

## **Marine Spatial Planning – policy adaptation in Australia**

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### Introduction

Australia's Oceans Policy was released by the Australian Government in 1998. In common with the European Commission Green Paper, *Towards a future Maritime Policy for the Union: A European vision for the oceans and seas*, Australia's Oceans Policy recognises that oceans management on an industry-by-industry basis will not be sustainable in the long term.

Regional marine planning – or marine spatial planning – was established under Oceans Policy as the key tool to achieve integrated and ecosystem-based oceans planning and management<sup>1</sup>. This paper discusses the Australian experience of relevance to Green Paper Section 2.2 – The importance of the marine environment for the sustainable use of our marine resources, and to Section 4.2 – Spatial planning for a growing maritime economy. The lessons learned in Australia may also be relevant in the context of Section 2.7 – The regulatory framework, and Section 5.1 – Policy making in the European Union – both of which address spatial planning.

Population, trade, maritime security and environmental pressures and imperatives are significantly different between Australia and Europe, as are the governance arrangements and legislative foundation. Australia's institutional challenges are those that arise between sectors and those that emerge in a federation between the national and state/provincial governments.

The approach to marine spatial planning has altered substantially in Australia during the past year in response to a policy review of the first six years of Oceans Policy – a period marked by slower than anticipated progress in implementing regional marine planning. A contributing factor to this experience was the institutional arrangements established in support of Oceans Policy in that the National Oceans Office was established as a stand-alone agency without statutory authority. Equally important was the all-encompassing nature of the regional marine planning mandate and the challenges that arose in securing cross-sectoral engagement and support within government. It is not surprising that progress has been slower than expected, given that the Oceans Policy was unparalleled at the time of its commissioning, and its processes and the detail of its underpinning policies have had to be developed during the implementation phase. The significant “learn by doing” dimension of marine spatial planning and its application in the most heavily populated and intensely exploited marine region of Australia – the South-east Marine Region – has been one of its challenges and strengths.

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<sup>1</sup> *Australia's Oceans Policy* uses the term “ecosystem-based management” to refer to a management approach that is integrated, adaptive and that ensures ecosystem considerations are balanced with social, cultural and economic objectives in working towards ecologically sustainable development in Australia's Oceans. An ecosystem approach is defined by the Convention on Biological Diversity, as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way”<sup>1</sup>.

The new model of marine spatial planning has been brought directly under the national *Environment Protection and Biodiversity Conservation Act* (the EPBC Act). It is using the processes established under this legislation to support nationally consistent decision making on marine biodiversity conservation, with the objective of securing long term protection and conservation of the marine environment in a way that provides improved certainty for industry.

### Background

The vision of the Oceans Policy was “Healthy oceans: cared for, understood and used wisely for the benefit of all, now and in the future”. The broad goals of Oceans Policy included:

- exercising and protecting Australia’s rights and jurisdiction over offshore areas, including offshore resources;
- meeting Australia’s international obligations under the United Nations Convention on the Law of the Sea and other international treaties;
- understanding and protecting our marine biodiversity and ensuring ecologically sustainable use of marine resources;
- promoting ecologically sustainable economic development and job creation;
- establishing integrated oceans planning and management arrangements;
- improving our expertise and capabilities in ocean-related management, science, technology and engineering;
- accommodating community needs and aspirations;
- identifying and protecting our natural and cultural marine heritage; and
- promoting public awareness and understanding.

In addition, Oceans Policy brought together a range of marine biodiversity conservation and sectoral and cross-sectoral initiatives already being undertaken in the marine domain under the broad banner of ecologically sustainable development. Examples included:

- support for national mandatory standards for marine and estuarine water quality;
- the development of a national ballast water management system; and
- a National Moorings Programme for sensitive marine areas.

