



National Plan to Combat Pollution of
the Sea by Oil and Other Noxious and
Hazardous Substances

*REPORT OF THE
2000 REVIEW*

May 2001

The Hon John Anderson MP
Minister for Transport and Regional Services
Parliament House
CANBERRA ACT 2600

Dear Minister,

I have much pleasure in submitting to you the report of the 2000 Review of the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances. The Review was carried out by a Steering Committee established by the Australian Transport Council (ATC) in March 1999. Membership of the Steering Committee, which met nine times between March 1999 and April 2000, is shown in Appendix 1 to the report.

The Steering Committee recognised that the National Plan has very clear operational strengths, and when called into action has worked well in providing both timely and effective response to actual pollution incidents. Consequently, this report's first recommendation is that ATC note that the National Plan provides an effective means of dealing with oil spills in the Australian marine environment and endorse its continuation in an augmented manner consistent with the findings of the Review.

The Steering Committee is of the opinion that there is scope to enhance the future effectiveness of the National Plan in a number of areas, most significantly by developing an Inter-Government Agreements between Government participants in the National Plan and streamlining the administrative and organisational framework. The latter involves the establishment of a National Plan Management Committee to undertake strategic management of the Plan, including the setting of broad policy directions, and monitoring the provision of agreed services by National Plan participants. Priority issues to be considered by the new Committee include the development of more equitable funding arrangements, arrangements for responding to chemical spills and changes to the roles of ports, terminals and offshore facilities. The report recommends that Management Committee be supported by a National Plan Operations Group to provide guidance for operational functions.

The Steering Committee carried out its work in an effective and co-operative manner, with all members contributing constructively to its deliberations.

I would like to commend in particular the work of the Steering Committee's Executive Officer, Mr Paul Nelson, who performed a difficult task with great distinction.

Len Early
Independent Chair
National Plan Review Steering Committee
30 June 2000

- 1.1. Since 1973, Australia has had in place a national strategy to respond to marine oil spills. In 1998, this strategy was extended to chemical spills with the addition of a contingency plan known as Chemplan, and the overall arrangements are now known as the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances (the National Plan). The objectives of the National Plan are based on Australia's obligations as a signatory to the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 and a responsibility to protect natural and artificial (man made) environments from the adverse effects of oil pollution and minimise those effects where protection is not possible. The Australian Maritime Safety Authority (AMSA) is the managing agency of the National Plan, working together with the States and Northern Territory governments, other Commonwealth agencies, ports, and the shipping, oil and exploration industries, to maximise Australia's marine pollution response capability.
- 1.2. The National Plan was last comprehensively reviewed in 1993. Since then it has been generally agreed that the operational aspects of the Plan have worked well and met the expectations of all parties.
- 1.3. However, during 1998 a number of issues were raised about the operation of the Plan. A report by Thompson Clarke Shipping commissioned by the National Plan Advisory Committee (NPAC) raised a number of issues about the role of port authorities in the National Plan arrangements, particularly in view of the privatisation and corporatisation of ports in a number of jurisdictions. Several jurisdictions also raised questions about the basis on which the National Plan is funded, specifically the relative financial contributions of the parties and the adequacy of the total funding. There were also questions raised about the adequacy of the policy and decision-making forums and the need for a formal agreement between the Government parties to the National Plan.
- 1.4. In view of the significance of these issues, the Australian Transport Council (ATC) agreed that the National Plan should be reviewed to address these emerging issues and any others relating to the effective and efficient operation of the National Plan. In March 1999 a Steering Committee was formed to manage the review on behalf of ATC. The Steering Committee consisted of the States/NT and Commonwealth, the Association of Australian Ports and Marine Authorities, the Australian Institute of Petroleum, the Australian Shipping Federation, the Great Barrier Reef Marine Park Authority, and the Australian Maritime Safety Authority, with an independent Chair.
- 1.5. Two consultancy projects were commissioned as part of this Review:
 - A risk assessment to determine the likely risk profile around the coast of pollution of the sea by discharges of oil or chemicals from ships; and
 - An analysis of the management arrangements of the National Plan, particularly with regard to the roles of the parties including port operators, the financial contributions of the parties and the adequacy of policy and decision making forums.

Risk Assessment

- 1.6. During the 1990s, assessment of the risk of oil spills in Australia was based primarily on the 1991 Bureau of Transport and Communications Economics study No 70 - 'Major Marine Oil Spills - Risk and Response'. This study covered risks of spills from oil tankers, platforms and pipelines and gave results that were acknowledged at the time as potentially pessimistic. The Steering Committee agreed that greater consideration must now be taken of the impact of increasing dry bulk trades on the potential for risks, and that consequently it was timely to carry out a full risk assessment in a formalised strategic manner using the most recent data available in Australia and internationally as well as considering future trends.
- 1.7. The project outcomes indicate that there are some key areas of relatively high risk around the coast: most of the east coast of Queensland, the southwest and northwest areas of Western Australia; and the major port areas around Sydney and Melbourne. The distribution of risks between ships at sea, ports and offshore facilities indicate that ports are the major overall contributor to risk levels, as the density of ships and the frequency of operations associated with a spill risk are highest in and around ports. Ships at sea can contribute to risks around the entire coast, but at relatively low levels in any specific location due to the low density of ships throughout Australian waters. Offshore facilities are low contributors to the overall risk level across Australia, but are significant contributors to the risks in their local areas as they are concentrated into a few locations.
- 1.8. The results of this risk assessment are generally in agreement with previous studies, and provided the basis for the Steering Committee to consider the management, policy and decision making arrangements of the National Plan.

The 37 500 dwt BHP-chartered bulk carrier *Iron Baron* grounded on Hebe Reef in the approaches to the Tamar River in northern Tasmania at 7.30 pm on Monday 10 July 1995.

The vessel lost in the region of 325 tonnes of heavy fuel oil, much of which affected foreshores along the Tamar River estuary and some beaches to the east of Hebe Reef.



The National Framework

1.9. The Review demonstrated that the National Plan has some very clear operational strengths, and when called into action has worked well and provided both timely and effective response to actual pollution incidents. However, the Steering Committee is of the opinion that there is scope to enhance the future effectiveness of the National Plan by:

- Introducing more collaborative strategic decision-making by the major stakeholders in the National Plan;
- Underpinning the National Plan with a formal inter-governmental agreement;
- Funding the National Plan more equitably with contributions from actual and potential polluters;
- Clarifying the role of ports and other fixed installations that are potential sources of marine oil and chemical spills; and
- Addressing a number of concerns identified during the review to improve the effectiveness of arrangements for responding to chemical spills.

Recommendation 1: Ministers note that the National Plan provides an effective means of dealing with oil spills in the Australian marine environment and endorse its continuation in an augmented manner consistent with the findings of this Review.

1.10. There was strong support for AMSA to continue as manager of the National Plan. However, it was recognised that the current National Plan Advisory Committee had largely evolved into a forum to address operational issues, and was not providing an appropriate level of strategic oversight, policymaking and funding direction for the National Plan. Accordingly, a new National Plan Management Committee should be established to provide strategic oversight of the Plan, including its management, oversight the formal arrangements between key stakeholders, and provide advice to ATC on the collection and distribution of funds for the National Plan, including contributions from the Commonwealth, States/NT and industry.

Recommendation 2: A National Plan Management Committee be established to undertake strategic management of the Plan, including the setting of broad policy directions, recommendations to Ministers on funding arrangements, and monitoring the provision of agreed services by National Plan participants. The Management Committee should have an independent Chair and comprise one representative from the Commonwealth, each of the States, the Northern Territory, the Australian Maritime Safety Authority, the Great Barrier Reef Marine Park Authority, the Association of Australian Port and Marine Authorities, the Australian Institute of Petroleum, the chemical industry, and the Australian Shipping Federation.

- 1.11. The new Management Committee should be supported by a National Plan Operations Group, which would assume responsibility for the ongoing, day to day operational aspects of the Plan.

Recommendation 3: A National Plan Operations Group be established to provide guidance for National Plan operational functions. The Operations Group comprise representatives of each of the key operational stakeholders of the National Plan, and be chaired by AMSA in recognition of its role as manager of the National Plan.

- 1.12. The Review concluded that the existing “Administrative Arrangements Applicable to Marine Pollution Events”, endorsed by ATC Ministers, do not constitute a formal agreement between the parties on obligations for, and funding of, maintenance of a marine spill investigation and response capacity. The Steering Committee agreed that an Inter-governmental Agreement (IGA), formalised at the level of the Australian Transport Council, would provide the basis for establishing the broad framework for the future of the National Plan. An IGA, building on the existing administrative arrangements, would ensure that all Government agencies associated with the Plan are clear about their own responsibilities for marine spill preparedness and response. Industry would not be a party to the IGA, and separate arrangements with all affected industry sectors would be necessary.

Recommendation 4: The National Plan be under-pinned by an Inter-Governmental Agreement formalised at Australian Transport Council level and by separate agreements between the National Plan Manager (AMSA) and the various industry stakeholders.

- 1.13. One of the main sources of concern identified during the consultation process was a perceived lack of clarity as to roles and responsibilities of the parties to the National Plan, including equitable funding arrangements. The existing Administrative Arrangements do not attempt to describe the roles and operational responsibilities of the various stakeholders under the National Plan, other than to set out the basic divisions of responsibility between the Commonwealth and the States/NT under the Offshore Constitutional Settlement; nor do they specify who is responsible for funding National Plan activities.

A particular concern raised by a number of stakeholders was that, in the absence of clearly defined roles and obligations, the expectations on the States with regard to resources and funding were unrealistic and inequitable. The proposed Inter-Governmental Agreement and the separate agreements with industry stakeholders would address this issue in respect of Government and industry National Plan participants. However, there would also be value in a mechanism to spell out the roles and responsibilities of all stakeholders. Any such mechanism could focus on operational matters.

Recommendation 5: The National Plan Management Committee develop, implement and monitor mechanisms to ensure that the roles and responsibilities of the stakeholders are clearly communicated to and understood by all stakeholders.

- 1.14. Consultations undertaken during the Review confirmed that the operational aspects of the National Plan are working well, and that the National Plan currently provides an effective means of dealing with oil spills in the Australian marine environment. On this basis the Steering Committee concluded that the current aggregate level of National Plan funding in relation to oil spill preparedness is likely to be broadly appropriate. The Steering Committee agreed that in principle potential polluters should be required to contribute to National Plan funds an amount related to the risk they present of marine oil or chemical spills, and actual polluters should be required to meet the response costs to the National Plan of any spills they cause.

Recommendation 6: That the following principles form the basis on which the National Plan is funded:

- the potential-polluter-pays principle, applied to preparedness;*
- the polluter-pays principle, applied to pollution response; and*
- the potential-polluter-pays principle applied to pollution response where the polluter is not identified, or costs are not recoverable.*

- 1.15. Consistent with the potential-polluter-pays principle, the Steering Committee agreed that owners/operators of ports, terminals, rigs and platforms should be required to ensure a first-strike capacity is provided to respond to oil spills within their boundaries or resulting directly from their activities. The underlying criteria for determining this capacity, is that it must be risk reflective in relation to each specific operation. This capacity may be provided directly by the terminal, port, rig or platform or purchased by the operator as a service by a separate organisation. The Steering Committee agreed that this first strike capacity should generally involve the provision of Tier 1 (up to 10 tonnes) type spill equipment and capacity for its effective operation. Ports that already have a statutory requirement to maintain an oil spill response capability, such as those in New South Wales, would not be affected by these revised arrangements.

- 1.16. Relevant State/NT Governments, through their State Committees and with the relevant terminal, port, rig or platform, should determine the required first strike capacity for these operations, having regard to individual circumstances.

Recommendation 7: States/NT ensure, following consultation with the National Plan Operations Group and terminal operators, that all oil/chemical terminals within their jurisdiction maintain, either directly or indirectly, an appropriate preparedness and response capacity consistent with the level of risk posed by the terminal.

Recommendation 8: States/NT ensure, following consultation with the National Plan Operations Group and port operators, that each port within their jurisdiction maintains, either directly or indirectly, an appropriate preparedness and response capacity consistent with the level of risk within the port.

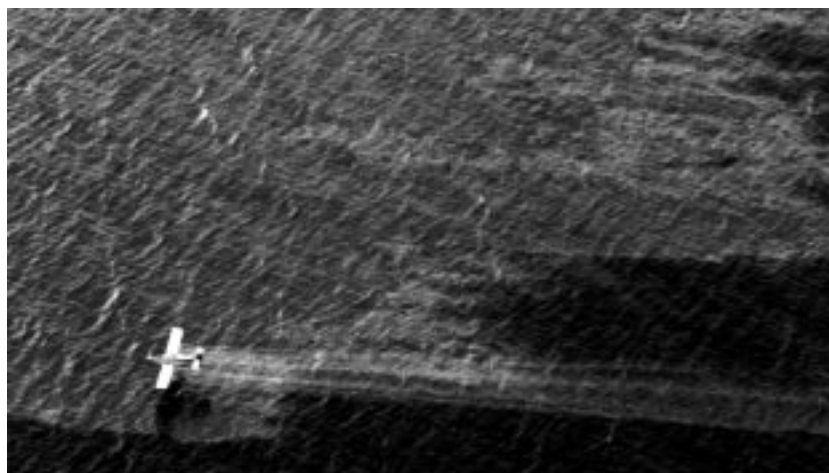
Recommendation 9: States/NT ensure, following consultation with the National Plan Operations Group and rig and platform operators, that all rigs and platforms within their jurisdiction maintain, either directly or indirectly, an appropriate preparedness and response capacity consistent with the level of risk posed by those structures.

