



Seagrass-Watch E-Bulletin

07 July 2008

Seagrass-Watch's electronic news service, providing marine and coastal news of international and national interest. Abbreviated articles are presented with links to their source. Seagrass-Watch HQ recommends that readers exercise their own skill and care with respect to their use of the information in this bulletin and that readers carefully evaluate the accuracy, currency, completeness and relevance of the material in the bulletin for their purposes. Seagrass-Watch welcomes feedback on the bulletins, and you are free to distribute it amongst your own networks.

Happy Birthday Seagrass-Watch!

March 2008 marked Seagrass-Watch's 10th year. On behalf of Seagrass-Watch HQ we would like to say thank you for your support.

IN THIS BULLETIN

NEWS	1
Local eco-groups now draw sponsors (Singapore)	1
June 8 is World Oceans Day	2
World Environment Day	2
Editorial: Petrochemicals and seahorses (Persekutuan, Malaysia)	2
Vital marine, coastal ecosystems in danger (Viet Nam)	3
Crist Protects Land Trust, Seagrass (Tampa, FL, USA)	3
Xemxija wrack misconceptions (Valletta, Malta)	3
County To Study Pole-Or-Troll Zone (Tampa, FL, USA)	4
UK. National Oceanography Centre PhD student Maike Paul wins ... (Gibraltar, Spain)	4
Death traps for marine turtles (Manama, Bahrain)	4
Global warming turning sea into acid bath (UK)	4
Fishing for the future (Suva, Fiji)	5
Harvesting the seeds in hopes of a sea grass revival (Norfolk, VA, USA)	5
Swallow Caye's manatees a healthy sign for cruise tourism (Belize City, Belize)	6
NOAA Teams Up With Local Experts to Restore Alabama Shorelines (Washington, DC, USA)	6
GALLERY	6
Cyrene Reef (Singapore): 08 June 2008	6
Pelican Bay, Great Sandy Strait (Qld, Australia): 03 June 2008	6
Bowen (Qld, Australia): 17 May 2008	6
Rodds Bay, Gladstone (Qld, Australia): 04 - 05 May 2008	6
Motupore Island (PNG): 05 - 08 May 2008	6
NEW PUBLICATIONS	6
Workshop proceedings	6
Marine Ecology Group	7
FROM HQ	7

Please note: links to sources were active on date of publication. Some sources remove links periodically.

NEWS

Local eco-groups now draw sponsors (Singapore)

11 June 2008, TODAYonline

THE coffee-shop setting was typically Singaporean, but the idea hatched there by a group of Singaporeans was not. Deciding to come together to lead nature walks for the public, the 15 called themselves the Naked Hermit Crabs — after the fragile crustacean found on our shores at low tide.

The Crabs turned one last week and celebrated by holding a Sentosa nature walk and a photo exhibition at the National Library. Other eco-volunteer groups have surfaced in recent years, with interests as diverse as the

environment they try to protect, from educating the apathetic to monitoring Singapore's shorelife. Team Seagrass, for example, was formed in 2006 and monitors our seagrasses and other intertidal life. It is part of the international Seagrass-Watch initiative, and works with NParks.

The Crabs now have 20 active volunteers and organise monthly Chek Jawa tours as well as Sentosa walks eight times a year. The Crabs also hope to organise trips to the Cyrene Reef, home to vast seagrass meadows and coral reefs and only exposed during low tide. Lying between the petrochemical plants of Jurong Island and Pulau Bukom, it was there that the nature lovers discovered a sea star species new to Singapore — the *Pentaceraster mammillatus*.

Said Ms Wong Ley Kun, 46, a member of the Crabs who also volunteers with Team Seagrass: "The Government is aware that there can be a balance between conservation and development. I once took an architect to Chek Jawa, and he was amazed to see both wildlife at his feet and a plane taking off at a distance."

