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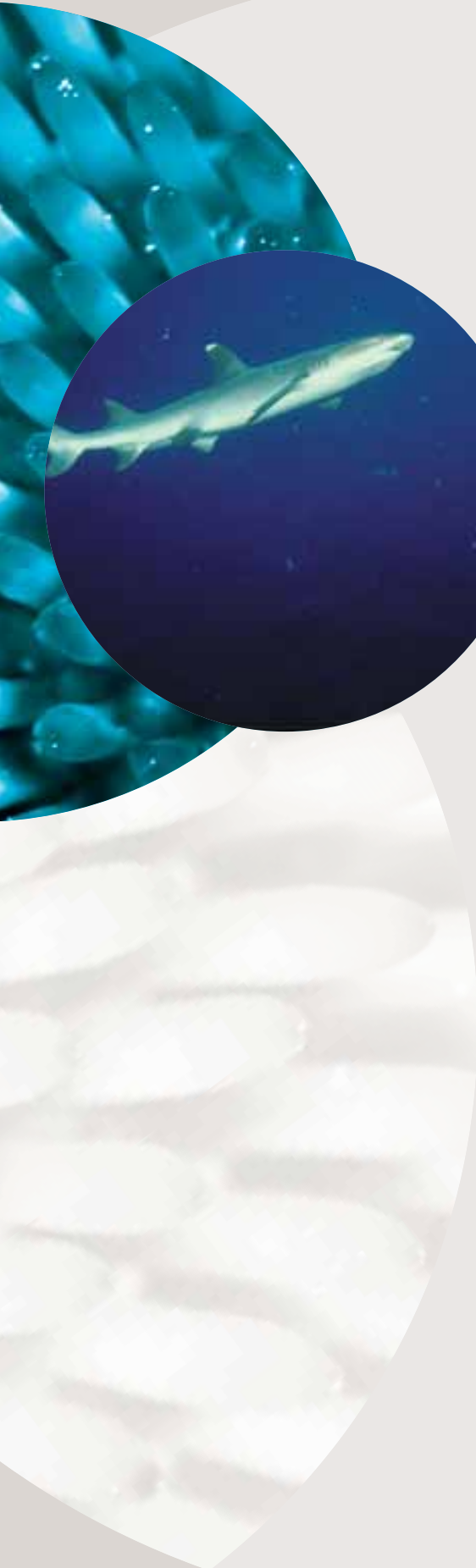
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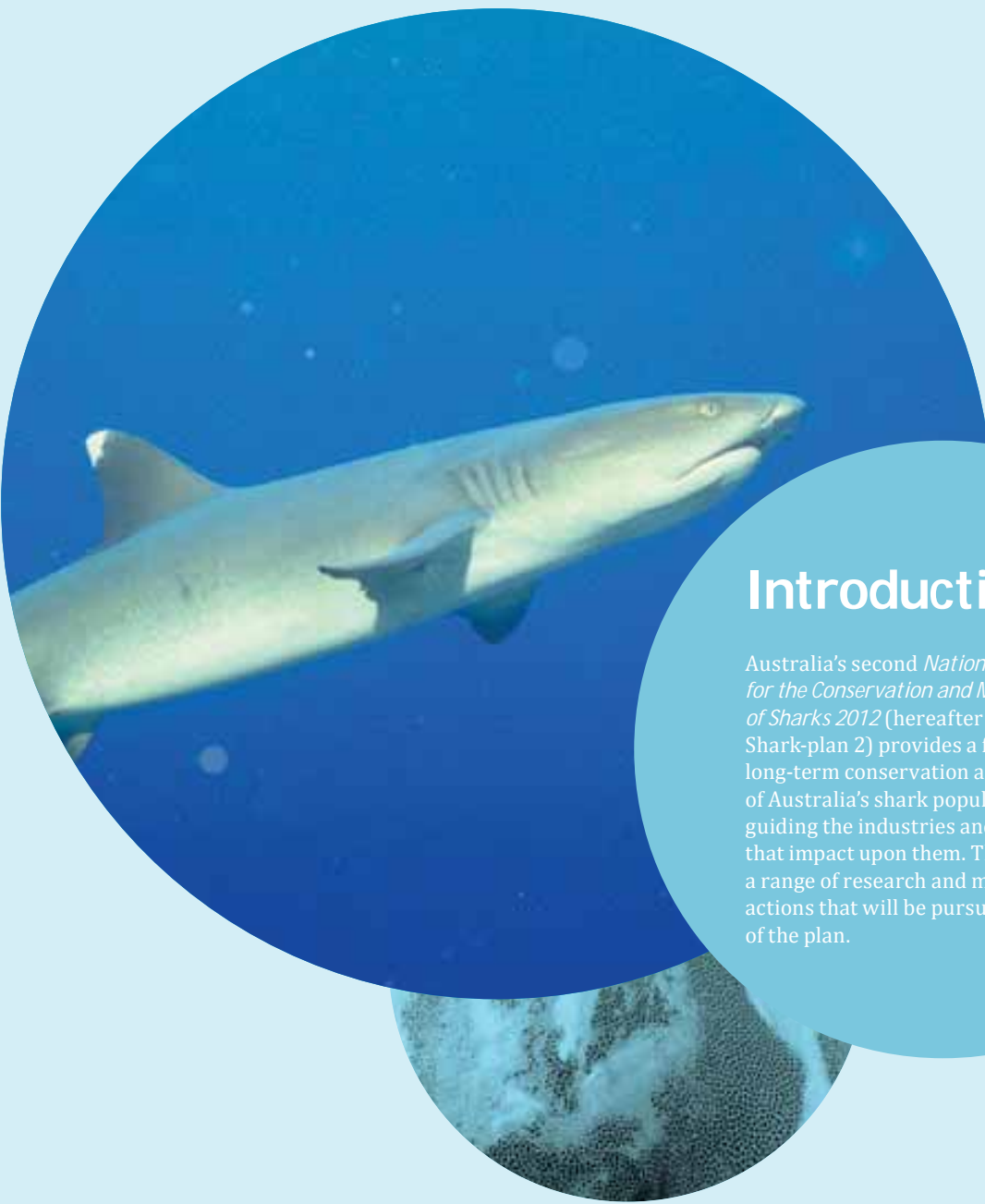
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Introduction