Recommendation 10: States/NT ensure that any arrangements put in place to provide for participation by Ports in National Plan activities outside port limits are undertaken on a commercial basis, where such participation is not separately mandated by legislation.

- 1.17. In respect of these consultations, the National Plan Operations Group should consider the development of principles to ensure compatibility of equipment and to enable a consistent approach to be taken by each jurisdiction.
- 1.18. The Steering Committee reviewed the arrangements for funding of the National Plan, including the relative financial contributions of the parties. However, the Committee recognised that it did not have (and could not generate in the time available) sufficient data to enable any realistic assessment as to whether existing contributions from potential polluters adequately reflect the risk they create. To consider this issue and make recommendations on any practical corrective measures, data would need to be collected relating to the risk of spills from those sectors not currently contributing to the National Plan, in particular chemical tankers, small fishing vessels and recreational craft, and government owned or operated vessels on non-commercial service. Such analysis was beyond the scope and time available for the current review. Accordingly, the Steering Committee agreed that the proposed National Plan Management Committee should undertake this task as a priority.

Recommendation 11: The National Plan Management Committee consider collection of appropriate data as a basis for a detailed financial analysis to determine the extent to which current National Plan funding arrangements reflect the “potential polluter pays principle” and report to ATC Ministers on any necessary corrective action.

On 28 June 1999, the *Chandra*, a 148 500 dwt oil tanker, having completed discharge of its cargo of Oman crude oil, was preparing for departure from the Port Stanvac single buoy mooring in the Gulf of St Vincent, South Australia. During this procedure, the discharging hose parted at or near the breakaway coupling. Approximately 230 cubic metres of oil had leaked into the sea.



1.19. To fully comply with the funding principles set out above, all potential polluters should contribute to preparedness an amount broadly commensurate with the level of risk they pose for marine spills. Subject to the outcome of recommendation 11, the National Plan Management Committee should consider the options available to align National Plan funding more closely with the “potential polluter pays principle”.

1.20. The Steering Committee concluded that not all potential polluters currently contribute directly to preparedness. In particular, there is currently no contribution from Commonwealth and State owned or operated vessels on non-commercial service, including defence force vessels, both Australian and foreign, and land-based risk sources.

Recommendation 12: The Commonwealth provide a contribution toward the cost of preparedness which is commensurate with the risk of spills from government owned or operated vessels on non-commercial service, including defence force vessels, both Australian and foreign.

Recommendation 13: State/NT authorities consider recovering a contribution from any identified potential land-based sources of marine pollution.

1.21. The Steering Committee also recognised that, while chemical tankers contribute to the existing levy based on their carriage of bunker fuel oil, there is no contribution in respect of the chemicals they carry. However, the Steering Committee has no data on the materiality of the risk of chemical spills - the risk may be so low that it is not worthwhile trying to collect a contribution towards preparedness for chemical spills.

Recommendation 14: The National Plan Management Committee should examine whether the funding of Chemplan should be aligned more closely with the funding principles agreed during this Review and make any appropriate recommendations to ATC.

1.22. The Steering Committee recognised that while Commonwealth and State/NT Governments contribute to the National Plan, the contributions by States/NT from general revenue are not fully in accord with the funding principles that the Review has developed. The Steering Committee agreed that it is likely that the States/NT have been financially over-contributing to the funding of the National Plan. Should the States/NT not make this contribution, there would be a funding gap.

Recommendation 15: The National Plan Management Committee examine the extent to which government contributions are consistent with the risk posed by potential polluters within their jurisdictional control and make any appropriate recommendations to ATC. Consideration should be given to including the option of all governments, including the Commonwealth, sharing on a more equitable basis the funding gap currently being paid for by the States/NT. In the event that there is any additional revenue or cost savings, consideration should be given to distributing this among the current funding contributors on an equitable basis.

- 1.23. The Steering Committee noted comments during the review that indicated the contingency plan for responding to chemical pollution incidents in the marine environment, known as Chemplan, is currently not considered adequate by some stakeholders. Issues identified included a general lack of awareness of Chemplan, a lack of strategic direction, limited training and uncertain funding arrangements. The Steering Committee agreed that these issues be addressed as a matter of priority by the National Plan Operations Group.

Recommendation 16: The National Plan Operations Group examine as a matter of priority the issues related to chemical spill response identified during the review to ensure that Chemplan provides an effective means of dealing with chemical spills in the Australian marine environment.

- 1.24. The Steering Committee agreed that it is in the interest of all parties to maintain the current successful National Plan arrangements until any changes have been successfully implemented. The National Plan Advisory Committee should complete current outstanding business as far as possible before the National Plan Management Committee takes over strategic National Plan management. The Steering Committee has outlined a suggested implementation agenda and timetable for transition to the new arrangements.

Recommendation 17: The Australian Transport Council endorse the recommendations in this report and immediately appoint an interim National Plan Management Committee to oversee their implementation by December 2001.

- 1.25. The Steering Committee recommends that the report be given wide circulation to all interested Governments, Parliaments, industry and environmental agencies.

2.1. Overview History of the National Plan

- 2.1.1. The National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances (National Plan) has been in operation since 1972. It is a cooperative arrangement between the Commonwealth, States/NT and the oil and shipping industries and embraces a range of preparedness and response capabilities and activities around Australia. The National Plan aims to ensure that:
- any immediate threat to marine and coastal environments is contained and minimised through rapid and effective deployment of resources; and
 - any necessary environmental response including wildlife clean-up is undertaken expeditiously and effectively.¹
- 2.1.2. The geographical area covered by the National Plan includes all Australian Territorial Seas, Exclusive Economic Zone and the High Seas where a spill has the potential to impact on Australian interests.
- 2.1.3. AMSA was established by the Commonwealth Government in 1991 under the *Australian Maritime Safety Authority Act 1990*. AMSA commenced operations as a government business enterprise (now a self-funded government safety agency) on 1 January 1991. One of its objectives is to enhance efficiency in the delivery of safety and other services to the Australian maritime industry. One of AMSA's defined functions in the Act is "to combat pollution in the marine environment". AMSA is able to discharge this responsibility by managing the National Plan.
- 2.1.4. The National Plan is funded by a levy applied by the *Commonwealth Protection of the Sea (Shipping Levy) Act 1981* and the *Protection of the Sea (Shipping Levy Collection) Act 1981*. The Acts apply to vessels which are not less than 24 metres in length, and having at least 10 tonnes of oil on board, either as fuel or cargo. Exempted vessels include vessels owned or operated by defence forces (Australian and foreign), government vessels on non-commercial service and vessels calling into Australian ports in emergency situations. Regulations made under the legislation have set the current rate of levy at 3.3 cents per net registered ton per quarter, and have also set the minimum levy at \$25 per quarter. The levy was first introduced on 1 October 1973, the date on which the National Plan became operational. The rate of levy is reviewed annually and may only be

¹It should be noted that compensation for oil spill damage, including clean up costs, is addressed by the relevant international oil spill compensation schemes and the insurance for ships normally provided by Protection and Indemnity Clubs. These arrangements generally include coverage for a broad range of issues such as preventive measures, environmental restoration, and pure economic loss. An example of pure economic loss is a compensation payment to fishing vessel or hotel operators who suffer loss of income following an oil spill incident. The National Plan was established to reimburse Australian response agencies for only those costs directly associated with the oil spill response, where such costs cannot be recovered from the polluter or the polluter cannot be identified.

changed when recommended by the Minister for Transport and Regional Services. These funds are administered by AMSA and applied to a range of activities to support the National Plan.²

- 2.1.5. Other than for collection of the levy, there is no specific legislative support for the National Plan. Instead, the National Plan is underpinned by Administrative Arrangements endorsed by Australian Transport Council Ministers. AMSA is assisted in managing the Plan by the National Plan Advisory Committee (NPAC), which comprises representatives from Commonwealth and State agencies, the oil industry, the ports association, and the shipping industry.
- 2.1.6. The Australian Marine Oil Spill Centre (AMOSC), a subsidiary company of the Australian Institute of Petroleum, operates the oil industry's major oil spill response facility. These resources are integrated into the National Plan under an agreement between AMOSC and AMSA.
- 2.1.7. The jurisdictional agreements reached in the Offshore Constitutional Settlement (OCS) are the basis for the allocation of operational responsibilities associated with the National Plan. In essence this means that the States/NT have been assigned operational responsibility for State waters (ie. up to the three nautical mile limit, measured from territorial sea baselines), and the Commonwealth, through AMSA, responsibility beyond the three nautical mile limit. Special arrangements exist within the Great Barrier Reef Marine Park (GBRMPA), which is mainly Commonwealth waters, whereby the Queensland Government has assumed operational responsibilities by agreement with the Commonwealth.
- 2.1.8. However, it should be noted that the OCS is essentially a jurisdictional agreement and not a funding agreement. Funding responsibilities have not been discussed or agreed in either the OCS or subsequent reports, which have considered divisions of responsibilities.
- 2.1.9. The National Plan and its components at State/NT and industry level have been reviewed on several occasions since 1972, the last major review involving all stakeholders being concluded in 1993 (see Review of the National Plan to Combat Pollution of the Sea by Oil - Report of the High Level Working Party 1993 - ISBN 0 644 29735 2). Attachment A is a timeline of events summarising the evolution of the National Plan.
- 2.1.10. The 1993 Review made 30 recommendations covering a broad spectrum of National Plan policy, administration and operations. The changes recommended highlighted the need to concentrate on effective communications, training in oil spill response and an appropriate level of equipment together with an effective maintenance program.

²For reasons of administrative simplicity when the levy was first initiated in 1973 the parties agreed that the Commonwealth would legislate and collect a single levy rather than have multiple levies by all jurisdictions.

2.2. Funding and Cost recovery

- 2.2.1. The 1993 Review discussed the manner of funding of the National Plan, and considered whether the levy on ships was still appropriate and whether any other sources of funding could be identified. While it was noted that the revised National Plan was intended to cover non-ship as well as ship-sourced pollution, it was agreed that an expanded revenue base was not necessary as any additional costs from covering non-ship sourced pollution were likely to be marginal and would almost certainly be fully recoverable. The existing levy on certain commercial shipping using Australian ports was seen as sufficient.
- 2.2.2. International arrangements exist that will generally ensure that the cost of combat and clean up of spills originating from oil tankers will ultimately be recovered. These arrangements were updated with the entry into force of international Protocols in 1996. There are currently no such mandatory obligations in respect of other types of vessels, although Australia is working with a number of countries at the International Maritime Organization to fill this perceived gap in international law.
- 2.2.3. However, ships operating in Australian waters are also generally covered by general liability regimes operated by Protection and Indemnity (P&I) Clubs. The oil pollution coverage available under these regimes is considerable, and may amount to more than \$500 million for a single incident. The ability to utilise this cover relies on the ability to identify the polluter and to prove that the polluter has appropriate insurance cover. Pending the development of new international arrangements, the Commonwealth is developing legislation that will require all ships visiting Australian ports to have proof of insurance with a P&I Club or equivalent arrangement.

2.3. Recent Developments

- 2.3.1. Since the 1993 Review, there have been a number of changes to both the National Plan and the context within which the Plan operates. The key changes are outlined below.

Chemical Spill Response Plan

- 2.3.2. The 1993 Review recommended that AMSA, in conjunction with interested parties, conduct a review into the requirements to respond to chemical spills from ships. A working group, including representatives from government and the chemical and shipping industries, was formed and developed a contingency plan that was endorsed by ATC Ministers in April 1998.
- 2.3.3. The purpose and objective of this contingency plan, known as Chemplan, is to provide a pattern of coordinated and integrated management by agencies of the Commonwealth, State, local governments and industry to pollution involving chemicals and hazardous substances.

The OPRC Convention

- 2.3.4.** In May 1995, the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC) entered into force both internationally and for Australia. The purpose of this Convention is to provide a global framework for international co-operation in combating major incidents or threats of marine pollution. Parties to the convention will be required to establish measures for dealing with pollution incidents, either nationally or in co-operation with other countries.
- 2.3.5.** On the basis that Australia's National Plan arrangements would meet the obligations imposed by the OPRC Convention, Australian acceptance of the OPRC Convention was approved by the 83rd Australian Transport Advisory Council in October 1991. The shipping and oil industries, along with port authorities, supported the Convention. The then Minister for Shipping and Aviation Support obtained agreement from the relevant Federal Ministers to Australian acceptance.
- 2.3.6.** In March 2000 IMO adopted a Protocol to the OPRC Convention, the Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000 (HNS Protocol). Like the OPRC Convention, Parties to the HNS Protocol will be required to establish measures for dealing with pollution incidents, either nationally or in co-operation with other countries. The effectiveness of the existing Chemplan arrangements will be important in the context of this Protocol.

