

Management programs operational schedule

- Strategy to be completed within this timeframe
- Strategy to be completed on an ongoing basis

MANAGEMENT FRAMEWORKS SCHEDULE		YEAR									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	The CEO of the department will jointly manage relevant portions of the marine park with the Nyangumarta and Ngarla Traditional Owners in accordance with the JMAs attached to this management plan (H-KMS).										
Management program action	Implement all other legal provisions necessary to establish and jointly manage the marine park, including reservation of intertidal areas within the marine park; gazettal of appropriate notices and orders under the CALM Act, Wildlife Act and <i>Fish Resources Management Act 1994</i> (FRM Act) [DoF] (H-KMS).										
Management program strategy	Develop and implement joint collaborative operational plans with DoF (H-KMS).										
Management program strategy	Ensure that the assessment of and setting of conditions for proposed and new developments and operations are consistent with the management objectives and targets for the marine park's values [MPRA, EPA, DoF, DER, DMP, Department of Transport (DoT), Local Government Authorities (LGAs), Tourism WA] (H-KMS).										
Social & economic value specific strategies	<ul style="list-style-type: none"> Ensure site planning and development proposals for recreational and commercial activities are consistent with maintaining the remote seascapes of the marine park [LGAs, adjacent land managers] (H). Ensure the granting and renewal of commercial tour licences is consistent with the permitted use table, management targets and wildlife conservation notices (H). Provide formal advice to the EPA, DMP, DoT, DER and the Commonwealth Department of Environment in relation to the environmental assessment of proposed industrial developments in and adjacent to the marine park [MPRA] (H). 										

MANAGEMENT FRAMEWORKS SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Ensure that relevant international conservation agreements and related obligations are considered during the development and implementation of management arrangements [DoF] (H).										
<i>Ecological value specific strategies</i>	<ul style="list-style-type: none"> • Ensure management of migratory shorebirds in the marine park supports relevant international agreements (e.g. JAMBA, CAMBA, RoKAMBA, Ramsar Convention, Convention on the Conservation of Migratory Species of Wild Animals (CMS) and contributes to other relevant instruments (e.g. <i>Asia-Pacific Migratory Waterbird Conservation Strategy 2001-2005</i> and <i>Draft Wildlife Conservation Plan for Migratory Shorebirds 2014</i>) (H). • Ensure management of marine turtles in the marine park supports relevant international and regional agreements (e.g. CMS and MoU on the Conservation and Management of Marine Turtles and their Habitats of Indian Ocean and South-East Asia) and contributes to other relevant instruments (e.g. <i>Draft Western Australian Marine Turtle Strategic Conservation Plan</i>) (H). • Ensure management of marine mammals in the marine park supports relevant international agreements (e.g. CMS and MoU on the Conservation and Management of Dugongs and their Habitats throughout their Range) (H). • Ensure that management of sharks and rays in the marine park supports relevant international agreements and conservation initiatives (e.g. CMS and <i>Sawfish: A Global Strategy for Conservation</i>) and contributes to other relevant instruments (e.g. <i>National Plan of Action for the Conservation and Management of Sharks 2012 Shark-plan 2</i> and <i>Draft Recovery Plan for Sawfish and River Sharks 2014</i>) [DoF] (H). 										
Management program strategy	Establish a program to train and mentor new traditional owner rangers and support the Karajarri Ranger group [relevant Aboriginal Corporations] (H).										
Management program strategy	Develop and implement a monitoring and evaluation framework to assess joint management effectiveness for the marine park (i.e. how joint management arrangements work for the department and traditional owners and whether the arrangements themselves are functioning effectively) [relevant Aboriginal Corporations] (H).										

