies which can provide independent advice on

the salvage operation, including the appropriateness of the salvage operation. An Incident Controller or Marine Pollution Controller should seek salvage and refloat plans from a salvor to a level of detail necessary to allow the making of an informed decision.

4.8. Updating the Plan

Contingency Plans are evolving documents, and as such, require regular updating. It is recommended that all Contingency Plans be reviewed annually to take into account policy changes and experience from incidents and exercises. Regular amendments should be made to reflect changes to contacts, equipment and other details.

Minor amendments to this Plan will be issued by AMSA as they become necessary. AMSA will review the National Marine Oil Spill Contingency Plan annually. Information for updating the Plan should be forwarded on a regular basis to:

Manager
Marine Environment Pollution
Marine Environment Division
Australian Maritime Safety Authority
GPO Box 2181
CANBERRA CITY ACT 2601
Facsimile: (02) 6279 5076