At the time Oceans Policy was released, it foreshadowed that the EPBC Act, then still proposed legislation being considered by the Australian Parliament, would offer a new level of protection to what is known under the EPBC Act as the Commonwealth marine area.<sup>2</sup>

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<sup>2</sup> The Commonwealth marine area generally comprises the waters around Australia starting three nautical miles from shore and extending seawards to the limits of Australia’s Exclusive Economic Zone. Inshore and coastal waters are managed by the Australian states and territories under arrangements negotiated between the two levels of government and enshrined in legislation in what is known as the Offshore Constitutional Settlement. The Commonwealth marine area is a matter of National Environmental Significance under the EPBC Act. All actions by industry or other parties (including government entities) that may or are likely to have a significant impact on a matter of national environmental significance must be referred for assessment and approval under the EPBC Act.

Two more aspects of Australia's Oceans Policy are directly relevant to matters discussed in the Green Paper and the related progress towards finalisation of a Thematic Strategy for the Marine Environment adopted by the Commission. These are Oceans Policy's objectives to:

- develop an improved understanding of the marine environment, including environmental baseline surveys and sustainability indicators, monitoring and improved assessment of the impacts of commercial and recreational activities; and
- accelerate development and improve management of marine protected areas.

Management of the coastal zone is excluded from Oceans Policy in that the Policy deals exclusively with the management of the marine environment within the direct control of the national government. However, a complementary *Framework for a National Cooperative Approach to Integrated Coastal Zone Management (ICZM)*, was endorsed in October 2003 by the national and state and territory governments meeting as the Natural Resources Management Ministerial Council. The ICZM framework addresses both development and conservation challenges for coastal Australia that are of national scale and scope. The six priority areas addressed in the Framework are: land and marine based sources of pollution; integration across the catchment-coast-ocean continuum; climate change; pest plants and animals; planning for population change; and capacity building. An implementation plan that seeks nationally cooperative outcomes within nominated timeframes has been released.

Lastly, while Australia's Oceans Policy is a product of the national government, it includes scope for co-operation between the national and state/territory governments in marine spatial planning activities in their adjoining waters. To this end, the Natural Resource Management Ministerial Council has agreed to work towards a collaborative approach to Integrated Oceans Management, utilising a draft framework developed for that purpose. The framework outlines a series of principles to guide application of integrated oceans management (Appendix A), and identifies options for governance arrangements between jurisdictions and across sectors, including in relation to marine spatial planning.

### Discussion

Regional marine planning was intended to be the primary tool by which integrated and ecosystems-based oceans planning and management would be achieved. At the time of review, one regional marine plan had been completed – that for the South-east Marine Region in May 2004.<sup>3</sup> The plan brings together all the key information gathered during the assessment and

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<sup>3</sup> The South-east Marine Region covers more than 1.6 million square kilometres of water off Victoria, Tasmania, southern New South Wales and eastern South Australia. The area is recognised as having global significance for marine biodiversity and the occurrence of large numbers of endemic organisms (an estimated 60% of the marine species found in temperate Australia are believed to be unique to the area). Oceans in the Region are relatively low in nutrients and primary productivity: exceptions occur where water bodies converge to create "hot spots" of primary productivity. These seasonal and transient upwellings are significant features of the Region. Seamounts are key geological features in the Region, supporting large aggregations of benthic fish. Large predators (e.g. whales, seals, sharks and tunas) are common in the Region.

public consultation phases to provide a snapshot of the region, its ecosystems and the use and management of the marine environment. The plan identifies a series of high level objectives for the region and sets out a detailed action plan for the pursuit of those objectives, including the identification of lead agencies and timeframes for delivery. It includes actions that range across a number of industry sectors, but these actions tend to be linked rather than integrated.

The South-east plan did not directly address all the key aspects of marine spatial planning articulated in Oceans Policy. In particular, the plan did not include indicators of ecosystem health/sustainability. Similarly, the intention to measure and address the cumulative impacts of resource use on the marine environment using multiple-use risk assessment was not realised. Also notable is that the plan did not achieve the Oceans Policy aspiration of using marine spatial planning to propose resource allocation among sectoral users and reconcile conflicts between competing sectoral interests. While it is possible to criticise these absences as failures of process, the first two are more readily explained as the products of having to stretch limited planning resources across multiple sectors and invest heavily in building the scientific understanding of the South-east marine region. Additionally, cumulative risk assessment and the development of indicators were key actions for early implementation under the plan.