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

June 8 is World Oceans Day

World Ocean Day (WOD) provides the opportunity to evaluate perspective, learn about ocean creatures and habitats, and ways to become a caretaker.

Think about this:

- the ocean helps regulate climate and produces about 50 percent of Earth's oxygen;
- marine plants and animals provide the inspiration for new medicines; and
- seafood is the main source of protein for one-sixth of the human population.

On this Day of the Oceans, let us -

- Change the way we look at oceans -what the sea means to us, and what it can give.
- Use the opportunity to learn more about the oceans - many of us do not realize the profusion of diverse and beautiful creatures and habitats that are found in oceans, and how our actions affect them.
- Do something positive for the oceans - by finding ways we can alter our daily lives to conserve the oceans and reduce the our impacts on its fragile ecosystems

Celebrate the 13th Annual World Ocean Day by organizing or participating in activities that celebrate our world ocean that connects us all. Check The Ocean Project site for a list of ways your organization can celebrate World Ocean Day (WOD)

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

World Environment Day

5 June 2008

World Environment Day, commemorated each year on 5 June, is one of the principal vehicles through which the United Nations stimulates worldwide awareness of the environment and enhances political attention and action.

World Environment Day was established by the United Nations General Assembly in 1972 to mark the opening of the Stockholm Conference on the Human Environment.

The World Environment Day slogan for 2008 is Kick the Habit! Towards a Low Carbon Economy. Recognising that climate change is becoming the defining issue of our era, UNEP is asking countries, companies and communities to focus on greenhouse gas emissions and how to reduce them. The World Environment Day will highlight resources and initiatives that promote low carbon economies and life-styles, such as improved energy efficiency, alternative energy sources, forest conservation and eco-friendly consumption.

On this World Environment Day, let us examine the state of our environment. Let us consider carefully the actions which each of us must take, and then address ourselves to our common task of preserving all life on earth in a mood of sober resolution and quiet confidence.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

Editorial: Petrochemicals and seahorses (Persekutuan, Malaysia)

4 June 2008, New Straits Times

PENINSULAR Malaysia's latest environmental cause celebre is surfacing in the Sungai Pulai estuary, an internationally recognised area of wilderness now threatened by industrial development. Overseen by the Port of Tanjung Pelepas authority, a RM2 billion petrochemical plant is slated to rise on more than 2,000 hectares upstream of the estuary, to supply the needs of the huge new manufacturing concerns anticipated for southern Johor.

This area is environmentally unique. Internationally recognised as a wetlands site of significant biodiversity, the Sungai Pulai estuary's mangrove forest reserve is among the country's most extensive. Moreover, the estuary

debouches onto expansive seagrass beds that are the natural habitat for the charming creature that has become the symbol of resistance to plans for industrial development there: the spotted seahorse, *Hippocampus kuda*, its Malay species name endearing it even more to locals.

more..... <http://www.seagrasswatch.org/news.html>

Vital marine, coastal ecosystems in danger (Viet Nam)

2 June 2008, Vietnam News Agency

HA NOI — Participants at a recent conference warned that the marine and coastal ecosystems in Viet Nam were in danger of being ruined because it is not given the attention it deserves and is treated with disrespect by people who are out to exploit it.

Data shows that 25 per cent of the Vietnamese population, as many as 20 million, rely on marine and coastal services of which about eight million are wholly reliant on it as a means of their livelihood. The country has 3,620 km of coastal area including 1,300 sq.km of coral reef, 155,000 sq.km of mangrove forests, 500 km of lagoons and 16 ha of sea grass and many tidal flats and estuaries. They play an important part in protecting the shoreline from natural hazards and erosion, mitigating greenhouses effects and regulate the micro climate. They are also important to the tourism sector.

