



# Wildlife Management Program Annual Report

## PROGRAM INFORMATION

**Program Name:** Dugong (*Dugong dugon*) Management Program for Western Australia 2007 – 2016.

**Reporting Period (Financial/Calendar Year):** Calendar year, 2009

**Program Co-ordinator:** Dr Tamra Chapman (Chair), Senior Zoologist, Species and Communities Branch

**Current Management Team Members:**

<b>Kensington HQ</b>	Dr Tamra Chapman, Species and Communities Branch Dr Chris Simpson, Marine Science
<b>Regional DEC</b>	Dave Holley, Shark Bay District Arvid Hogstrom, Exmouth District Peter Kendrick, Pilbara Region Troy Sinclair, East Kimberley District Fiona Galloway, West Kimberley District

**Status of Plan:** Draft reviewed by author 28 June 2007. Director of Nature Conservation (DNC) made some suggestions and changes were made by Tamra Chapman and reviewed by Ken Atkins. The draft was forwarded to DNC on 29 August 2007. On 24 October 2008 Ken Atkins informed the author that Gordon Wyre had requested that the draft plan be split into a management program and an appendix of background information. This was completed by Tamra Chapman and the draft with a request to fast track approval was forwarded to DNC via Ken Atkins on 19 November 2008.

**Aim:** Ensure that human activities are not detrimental to the long-term conservation and viability of the dugong throughout its range in Western Australian waters.

**Assessment of Aim:** No detectable decline in dugong population in Western Australian waters 1989-2004.

## TASKS CARRIED OUT AGAINST ACTIONS

Action	Participants	Date	Task (include project report)
1. Survey, monitor and study dugong population(s).	Woodside	19-26 Mar 2009	Woodside conducted aerial dugong (and other mega fauna) surveys on the western coast of Dampier Peninsula from Cape Leveque to Larange Bay.
	DEC / Universities	18 Dec 2009	<p>A meeting was held between DEC and Universities to devise a list of projects that may be suitable for Aust. Marine Mammal Centre funding. Research priorities were as follows:</p> <ol style="list-style-type: none"> <li>1. Assessing marine mammal population health and potential emerging pressures and impacts through the implementation of standard incident response protocols for sample and information collection, analysis and data management.</li> <li>2. Assessing available historical datasets on species/population abundance and/or distribution.</li> <li>3. Establishing long term monitoring or abundance and distribution patterns for marine mammals <ul style="list-style-type: none"> <li>• Development of cost effective techniques</li> <li>• Undertaking large monitoring exercises, where needed</li> </ul> </li> <li>4. Identifying key habitats for small cetacean and other coastal species that should be considered in the development of long term monitoring initiatives.</li> <li>5. Impacts of industrial activity on marine mammals and the development of appropriate guidelines (e.g. noise, contaminants, shipping, lights)</li> <li>6. Quantifying human impacts on protected marine species (e.g. hunting dugong, fishery bycatch of small cetaceans, tourism, resource competition with pinnipeds)</li> <li>7. Developing our understanding of trophic ecology and the role of marine mammals. This may include aspects of predator/prey interaction, climate change impacts and ecological role of species in structuring marine communities (e.g. dugong and seagrass)</li> <li>8. Developing/refining new techniques both for the cost effective techniques for the long term monitoring of marine mammal populations and to better</li> </ol>

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Action	Participants	Date	Task (include project report)
			<p>understand marine mammal management units and their connectivity (e.g. genetics, acoustic monitoring, camera monitoring, satellite tracking, stable isotopes)</p> <p>It was agreed that university research teams would make application and that DEC would offer support in the form of letters, review of application, vessel time etc. where possible.</p>
	NAILSMA	Dec 2009	NAILSMA released <a href="#">‘The I-Tracker Report – A review of the I-Tracker data collection and management program across north Australia</a>
	ECU/DEC/NAILSMA /KLC	2008/2009	<p><b>Australian Marine Mammal Centre Project 0809/14: Movement behaviours and habitat usage of West Kimberley dugongs: A community based approach Mr David Holley and Mr Daniel Oades Edith Cowan University</b></p> <p>The Kimberley region of Western Australia represents an area where there are significant numbers of dugong, but information is scarce on distribution and behaviour of this species. Traditional usage of dugong is high and local communities have strong relationships with this species. This project will build capacity amongst local Indigenous communities throughout the West Kimberley area to conduct research on dugong movements, behaviours and habitat requirements using GPS satellite telemetry. Information gathered from GPS tags will assist the local communities in the management of dugong as well as provide much needed conservation management data for the appropriate assessment of proposed large scale industry within the region.</p> <p>Four dugong tagged in Beagle Bay 16-19 July 2009. Results showed a high degree of fidelity to Beagle Bay, but one Dugong travelled 500 km south. Dive patterns were also recorded.</p>