The issue of cross-sectoral resource allocation is more complex. A key question relates to how we conceive of spatial planning. In the context of Oceans Policy, the implication is that spatial planning equals activity-based zoning, with resource allocation occurring based on criteria that have both socioeconomic and ecological elements. However, viewing marine spatial planning only in terms of zoning risks the adoption of a one-dimensional approach that does not utilise the full set of tools available to planners. These tools may include things such as legislative instruments, non-statutory guidelines, voluntary codes of practice, direct public and private investment in conservation and impact mitigation measures, and technological innovation. The key challenge is to select the tool(s) fit for purpose, recognising that we are operating in a large scale spatial context in which zoning is an important tool (eg, creation of marine protected areas, spatially or temporally fixed fisheries closures or temporal area closures to protected endangered species such as whales aggregating to breed).

Finally, there are relatively mature and effective sectoral arrangements already in place in Australia for dealing with industry impacts on the marine environment. For example, the *Petroleum (Submerged Lands) Act 1967* includes substantive provisions for the protection of the marine environment and is supplemented by the referral and approval (environmental impact assessment) provisions of the EPBC Act. Similarly, the combination of the *Fisheries Management Act* and the EPBC Act establish a comprehensive framework for the management of the environmental impacts of commercial fishing. A key questions that emerges in this context is whether the foundation of these regulatory regimes might need to be refocused from minimising the environmental impact of economic activity to be more directly aligned with an ecosystem-based approach to marine management.

Where issues arise that require whole-of-government coordination, these generally result in issue-specific processes being established. Once such example is introduced marine pests. An Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions was signed in April 2005. Parties to this Agreement agree that the intention of the National System is to provide effective and cost efficient procedures for the prevention, emergency response and ongoing management and control of marine pest

incursions, while providing a consistent and cost effective approach to border control, compliance and development of legislation. The Agreement is intended to ensure that all sectors whose activities may lead to the introduction and translocation of marine pests will manage the associated marine pest risk and that measures implemented under the framework of the National System will be consistent with any current or future international agreements relating to introduced marine species.

### *Marine Protected Areas*

As already identified, a key commitment of Oceans Policy was the accelerated development of the National Representative System of Marine Protected Areas (NRSMPA) in Commonwealth waters as part of the planning process. The development of the NRSMPA fulfils Australia's responsibilities and obligations under a number of international conventions and agreements, as well as the National Strategy for the Conservation of Australia's Biological Diversity.

The South-east MPA network – covering some 226,000 square kilometres – was not delivered in the same timeframe as the South-east plan. Indeed, it was developed by another agency through a parallel process, although the underlying scientific information and analysis was held in common. There was a high level of complexity in the MPA development process, both in terms of technical detail and stakeholder engagement. Part of this complexity was due to the limits of the information base and the sheer scale of the programme in a deep and remote offshore marine region. The process was also complicated by the adoption of a consensus based model of development where stakeholders were involved in drawing MPA boundaries.

The newness of MPA development agenda resulted in the emergence of new government policy. For example, there is the potential (realised in the South-east) for resource use to be reallocated from a range of industry uses to biodiversity conservation, with different levels of access restrictions set according to the level of protection desired in any MPA. This necessitated the development of government policies on how to deal with the structural adjustment needs arising from the displacement of commercial fishing effort from MPAs, and how to approach the development of MPAs in areas known to be prospective for oil and gas.

### *Legislative basis for marine spatial planning*

The capacity for the EPBC Act to strategically drive the integrated and sustainable management of industry exploitation of the marine environment was not utilised effectively during the first phase of regional marine planning. Indeed, quite some effort was expended in examining whether stand-alone oceans legislation was required.

