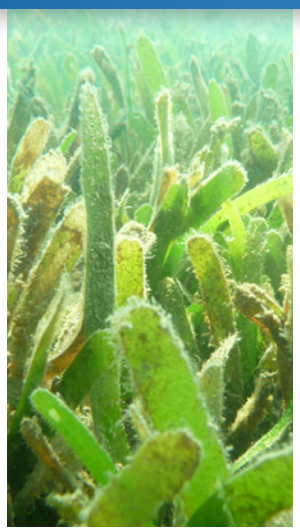
Marine environment monitoring informs sustainable port development

Monitoring marine environment health in Queensland ports



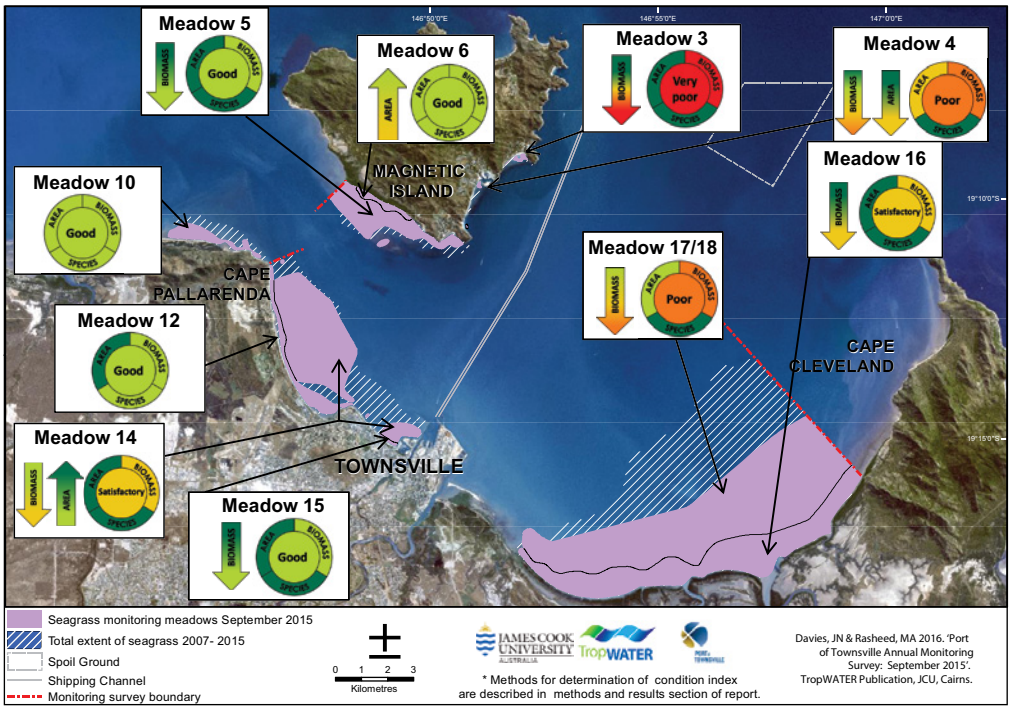
> More than 4,323 ha of seagrass recovered near the Port of Townsville since 2011.

Australia's ports are committed to understanding and managing the marine environments in which they operate.

Research and monitoring programs are essential to understanding the marine environment and provide valuable information for ports.

These programs inform an environmentally sustainable approach to port development and maintenance designed to have minimal impact.

Map: Seagrass condition index for Townsville seagrass monitoring meadows



PORT of TOWNSVILLE

Ports Australia

Solution

The Queensland ports seagrass monitoring program is an example of ports safeguarding the environment.

Seagrasses are an ideal indicator of overall marine environment health because they are sensitive to changes in water quality.

Seagrasses support marine life including dugongs and turtles and are important nursery grounds for fish and prawns. They are also a vital element of the Great Barrier Reef.

The seagrass monitoring program is a partnership between 14 of Queensland's ports and the Seagrass Ecology Group at James Cook University's Centre for Tropical Water and Aquatics Research department (TropWATER).

A network of nine ports across the coasts of Queensland are involved in the environmental monitoring and assessment program, which began in 1994.

Each location is funded separately but a common methodology and rationale is used across the network.

The program involves conducting baseline mapping of seagrasses in each location, followed by an annual survey of seagrass meadows during the peak time for seagrass distribution and abundance.

The surveys identify seagrass species and assess density. Monitoring techniques include boat-based free divers and helicopter aerial surveillance.

Long-term seagrass monitoring programs are in place at the following ports:

- Karumba (established 1994)
- Mourilyan (established 1994)
- Weipa (established 2000)
- Cairns (established 2001)
- Thursday Island (established 2002)
- Gladstone (established 2002)
- Hay Point (established 2004)
- Abbot Point (established 2005)
- Townsville (established 2007)

Additional baseline mapping of seagrass and other marine habitats has been conducted at the following ports:

- Cape Flattery (1996)
- Mackay (2001)
- Skardon River (2002, 2010)
- Lucinda (2007)
- Port Musgrave

Outcome

The Queensland ports seagrass monitoring program demonstrates that environmental best practice and sustainable port development go hand in hand.

The program delivers key information that enables ports to safeguard the environment and plan port development and maintenance while minimizing impacts on the marine environment.

The program provides key information about the health of seagrasses and overall marine environment health and invaluable data on long-term trends and changes in seagrass health.

Across Queensland, the program has achieved significant advances in knowledge of tropical seagrass ecology.

It has also been instrumental in developing tools, indicators and thresholds for the protection and management of seagrasses and an understanding of the drivers of tropical seagrass change.

For more information visit:
http://www.townsville-port.com.au/about-the-port/environment/seagrass-monitoring