MANAGEMENT FRAMEWORKS SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Collaborate with and provide advice to agencies, stakeholders and adjacent land managers, where necessary, to ensure the protection of marine park values and complementary management of adjacent reserves (H).										
<i>Cultural value specific strategies</i>	<ul style="list-style-type: none"> Develop a shared understanding of the significance of the area and species to traditional owner groups [relevant Aboriginal Corporations] (H-KMS). Where relevant, support traditional owners to manage sustainable take of marine fauna (e.g. turtles, dugongs, sharks, rays) for cultural purposes [DoF] (M). 										
<i>Ecological value specific strategies</i>	<ul style="list-style-type: none"> Liaise with coastal land managers to ensure effective management of access to and use of coastal landforms in the marine park (H). Investigate sister site arrangements and other collaborative opportunities across the Flyway through the East Asian-Australasian Flyway Partnership to enhance conservation outcomes for migratory shorebirds (M). Develop and implement a program with traditional owners to promote the conservation of sawfish in the marine park [DoF] (M). 										
<i>Social & economic value specific strategies</i>	<ul style="list-style-type: none"> Determine and maintain appropriate levels of access to European heritage sites within the marine park [WA Museum] (M). Consult with Parks and Wildlife, JMBs and the MPRA in regard to the status of fisheries and any changes to management arrangements for commercial fisheries that operate within the marine park [DoF] (M). 										
Management program strategy	Ensure that proponents of development proposals or activities with the potential to impact on the marine park's values conduct appropriate compliance monitoring [MPRA, EPA, DER] (H).										
Management program strategy	Ensure that appropriate licences and permits are provided where necessary [DoF] (H).										
<i>Social & economic value specific strategies</i>	<ul style="list-style-type: none"> License all commercial tour operators within the marine park with appropriate conditions (H-KMS). 										
Management program strategy	Ensure the provision of information to the MPRA for audit processes [DoF] (H).										

MANAGEMENT FRAMEWORKS SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Pursue relinquishment and incorporation of terrestrial reserves that extend into the intertidal area, into the marine park as appropriate (M).										
Management program strategy	Pursue external funding opportunities to implement strategies in the management plan (M)										
Social & economic value specific strategies	<ul style="list-style-type: none"> Identify and communicate high priority research and monitoring projects to appropriate external organisations and funding bodies (H). 										

EDUCATION AND INTERPRETATION PROGRAM SCHEDULE		YEAR									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Develop and implement an integrated education and interpretation program that communicates: <ol style="list-style-type: none"> the importance of the marine park's values [DoF] (H-KMS) the purposes of management zones and regulations [DoF] (H-KMS) appropriate behaviour to reduce human impacts and ensure public safety [DoF] (H-KMS). 										
Ecological value specific strategies	<ul style="list-style-type: none"> Educate users about the ecological significance of intertidal sand and mudflat communities and impacts that some activities can have upon them (M). Educate users about nationally and internationally significant waterbird populations, the impacts that some human activities can have upon them and the external pressures affecting migratory shorebirds (H). Work with the managers of Eighty Mile Beach Caravan Park and Cape Keraudren Reserve, and adjacent pastoralists, to ensure marine park users are aware of, and comply with, Parks and Wildlife's Turtle Watcher's Code of Conduct (H). Educate users about invertebrate populations within the marine park and relevant fisheries regulations that apply [DoF] (M). Educate users about scalefish within the marine park and relevant fisheries regulations that apply [DoF] (M). Educate users about the marine park's sharks and rays (with a focus on threatened, endangered and high-risk species) and the relevant fisheries regulations that apply [DoF] (M). 										
Social & economic value specific strategies	<ul style="list-style-type: none"> Provide information to enhance visitor enjoyment of, and reduce impacts to, European heritage sites [WA Museum] (M). 										

EDUCATION AND INTERPRETATION PROGRAM SCHEDULE, CONT		YEAR									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Obtain guidance and input from traditional owners to develop and implement the program, including recommendations on culturally appropriate behaviour in the marine park (H-KMS).										
<i>Cultural value specific strategies</i>	<ul style="list-style-type: none"> Develop a cultural awareness training program, to be delivered by relevant JMBs for government employees and/or contractors working on the ground or in park management (H). Consider and support the concept of cultural interpretive sites and cultural tourism opportunities in the park, within available resources [Western Australian Indigenous Tourism Operators Council (WAITOC)] (M). 										
<i>Social & economic value specific strategies</i>	<ul style="list-style-type: none"> As part of the education and interpretation program, communicate and promote traditional seasonal calendars for recreational fishing within the park [DoF] (M). 										
Management program strategy	Prepare educational and interpretive signage and materials for the marine park [DoF] (H).										
Management program strategy	Distribute the resulting material to marine park users, including commercial operators and the local tourism industry (H).										

PUBLIC PARTICIPATION PROGRAM SCHEDULE		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Develop and implement a public participation program for the marine park, which encourages community involvement in management through a range of opportunities including in education, research and monitoring (H-KMS).										
Management program strategy	Establish and maintain records of community participation (M).										