The Commonwealth marine area is a “matter of national environmental significance” under the EPBC Act and accordingly afforded significant protection. Oceans users can be subject to the individual environmental impact assessment of proposed actions and there are also provisions for the strategic assessment of classes of activity. As noted above, fisheries have their own assessment process under the EPBC Act. There are provisions covering threatened species and ecological communities, marine species, critical habitat, threat abatement, recovery planning, wildlife trade and protected areas. With the exception of the strategic assessment provisions of the EPBC Act, these provisions are applied actively.

The significant advances made under Oceans Policy to improve our understanding of the marine environment have been a major achievement to date. This was achieved through a significant investment in scientific investigation and analysis and the development of key tools such as a bioregional map of Australia's Exclusive Economic Zone. These tools also included extensive analysis of the economic and social uses of the marine environment. The policy review found that further work was required to support the sustainable use and management of Australia's oceans by developing data and frameworks to allow the assessment of the ecological, social and economic impacts of management actions and support bioregional planning. Such a framework is required to support the effective regulation and management of marine resource use and enable the effective implementation of the principles of ecologically sustainable development, ecosystem-based management, and multiple-use management.

In the absence of the discipline of a statutorily backed framework, there is a risk that the pursuit of integrated oceans management outcomes may be compromised by ad hoc decision making. Therefore, the role of regional marine planning has been recast so that it will set overarching environmental outcomes to support and inform sectoral decision-making. This is consistent with the Australian Government's preference for outcomes-based management over regulation. In following this path, the focus of marine planning is being brought more directly to biodiversity conservation priorities at the regional level and in doing so creating the long term security of access and certainty of process for existing and future marine-based industries that was one of the key objectives of Oceans Policy.

#### *Bioregional marine planning – the next phase*

The key recommendations of the policy review were adopted by the Australian Government in late 2005 and the Department of the Environment and Heritage is now developing bioregional marine plans. The significance of these plans being made under the EPBC Act is that the Act stipulates that the Minister for the Environment and Heritage must have regard to such plans when making decisions under the Act about matters to which the plans are relevant. While not binding on the Minister, the plans offer significant capacity to influence future sectoral activity in and adjacent to the Commonwealth marine area. We are developing these plans with two primary outcomes in our sights; firstly, delivery of an overarching, objectives based framework for ecosystem management to inform and influence sectoral management; and secondly, the consolidation of conservation priorities and actions to address them at the regional level.

Bioregional plans will present a comprehensive ecological profile of the region, identifying key priority conservation values and threatening processes. Conservation values will be identified firstly by reference to existing statutory arrangements and requirements (for example, protecting endangered species and species protected under international agreements); and secondly by detailed scientific analysis of ecological processes at the regional level. Key conservation values arising from the ecological analysis within a region could be as diverse as small pelagic fishes, seagrass beds and nutrient upwellings/areas of high primary productivity.

Given the massive size of Australia's Exclusive Economic Zone, this regional scale assessment of the ecosystem allows for a level of understanding of geomorphology and ecosystem processes and their interrelationship with biodiversity values which has not been achievable before. In turn this allows government to establish strategic conservation priorities for regions,

and marine industries to be more informed in their engagement within the region and with the EPBC Act as it is applied in the region.

Cumulative risk assessment is an important aspect of the planning process. This approach to planning allows for regional and sub-regional data collection and analysis of current and potential impacts from the range of human activities within a region. Combining and overlaying the range of human induced impacts on the conservation values identified in the plans and applying a risk approach will inform government and industry on how to avoid or manage impacts. It may also have an affect on the status of conservation values.

Bioregional marine planning has nested marine protected area (MPA) development within the broader planning framework. This approach identifies MPAs as one of a range of spatial and non-spatial tools available to government to address conservation priorities, including developing a representative protected area system. It allows the contribution of other spatial management measures, such as fisheries closures, to be recognised for their conservation contribution. The integrated approach has a number of other advantages including streamlining stakeholder interactions (see Fig 1) and effective and efficient data collection and analysis.