Oil Industry contribution to the National Plan

- 2.3.7.** Most major oil companies own and maintain oil spill response equipment at all their operational facilities, including offshore exploration and production facilities, oil-loading facilities, refinery ports and outports. Each company makes its equipment and technical personnel available to other oil companies under mutual aid arrangements.
- 2.3.8.** The establishment of the Australian Marine Oil Spill Centre (AMOSC) by the oil industry in 1990 was a particularly important development. AMOSC, a subsidiary company of the Australian Institute of Petroleum, operates the oil industry's major oil spill response facility at Geelong. AMOSC coordinates the oil industry's mutual aid arrangements and the participation of the oil industry as an integral part of the National Plan. However not all oil industry organisations are members of or participate in the AMOSC arrangements.
- 2.3.9.** Through a formal agreement between AMOSC and AMSA, some oil companies' equipment and the equipment managed by AMOSC, together with technical personnel, is available for hire by AMSA (and therefore use by all jurisdictions) on behalf of the National Plan.

- 2.3.10.** The declaration of the 200 mile Australia exclusive economic zone (EEZ) in August 1994 means that the Commonwealth has assumed an obligation under international law to undertake certain actions relating to this area or else relinquish the claim. The Commonwealth is carrying this out in a number of ways including the implementation of Australia's Oceans Policy, released in December 1998. In Australia's Oceans Policy the Commonwealth refers to the National Plan as part of its activities in waters under its control and states that it 'will continue to support ... the National Plan'.
- 2.3.11.** The arrangements with respect to the relative jurisdiction and responsibilities of the States/NT and the Commonwealth have changed since the inception of the National Plan. Whereas the States/NT have responsibilities which extend out to the 3 nautical mile limit, Commonwealth responsibilities now extend out to the 200 mile limit.

2.4. The Need for a Review

- 2.4.1.** During 1998 a number of important issues were raised in regard to the operation of the National Plan. In particular, the 1998 Thompson Clarke Shipping report commissioned by NPAC raised a number of issues about the role of port authorities in the National Plan arrangements, particularly in view of the corporatisation/privatisation of previously Government owned port authorities and other ports in a number of jurisdictions. The Report made 22 recommendations, with 19 recommendations being accepted for implementation by NPAC and two rejected. The remaining primary recommendation was referred to the Marine and Ports Group for consideration as part of this review. The Primary Recommendation from the Thompson Clarke Shipping Report proposed that consideration be given to a number of issues, including:
- funding and resourcing of effective pollution response arrangements in States/NT;
 - response arrangements in coastal waters outside the jurisdiction of ports; and
 - the appropriateness of ports having statutory authority for pollution response.
- 2.4.2.** In the development of the National Plan and for most of its operation the vast majority of ports around Australia have been owned and operated by State/NT Governments as port authorities. For most of that period, ports were seen by governments as instruments of Government policy as well as, in some cases, sources of general revenue. This has changed following corporatisation and privatisation. The National Plan arrangements generally envisage the ports as providing a significant amount of the expertise and labour requirements for combating an oil spill.

Historically, ports have generally been assigned responsibilities for acting both within their own port waters, and often for significant areas of water up and down the coastline outside their port boundaries (but within three-mile coastal

waters). Corporatisation and restructuring of ports by State Governments over the last five years has not always taken into account these arrangements. Their reduced capacity to respond to oil spills as a result of the contracting out of previously managed activities and the downsizing in the number of port employees also appears not to have been considered. Significantly, at least one port authority/corporation does not believe that under its embodying legislation it has the responsibility to respond to pollution incidents.

- 2.4.3. In addition to issues related to ports, several jurisdictions also raised broader questions about the basis on which the National Plan is funded, specifically the relative financial contributions of the parties and the adequacy of the total funding. The Thompson Clarke Shipping report noted a significant variation in funding of marine pollution preparedness activities by the responsible State/NT authorities. It must be recognised that States/NT make a significant contribution to the National Plan through both direct and indirect contributions not always reimbursed from National Plan funds.
- 2.4.4. The costs of National Plan equipment, storage and maintenance is subject to Loan Agreements between AMSA and the States/NT. However, in practice it is most commonly the ports, which increasingly are either privately owned and operated or are operated as commercial entities, that meet these storage and maintenance costs.
- 2.4.5. There were also questions raised about the adequacy of the policy and decision-making forums and the need for a formal agreement between the Government parties to the National Plan to set out the responsibilities and accountabilities of the Government parties.
- 2.4.6. In view of the significance of these issues, the Australian Transport Council (ATC) agreed that a Review proposed for 2003 be brought forward and the National Plan be reviewed to address these emerging issues and any others relating to the effective and efficient operation of the National Plan. Attachment B sets out details of the Review process, including Terms of Reference and a listing of participants.

3.1. Risk Assessment

3.1.1. The first consultancy project commissioned as part of this Review was a risk assessment to determine the likely risk profile around the coast of pollution of the sea by discharges of oil or chemicals from ships. The Steering Committee commissioned Det Norske Veritas to review and report by location on the level of risk of pollution of the sea, coastline and ports of Australia by oil and other noxious and hazardous substances, taking into account:

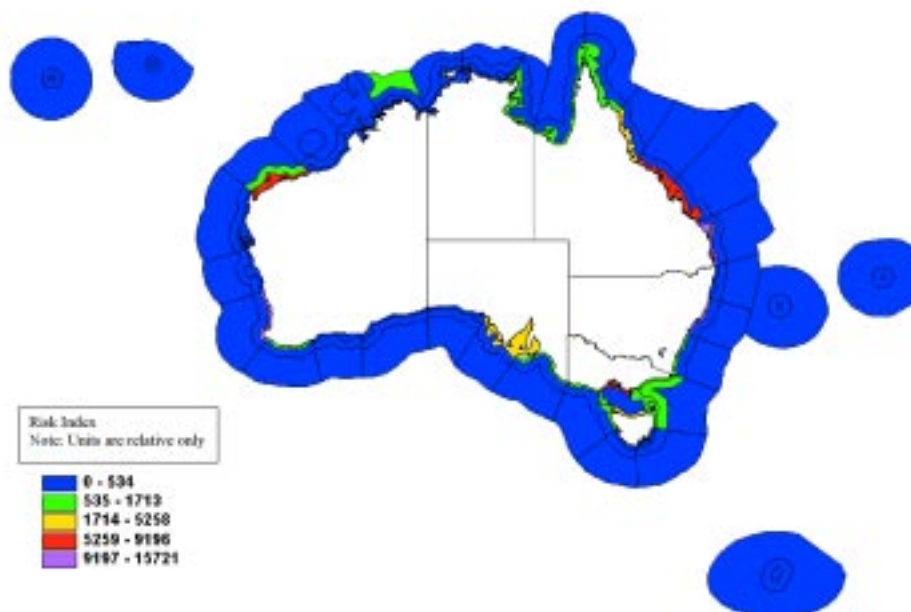
- environmental sensitivity;
- industries (eg fishing, tourism) which would be most adversely affected ecologically or financially by a spill;
- commercial cargo shipping size, frequency, trading patterns and amounts of oil carried as bunker fuel;
- oil/chemical tanker frequency, sizes, shipping patterns and quantities shipped;
- properties of oil/chemicals shipped as cargo;
- type, density and movement of shipping including concentration of fishing vessels and tourist vessels;
- areas that pose a high level of difficulty to safe navigation;
- changes in the operation and construction of ships during the 1990's, such as the introduction of double hulls, amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), International Safety Management Code, etc;
- amount and properties of oil produced offshore and transported by pipeline;
- location of offshore production and pipeline facilities;
- extent of offshore exploration drilling; and
- future trends, including proposed new ports and projected changes to trading patterns.

3.1.2. The outcomes of this project are set out in Attachment 3. The following tasks were carried out:

- consultation with stakeholders to obtain opinions and identify issues and information sources;
- review of previous relevant work and evaluation of historical incident data;
- gathering of data required by the risk model and development of risk model; and
- application of risk model and production of results for Australian ports and waters.

- 3.1.3. The risk model calculates the frequency, size and location of large (>10 tonnes) accidental spills of crude oil, refined products, bunker fuel and bulk chemicals. Spill scenarios are modelled for ships in transit, ships in port waters, ships at berth, transfer operations at sea and at berth, and all offshore facilities. The risk model uses actual Australian operational data from 1998 on shipping, port and offshore activities to calculate risks based on historical accident rates from around the world. Australian historical spill frequencies are then used to check if the results of the predictive model are similar to Australian historical experience. Australian historical spill frequencies are not used directly in the model as there is insufficient data in the necessary format, as Australia has had relatively few large spills on which to base a statistical model.
- 3.1.4. In the risk model, the waters around Australia were divided into regions around the coast, and each region further divided into near-shore, intermediate and deep sea subregions. The model calculated a Risk Index for each subregion, by combining the predicted frequency and average size of spills from all sources in each subregion, with a simple environmental sensitivity factor taking into account the vulnerability and importance of the main environmental resources in each subregion.
- 3.1.5. The overall Risk Profile for Australia is shown in Figure 1 below. This shows the geographical distribution of the Risk Index from all spills over 10 tonnes for all ships at sea, port operations and offshore facilities included in the model. Higher risk areas (where frequency, spill size and environmental sensitivity are all likely to be higher) are shown as magenta, with progressively lower levels of risk being shown as indicated in the legend, down to the lowest category of risk (presented by the blue areas).

Figure 1
Risk profile from
all spills greater
than 10 tonnes for
all sources of
spills



Note that the Risk Index represents the overall risk in any subregion, and variations of the risk level across a subregion are not shown. Further maps and numerical results from the risk model are included in the main consultant's report, for example maps showing the total frequency of spills exceeding different sizes, and a map of the environmental sensitivity in each subregion. Results are generated and analysed for all sources considered, for each of the three industry sectors (offshore, ports and ships at sea) separately, and for individual contributors in each sector.

- 3.1.6.** The Risk Profile indicates that there are some key areas of relatively higher risk from larger oil spills. These are most of the East Coast of Queensland, the Southwest and Northwest areas of Western Australia and the major port areas around Sydney and Melbourne. This generally reflects the risk profile used by the National Plan since 1993. Relative to these risks, chemicals overall are a minor contributor to risk due to the low level of traffic and the high integrity of chemical tanker hull design. However, it must be recognised that the environmental hazards associated with chemicals can vary significantly, and even a small spill of a highly toxic chemical could have serious consequences.
- 3.1.7.** Further details of this project are at Attachment C. In accordance with one of the recommendations in the risk assessment report, the Steering Committee arranged for a peer review. This was carried out by the UK-based company AEA Technology. The peer review found that the study provides a good assessment of the potential frequency of pollution in Australian waters. However, AEA Technology questioned some aspects of the methods used to determine risks. Det Norske Veritas advised that the risk calculation is based on simple sensitivity and consequence considerations, and that these areas could be enhanced if desired. For the specific decision-making purposes required, and given the constraints of the project, DNV advised that the approach taken is fit for purpose.

3.2. Management Analysis

- 3.2.1.** The Steering Committee commissioned ACIL Consulting to:
- review the responsibilities arising from the international and national statutory basis for the National Plan and the resulting obligations and responsibilities which arise on the various parties with respect to the National Plan;
 - review and make recommendations on the appropriateness and adequacy of any formal and informal agreements between the parties, both Government and non-Government, which underpin the National Plan and the resulting obligations and responsibilities which arise on the various parties;
 - critically review and make recommendations on the overall adequacy of the National Plan arrangements to mount an effective and appropriate response to an oil spill around Australia, including the outcomes of the Thompson Clarke Shipping Report and subsequent decisions;
 - review the tri-partite basis of the National Plan and make recommendations on the appropriateness and adequacy of the existing arrangements for delivering on and managing the National Plan and the statutory basis of the various elements of the structure; and

- review and make recommendations on the appropriateness and adequacy of the financial contributions of the parties to the National Plan given the roles and responsibilities of the parties and the total scope of the National Plan, the Commonwealth's Oceans Policy and other related Commonwealth and State/ NT policies.

3.2.2. ACIL Consulting met with members of the Review Steering Group, and of the National Plan Advisory Committee (NPAC) to obtain high level, preliminary, organisational views on the adequacy of current National Plan arrangements. ACIL then prepared a Discussion Paper summarising the key issues to be canvassed and addressed during the course of the Review. This Discussion Paper was circulated to a wide range of stakeholders prior to the conduct of a second, more extensive consultation phase. In all, ACIL spoke with 63 organisations. A number of stakeholders also provided written submissions to the Review.

3.2.3. The Report prepared by ACIL highlighted a broad range of issues including the need for an improved management structure underpinned by formal agreements, improved chemical response arrangements, clarifying the role of ports and proposed funding principles. This Report formed the basis of the Steering Committee's consideration of these issues and subsequent recommendations.

Following the oil spill from the *Laura D'Amato* in Sydney Harbour on 3 August 1999 two inquiries were undertaken to investigate the circumstances surrounding the cause of the oil spill.

One investigation was established by the NSW Minister for Transport under the NSW *Marine Pollution Act 1987* to determine the reasons for the spill and whether any corporation or individuals were responsible for the spill and should be prosecuted.

The second investigation undertaken by the Marine Incident Investigation Unit (MIIU) in the Australian Transport Safety Bureau was established under the provisions of the Navigation (Marine Casualty) Regulations, of the *Navigation Act 1912*. The purpose of the MIIU investigation was to identify the factors contributing to the incident so as to assist in preventing similar incidents in the future.