PATROL AND ENFORCEMENT PROGRAM SCHEDULE		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Develop and implement a patrol and enforcement program to ensure compliance with zoning restrictions, permitted uses, regulations, licences and permits [DoF] (H-KMS).										
Management program strategy	Facilitate cross-authorisation of enforcement officers as appropriate [DoF] (H-KMS).										
Management program strategy	Install zone markers and signage for compliance purposes [DoF] (H).										
Social & economic value specific strategies	<ul style="list-style-type: none"> • Ensure commercial tour operators are aware of the zoning scheme and any restrictions that may apply to their operations in the marine park (H-KMS). • Ensure recreational fishers are aware of the zoning scheme and any restrictions that may apply to their activities in the marine park [DoF] (H-KMS). • Ensure commercial fishers are aware of the zoning scheme and any restrictions that may apply to their operations in the marine park [DoF] (H-KMS). 										
Management program strategy	Encourage voluntary compliance and peer enforcement of regulations [DoF] (H).										
Management program strategy	Establish and maintain records of compliance and related issues for management assessment [DoF] (M).										

MANAGEMENT INTERVENTION AND VISITOR INFRASTRUCTURE PROGRAM SCHEDULE		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Undertake periodic assessments of visitor risks in the marine park and implement measures to reduce or remove identified visitor risks (H-KMS) .										
<i>Cultural value specific strategies</i>	Ensure visitors are aware of cultural laws and protocols regarding visitor risk and safety (H) .										
<i>Social & economic value specific strategies</i>	Develop codes of practice for nature-based tourism operations in the marine park consistent with the park's objectives, targets and performance measures [Tourism WA] (M) .										
Management program strategy	Identify areas of existing or potential human impacts and implement measures to address these impacts, where appropriate (H-KMS) .										
<i>Cultural value specific strategies</i>	<ul style="list-style-type: none"> Control access to sites that traditional owners consider unsuitable for visitation (H). 										
<i>Ecological value specific strategies</i>	<ul style="list-style-type: none"> Support the installation of fencing along the landward boundary of the marine park to exclude cattle, in liaison with the manager of Pardoo Station (M). Identify disturbed areas of mangroves and saltmarshes in the marine park and assess whether regeneration is likely to occur naturally or whether active restoration efforts are required (H). 										
<i>Social & economic value specific strategies</i>	<ul style="list-style-type: none"> Support and contribute to efforts to minimise the amount of debris in the marine park (M). 										
Management program strategy	In liaison with user groups, provide high-quality visitor facilities where appropriate to enhance visitor enjoyment of, and reduce impacts to marine park values (H-KMS) .										

MANAGEMENT INTERVENTION AND VISITOR INFRASTRUCTURE PROGRAM SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Investigate and implement mechanisms to restrict vehicle access as necessary e.g. in special purpose zone (mangrove protection) [DoT, LGAs, relevant land managers] (H).										
Ecological value specific strategies	<ul style="list-style-type: none"> In liaison with traditional owners, adjacent land managers and users of the marine park, investigate the need for and implement as appropriate, a vehicle closure of Malamalajungunya Special Purpose Zone (Mangrove Protection) [DoT, Shire of East Pilbara, adjacent land managers] (M). In liaison with traditional owners, adjacent land managers and users of the marine park, investigate the need for and implement as appropriate, a seasonal vehicle closure of the northern part of Eighty Mile Beach from Cape Missiessy to Mandora Creek to protect waterbirds [DoT, Shire of Broome, adjacent land managers] (M). In liaison with traditional owners, adjacent land managers and users of the marine park, investigate the need for and implement as appropriate, a seasonal vehicle closure in key turtle rookery areas at Eighty Mile Beach and Cape Keraudren during the flatback turtle nesting and hatching season (November to March) [DoT, LGAs, adjacent land managers] (M). 										
Management program strategy	Undertake routine inspections and maintenance of Parks and Wildlife managed infrastructure in the marine park, particularly zone markers and signage (M).										
Management program strategy	Establish and maintain records of human use within the marine park (M).										
Management program strategy	Ensure that marine park values are included in predictive models and response plans for oil spills to assist in managing any significant pollution event that occurs [DoT] (M).										
Ecological value specific strategies	<ul style="list-style-type: none"> Map the areas of the marine park that are highly sensitive to oil and chemical spills and ensure that this information is accessible to the State Marine Oil Pollution Coordination Group (M). 										
Management program strategy	Investigate the need for, and prepare and implement as required, a mooring and anchoring management plan for the marine park [DoT] (L).										