Australia's second *National Plan of Action for the Conservation and Management of Sharks 2012* (hereafter referred to as Shark-plan 2) provides a framework for the long-term conservation and management of Australia's shark populations and for guiding the industries and communities that impact upon them. The plan identifies a range of research and management actions that will be pursued over the life of the plan.

The importance of monitoring and evaluation, and continuous program improvement was identified during the review of Australia's first *National Plan of Action for the Conservation and Management of Sharks* (Shark-plan 1), which stated Shark-plan 2 would benefit from more active engagement by all jurisdictions and greater clarity against, and accountability for Shark-plan outcomes. The implementation of actions, involving monitoring and evaluation will be key to the effectiveness of Shark-plan 2. Determining an appropriate and cost-effective performance management framework is important.

Following the development of Shark-plan 2, representatives from state, Northern Territory and Australian Government fisheries agencies agreed in September 2011 to develop an operational strategy. The purpose of the operational strategy is to identify the actions that state, Northern Territory and Australian Government will individually or collectively pursue to contribute to the broader objectives of Shark-plan 2.

The operational strategy details the monitoring, evaluation and reporting processes required for the effective implementation of Shark-plan 2. The life of this operational strategy is from 2012 until the completion of a formal review of Shark-plan 2, noting Shark-plan 2 is to be reviewed within four years of implementation.

Implementation of the actions in Shark-plan 2 through this strategy is a shared responsibility, which relies on governments and stakeholders around Australia. This strategy sets out the governments (that is, the Australian, state and Northern Territory governments, referred to as jurisdictions) that are responsible for the implementation of Shark-plan 2.



Governance

The Department of Agriculture, Fisheries and Forestry (DAFF) is the lead agency responsible for the development of Shark-plan 2 and for coordinating its implementation. DAFF reports to the Australian Government Minister for Agriculture, Fisheries and Forestry. DAFF also represents the Australian Government on the United Nations Food and Agriculture Organisation's Committee on Fisheries.

At the operational level, the state, Northern Territory and Commonwealth governments have prime responsibility for implementing and reporting on the actions in Shark-plan 2.