The plans will also include the development of baseline measures for ecological sustainability, which would be reported in Australia's State of the Environment Report every five years. Regional indicators of ecosystem health and the effectiveness of conservation management arrangements in the marine environment will contribute to effective adaptive management and government decision making.

## **Conclusion**

Australia has significantly changed its approach to marine spatial planning in the past 12 months based on the lessons learned during the first five years of implementation. A key conclusion from this experience is that having a legislative foundation is beneficial to managing a planning exercise that necessarily spans multiple sectors and interests. In tandem with statutory authority, careful thought needs to be given to the governance arrangements established in support of marine spatial planning. Having said this, it should be noted that marine bioregional plans in Australia will not be "hard" legal instruments in that they will be advisory to the Minister for the Environment and Heritage. They will set the ecological and socioeconomic context for decision-making, rather than dictating what those decisions must be. This means bioregional plans can also be important advisory tools for industry and sectoral managers in government.

Secondly, marine spatial planning can only work where government departments have to operate under a common objective. In Australia, that common objective is Ecologically Sustainable Development, which is given effect through the EPBC Act and sectoral legislation. The principles of ecologically sustainable development as spelt out in the EPBC Act are:

- decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equity considerations;
- if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;

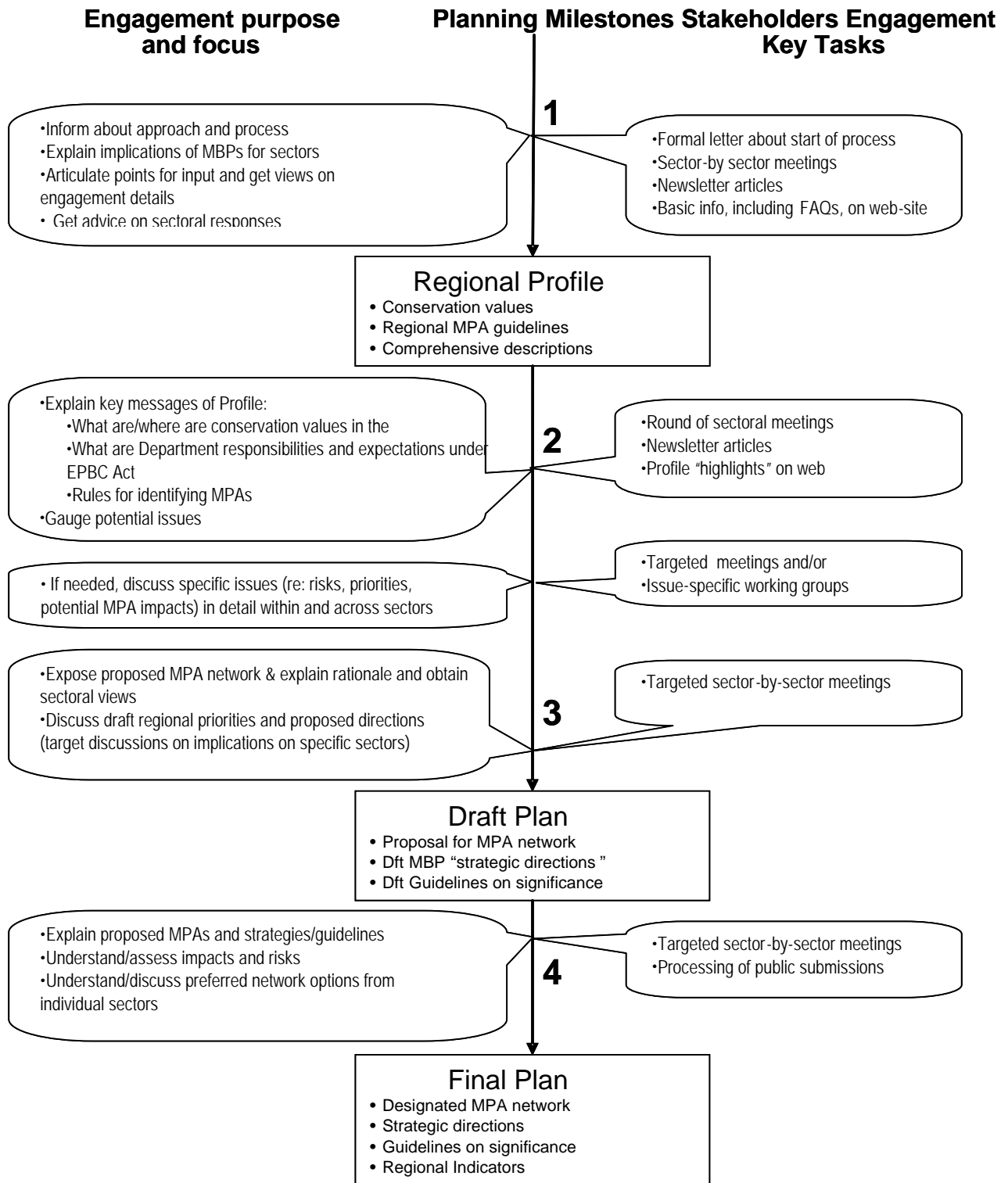
- the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; and
- improved valuation, pricing and incentive mechanisms should be promoted.