RESEARCH PROGRAM SCHEDULE		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	<p>Prepare and progressively implement a coordinated and prioritised marine research program with a focus on:</p> <ol style="list-style-type: none"> defining condition, pressure and response indicators and metrics (i.e. performance measures) to support the monitoring program [DoF] (H-KMS) establishing baselines for marine park values [DoF] (H-KMS) addressing knowledge gaps for values identified as key performance indicators (KPIs), reflecting the highest conservation and management priorities [DoF] (H-KMS) integrating traditional knowledge with contemporary science programs, where appropriate [DoF] (H) examining how tidal amplitude influences the distribution and movement patterns of marine species [DoF] (M). 										
Cultural value specific strategies	<ul style="list-style-type: none"> Identify Aboriginal heritage sites in the marine park through cultural heritage mapping or other means as appropriate [DAA, relevant Aboriginal Corporations] (H-KMS). 										
Ecological value specific strategies	<ul style="list-style-type: none"> Undertake research to better understand coastal geomorphic processes and drivers such as sediment transport and the impact of cyclonic activity (M). 										
	<ul style="list-style-type: none"> Undertake research to: <ol style="list-style-type: none"> develop an appropriate understanding of the background water quality, variability, circulation and mixing in the marine park (H) develop an appropriate understanding of the background sediment quality and variability within the marine park (H) better understand the groundwater regime and freshwater seeps, and their ecological significance (M). 										
	<ul style="list-style-type: none"> Undertake research to characterise the floral and faunal diversity, abundance and natural variability of intertidal sand and mudflat communities (H-KMS). 										
	<ul style="list-style-type: none"> Undertake research to characterise the diversity, abundance, spatial extent and natural variability of subtidal filter-feeding communities within the marine park and their contribution to the ecosystem (H). 										

RESEARCH PROGRAM SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
	<ul style="list-style-type: none"> Undertake research to characterise the diversity, composition, density, spatial extent and natural variability of macroalgal and seagrass communities in the marine park (H). 										
	<ul style="list-style-type: none"> Undertake research to characterise the diversity, cover, spatial extent, community composition and natural variability of coral reefs within the marine park (H). 										
	<ul style="list-style-type: none"> Undertake research to develop a more comprehensive understanding of the diversity, spatial extent, canopy cover and natural variability of mangrove communities and saltmarshes in the marine park, and the ecological role of saltmarshes (H-KMS). 										
	<ul style="list-style-type: none"> Undertake research to better understand the location and significance of critical areas and nesting beaches for marine turtles in the marine park (H-KMS). 										
	<ul style="list-style-type: none"> Undertake research on marine mammal abundance, distribution and natural variability (spatial and temporal patterns) and habitat requirements in the marine park (H). 										
	<ul style="list-style-type: none"> Undertake research to characterise the diversity, abundance, natural variability, distribution and habitat requirements of invertebrates within the marine park and to understand the ecological role of targeted invertebrate species and the consequences of their removal [DoF] (H). 										
	<ul style="list-style-type: none"> Undertake research to characterise scalefish diversity, abundance, natural variability, movement patterns and critical habitats within the marine park and to understand the ecological role of targeted scalefish species and the consequences of their removal [DoF] (H-KMS). 										
	<ul style="list-style-type: none"> Undertake research to characterise shark and ray diversity, abundance and critical habitats within the marine park [DoF] (H). 										
<i>Social & economic value specific strategies</i>	<ul style="list-style-type: none"> Identify, map and characterise important remote seascapes in the marine park (H-KMS). Undertake research to identify recreationally targeted species and to investigate whether there are localised depletions of recreationally targeted species, or risk of depletions in the marine park, and address identified issues as appropriate [DoF] (H). Facilitate research and monitoring by appropriate external organisations by providing financial and logistical assistance, where possible (H). 										

RESEARCH PROGRAM SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Facilitate knowledge transfer and uptake of research program outcomes to marine park management, planning and policy (H-KMS).										
Management program strategy	Ensure that all research projects undertaken by or on behalf of Parks and Wildlife comply with the department's policy No. 78 <i>Science Policy</i> and associated guidelines (H).										
Management program strategy	Facilitate the transfer of information from research in the marine park by external organisations to Parks and Wildlife, JMBs, MPRA and the relevant Aboriginal Corporations through research licence conditions (H).										
Management program strategy	In consultation with traditional owners, develop and implement protocols to ensure that any research undertaken in the marine park is culturally appropriate, information shared by traditional owners is used in a culturally appropriate manner and that research findings are reported back to traditional owners. Research partnerships between research scientists and traditional owners should be accompanied by a research agreement (H).										
Management program strategy	Develop and maintain records of all research that has occurred within, or is relevant to, the marine park and its values (M).										