The amount of fish which is caught per ha on an annual basis has also been reduced by 50 per cent over the last decade while the significant reduction has been found in the seagrass bed in recent years. For example, the province of Khanh Hoa lost 80 per cent of its seagrass bed between 1997 and 2004.

more..... <http://www.seagrasswatch.org/news.html>

Crist Protects Land Trust, Seagrass (Tampa,FL,USA)

1 July 2008, Tampa Tribune

A massive program for buying conservation land that started two decades ago has been extended for 10 more years.

Gov. Charlie Crist signed a bill Monday to continue the program now known as Florida Forever until at least 2018. The land-buying program would have ended in 2010 if lawmakers failed to pass the measure this spring.

Also on Monday, Crist followed through on his promise to veto a bill that would have allowed coastal developers to destroy seagrass beds as long as they paid to restore seagrass elsewhere.

Full story and source: <http://www2.tbo.com/content/2008/jul/01/me-crist-protects-land-trust-seagrass/>

Related links: <http://www.tampabay.com/news/environment/wetlands/article652667.ece>

<http://www.pnj.com/apps/pbcs.dll/article?AID=/20080610/NEWS01/80610035/1006/NEWS01>

<http://www.commondreams.org/news/2008/0610-13.htm> , <http://www.tcpalm.com/news/2008/jun/10/governor-vetoes-bill-would-allow-seagrass-destruct/>

<http://www.tcpalm.com/news/2008/jun/08/thomas-ries-gov-crist-should-ignore-negative-spin-/>

<http://www2.tbo.com/content/2008/jun/08/sp-seagrass-bill-a-mixed-blessing-for-environmental/>

<http://www.tcpalm.com/news/2008/jun/04/lets-protect-key-resource/>

<http://www2.tbo.com/content/2008/jun/04/me-seagrass-bill-add-on-stirs-concerns-for-some/>

<http://www.tcpalm.com/news/2008/may/24/killer-on-sea-grass/>

Xemxija wrack misconceptions (Valletta, Malta)

29 June 2008, Times of Malta

In his letter entitled 'Xemxija Beach' of June 15 in The Sunday Times, Alfred Vella exposes a series of misconceptions which need to be addressed. Vella claims that 'Xemxija beach is still in a deplorable state, despite all the embellishment that has been carried out around it. The seaweed that accumulated in winter is still left to rot on the beach, spoiling what is otherwise a natural beauty spot. Every year the cleaning-up of this beach is delayed.'

The 'seaweed' in question is actually an accumulation of dead *Posidonia oceanica*, which is a seagrass - such accumulations are common along Mediterranean coastlines and are known as 'banquettes.' Local tourism authorities delayed the clearing of our beaches for various reasons, including the fact that the beached wrack traps sand particles, helping to protect against beach erosion. This is much less expensive than the numerous beach-reclamation schemes which are being undertaken in areas like Bugibba.

The real hazard to the bathing water quality at Xemxija is not the seagrass wrack, but the discharges and leaks from the numerous vessels anchored within the bay. Ongoing research on local banquettes has highlighted their conservation importance, as well as their role in buffering beaches from wave-induced erosion.

Full story and source: <http://www.timesofmalta.com/articles/view/20080629/environment/rewarding-illegality>

County To Study Pole-Or-Troll Zone (Tampa, FL, USA)

28 June 2008, Tampa Tribune

RUSKIN - The idea of banning outboard motors in the Cockroach Bay Aquatic Preserve has not gathered steam on a local task force considering the possibility of Hillsborough County designating its first pole-or-troll zone. In fact, a proposal to limit boaters to push poles or trolling motors in Little Cockroach Bay, a much smaller target, drew outcry from boaters and fishermen when county scientists broached the proposal more than a year ago. Scientists said the proposal would give scarred seagrass beds a chance to heal.

But Gus Muench, a longtime crabber pushing for a no-motor zone throughout the seagrass meadows of Cockroach Bay, remains undeterred in his quest. Muench has served on several environmental preservation committees and is a founder of the Cockroach Bay Users Group and Little Manatee Preservation Committee. He said he would like to see the aquatic preserve designated as a sanctuary or marine park to highlight its importance, but he does not propose to ban fishing or canoeing - just motorized boats south of the Little Manatee River.