A shark representative group comprising key stakeholders will meet annually to review the progress against actions. The establishment and management of the shark representative group is the responsibility of DAFF.

Shark-plan 2 does not have any formal statutory powers and must link closely with existing regulation and policy in each jurisdiction. Successful implementation will depend on the capability and will of jurisdictions to complete the actions identified in the plan and this strategy.



Stakeholders

Effective shark conservation and management requires cooperation among a range of stakeholders, from each jurisdiction, including commercial, recreational and game-fishing groups, environment and conservation non-government organisations, Indigenous groups, scientific and research organisations and the general public.

Outcomes from Shark-plan 2 need to be accountable to stakeholders. Stakeholders will be invited to participate in the shark representative group which will provide opportunities for input, information on progress and discuss any issues about shark conservation and management.



Jurisdiction responsibilities

Each jurisdiction has nominated priority actions to progress over the next four years to address shark conservation and management issues. These actions add to the conservation and management work already being undertaken by each jurisdiction. Progress against the actions identified in the operational strategy will be reported to DAFF and the shark representative group annually.

It is unrealistic to expect that all of the actions identified in Shark-plan 2 will be fully addressed by all jurisdictions over the life of the plan. The strategy details specific actions jurisdictions will implement, progress and report on over the life of Shark-plan 2.

Table 1 sets out the actions that each jurisdictional has agreed to initiate or complete during the next four

years. The table details actions to progress as a primary, a secondary focus and actions that relate to day-to-day management.

It should be noted that Shark-plan 2 and this operational strategy do not replace legislative requirements for each jurisdiction or agency to manage sharks and rays.

Table 1: Jurisdiction responsibilities

Issue	Priority of issue	Action	Jurisdiction										
			Commonwealth				NSW	NT	Qld	SA	Tas	Vic	WA
			AFMA*	DAFF / ABARES*	DSEWPaC*	GBRMMPA*							
Issue 1	High	1. Review existing shark species identification guides (and any in development), implementing the best available identification guides in all relevant fisheries: <ul style="list-style-type: none"> ensure guides are culturally appropriate, including the use of Indigenous species names where appropriate. ensure the best available guides have been provided to relevant user groups, including fishers, processors, compliance officers, observers and scientists. 					Primary Focus	Primary Focus	Secondary Focus			Secondary Focus	
		2. Monitor the effectiveness of identification guides.					Primary Focus	Primary Focus	Secondary Focus				
		3. Investigate the potential for additional tools for shark identification, such as morphological diagnostic tools or DNA identification kits.					Primary Focus	Primary Focus					
Issue 2	High	4. Develop and implement national minimum data standards for all commercial, recreational, bather protection and Indigenous fishing operations that take sharks.		Primary Focus	Secondary Focus		Primary Focus	Primary Focus			Primary Focus		
		5. Obtain better understanding of illegal, unregulated and unreported shark catch.	Primary Focus	Primary Focus			Primary Focus						
		6. Develop and implement data verification systems with clear objectives and performance measures.					Primary Focus	Primary Focus					
Issue 3	Medium-high	7. Implement anti-finning measures for all Australian fisheries and assess their effectiveness across jurisdictions. Measures should be promoted for adoption regionally and internationally.		Primary Focus	Primary Focus		Primary Focus			Primary Focus			
		8. Assess the potential for more comprehensive trade data collection and analysis to improve shark conservation and management outcomes and implement a more comprehensive trade data collection system as appropriate.		Primary Focus	Secondary Focus								

* AFMA (Australian Fisheries Management Authority); DAFF (Department of Agriculture, Fisheries and Forestry); ABARES (Australian Bureau of Agricultural and Research Economics and Sciences); DSEWPaC (Department of Sustainability, Environment, Water, Population and Communities); GBRMPA (Great Barrier Reef Marine Park Authority).