4.1. Overview

4.1.1. The National Plan is an overall system for managing preparedness for and response to oil and chemical spills in the marine environment in Australia. This encompasses any activity, whether conducted by governments, ports, industry or other stakeholders, that contribute to the maintenance of a capacity to respond to oil or chemical pollution in the marine environment from land or sea (see Figure 2). The National Plan includes separate contingency plans for oil and chemicals, supported by State contingency plans, regional contingency plans, contingency plans for ports and terminals, and vessel response plans.

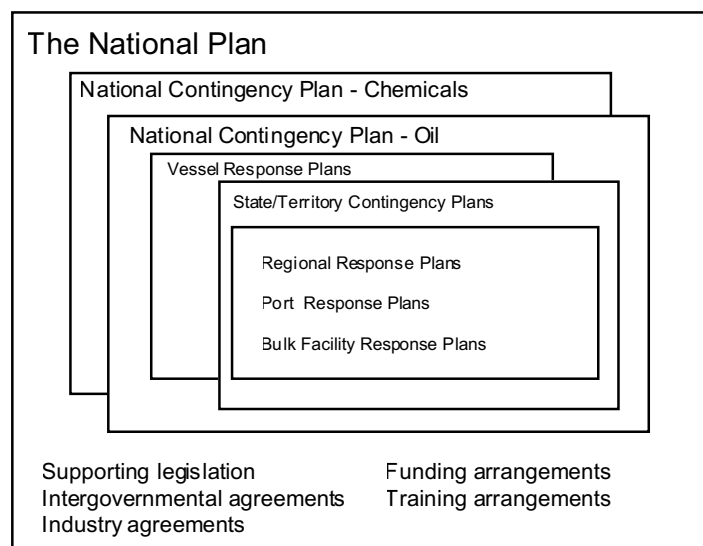
4.1.2. The scope of National Plan activities include:

- land based sources of oil and chemical pollution;
- investigation of all reports of oil and chemical spills in the marine environment, with remedial action as appropriate;
- provisions for oiled wildlife rescue, recovery and rehabilitation; and
- post-spill monitoring activities provided that the need for such activities arises directly from the impacts of marine pollution damage. Program scope, implementation and budget are agreed in advance by the relevant State/NT authority and the National Plan Manager.

4.2. The National Oil Spill Plan

4.2.1. The National Oil Spill Plan has a notional capacity to respond to an oil spill of up to 21,000 tonnes with equipment stockpiled in Australia. A larger spill could require additional resources from overseas.

Figure 2
The National Plan



4.2.2. The distribution of National Plan equipment is broadly consistent with the risk profile outlined above. The National Plan holds a wide range of response equipment at 37 locations around the Australian coast, including all major ports. Types of equipment included oil spill control booms of varying dimensions, self-propelled oil recovery vessels, static oil recovery devices and sorbents. This is complemented by equipment held by port authorities, individual oil and chemical companies and by the Australian Marine Oil Spill Centre (AMOSC) stockpile in Geelong. Equipment can be rapidly deployed to the scene of a spill. A study conducted in 1996 indicated that appropriate response equipment could be delivered on site around Australia within approximately 24 hours, even to remote locations such as Gove, Northern Territory and Port Walcott, Western Australia.

4.2.3. The consultation process conducted by ACIL found that the National Plan has some very clear strengths, including:

- a history of generally willing and effective cooperation between key players from both government and industry;
- an informal network of experienced and committed individuals whose personal actions have helped to maintain a high level of response capacity in many locations;
- the generally well-regarded role played by AMSA as the ‘competent national authority’, particularly in providing advice and expertise in the context of exercises and incidents; and
- the considerable financial commitment to marine pollution preparedness presently made by the oil and large shipping industry.

4.2.4. When called into action, the National Plan has worked well and has provided both timely and effective response to actual pollution incidents.

Recommendation 1: Ministers note that the National Plan provides an effective means of dealing with oil spills in the Australian marine environment and endorse its continuation in an augmented manner consistent with the findings of this Review.

4.2.5. However, the Steering Committee is of the opinion that there is scope to enhance the future of the National Plan by:

- introducing more collaborative strategic decision-making by the major stakeholders in the National Plan;
- underpinning the National Plan with a formal inter-governmental agreement;
- funding the National Plan more equitably by contributions from actual and potential polluters;
- clarifying the role of ports and other fixed installations that are potential sources of marine oil and chemical spills; and
- addressing a number of concerns identified during the review to improve the effectiveness of arrangements for responding to chemical spills.

4.3. More Collaborative Decision Making

- 4.3.1.** The AMSA Board is formally responsible for the allocation of National Plan funds collected by the pollution levy. The Australian Transport Council (ATC) established the National Plan Advisory Committee (NPAC) following the 1993 Review of the National Plan to provide advice to the AMSA Board on the focus, policies and priorities of the National Plan.
- 4.3.2.** The AMSA Board has been obtaining and following advice from NPAC. However under the current arrangements, the issues that have required consideration by NPAC have been mainly operational, such as training, equipment acquisition/maintenance/monitoring policies, exercising contingency plans, consideration of the draft budget and other issues that affect the interests of all parties to the National Plan. NPAC has also established a number of special-purpose working groups to deal with particular issues such as equipment acquisition and distribution; training; fixed wing aerial dispersant spraying; and research and development.
- 4.3.3.** There is strong support by stakeholders for AMSA to continue as the manager of the National Plan. However, questions were raised during the review as to whether it was appropriate for AMSA to have the dual function of plan manager and to also Chair the body providing strategic oversight and direction of the National Plan, given that AMSA itself is but one participant in that Plan.
- 4.3.4.** It would be possible to refocus NPAC's role back to the strategic oversight of the National Plan. However, the Steering Committee does not consider it desirable or effective to expect any one body to undertake high level policy making, monitoring, advisory and operational roles. In most jurisdictions, different individuals would be responsible for strategic and operational matters. It was also recognised that NPAC has become too large to undertake this role effectively.

National Plan Management Committee

- 4.3.5.** In the Steering Committee's opinion, it would be preferable to establish a separate National Plan Management Committee to provide advice to ATC on the strategic, policymaking and funding direction for the National Plan. The Steering Committee agreed that, as with the existing National Plan Committees and Working Groups, participants at all National Plan meetings should meet their own attendance costs.
- 4.3.6.** The functions of the Management Committee would be:
- strategic oversight of the effectiveness and efficiency of the National Plan, including that of preparedness and response standards;
 - oversight of the ongoing effectiveness of the formal arrangements between key stakeholders and National Plan management; and
 - provide advice to ATC on the collection and distribution of funds for the National Plan, including contributions from Commonwealth, State/NT and industry.

- 4.3.7. The *Australian Maritime Safety Authority Act 1990* makes AMSA responsible for combating pollution in the marine environment. These responsibilities are discharged by AMSA's management of the National Plan. In accordance with section 48 of this Act, AMSA receives the levy paid under the *Protection of the Sea (Shipping Levy) Act 1981*, and the Consolidated Revenue Fund is appropriated accordingly. Accordingly, AMSA is accountable to the Parliament through the Minister and the AMSA Board for the expenditure of the funds appropriated to it for the discharge of its functions and exercise of its powers.
- 4.3.8. The Review Steering Committee proposes that AMSA discharge this responsibility against a four-year rolling budget developed by the National Plan Management Committee and approved by the Australian Transport Council each May. AMSA would manage the National Plan against this endorsed budget. The Management Committee would also advise on the level of the levy, including justification for any increases or decreases, and the provision of agreed services by National Plan participants
- 4.3.9. Given that the National Plan is a tripartite co-operative arrangement between the Commonwealth, State/NT governments and industry, the Management Committee should include appropriate executive management representatives of each of these key stakeholders to the National Plan and have an independent Chair. (An independent Chair would be in accordance with modern corporate governance practices that strongly favour the allocation of chairmanship roles to independent directors, rather than senior executive management.) The Committee would meet no more than two or three times per year. Government members should be expected to provide whole of government representation, and not merely represent the views of the statutory agency.
- 4.3.10. The Steering Committee agreed that the Great Barrier Reef Marine Park Authority (GBRMPA - a Commonwealth agency) should also be a member of the Management Committee. The Great Barrier Reef Marine Park is a unique jurisdiction as it straddles both State coastal waters and Commonwealth waters. Essentially it is a Commonwealth jurisdiction and the GBRMP Act will prevail where State legislation is inconsistent.

Recommendation 2: A National Plan Management Committee be established to undertake strategic management of the Plan, including the setting of broad policy directions, recommendation to Ministers on funding arrangements, and monitoring the provision of agreed services by National Plan participants. The Management Committee should have an independent Chair and comprise one representative from the Commonwealth, each of the States, the Northern Territory, the Australian Maritime Safety Authority, the Great Barrier Reef Marine Park Authority, the Association of Australian Port and Marine Authorities, the Australian Institute of Petroleum, the chemical industry and the Australian Shipping Federation.

National Plan Operations Group

- 4.3.11. The Steering Committee considers that the National Plan Management Committee would be supported by a National Plan Operations Group to consider the ongoing day to day operational aspects of the plan for both oil and chemicals. The Group would assume responsibility for the majority of issues currently addressed by NPAC and its working groups. This Group would be chaired by AMSA, with membership incorporating the key operational stakeholders, as listed in figure 3.
- 4.3.12. The Steering Committee agreed that the Environment and Scientific Coordinators (ESC) Network be represented on the National Plan Operations Group. The ESC Network was established during the 1980's and has developed into a Government/Industry forum where environment policy and operational issues can be discussed and recommendations made for the National Plan. The ESC Network is in a position to provide independent coordinated advice to the National Plan Operations Group on environmental matters.
- 4.3.13. The functions of the National Plan Operations Group would be to develop and implement programs such as training, equipment acquisition and monitoring, maintenance policies, exercising contingency plans and similar operational issues. The National Plan Operations Group would establish and oversight any working group it considers necessary to carry out these functions.

Recommendation 3: A National Plan Operations Group be established to provide guidance for National Plan operational functions. The Operations Group comprise representatives of each of the key operational stakeholders of the National Plan, and be chaired by AMSA in recognition of its role as National Plan Manager.

Consultation with other stakeholders

- 4.3.14. The Steering Committee agreed that improving consultation with non-participant stakeholders in the National Plan, for example community-based groups, is primarily a function to be undertaken at State level. States/NT should identify those non-participant stakeholders not currently represented within the existing State Committee structure and develop an appropriate mechanism for effective consultation with such stakeholders.
- 4.3.15. The Committee agreed that this action should be supported at the national level, and that AMSA would produce a National Plan newsletter, to be issued approximately twice each year. This newsletter would also be placed on the AMSA web site, with links from web sites of other National Plan stakeholders. In addition, it was agreed that should any strategic issues be identified as a consequence of consultation with non-participant stakeholders, the National Plan Management Committee should consider holding a National Consultative Forum meeting.