The Little Cockroach Bay pole-or-troll zone was proposed in spring 2007 after aerial photographs showed numerous boat propeller scars in the aquatic preserve. Tom Ash said Monday the EPC staff has documented more than 20,000 gouges in seagrass beds on the north side of the boat launch at the end of Cockroach Bay Road. More are presumed to lie to the south.

Full story and source: <http://southshore2.tbo.com/content/2008/jun/28/ss-county-to-study-pole-or-troll-zone/>

UK. National Oceanography Centre PhD student Maike Paul wins ... (Gibraltar, Spain)

13 June 2008, BYM News (press release)

For her research on the role of two seagrass species in wave attenuation and coastal protection, Maike Paul (30), from the National Oceanography Centre, Southampton, has been awarded the Stanley Gray Fellowship for the 2007/8 academic year by the Institute of Marine Engineering, Science and Technology (IMarEST).

Maike explains in a summary of her work: 'This research aims to investigate the influence of specific and measurable vegetation characteristics on wave dissipation in order to answer the question 'How does seagrass attenuate waves?' Characteristics under investigation will be canopy height, shoot density, leaf shape and patch size. To understand the process in detail, surface waves as well as velocity profiles will be measured. The impact of changing seagrass characteristics throughout the water column will be investigated and a description of bed shear stress as a function of seagrass characteristics will be derived.

She is looking at the characteristics of two species *Zostera noltii* and *Cymodocea nodosa*, carrying out laboratory experiments at small scale in Southampton, and in full scale in wave tanks at UPC Barcelona, Spain and KISR in Kuwait. Field studies will be undertaken in a large *Cymodocea nodosa* stand in Venice Lagoon in Italy; and in the world's most extensive *Zostera noltii* bed in Archachon in France. "A summary of her plans certainly makes fascinating reading," says Ben Saunders. "We wish her well with her research."

Full story and source: <http://www.bymnews.com/news/newsDetails.php?id=28037>

Death traps for marine turtles (Manama, Bahrain)

10 June 2008, Gulf Daily News

BAD fishing practices caused the deaths of at least 170 sea turtles in Bahrain last year, according to a study released yesterday. They were mainly killed during the shrimping season by trawlers, nets and traps, according to the Bahrain Centre for Studies and Research (BCSR).

Head of the organisation's fisheries studies and technical manager of the marine turtle protection programme Dr Ebrahim Abdulqader called for urgent changes in fishing methods, to protect the endangered species. "The shrimping trawlers are responsible for most of the deaths. "Most of the cases happened between July and October, during the shrimping season. "Most also occurred in the northern area of Bahrain located around the habitat of shrimps where sea grass is found."

Dr Abdulqader said the other main threats to sea turtles were from dredging and reclamation, litter dumped at sea, pollution and recreational boats speeding through shallow water. The study, which covered five coastal areas in the northern, eastern and western areas of Bahrain, used reported sightings from fishermen and a questionnaire to collect data.

Full story and source: <http://www.gulf-daily-news.com/Story.asp?Article=219849&Sn=BNEW&IssueID=31082>

Global warming turning sea into acid bath (UK)

09 June 2008, Times Online

Increasing carbon dioxide emissions could leave species such as coral and sea urchins struggling to survive by the end of the century because they are making the oceans more acidic, research led by British scientists suggests. The study of how acidification affects marine ecosystems has revealed a striking impact on animal and plant life. The

findings, from a team led by Jason Hall-Spencer, of the University of Plymouth, indicate that rising carbon emissions will alter the biodiversity of the seas profoundly, even before the effects of global warming are taken into account.