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Action	Participants	Date	Task (include project report)
<b>2. Identify, protect and manage important dugong habitats.</b>	DEC / persons licensed to take fauna	Ongoing	Due to a change to electronic license (to take fauna) returns in Nov 2008, all licensees will have to upload co-ordinates for fauna observations online, into 'Fauna Survey'. These data will then be accessible (at varying levels of accuracy) via <a href="#">NatureMap</a> . As resources permit, data may be entered retrospectively.
	DEC Species and Communities Branch	14 Jan 2009	Tamra Chapman assisted in the strategic regional assessment of specific conservation values and the current and emerging pressures on the North-west marine environment as part of the development of the North-west Marine Bioregional Plan by the Commonwealth Department of the Environment, Water, Heritage and the Arts (DEWHA).
	DEC in kind	21 Jul 2009	Tamra Chapman provided data and advice on marine species occurring in the Port Hedland area, in relation to a <a href="#">referral for Port Hedland dredging project under the EPBC Act</a> .
	DEC Species and Communities Branch	22 Jul 2009	Tamra Chapman provided information and data in response to public submissions relating to the Kimberley Conservation Strategy
<b>3. Monitor and manage the effects of climate change on dugong biology, ecology and habitat.</b>			Part of other actions relating to research and monitoring.
<b>4. Encourage and support programs to monitor and manage harvest of dugong for traditional and cultural purposes by indigenous persons and minimise illegal take.</b>	DEC	02 Oct 2009	Tamra Chapman met with Dave Hampton and Bill Carr (DEC) who is drafting amendments to legislation. It is proposed that the legislation for hunting (Section 23,, <i>Wildlife Conservation Act 1950</i> ) will change from 'A person of Aboriginal descent may take dugong sufficient only for food for himself and his family' to 'Aboriginal persons may take flora and fauna for customary purposes.....'.
	NAILSMA	04 Nov 2009	NAILSMA released 'The socioeconomics of Indigenous customary use and

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			management of dugong and marine turtles—a view from Bardi and Jawi sea country, Western Australia' <a href="http://www.nailsma.org.au/publications/always_part_of_us.html">http://www.nailsma.org.au/publications/always_part_of_us.html</a>
<b>5. Make use of education and legislation to minimise dugong boat strike, disturbance, displacement and habitat damage by vessel operation.</b>	DEC	12 Feb 2009	Tamra Chapman forwarded a draft of the educational materials providing advice on dugong and recreational fishing to Cath Samson for a signage program at DEC Karratha.
	DEC	May 2009	DEC Environmental Management, Marine Planning, Marine Science and Species and Communities Branches provided (confidential) advice to the DEC Director General regarding off-sets from the Chevron Gorgon Joint Venture gas development on Barrow Island.
<b>6. Adequately conserve dugong habitat in marine protected areas.</b>	DEC	12 Nov 2009	Tamra Chapman provided a copy of the draft recovery plan to Michelle Anderson (DEC Marine Planning) for preparation of DEC's draft terrestrial <i>Barrow, Boodie, Double and Middle Island Nature Reserves Management Plan</i>
	DEC	27 Oct 2009	Environment Minister <a href="#">Donna Faragher announced that a new national park would be created on Western Australia's largest island, Dirk Hartog Island, part of the Shark Bay World Heritage Area</a>
<b>7. Conduct a public education program to minimise the effects of bycatch and fishing debris on dugong by commercial and recreational fishing.</b>	DEC	12 Feb 2009	Tamra Chapman forwarded a draft of the educational materials providing advice on dugong and recreational fishing to Cath Samson for a signage program at DEC Karratha.
<b>8. Monitor development proposals and provide the advice needed to minimise the impacts of industrial, residential and tourism development on dugong and their habitat.</b>	DEC	26 May 2009	Tamra Chapman provided maps and information on dugong and turtle records in the Pilbara as part of biodiversity assessments for industrial development proposals to Jackie Purvis (Syrinx – Port Hedland) and Michelle Vardy (BHP Billiton).
	DEC	21 Jul 2009	Tamra Chapman provided data and advice on marine species occurring in the Port Hedland area, in relation to a referral for Port Hedland dredging project under the EPBC Act:

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			<a href="http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&amp;proposal_id=4920">http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&amp;proposal_id=4920</a>
	DEC	Ongoing	Nature Protection Branch monitored and advised on impact assessment and management of resource developments in the north-west of WA.
	SVT Engineering Consultants / Curtin University	25-26 Feb 2010	<p>'Introduction to Underwater Environmental Noise' course planned. Overview: <i>How do I assess underwater noise impacts on the marine environment? Do underwater marine animals hear anything, and if they do how do they hear and what do they hear? How does underwater noise from piling, blasting, dredging and shipping affect marine animals? What do we know and what don't we know?</i></p> <p><i>This course is designed for the environmental scientist who is interested in understanding the fundamentals of underwater noise and its propagation through the water. The course will describe how noise can affect marine animals, it will describe the auditory structures and bandwidths of various marine animals, and it will also describe common noise sources and their possible impact on marine animals. Guidance will also be provided on the environmental impact assessment process with regards to marine noise impacts.</i></p> <p>Topics:</p> <ul style="list-style-type: none"> <li>• <i>Fundamentals of underwater acoustics</i></li> <li>• <i>Marine Animals auditory structures and bandwidth (Whales, Turtles and Fish both hearing specialist and generalists)</i></li> <li>• <i>Typical underwater noise sources</i></li> <li>• <i>Underwater sound and modelling</i></li> <li>• <i>Guidelines for assessment</i></li> </ul>
<b>9. Develop and expand education programs to encourage awareness and understanding of the biology, ecology and conservation needs of</b>	NAILSMA	Nov 2009	NAILSMA released the <a href="#">Dugong and Marine Turtle: Teaching Resource and Information Package</a> by the Torres Strait Regional Authority's Land and Sea Management Unit.
	DEC	29 Jul 2009	With approval from branch manager Ken Atkins, Tamra Chapman submitted a publication request for a quote for branding to DEC Publications on 03 Jul 2009.

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Action	Participants	Date	Task (include project report)
<b>dugong throughout the community.</b>	UNEP/CMS		Rhianna King contacted Tamra on 29 Jul 2009 to say that graphic design for web-pages can be conducted and that there would be no cost since printing was not required and the first draft would take about six weeks.
<b>Other</b>		07 Sep 2009	UNEP/CMS advised of the establishment of a Convention on Migratory Species Project Office in Abu Dhabi.
		12-13 Aug 2009	Dave Holley, Kim Poland, Kevin George and Tamra Chapman attended a technical workshop addressing the matter of developing a National Dugong Conservation Plan.