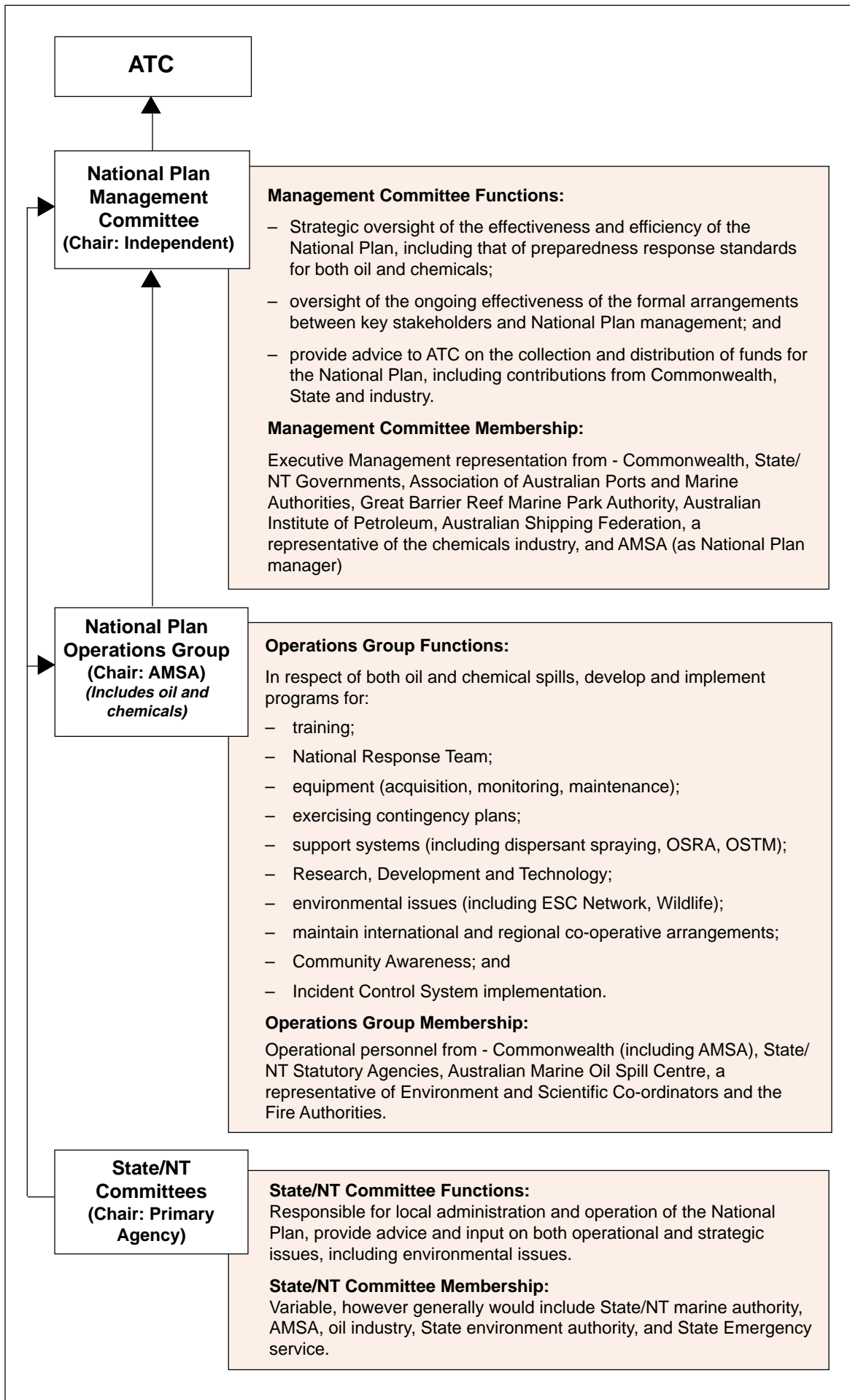


Figure 3 - Proposed National Plan Management Structure

4.4. A Formal Inter-Governmental Agreement

- 4.4.1.** The existing Administrative Arrangements, endorsed by Australian Transport Council Ministers, is the primary document setting out formal roles underpinning the National Plan. However the Administrative Arrangements are focused primarily on operational roles. They do not constitute a formal agreement between the parties on obligations for, and funding of, maintenance of a marine spill investigation and response capacity.
- 4.4.2.** A number of other formal and informal agreements do exist setting out arrangements between various parties. Such arrangements are significant means of clarifying the specific understandings and agreements between various parties regarding their roles under the National Plan. However they can only provide a piecemeal coverage of these matters. They are an important supplement to, but cannot take the place of, a clear, high-level agreement of roles and responsibilities.
- 4.4.3.** There is widespread and strong support among stakeholders for documentation of obligations and responsibilities at a national level. A clear majority of all stakeholders argue that greater formalisation would:
- provide a basis for continued Commonwealth, State and NT government commitment to and support for the National Plan;
 - provide a stable reference point whereby those unfamiliar with the Plan can readily ascertain the obligations placed on their organisation; and
 - be used to set out agreed minimum activities, allowing participants' performance against those minimums to be more readily assessed.
- 4.4.4.** An Inter-Governmental Agreement (IGA), formalised at the level of the Australian Transport Council and building on the existing administrative arrangements, would provide the basis for establishing the broad framework for the future of the National Plan. The IGA should spell out:
- obligations agreed by the government parties under the National Plan to maintain a response capacity;
 - mechanisms that will be used to ensure that decision-making is collaborative and that obligations are met; and
 - the principles under which obligations are to be funded.
- 4.4.5.** Such an IGA could help to ensure that all those associated with the Plan are clear about their own responsibilities for marine spill preparedness and response. The Steering Committee's proposals regarding the role of ports should also be covered by this agreement.
- 4.4.6.** Separate arrangements with all affected industry sectors would be necessary by way of a formal agreement with AMSA in its role as National Plan Manager on behalf of all National Plan stakeholders.³ Some agreements are already in place.

³ One of the most significant is the Master Service Contract between AMOSC and AMSA (August 1998).

A number of other formal agreements govern the relationship between AMOSC and its member organisations. In addition, Memoranda of Understanding (MOU) have been written between some State committees and fire service agencies. In at least one location (Port of Brisbane) an MOU establishing an alliance between local oil industry companies to provide mutual assistance in the event of an actual or threatened environmental incident or spillage of oil is being developed.

Recommendation 4: The National Plan be under-pinned by an Inter-Governmental Agreement formalised at Australian Transport Council level and by separate agreements between the National Plan Manager (AMSA) and the various industry stakeholders.

- 4.4.7. One of the main sources of concern identified during the consultation process was a perceived lack of clarity as to roles and responsibilities of the parties to the National Plan, including funding obligations. The existing Administrative Arrangements do not attempt to describe the roles and responsibilities between of the various stakeholders under the National Plan, other than to set out the basic divisions of responsibility of the Commonwealth and the States/NT under the Offshore Constitutional Settlement; nor do they specify who is responsible for funding National Plan activities.

A particular concern raised by a number of stakeholders was that, in the absence of clearly defined roles and obligations, the expectations on the States with regard to resources and funding were unclear. The National Plan Management Committee should ensure that all National Plan participants understand their roles and responsibilities, the services they are to provide, and where funds are to be paid from the shipping levy, the costs that can be allocated to that funding source.

Recommendation 5: The National Plan Management Committee develop, implement and monitor mechanisms to ensure that the roles and responsibilities of the stakeholders are clearly communicated to and understood by all stakeholders.

4.5. Funding the National Plan

Roles and funding arrangements

- 4.5.1. Under current National Plan arrangements, responsibility for oversighting response action for oil and/or chemical spills other than those from offshore petroleum operations is as follows:
- within the three nautical mile coastal waters and foreshore areas - with the State or NT government's designated authority;
 - outside the three nautical mile coastal waters - with the Australian Maritime Safety Authority (AMSA), as the Federal Government's designated authority.

- 4.5.2. An exception to this general rule is in respect of the Great Barrier Reef, where the Great Barrier Reef Marine Park Authority (a Commonwealth Statutory Authority) has the legislative responsibility for the care and management of the Great Barrier Reef Marine Park. In this instance, by mutual agreement the relevant State government agency, the Queensland Department of Transport, is the designated Combat Agency for oil and/or chemical spills in the Marine Park.
- 4.5.3. Current funding arrangements of National Plan stakeholders for both preparedness and response may generally be described as follows.
- 4.5.4. *Commonwealth* - The Commonwealth as part of its revenue raising imposes a number of levies on commercial shipping calling at Australian ports. One of these levies is imposed by the *Protection of the Sea (Shipping Levy) Act 1981* and currently raises some \$3.6m each year. One of the functions of AMSA, as set out in the *Australian Maritime Safety Authority Act 1990*, is to combat pollution in the marine environment. This Act determines that an appropriation from the Commonwealth Consolidated Revenue Fund equal to the amount raised by this levy is paid to AMSA to undertake its responsibilities to combat pollution in the marine environment. AMSA fulfils this function primarily through management of the National Plan. Funds provided to AMSA for this purpose are intended to cover the costs of maintaining the national stockpile of response equipment and of operations against oil spills where recovery from the polluter proves to be impossible. The National Plan consists of arrangements for responding to oil and chemical spills. There is currently no separate funding source for Chemplan (see 4.6 below), and the development of Chemplan was funded from the existing levy.
- 4.5.5. If cleanup costs (as opposed to preparedness) cannot be recovered from a polluter (for example, because the polluter cannot be identified, or because the polluter has inadequate insurance coverage) the Commonwealth through AMSA will initially meet unrecovered clean-up costs from its own resources, to a maximum of \$10 million. The Commonwealth has a standing loan agreement with a private sector bank to provide this level of cover. If the loan facility were to be called on, the Commonwealth would increase the Protection of the Sea Levy for a period until the loan is repaid.
- 4.5.6. Beyond the \$10 million limit of coverage, the Commonwealth government provides stand-by access to funds to meet the costs of providing an adequate response, even for very large spills. In such circumstances, a special appropriation would provide funds for pollution clean up. The Commonwealth government would generally expect to recover from the insurer any amounts expended under this appropriation. Exceptional circumstances could arise in which, despite these arrangements, full cost recovery for a major incident proves impossible, in which case the Commonwealth would permanently bear some of the clean-up costs.

- 4.5.7. The Great Barrier Reef Marine Park Authority (GBRMPA), together with AMSA and Queensland Transport administers a specific contingency plan for the Great Barrier Reef, REEFPLAN. The GBRMPA also makes a contribution from general revenue to support REEFPLAN. However, as noted above, the Queensland Government is the combat agency for response to pollution incidents and provides a significant commitment to maintain this capability.
- 4.5.8. *State/NT Governments* - Contributions through State and Northern Territory governments vary considerably and include various “in kind” contributions as well as direct cash outlays. In some locations a port environmental levy is imposed on visiting ships and is applied in part to fund pollution prevention and preparedness measures. The aggregate amount spent by States/NT on the National Plan is substantial. The 1998 Thompson Clarke Shipping Report estimated the total contribution from the States/NT to be \$2.6 million, although the Steering Committee recognised that the true amount was considerably higher.
- 4.5.9. *Industry* - Most major oil companies own and maintain oil spill response equipment at their operating facilities, including offshore exploration and production facilities, oil loading facilities, refineries and storage facilities. Several of the companies have entered into mutual aid arrangements to make equipment and personnel available to other companies when needed. The Australian Marine Oil Spill Centre (AMOSOC), a subsidiary company of the Australian Institute of Petroleum, operates the oil industry’s major oil spill response facility at Geelong in Victoria. AMOSOC coordinates the oil industry’s mutual aid arrangements and its participation as a key stakeholder in the National Plan. The oil industry also contributes to the International Oil Pollution Compensation Fund based in London. There are no equivalent arrangements in place for the chemical industry.
- 4.5.10. *Ports and other fixed facilities* - At the time of initial development of the National Plan, and for most of its operation, the vast majority of ports around Australia have been owned and operated by State/NT Governments as port authorities. During that period, governments saw ports as instruments of government policy. The National Plan arrangements generally envisage ports as providing significant expertise and labour requirements for combating an oil spill. Historically, ports have stored National Plan equipment and have been responsible for significant areas of the coastline outside their port boundaries. However, corporatisation and restructuring of ports by State Governments over the last five years has not always taken into account these arrangements.
- 4.5.11. Some ports question whether responding to marine spills, either inside or outside the port environment, is part of their responsibilities as well as any requirements to store and maintain equipment other than a commercial basis.
- 4.5.12. However, the risk analysis carried out as part of this Review has demonstrated that the activities associated with ports are the major overall contributors to marine spill risk levels, because the density of ships and the frequency of operations associated with a spill risk are highest in and around ports.

Funding principles

- 4.5.13. The Steering Committee believes that the operational aspects of the National Plan are working well, and that the National Plan currently provides an effective means of dealing with oil spills in the Australian marine environment. On this basis the Steering Committee concluded that the current aggregate level of National Plan funding in relation to oil spill preparedness is broadly appropriate.
- 4.5.14. The Steering Committee agreed that three basic principles underlie the current National Plan funding arrangements:
- the potential-polluter-pays principle, applied to preparedness;
 - the polluter-pays principle, applied to pollution response; and
 - the potential-polluter-pays principle applied to pollution response where the polluter is not identified or the cost is not recoverable.⁴
- 4.5.15. This means that potential polluters should be required to contribute to National Plan funds an amount related to the risk they present of marine oil or chemical spills. Actual polluters should be required to meet the response costs to the National Plan of any spills they cause.

Recommendation 6: That the following principles form the basis on which the National Plan is funded:

- *the potential-polluter-pays principle, applied to preparedness;*
- *the polluter-pays principle, applied to pollution response; and*
- *the potential-polluter-pays principle applied to pollution response where the polluter is not identified, or costs are not recoverable.*

- 4.5.16. Consistent with the potential-polluter-pays principle, ports, terminals, rigs and platforms should be required to ensure a first-strike capacity is provided to respond to oil spills within their environment. The underlying criteria determining this capacity within these operations is that it must be risk reflective in relation to each specific operation. This capacity may be provided directly by the operation itself, or as a service to the operation by a separate organisation. The Steering Committee agreed that this first strike capacity should generally involve the provision of Tier 1 (up to 10 tonnes) type spill equipment and capacity for its effective operation, although there may also be circumstances where a lesser capacity would be acceptable.
- 4.5.17. Relevant State/NT Governments through their National Plan State Committee and with the relevant terminal, port, rig or platform should determine the required first strike/tier one capacity for these operations, having regard to the individual circumstances. AMSA would be available to assist all stakeholders in

⁴ It would be expected that the Statutory Agency would take all available steps, including the institution of criminal or civil proceedings, for recovery from the owner or master of the ship, and has been unsuccessful before the costs were reimbursed from the National Plan funds.

determining appropriate capacity. If a port chooses to provide this capability by imposing a levy on the port users, this should be applied equitably to all the appropriate stakeholders.

- 4.5.18. The equipment employed should be compatible with national standards and/or criteria to be established for National Plan equipment by the National Plan Operations Group. In addition, bulk oil and chemical and product handling and storage facilities in port that do not already contribute to industry-based preparedness and response arrangements should make an appropriate contribution to National Plan funding.
- 4.5.19. The Steering Committee recognised that introduction of a first strike capability for oil spills would not be applicable in NSW ports that already have a statutory responsibility under relevant legislation to respond to oil spills in ports and the coastal waters adjoining the state, for which they receive appropriate regulatory fees.
- 4.5.20. Ports' participation in National Plan activities outside port limits was one of the issues raised in the primary recommendation from the 1998 Thompson Clarke Shipping Report. The Steering Committee agreed that this should be undertaken on a commercial basis in the absence of any statutory requirements (as exist, for example, in New South Wales). This should include full cost reimbursement, Governments pursuing recovery of costs from polluters, appropriate indemnification during response operations and ports providing storage for additional National Plan equipment over and above that needed for an "in port" response on a cost-recovered basis.