Primary Focus
 Secondary Focus
 Day to day management where applicable to the jurisdiction

Table 1: Jurisdiction responsibilities (continued)

Issue	Priority of issue	Action	Jurisdiction												
			Commonwealth					NSW	NT	Qld	SA	Tas	Vic	WA	
			AFMA*	DAFF / ABARES*	DSEWPac*	GBRMIPA*									
Issue 4	High	9. Support the FRDC National Research, Development and Extension Framework <i>Shark futures</i> .													
		10. Investigate opportunities for collaborative research initiatives to address the aims and objective of Shark-plan 2.													
Issue 5	High	11. Maintain and/or improve stock assessments, risk assessments and status determination processes for target, bycatch and byproduct species.													
		12. Assess the need for implementation of formal harvest strategies to manage shark catch.													
Issue 6	Medium	Covered under Issue 5													
Issue 7	High	13. Iterative/ongoing jurisdictional assessment of the adequacy of shark management including the implementation of harvest strategies and compliance, enforcement and education strategies to support sustainability objectives for sharks.													
		14. Explore mechanisms for greater collaboration between jurisdictions regarding research, assessment and management of shared stocks.													
Issue 8	Medium	15. Review the effectiveness of management measures for recreational and game fishing in achieving sustainability objectives for shark species and develop recommendations for future management approaches, should this be found to be necessary.													

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Primary Focus
 Secondary Focus
 Day to day management where applicable to the jurisdiction

Issue	Priority of issue	Action	Jurisdiction													
			Commonwealth													
			AFMA*	DAFF / ABARES*	DSEWPaC*	GBRMIPA*	NSW	NT	Qld	SA	Tas	Vic	WA			
Issue 8 (cont.)	Medium	<p>16. Assess the findings of the Review under action plan 16 and relevant recreational and Indigenous fishing surveys to:</p> <ul style="list-style-type: none"> • identify gaps in existing monitoring and data collection programs for recreational, charter and Indigenous fishing. • determine the nature and role of state and territory recreational fishing surveys. • determine the required frequency of future national surveys. • determine adequacy of reporting on recreational and Indigenous fishing issues at national level. • where necessary, update existing survey methodologies or introduce effective supplementary or alternative data collection mechanisms. • review and where necessary revise recreational and game fishing management arrangements to ensure impacts on sharks are sustainable. • where necessary, increase education and enforcement programs in recreational and gamefishing sectors. 														
Issue 9	Medium–low	<p>17. Improve understanding of the cryptic mortality of high risk sharks in commercial, recreational and Indigenous fisheries.</p>														
		<p>18. Implement strategies to reduce cryptic mortality, noting the link with Theme 2 of <i>Shark Futures</i> which has a focus on minimising the environmental impacts of fisheries on sharks.</p>														
		<p>19. Ensure cryptic mortality is accounted for in the setting of catch quotas (where information is available).</p>														

DSEWPaC (Department of Sustainability, Environment, Water, Population and Communities); GBRMPA (Great Barrier Reef Marine Park Authority).

Table 1: Jurisdiction responsibilities (continued)

Issue	Priority of issue	Action	Jurisdiction											
			Commonwealth					NSW	NT	Qld	SA	Tas	Vic	WA
			AFMA*	DAFF / ABARES*	DSEWPaC*	GBRMPA*								
Issue 10	Medium–low	20. Investigate shark handling practices to identify any areas of concern.												
		21. Implement solutions as required, with consideration given to increased training and enforcement requirements.												
Issue 11	Medium	22. Assess the extent of Indigenous fishing for sharks and incorporate into overall management arrangements. Identify gaps in knowledge about Indigenous shark fishing and, where a need is identified, develop research proposals to address these gaps.												
		23. Assess the impact of existing management measures for sharks on Indigenous subsistence fishing practices.												
Issue 12	Medium–high	24. Implement management responses for species (or species groups) already assessed as high risk.												
		25. Undertake best practice risk assessments for shark species not already assessed.												
		26. Continue to refine risk assessment processes for target, bycatch and byproduct shark stocks, seeking to include all available data and to include consideration of cumulative impacts. Collection of data on species biology and human impacts will be foundational to the success of this action.												
		27. Evaluate the methodologies for risk assessment and assess the need for national risk assessment guidelines.												
		28. Implement management measures for any subsequent high risk species.												
		29. Identify important habitat and broader environmental and habitat requirements for shark species and appropriate protection and management of these areas.												