Thirdly, marine spatial planning is an important process for developing an ecosystem-based approach to management. However, space-based management (including zoning as a sub-set of it) should not be viewed as a panacea. Equally important is the suite of other management tools at our disposal, which themselves many need to be recast on a foundation of ecosystem-based management. To do this necessitates an understanding not just of the environmental footprint of sectoral activity, but the cumulative impact of and interactions between sectors. This understanding should be a key outcome of marine spatial planning. Similarly, it is important to include social and economic analysis in the planning process as we need to understand the human implications of the decision governments make. Direct engagement with stakeholders will add real value to this analysis.

Fourthly, industry investment security matters. While security can never be absolute, it is reasonable for industry and other stakeholders to expect certainty of process, clarity about the information on which decisions will be made, and advice about the priorities for government (which in the case of marine spatial planning should be advice about biodiversity conservation objectives and priorities in the context of sustaining healthy and productive ecosystems).

Fifthly, we need to think carefully about what we mean if we say we want a comprehensive or all-encompassing approach to marine policy. The Australian experience is that if we embark with the objective of marine spatial planning being all-encompassing, we may end up with lowest common denominator policy. The consequential likelihood is that the core elements at the heart of our original intention may not be secured through the pursuit of consensus. Arguably it is better to focus comprehensively on a limited number of key objectives and get these right.

Figure 1: MBP Stakeholder Engagement Diagram



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## Appendix A

### Natural Resource Management Ministerial Council Integrated Oceans Management Principles

*The principles should be considered in the context of Australia's rights and obligations as a signatory to a number of conventions of relevance to oceans management. These include responsibilities for the sustainable management, exploration and exploitation of resources, conservation of marine species and habitat, and maritime safety.*

Decision making on oceans management includes consideration of short and long-term environmental, economic and social implications across sectors

In making decisions on oceans use and management governments recognise that sustainable marine industries rely on functioning marine ecosystems and that ecosystem integrity is a priority consideration

Decisions on oceans management recognise that access to marine resources and security for marine industries that are sustainable, ecologically responsible and internationally competitive is crucial to regional and national economies.

Governments allow for joint decisions on cross-jurisdictional issues where appropriate, recognising that governments will continue to exercise their sovereign responsibilities for oceans management as defined and agreed under existing Offshore Constitutional Settlement arrangements.

Lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.

Marine planning and management is designed to complement other marine, coastal and terrestrial planning and management processes, recognising the connectivity of the marine environment between catchments, inshore and offshore areas and in areas that cross jurisdictional boundaries

Governments adopt a co-operative transparent approach to oceans planning and management including effective consultation with community, industry and interest groups to maximize efficient and effective management and encourage partnerships.

Planning and management is based on an adaptive approach that uses the best available scientific information and incorporates an understanding of the risks to economic, conservation, social, cultural and ecological values of the ocean.