Recommendation 7: States/NT ensure, following consultation with the National Plan Operations Group and terminal operators, that all oil/chemical terminals within their jurisdiction maintain, either directly or indirectly, an appropriate preparedness and response capacity consistent with the level of risk posed by the terminal.

Recommendation 8: States/NT ensure, following consultation with the National Plan Operations Group and port operators, that each port within their jurisdiction maintains, either directly or indirectly, an appropriate preparedness and response capacity consistent with the level of risk within the port.

Recommendation 9: States/NT ensure, following consultation with the National Plan Operations Group and rig and platform operators, that all rigs and platforms within their jurisdiction maintain, either directly or indirectly, an appropriate preparedness and response capacity consistent with the level of risk posed by those structures.

Recommendation 10: States/NT ensure that any arrangements put in place to provide for participation by Ports in National Plan activities outside port limits are undertaken on a commercial basis, where such participation is not already separately mandated by legislation

- 4.5.21. In respect of these consultations, the National Plan Operations Group should consider the development of principles to ensure compatibility of equipment and to enable a consistent approach to be taken by each jurisdiction.

Existing contributions from other potential polluters

- 4.5.22. The majority of other potential polluters - but not all - currently contribute to preparedness;
- the pollution levy applies to vessels which are not less than 24 metres in length, having at least 10 tonnes of oil on board either as fuel or cargo. The only exceptions are defence force vessels (both Australian and foreign) and government owned or operated vessels on non-commercial service;
 - oil tankers make additional contributions to the National Plan through contributions to oil industry response arrangements, as described above; and
 - fishing and commercial vessels and recreational craft pay registration and licence fees to State/NT governments. While these funds are normally paid into general State/NT revenue, a portion of these fees might be considered as a contribution to the State/NT expenditure on oil pollution control.
- 4.5.23. The Steering Committee noted that the majority of oil terminal operators contribute to AMOSC, and therefore make a contribution to preparedness. However, not all oil importers contribute to AMOSC.
- 4.5.24. The Steering Committee recognised it had insufficient data to enable any realistic assessment as to whether existing contributions from potential polluters adequately reflect the risk they create. To consider this issue and make recommendations on any practical corrective measures, data would need to be collected relating to the risk of spills from those sectors not currently contributing to the National Plan, including chemical tanker transport, handling and storage, small and recreational craft. Such analysis was beyond the scope and time available for the current review. Accordingly, the Steering Committee agreed that the proposed National Plan Management Committee should undertake this task as a priority.

Recommendation 11: The National Plan Management Committee consider the collection of appropriate data as a basis for a detailed financial analysis to determine the extent to which current National Plan funding arrangements reflect the “potential polluter pays principle” and report to ATC Ministers on any necessary corrective action.

Non-contributing potential polluters

- 4.5.25. Not all potential polluters currently contribute directly to preparedness, in particular there is no contribution from:⁵
- fishing vessels less than 24 metres in length;
 - recreational and commercial craft less than 24 metres in length;
 - Commonwealth and State owned or operated vessels on non-commercial service, including defence force vessels, both Australian and foreign; and
 - transit vessels not visiting Australian ports; and
 - land-based risk sources.⁶
- 4.5.26. The Steering Committee also recognised that, while chemical tankers contribute to the existing levy based on their carriage of bunker fuel oil, there is no contribution in respect of the chemicals they carry. Similarly oil tankers are not levied on the basis of their oil carriage but only on their tonnage as for container and other vessels.
- 4.5.27. To fully comply with the funding principles, all potential polluters should contribute to preparedness an amount broadly commensurate with the level of risk they pose for marine spills. The Steering Committee noted that it would be difficult to impose any levy on fishing vessels and recreational craft unless and until the risk, if any, is quantified, and in any event that risk would appear to be minimal. It was also noted that the United Nations Convention on the Law of the Sea precludes the option of collecting any levy from vessels only passing through Australian waters. The Steering Committee considered that the Commonwealth should contribute in respect of government owned or operated vessels on non-commercial service, including defence force vessels, both Australian and foreign.
- 4.5.28. Once adequate data is available, the National Plan Management Committee should consider the options available to align National Plan funding more closely with the “potential polluter pays principle”. In respect of land-based sources of marine pollution, the Steering Committee noted that additional contributions would not be required in respect of oil terminals already contributing to industry oil spill response arrangements.

Recommendation 12: The Commonwealth provide a contribution toward the cost of preparedness commensurate with the risk of spills from government owned or operated vessels on non-commercial service, including defence force vessels, both Australian and foreign.

⁵ Although, as noted above, fishing and commercial vessels and recreational craft pay registration and licence fees to State/NT governments.

⁶ The US Academy of Sciences estimates 44% of the oil entering the marine environment does so as a result of industrial discharge, urban run-off and natural sources.

Recommendation 13: State/NT authorities consider recovering a contribution from any identified potential land-based sources of marine pollution.

- 4.5.29. The Steering Committee also recognised that, while chemical tankers contribute to the existing levy based on their carriage of bunker fuel oil, there is no contribution in respect of the chemicals they carry. However, the Steering Committee has no data on the materiality of the risk of chemical spills - the risk may be so low that it is not worthwhile trying to collect a contribution towards preparedness for chemical spills.

Recommendation 14: The National Plan Management Committee should examine whether the funding of Chemplan should be aligned more closely with the funding principles agreed during this Review and make any appropriate recommendations to ATC.

Funding contributions by Governments

- 4.5.30. Commonwealth and State/NT Governments contribute to the National Plan, both directly and indirectly. The direct Commonwealth contribution to preparedness from the Consolidated Revenue Fund is funded by the pollution levy. In respect of the Great Barrier Reef, the cost of preparedness is currently met by the Queensland Government. These arrangements are a matter for the Commonwealth and Queensland Governments and a process for monitoring the arrangements is in place between the respective agencies.
- 4.5.31. The Steering Committee recognised that the contributions by States/NT from general revenue are not fully in accord with the funding principles that the Review has developed. Such contributions should be at a level that could be attributed to risk posed by the potential polluters within their jurisdictional control, ie. government owned or operated vessels on non-commercial service (although there were now very few of these), fishing and commercial vessels and recreational boats. The application of these funding principles indicates it is likely that the States/NT have been financially over contributing to the funding of the National Plan. Should the States/NT not continue to make this contribution then there would be a funding gap.
- 4.5.32. The Steering Committee recognises that the implementation of the recommendations in this report may lead to the raising of additional funds from the levy as well as expansion of the scheme to include current non-contributors. There might also be some savings from current additional expenditure as fixed installations, including ports, assume their funding responsibilities as potential polluters. However, any savings or additional revenue may be partly or fully offset by additional storage and maintenance charges likely to be incurred in respect of National Plan Tier 2/3 response equipment. These costs are currently mostly met by the ports and not passed on to the National Plan.

- 4.5.33. The changed funding arrangements from this Review raise the possibility of either:
- all Governments, including the Commonwealth, sharing on an equitable basis in funding the gap currently being paid for by the States/NT; or
 - distributing any additional revenue or reduced expenditure from the levy to the current funding contributors.
- 4.5.34. The Steering Committee believes that this is a matter Ministers need to consider.

Recommendation 15: The National Plan Management Committee examine the extent to which government contributions are consistent with the risk posed by potential polluters within their jurisdictional control and make any appropriate recommendations to ATC. Consideration should be given to including the option of all governments, including the Commonwealth, sharing on a more equitable basis the funding gap currently being paid for by the States/NT. In the event that there is any additional revenue or cost savings, consideration should be given to distributing this among the current funding contributors on an equitable basis.

4.6. The National Chemical Spill Plan

Development and summary of Chemplan

- 4.6.1. In July 1988, Australian Transport Advisory Council (ATC) Ministers adopted administrative arrangements applicable to action taken to prevent and clean up spills of hazardous and noxious substances from ships. Following a comprehensive review of the National Plan in 1993, ATC Ministers agreed that these arrangements be examined, noting in particular the proposed extension of the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990 to substances other than oil.
- 4.6.2. After extensive discussion and consultation with stakeholders, including in particular fire authorities and the chemical industry, it was agreed that the most effective response system involved the preparation of a comprehensive contingency plan. This would bring together the National Plan management arrangements and the land-based chemical and hazardous materials response capabilities of fire brigades, the chemical industry and government authorities. A contingency plan was subsequently developed in consultation with stakeholders over a period of several years, resulting in Australian Transport Council Ministers endorsing the National Chemical Spill Plan (known as Chemplan) in April 1998.
- 4.6.3. Chemplan defines the response arrangements to chemical spills in the marine environment that have the potential to impact on any of Australia's interests, which include those of an environmental, health, resource or economic nature. The Plan outlines combined government and industry arrangements designed to allow a rapid and co-operative response to a maritime chemical spill occurring

within the area defined by this Plan. It is complemented by other Government and industry Contingency Plans prepared at a Commonwealth, State/NT, regional, port and facility levels. Matters of detail are contained in local, site specific, contingency plans. The specialised Fire Brigade Hazardous Chemical (HazChem) response units and Chemical Spill Response units of State/NT Environmental Agencies are the designated combat agencies under direction of the Combat or Statutory Agency. This structure maximises the utilisation of existing local resources and expertise in fire and toxic emission control, chemical spill containment, clean up and decontamination operations.

- 4.6.4. Due to the wide range of chemicals and their diverse hazards and properties, specialist expertise from the fire brigades, HazMat units, chemical industry, AMSA's advisers and environmental agencies is sought to ensure that safe and practical response systems are employed.
- 4.6.5. The Plan relates primarily to incidents involving spills from ships of bulk chemical cargoes, container chemical tanks and packaged chemicals, and other dangerous goods, lost overboard at sea. The Plan sets out response options for releases of gases and vapours and chemicals that dissolve, evaporate, float and sink. Responsibility for packaged substances washed ashore generally resides with the State/NT authority.

Issues identified during the Review

- 4.6.6. As part of the review, the Steering Committee considered the management issues associated with Chemplan, and concluded that response arrangements for chemical spills should remain part of the overall National Plan arrangements, although the oil and chemical spill components should remain as distinct and separate contingency plans. However, the Steering Committee also noted numerous comments during the review that indicated arrangements for response to chemical pollution incidents are currently not considered adequate by some stakeholders. The Steering Committee accepted that issues identified during stakeholder consultations indicated Chemplan was deficient in some areas. Issues identified included:
- a general lack of awareness of Chemplan and its operational aspects;
 - a perceived lack of strategic direction;
 - funding obligations for chemical spill preparedness and response have not been determined or agreed;
 - the availability of equipment for chemical spill response has not been adequately examined;
 - there has been only limited training on chemical spill response;
 - chemicals industry representatives are not represented on the National Plan Advisory Committee; and
 - marine chemical spill response arrangements in some States are not yet finalised.

- 4.6.7. Noting that many of these issues are operational in nature, the Steering Committee believes that the proposed National Plan Operations Group should address these issues as a priority in its work programme, and that the outcomes be reported to the proposed National Plan Management Committee. It was also noted that the timing of this work was opportune, as Chemplan would in any event also need to be examined as a result of:
- the implementation of the Incident Control System (ICS) throughout the National Plan response structure by the end of 2001; and
 - the recent conclusion by the International Maritime Organization of the Hazardous and Noxious Substances Protocol to the 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation.

Recommendation 16: The National Plan Operations Group examine as a matter of priority the issues related to chemical spill response identified during the review to ensure that Chemplan provides an effective means of dealing with chemical spills in the Australian marine environment.

4.7. Transitional Arrangements

- 4.7.1. Implementation of the enhancements recommended in this review could take some time. The Steering Committee suggests that ATC endorse the approach recommended in this review and immediately appoint an interim National Plan Management Committee to oversee the implementation process.
- 4.7.2. The objective should be to achieve the following implementation timetable:
- The immediate establishment of an Interim National Plan Management Committee and National Plan Operations Group, with terms of reference as outlined in this Report.
 - The Interim National Plan Management Committee providing a progress report to the ATC meeting in November 2000 on progress towards full implementation of the Review recommendations.
 - The negotiation of an IGA as outlined in this Report with a target date for signing by ATC being the meeting of ATC in May 2001.
 - By May 2001 the National Plan Management Committee present a package to the Australian Transport Council covering:
 - detailed implementation arrangements for the Review findings; and
 - funding arrangements for the National Plan, including funding the National Plan managers at national and State/NT level; and planning and performance standards for the National Plan.
- 4.7.3. In the meantime, it is in the interest of all parties to maintain the current National Plan arrangements until any changes have been successfully implemented.

Recommendation 17: The Australian Transport Council endorse the recommendations in this report and immediately appoint an interim National Plan Management Committee to oversee their implementation by December 2001.