* AFMA (Australian Fisheries Management Authority); DAFF (Department of Agriculture, Fisheries and Forestry); ABARES (Australian Bureau of Agricultural and Research Economics and Sciences);

Primary Focus
 Secondary Focus
 Day to day management where applicable to the jurisdiction

Issue	Priority of issue	Action	Jurisdiction																			
			Commonwealth					NSW	NT	Qld	SA	Tas	Vic	WA								
			AFMA*	DAFF / ABARES*	DSEWPaC*	GBRMPA*																
Issue 13	Medium-high	30. For species designated as requiring recovery, implement recovery strategies. Recovery strategies should be monitored and revised as appropriate to ensure effectiveness.																				
Issue 14	Medium-high	31. Initiate action (as required) to ensure effective bycatch reduction methods for sharks have been developed for all fisheries in which shark are caught as bycatch, giving priority to species identified through risk assessment as 'high risk'.																				
		32. Assess the effectiveness of current shark bycatch reduction measures in reducing shark mortality (including cryptic mortality) and develop performance measures for shark bycatch reduction.																				
		33. Promote adoption of effective shark bycatch reduction measures internationally.																				
Issue 15	Medium-low	34. Undertake periodic assessment/support research of the impact of targeted shark fishing on non-target species (particularly threatened species) and identify priority issues for management.																				
		35. Undertake periodic assessment/support research of the impact of fishing operations on structure and function of shark species/stocks and identify priority issues for management.																				
		36. Periodic assessment of the ecological impacts of shark control programs for bather protection.																				
		37. Investigate methods for modelling the population ecology of sharks and distinguishing between natural vs fishing induced variation, so as to better understand population status and rates of recovery.																				
		38. Consider ecosystem structure and function in the development and implementation of management measures, including trophic system interactions and how changes in systems may be measured.																				

DSEWPaC (Department of Sustainability, Environment, Water, Population and Communities); GBRMPA (Great Barrier Reef Marine Park Authority).



Reporting

Annual reports on activities, achievements and progress under this strategy will be prepared and distributed to stakeholders. An annual shark representative group meeting will provide opportunities to further report, discuss progress, seek feedback and reprioritise actions.

The reporting template (Table 2) will be used by jurisdictions to report against Shark-plan 2 on an annual basis. The intention of this template is to lessen the reporting requirements for all without compromising the quality of information.

Reporting against each action is required for all primary and secondary actions. Reporting on day-to-day management actions is encouraged. This reporting will demonstrate actions jurisdictions are taking to progress the conservation and management of sharks within Australia.

During the operational period of the strategy, jurisdictions will identify actions that have not been initiated for discussion with the relevant shark representative group. These actions may be placed in a higher category and carried over into the next 12-month activity period.

Jurisdictions are encouraged to initiate the implementation of additional actions as further resources become available or where the actions can be completed through day-to-day operations.

DAFF is responsible for updating the operational strategy and amending the action table at the end of each 12-month activity period.

Completed actions will be moved over to the final report, which will be presented at the completion of Shark-plan 2's term.



Table 2: Reporting template for Shark-plan 2 operational strategy

Action number	Completed (Yes/No/In part). If in part, expected timeframe for completion	If Yes, what was the output? If No, what was the reason for not completing the action? If in part, what progress has been made	Outcome/s from the full or partial implementation of the action, and/or implications/outcomes from the lack of or partial implementation of the action
1.			
2.			
3.			



Review, analysis and evaluation

The shark representative group will meet annually to discuss outcomes and the progress of issues and actions in Shark-plan 2.

On conclusion of the operational period of Shark-plan 2, jurisdictions will evaluate its overall performance against its aims and objectives. Information will be collected and used to assess whether and to what extent each management jurisdiction has addressed the issues and actions identified. The outputs and outcomes recorded will

allow an assessment of the degree to which actions have addressed the issues identified within the plan.

The outcomes of the evaluation process will be reported and made available for public viewing on the DAFF website.

The biosphere is relevant to the work we do and aligns with our mission – we work to sustain the way of life and prosperity of all Australians. The biosphere imagery used in Shark-plan 2 represents the environment, habitat and shark and ray species relevant to the *National Plan of Action for the Conservation and Management of Sharks 2012 Shark-plan 2*.



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