MONITORING PROGRAM SCHEDULE		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	<p>Develop and implement a coordinated and prioritised monitoring program for the marine park that:</p> <ol style="list-style-type: none"> assesses the nature, level and potential impacts of human activities on marine park values [DoF] (H-KMS) assesses the effectiveness of the zoning scheme, with a focus on KPIs [DoF] (H-KMS) meets Parks and Wildlife and MPRA audit requirements [DoF] (H-KMS) uses traditional knowledge and, where possible, provides capacity-building opportunities for traditional owners [DoF] (H). 										
<i>Cultural value specific strategies</i>	<ul style="list-style-type: none"> Assess the nature and level of impacts on Aboriginal culture and heritage values within the marine park, and take action to address these impacts as appropriate (M). 										
<i>Ecological value specific strategies</i>	<ul style="list-style-type: none"> Monitor the condition of coastal landforms and seabed structural complexity in the marine park, and take remedial action if human activities are impacting these features (H). Monitor the condition of water and sediment quality in the marine park, and take remedial action if human activities are impacting this value (H). Monitor the condition of intertidal sand and mudflat communities in the marine park, and take remedial action if human activities are impacting these communities (H). Monitor the condition of subtidal filter-feeding communities in the marine park, and take remedial action if human activities are impacting these communities (M). Monitor the condition of macroalgal and seagrass communities in the marine park, and take remedial action if human activities are impacting these communities (M). Monitor the condition of coral reef communities in the marine park, and take remedial action if human activities are impacting these communities [DoF] (M). Monitor the condition of mangrove communities and saltmarshes in the marine park, and take remedial action if human activities are impacting these communities (H). 										

MONITORING PROGRAM SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
	<ul style="list-style-type: none"> • Work with the appropriate expert bodies (e.g. the Wetlands and Waterbirds Taskforce, the Global Flyway Network and the Australasian Wader Studies Group) to develop and implement a waterbird monitoring program that meets national and international reporting requirements (H-KMS). • Monitor the condition of marine turtles in the marine park, and take remedial action if human activities or feral predators are impacting these species (H). • Evaluate the effectiveness of turtle monitoring efforts in the marine park and implement a revised/modified turtle monitoring program as required (M). • Monitor the condition of marine mammals in the marine park, and take remedial action if human activities are impacting these species (M). • Monitor the condition of invertebrates susceptible to localised depletion in the marine park, and take remedial action if human activities are impacting these species [DoF] (H). • Monitor the condition of scalefish susceptible to localised depletion in the marine park, and take remedial action if human activities are impacting these species [DoF] (H). • Monitor the condition of sharks and rays in the marine park, and take remedial action if human activities are impacting these species [DoF] (M). 										
<i>Social & economic value specific strategies</i>	<ul style="list-style-type: none"> • Monitor recreational fishing catch and effort within the marine park and report the results to Parks and Wildlife and the MPRA for the annual and periodic reviews of the implementation of the management plan [DoF, MPRA] (H). • Monitor commercial fishing catch and effort within the marine park and report the results to Parks and Wildlife, JMBs and the MPRA for the annual and periodic reviews of the implementation of the management plan [DoF] (H). 										
Management program strategy	Ensure feedback of monitoring results into marine park management, planning and policy (H-KMS).										
<i>Cultural value specific strategies</i>	Refer to specific monitoring strategies listed above.										
<i>Ecological value specific strategies</i>	Refer to specific monitoring strategies listed above.										
<i>Social & economic value specific strategies</i>	Refer to specific monitoring strategies listed above.										

MONITORING PROGRAM SCHEDULE, CONT		Year									
		1	2	3	4	5	6	7	8	9	10
Management program strategy	Ensure all monitoring activities undertaken by or on behalf of Parks and Wildlife comply with the department's policy No. 78 <i>Science Policy</i> and associated guidelines (H).										
Management program strategy	Facilitate the transfer of information from monitoring in the marine park by external organisations to Parks and Wildlife, JMBs, MPRA and the relevant Aboriginal Corporations as part of research licence conditions (H).										
Management program strategy	Ensure the monitoring program can detect changes in the ecological character of the beach section of the Ramsar site [DoF] (H).										
Management program strategy	Consider the impacts and implications of climate change when developing and implementing the monitoring program (M).										