- 1960 Commonwealth Government accepts *International Convention for the Prevention of Pollution of the Sea by Oil, 1954* and initial division of responsibilities between Commonwealth and States is established.
- 1970 The grounding of the *Oceanic Grandeur* provided a catalyst to develop a national approach to control of oil pollution.
- 1971 A meeting between Commonwealth and State/NT Ministers agrees on the '*basic divisions of responsibility for combating pollution of the sea by oil from ships*'.
- 1972 The Commonwealth, with agreement of the States/NT and industry, enacts legislation to raise shipping levy - *Protection of the Sea (Shipping Levy) Act, 1972* and *Protection of the Sea (Shipping Levy Collection) Act, 1972*. No documentation can be found regarding details of the agreement on the expenditure of the moneys collected other than the statements in the Minister's second reading speech that it is to be spent on the unrecovered operating costs of the National Plan. These costs have '*2 components - firstly, the standing charges and, secondly, operating costs which can not be recovered from the actual polluter.*'
- 1973 National Plan commences with cash funding contributions from the Commonwealth Government, States/NT Governments and oil industry, as well as levy collected from shipping.
- 1978 Five year review conducted by Advisory Committee on Marine Pollution.
- 1979 Offshore Constitutional Settlement entered into by Commonwealth and State Governments. This provided agreement to resolve jurisdiction and control for various matters relating to the waters around Australia. The Settlement provides, among other matters, that the arrangements for 'ship-sourced marine pollution' that existed prior to 1975 (the States/NT have jurisdiction over matters out to 3 nautical miles and the Commonwealth beyond that) would continue. No reference to funding is apparent.
- 1991 AMSA established by the Commonwealth Government with statutory functions and powers, which include combating pollution of the marine environment. AMSA takes over the role of administering the National Plan from the Commonwealth Department of Transport and Communications.
- 1992 Australian Marine Oil Spill Centre Pty Ltd (AMOSC) commenced operation as a subsidiary of the Australian Institute of Petroleum to coordinate the oil industry's mutual aid arrangements and participation of the industry in the National Plan. Industry equipment and personnel are available for hire to AMSA as part of National Plan.

- 1992** Commonwealth accedes to *International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) 1990*. This establishes an obligation on the Commonwealth to establish national arrangements for responding to oil pollution incidents.
- 1993** The *High Level Working Party to Review the Australian National Plan to Combat Pollution of the Sea by Oil* established by ATAC Ministers in 1991 provides its report which is accepted by the Ministers for implementation. The Report includes recommendations to clarify the organisation and administration of the National Plan, including the division of responsibilities between the Commonwealth, States/NT and the oil industry.
- More formal consultative and advisory arrangements (the National Plan Advisory Committee) are recommended with the AMSA Board being ultimately responsible to the Commonwealth Government as the 'Managing Agency' for the National Plan.
- The States/NT are recommended to be the combat agency, via the National Plan State Committee, for responding to oil spills in State waters, with AMSA assistance as required. AMSA is recommended to be the combat agency for responding to spills outside State/NT waters.
- The Report makes some general comments about funding and notes that there has been '*an evolutionary process and in keeping with cooperative basis on which the National Plan was first established and has grown, the States/NT contribute, as does the oil industry, quite significantly.*' While the Report does recommend that the shipping levy continue, it makes no comment on Commonwealth expenditure, or about the utilisation of the shipping levy monies.
- 1995** The Australian National Audit Office (ANAO) reports on the National Plan and makes recommendations on improving the National Plan including the division of responsibilities (including equipment storage and personnel training), and the future role of AMSA.
- 1997** *Review of AMSA Levies* recommends retention of the shipping levy but with minor changes.
- 1998** A report on *Port Reform and the National Plan* by Thompson Clarke Shipping for AMSA is tabled at the National Plan Advisory Committee. The Report makes recommendations '*reminding States/NT of their National Plan responsibilities which must be carried out if Australia is to comply with its obligations under the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990 (OPRC).*' This and similar recommendations are opposed strongly by Western Australia and some other jurisdictions.
- 1998** The *Report of the Ministerial Advisory Group on Oceans Policy* recommends that the National Plan should be supported.
- 1998** The Commonwealth releases *Australia's Ocean Policy* and indicates that it will allocate funding to specific measures. Among other things the Policy outlines those matters that '*the Commonwealth has responsibility for and states that 'the Government will continue to support the enhanced National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances (the National Plan).*'

Process The Australian Transport Council (ATC) agreed that the review would be managed by a Steering Committee on behalf of ATC.

The Steering Committee consisted of State/NT and Commonwealth members from the ATC Marine and Ports Group, the Association of Australian Ports and Marine Authorities, the Australian Institute of Petroleum, the Australian Shipping Federation, the Great Barrier Reef Marine Park Authority, and AMSA. The Steering Committee was chaired by an independent person selected by Committee members. A full listing of organisations and representatives involved in the Review is set out below.

The Steering Committee met nine times between March 1999 and May 2000.

In conducting the review, it was agreed consultations would be undertaken with all current stakeholders, including, but not limited to, the petroleum, chemical and shipping industries, State/NT administrations, port operators and members of the National Plan Advisory Committee (NPAC). At its first meeting, the Steering Committee developed the purpose, scope and context for the Review, as set out below.

Purpose The purpose of the review was to determine if current arrangements, particularly with regard to the roles of port operators, the financial contributions of the parties and the adequacy of policy and decision making forums, are adequate to provide an effective response to pollution of the sea by oil and other noxious and hazardous substances, and where deficiencies are identified, make recommendations to rectify them.

Scope The scope was to review and report on the capacity of the National Plan to provide an adequate and effective response to pollution of the sea by oil and other noxious and hazardous substances, focussing on and making recommendations about those matters which are in need of improvement.

In undertaking the Review it was agreed that the following specific matters were to be addressed:

- The general arrangement of the framework of the National Plan having regard to the statutory and other responsibilities of the Commonwealth, AMSA, the States/NT, the oil and shipping industries and port operators.
- The arrangements for funding of the National Plan, including the relative financial contributions of the parties, having regard to the roles, responsibilities and accountabilities of the parties, the level of risk and the equipment and training needs throughout the total span of the National Plan.
- National Plan management arrangements and the opportunities for the tripartite partners to adequately participate in decision-making including in policy development and budgetary matters.

It was agreed that the Review should be conducted in the light of existing data available from the Bureau of Transport Economics (BTE), AMSA, the recent Australian and New Zealand Environment and Conservation Council (ANZECC) sensitive sea area project and other sources on the likely risks of pollution of the sea by oil and other noxious and hazardous substances in Australian waters.

Context

It was agreed that the review would be carried out in the context of:

- the view by the States/NT that the operational aspects of the National Plan have worked well and are meeting the expectations of all parties ;
- the likely risk profile of a pollution of the sea by oil and other noxious and hazardous substances incident and most likely locations. Maximum use must be made of existing data which have been prepared by the Bureau of Transport Economics, AMSA, the recent ANZECC sensitive sea area project and other organisations;
- the concept behind the establishment of the National Plan and its associated arrangements which involved the Commonwealth Government, the States/NT and the oil and shipping industries forming a collaborative partnership to combat pollution of the sea by oil and other hazardous substances;
- Australia’s commitments under the International Convention on Oil Pollution Preparedness, Response and Co-operation;
- the Report on Port Reform and the National Plan by Thompson Clarke Shipping which was recently completed for NPAC and the responses made by the various jurisdictions;
- the commitments made by the Commonwealth in Australia’s Oceans Policy; and
- the issues raised in a Western Australian Discussion Paper to the Standing Committee on Transport (SCOT) in October 1998 and the Working Group report from the November 1998 Strategic Policy Working Group of the National Plan Advisory Committee.

List of Participants

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Len Early Pty Ltd

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Introduction

This attachment summarises the results of a six-month study commissioned by AMSA and carried out by Det Norske Veritas (DNV) to produce a risk assessment of oil and chemical spills in Australian Ports and Waters. The work was performed as part of the review of the National Plan to Combat Pollution of the Sea By Oil and Other Noxious and Hazardous Substances.

Approach

The overall study approach is shown in Figure 1. The main tasks carried out by DNV were consultations with stakeholders, study definition and data gathering, development and application of the risk model, and assessment and reporting. The model developed is termed a “dynamic” risk model, with the intention that it can be enhanced in future and new risk calculations performed to reflect changes in the level of activities and to support future decision-making.

The study area is illustrated in Figure 2. The outer boundary of the study area is defined by the Australian Exclusive Economic Zone. Specific islands included are as follows: Lord Howe, Norfolk, Cocos, Christmas, Heard, MacDonald and Macquarie. The study area is divided into three main zones:

- nearshore, 0-12 nautical miles (nm);
- intermediate, 12-50nm; and deep sea, 50nm to AEEZ boundary, typically 200nm.

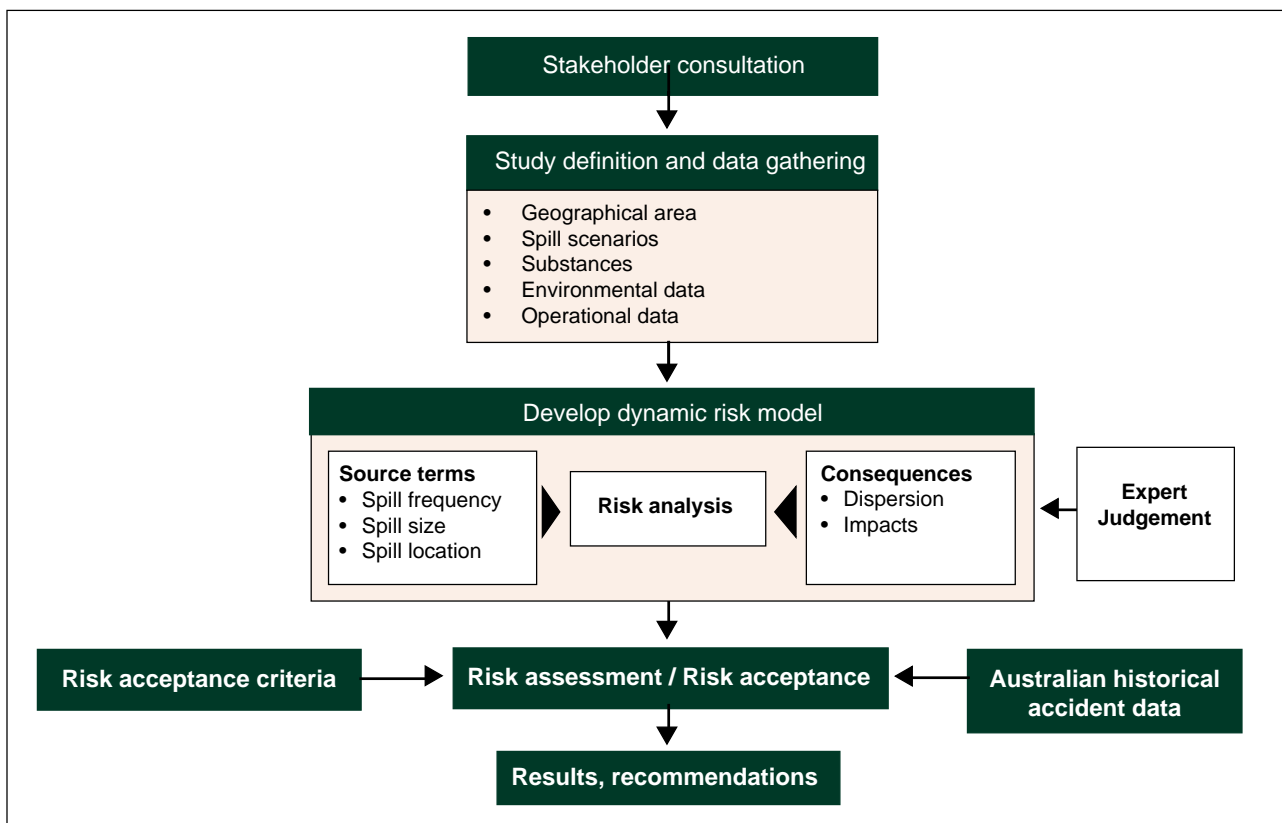


Figure 1: Overall Approach to risk assessment study

The Australian coast is divided into 31 regions, each of approximately the same coastal length and allocated so there are an integer number of regions per state; hence the regions line up with the state boundaries where these join the coast. The different coastal lengths in each state dictate the number of regions allocated to each state. Queensland has six regions, WA has 10 regions, and all other states have three regions. Subregions are thus defined and labelled according to the state, region and zone. For example, South Australia has nine subregions. Risks are calculated for each subregion.

