INTRODUCTION
The latest information on dugongs.

Dugong Awareness
A great deal of public education is needed about the presence of dugong in Moreton Bay and the responsibility we all share to ensure this gentle creature is saved from extinction in the wild.

Within Moreton Bay there are a number of dugong / turtle zones. These have been set up by the State Government to help protect the dugong and turtles from injury and death caused by vessels. In these areas people must operate their boats in a non-planing / displacement mode. It is important we recognise these areas, abide by the rules and ensure others do likewise, for in doing so we are all helping in the long-term survival of the dugong and turtle.

Threats to Dugong in Moreton Bay

Nutrients fuel nuisance algal blooms that reduce light leading to seagrass death. While we have been good at improving the quality of water leaving our sewerage plants we have done little to address stormwater pollution, which can account for 50% of the nutrients entering the bay during the wet season.

If dugongs are going to survive in Moreton Bay they will require better protection, creation of safe havens away from human interaction and better catchment and stormwater management.

Marine wildlife stranding and mortality database annual report 2005
A total of 40 stranded or dead dugong were recorded, all from the east coast of Queensland. Based on the reported dugong strandings and mortality over the ten years since 1996, the annual rate of dugong mortality has been stable over the last four years. Within the samples of carcasses for which cause of the problem could be identified (n=13), the majority of cases (84.6%) were linked to human activities:

- Boat strike x2 confirmed +2 unconfirmed;
- QDPI Shark Control Program x1;
- Netting x4;
- Hunting x1;
- Unconfirmed human activity x1.


Concerns
To maintain dugong numbers, at least 95% of adult dugongs alive at the beginning of a year must still be alive 12 months later. The maximum sustainable mortality from all human impacts is estimated to be about 1 – 2% of adult females per year. If dugongs calve later and less often because they are not getting enough to eat, they will produce fewer young which means that their sustainable mortality as a result of human impact would be even less.

How can you help
The Queensland Government is currently carrying out a 10 year review of the Moreton Bay Marine Park. The review will give each and everyone of us the opportunity to have our say about the future of the marine park.

This is a good opportunity to raise your concerns about dugongs in Moreton Bay.

If you would like to pass on your ideas and or concerns please send them to the Environment Minister.

Write and or email. Hon. Lindy Nelson-Carr,
Postal : PO Box 15155, City East Qld, 4002
Email : EandM@ministerial.qld.gov.au
Dugong belong to the Order Sirenia, which dates back 50 million years and shares a common ancestor with the elephant. The Order was named Sirenia after the Sirens or Seirenes of Greek mythology. Sirens were sea deities who lived on an island surrounded by cliffs and rocks, and seaman who sailed near were decoyed with the Sirens' enchanting music to shipwreck on the rocky coast, where the Sirens devoured them.

An adult dugong will eat about 25 kg of seagrass a day, little wonder they are called sea cows. Dugongs prefer seagrasses that are ‘pioneer’ species, especially species of the genera Halophila and Halodule. They base their diet on a selection correlated with the chemical and structural composition of seagrass. The most frequently selected species are lowest in fibre and highest in available nitrogen and digestibility. Selection for the species that are highly digestible (Halophila) and have high nutrients (Halodule) means that dugongs maximize the intake of nutrients rather than bulk. While dugongs can dive to at least 39 metres to feed on seagrass they spend most of their time in shallow water less than 10 metres deep.

There are currently four living types of sea cow, three are manatee species (Trichechiidae) found in the Atlantic ocean and one dugong species (Dugongdiaade) found in Australian tropical and sub-tropical waters.

The dugong’s closest relative, steller’s sea cow, weighed more than 6000 kilograms and was over 8 metres long. This huge, slow moving animal grazed the kelp beds of the Northern Pacific for two million years. This large sea cow was widely hunted. When a remnant population was found by Mr Steller off Siberia in 1741, it was hunted to extinction in two decades, the first marine mammal to become extinct in modern history.

The other sea cow is the manatee, which is slightly larger and more rotund than its cousin, the dugong. Manatee have paddle shaped tails and nails on their flippers, they spend more time in rivers and some never go to sea. Manatee populations are also threatened, but their rate of increase is greater, as they breed more easily and frequently than dugong.

The dugong lives to about 70 years or more. Their age can be calculated by measuring the growth layers in their tusks. In males the tusks erupt after puberty and in a smaller proportion of older females. Females don’t have young till they are at least ten to seventeen years old, having a pregnancy lasting 14 months. They have only one calf, which will suckle for 14 - 18 months. The calves are never far from their mothers and often ride on their backs. The dugong will only reproduce once every three to five years and therefore the potential rate of population growth is slow.

Interestingly, research showed that out of 29 dugongs tracked on the east coast of Australia, more than half moved 80 km from the point of capture (and up to 600 km). Aerial surveys also show that large fluctuations in dugong numbers over long stretches of coastline can only be explained by large movements of dugongs. Such movements have been seen when there was flooding in Hervey Bay, as many dugongs moved to Moreton Bay because of the loss of seagrass after the floods.

**Genetic structure**

Molecular techniques have been and are being used to investigate the genetic population structure of dugongs. The results suggest that the haplotypes (statistically, genetically closely association) of dugongs from parts of Southeast Asia (Indonesia, Thailand and the Philippines) are generally distinct from those from Australia with overlap at Ashmore Reef between Western Australia and Timor, suggesting that there is (or has been in the past) limited genetic exchange between Australia and Asia. The genetic structure of dugong populations around the Australian coast appears to comprise two maternal lineages one of which has also been recorded from dugongs from Kenya and the Arabian Gulf. Torres Strait, between Australia and Papua New Guinea is a major zone of overlap between the two lineages.

**Updates on surveys**

Dugongs have been reported near the following: Wynnum North, Birkdale (outside Aquatic Paradise), Raby Bay (inside the canal estate), Lamb Island, Manly Boat Harbour and Price’s Anchorage. Coochie Ferry Service has been providing great information on dugong activity between Cooihemudlo and Victoria Point.

**Thanks**

“A big thanks must go to the volunteers who have supplied us with valuable information about the dugong. Their observations and past research have been compiled to provide the contents of this information sheet. This sheet provides general information on dugongs, the issues and their location in Moreton Bay, in particular the Western side of Moreton Bay and Bay Islands. We hope you enjoy reading this information sheet and perhaps consider, or continue, to participate in this survey or some other worthwhile conservation initiative.”

**Contact**

If you have seen a dugong or would like more information, please contact.

Mail: Moreton Bay Community Dugong Watch
Wildlife Preservation Society of QLD
Bayside Branch, PO Box 427 Capalaba QLD 4157
Email: wildlifebb@bigpond.com

Source: The Dugong (Dugong dugon) STATUS REPORTS AND ACTION PLANS FOR COUNTRIES AND TERRITORIES IN ITS RANGE.
Compiled by Helene Marsh