Consultation

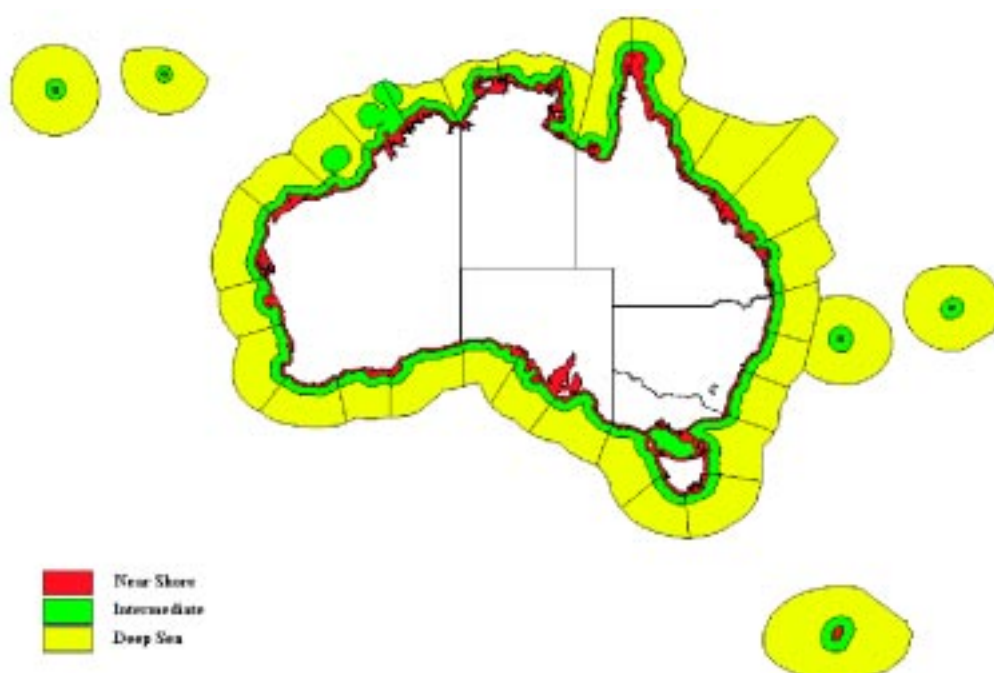
Consultation with stakeholders was carried out in order to provide information on the purpose and scope of the study and to obtain views and input data from interested parties. The National Plan state committees were met, along with a variety of other parties. The consultation process provided the opportunity to obtain the perspective of experts from a variety of backgrounds on the risks of spills in Australian ports and waters. These perspectives provided an important complement to the quantitative picture of risk developed during the project.

Input Data

A substantial amount of data was gathered in order to generate a quantitative model of the risks of pollution in Australian ports and waters. The data was compiled using 1998 as a baseline for the study. Clearly the risk profile will vary from year to year according to changes in shipping and offshore industry activity.

The AUSREP (Australian Ship Reporting) system was used as the source of information on ship traffic levels within the study area. The AUSREP data was converted into a shipping density map suitable for use in the ship risk model. Bureau of Transport Economics statistics on ship arrivals in each port were used as the basis of the port risk model. Offshore oil facility operations data was gathered primarily from the Australian Petroleum Production and Exploration Association.

Figure 2
Study Area



Environmental resource data was analysed from various sources, including the AMSA Oil Spill Response Atlas database, and converted into a simple environmental sensitivity map reflecting the presence and sensitivity of a range of resource types in each sub-region of the study area. A wide range of resource types are incorporated in the map, including ecological, recreational and commercial resources. Each resource type is allocated a sensitivity weighting to reflect both its overall importance and the potential severity of effects from oil impacts. The weighting factors are judged from the response priorities defined in the National Plan.

The main risk management measures in place in Australian ports and waters have been incorporated into the model. These are as follows:

- specific controls in Great Barrier Reef area - pilotage and vessel information;
- traffic separation schemes in Bass Strait area;
- emergency salvage tug capabilities;
- pilotage and vessel traffic systems (VTS) operating in port areas;
- single vessel traffic restrictions in port approach channels; and
- use of high specification containment; for example double hull vessels.

Meteorological data was collected from the Bureau of Meteorology and the Australian Oceanographic Data Centre. Annual and monthly data for approximately 30 stations around the coast of Australia is incorporated in the model, including wind rose, sea state and visibility data. The ship risk model selects the nearest station during calculations in each subregion.

Risk Model

The risk model consists of several main components below, as set out in Figure 3.

Any risk assessment requires a set of accidental events or scenarios to be identified, which then form the basis of the risk prediction. The risks associated with each scenario are estimated in terms of the likelihood and outcome of each scenario. The total risk is a summation of the risks from all scenarios. Accident scenarios included in this assessment are as follows:

Collision - two vessels under way or anchored run into each other, or a ship hits a platform.

Striking - a vessel moored in a port is struck by a passing vessel.

Grounding - a vessel runs onto the shore or submerged rocks, either under power or drifting.

Impact - a vessel runs into a dock wall, lock or jetty.

Transfer spill - cargo or bunker fuel is spilled during transfer within the port.

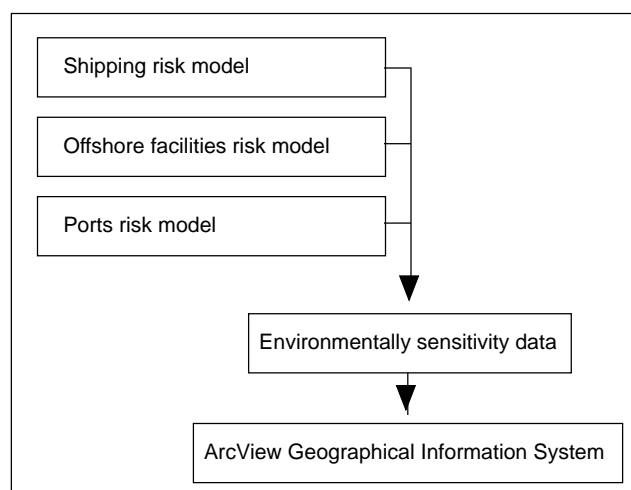


Figure 3 - Overview of Risk Model

Fire/explosion - on vessel but not due to the above causes.

Structural failure - the hull or cargo tanks crack due to inadequate structural strength.

Lightering - Cargo/bunker fuel transfer from ship to ship while at sea.

Offshore spills - fixed/mobile units, blowouts, drilling and production, pipelines, transfer operations.

This list of events covers the vast majority of accident types associated with spills into the marine environment. An accidental event modelled in this study is defined as an event which occurs unintentionally and which may involve significant damage to containment such that a spill of 10 tonnes or more may arise. Not all accidental events would lead to a spill of 10 tonnes or more.

The Port Risk Model is based on a 1990 Det Norske Veritas study of UK port risks for the Health and Safety Executive, which generated port accident frequencies and spill probabilities. Each Australian port is specified in terms of the annual vessel traffic levels and average ship sizes (based on Bureau of Transport Economics data) in each of the main AMSA ship type categories of concern. Each port is further defined by its specific location, size and layout, presence of traffic control systems, single-vessel channels and pilotage.

The Offshore Facilities Risk Model is based on the Dutch Government Oil Spill Risk Database (OSRD), developed by DNV in 1992 from North Sea and US offshore experience between 1975 and 1990. OSRD estimates the size and frequency of oil spills “per activity”, where the activity can be any of the standard offshore operations associated with oil spill risk.

All three of the risk models produce results in the form of frequencies and sizes of spills for all activities in each subregion. This information is then combined with dispersion factors, which reflect the fact that natural dispersion processes will reduce both the mass and likelihood of spilled material impacting at distances away from the spill location. The dispersion factors are based on the detailed Det Norske Veritas methodology for assessing oil spill risks. The effects of spilled material in each subregion are represented by the environmental sensitivity rating allocated to each subregion. Differences in the dispersion and impact characteristics of different types of material spilled (crude oil, refined products, bunker fuel and chemicals) are accounted for using a simple material factor which defines the behaviour of each material in the marine environment relative to crude oil.

In summary, the risk model enables the main factors affecting pollution risk from spills to be combined in a simple manner for the entire study area. More detailed methods are available for many of the components of the risk model. However it is considered appropriate to start with the application of relatively simple models to the entire study area, to produce an overall “high level” risk profile for Australia. This can then be used as a basis for the selective and staged enhancement of the model in particular locations or to reflect particular additional factors.

Risk Results

The overall Risk Profile for Australia is shown in Figure 4 below. This shows the geographical distribution of the Risk Index from all spills over 10 tonnes for all ships at sea, port operations and offshore facilities included in the model. Higher risk areas (where frequency, spill size and environmental sensitivity are all likely to be higher) are shown as magenta, with progressively lower levels of risk being shown as indicated in the legend, down to the lowest category of risk (presented by the blue areas). Note that the Risk Index represents the overall risk in any subregion, and variations of the risk level across a subregion are not shown.

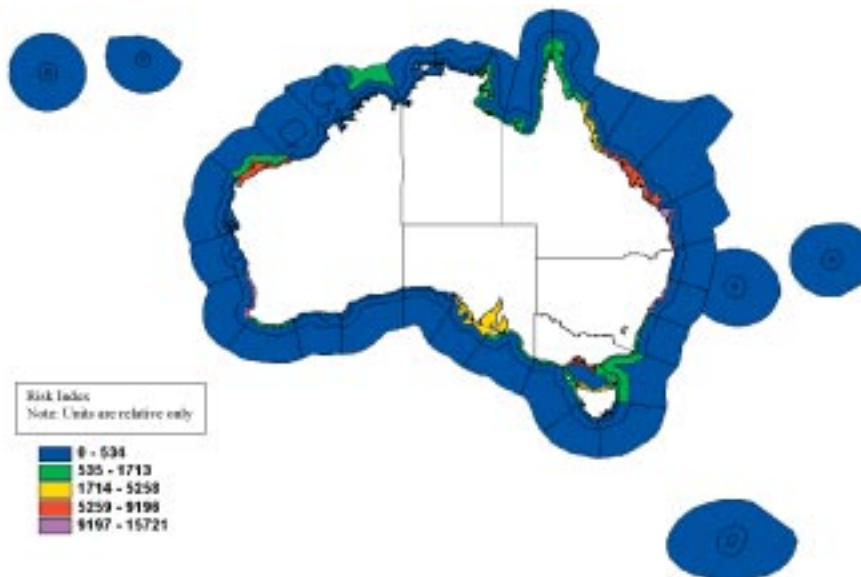
The Risk Profile indicates that there are some key areas of relatively high risk around the coast: most of the east coast of Queensland, the major port areas around Sydney and Melbourne, and the southwest and northwest areas of Western Australia. The distribution of risks between ships at sea, ports and offshore facilities indicate that ports are the major overall contributor to risk levels, as the density of ships and the frequency of operations associated with a spill risk are highest in and around ports. Ships at sea can contribute to risks around the entire coast, but at relatively low levels in any specific location due to the low density of ships throughout Australian waters. Offshore facilities are low contributors to the overall risk level across Australia, but are significant contributors to the risks in their local areas as they are concentrated into a few locations.

Table 1 shows the overall results from the model, together with historical data for comparison purposes. The results indicate ports are the major contributors to both frequencies of spills and risk levels. There is close agreement between the predicted and historical results in each sector.

The risk model predicts that spills over 10 tonnes will occur at a frequency of approximately 0.34/year, 0.18/year and 1.01/year for ships, offshore and port operations respectively. The total frequency of spills greater than 10 tonnes is therefore approximately 1.53/year. This reduces to 0.71/year, 0.15/year and 0.01/year for spills greater than 100,

Figure 4

Risk profile from all spills greater than 10 tonnes for all sources of spills



1000 and 10,000 tonnes respectively. This can alternatively be expressed approximately as a spill of 10 tonnes or more once every eight months, a spill of 100 tonnes or more once every 17 months, a spill of 1000 tonnes or more once every seven years, and a spill of 10,000 tonnes or more every century.

Historical data for ships and ports in Australia indicates that there have been 27 spills over 10 tonnes since 1982, or 1.6/year. Of these, eight were over 100 tonnes (0.47/year) and one was over 10,000 tonnes (0.06/year). For the offshore sector, a historical frequency of 0.1/year has been estimated based on one spill over 10 tonnes in Western Australia. The risk model is reasonably close to Australian historical conditions overall. Note that judging the current frequency from the historical frequency of large spills is highly uncertain, particularly for very large spills, given that there have been very few large spills in Australian waters, and underlying conditions have changed over time.

Table 1 also shows the distribution of the predicted risk in each sector between oil, bunker fuels and chemicals. This shows that bunker fuels are the dominant overall contributor to spill risks, which is due to the high proportion of non-tanker vessels (eg. container/RORO vessels, dry bulk carriers, etc.) entering Australian ports and waters. Oil tankers are a significant contributor to the risk in the ships at sea sector, because of the potentially large spill sizes that may occur with incidents at sea involving tankers. Chemicals overall are a minor contributor to risk due to the low level of traffic and the high integrity of chemical tanker hull designs.

The previous study of risks of oil spills throughout Australia (Review of the National Plan, 1993) was compared with the current study. The results are generally in good agreement. The previous study determined a spill frequency of 0.04 spills/year greater than 1000te, compared with a value of 0.15 spills/year predicted here. This is most likely to be due to methodology differences, although from a risk assessment perspective the difference is not great. The two studies identify similar specific areas as high risk; the current study places greater emphasis however, on the risk from ports, whereas the previous study addressed more general areas including ports.

Table 1: Overall Risk Results and Historical Data

Sector	Spill frequency (spills per year >10 tonnes)		Total risk index for sector	Distribution of risk by material type (%)		
	Predicted	Historical		Oil	Bunkers	Chemicals
Ports	1.01	1.2	76100	21	72	7
Ships At Sea	0.34	0.4	28400	51	48	1
Offshore	0.18	0.1	4000	100	-	-
TOTAL	1.53	1.7	108600	32	63	5