Dr Hall-Spencer's team investigated the likely effects of acidification by studying natural underwater vents off the coast of Italy, where carbon dioxide bubbles up through the sea floor. This makes the water around the vents significantly more acidic than it is in surrounding areas. The study, published in the journal *Nature*, shows that certain species are very badly affected by rising acidity. Corals of the *Caryophyllia*, *Cladocora* and *Balanophyllia* varieties, for example, were common in on the sea bed in the region, but absent close to the vents. Sea urchins and sea snails were also affected badly by the high acidity.

Other species, including seagrass and a type of algae known as *Sargassum*, thrived as the extra carbon dioxide has a fertilising effect. This extra growth, however, can be damaging to other sea life - *Sargassum* is an alien invasive species, carried to the region in the ballast of shipping.

The research team is the first to use natural underwater carbon dioxide vents to assess how acidity caused by the gas influences sea life. "Our field studies provide a window on the future of the oceans in a high CO₂ world," Dr Hall-Spencer said.

Full story and source: <http://www.timesonline.co.uk/tol/news/uk/article4092822.ece>

Full story and source: <http://www.fijitimes.com/story.aspx?id=92052>

<http://sciencenow.sciencemag.org/cgi/content/full/2008/609/2>

Fishing for the future (Suva, Fiji)

08 June 2008, Fiji Times

More than 60 villagers from the four tikina of Sasa, Mali, Dreketi and Macuata converged on the chiefly village of Naduri, Macuata Province last week to plan a better future for natural resource management in their region. A three-day workshop facilitated by the Macuata Provincial Office, WWF-Fiji Country Program (WWF) and partner organisations the Wildlife Conservation Society (WCS) and Wetlands International Oceania (WIO) was held in Naduri on May 27-29 for the traditional community leaders and managers of the Qoliqoli (fishing grounds) Cokovata.

The existing network of nine tabu sites was established by Macuata qoliqoli managers in 2004, with the assistance of WWF and the Fiji Locally Managed Marine Area Network (FLMMA) sites were chosen using the best traditional knowledge and information on fish breeding sites and habitats that was available at the time. Currently, only about 111.5km² or 8% of Qoliqoli Cokovata is protected from fishing by customary tabu.

Akisi Bolabola, Sustainable Livelihoods officer at WWF said, "this scientific and socio-economic information, combined with the traditional ecological knowledge of the qoliqoli managers, helped the workshop attendees to identify up to 16 proposed new tabu sites of various sizes. "The new sites include important habitats such as mangroves, seagrass beds and turtle nesting beaches."

Full story and source: <http://www.fijitimes.com/story.aspx?id=91570>

Harvesting the seeds in hopes of a sea grass revival (Norfolk, VA, USA)

07 June 2008, The Virginian-Pilot

They came to collect seeds - 20 million or more - to expand what organizers call "the largest sea grass restoration in the world." The work is tedious and long and can be interrupted by strong wind, a heavy tide or a sting ray lounging in the shallows.

"Ten years ago, you couldn't find a blade of grass in here," said Bob Orth, an aquatic plants specialist at the Virginia Institute of Marine Science. "Today, there's more than 1,400 acres of continuous beds - just amazing." "You read all the time about restoration efforts in the Chesapeake Bay not working. But here, it's so great to be involved in such a successful program," said Barry Truitt, a senior scientist with The Nature Conservancy, an international environmental group.

Orth said he started the grasses project with "almost nothing," just a small grant from the Virginia Marine Resources Commission. Today, though, his budget has swollen to about \$250,000 a year, with state, federal and private groups contributing to the cause, led by the Virginia Coastal Zone Management Program, as part of its Seaside Heritage project that supports oyster restoration, eco-tourism and, of course, the grasses.

Much of the work to date has been conducted in coastal bays that were set aside as grass sanctuaries by the state. Orth expects to sprinkle seeds this year in public waters. He worries about possible conflicts with recreational and fishing boats, whose propellers can cut long scars in the beds. But his anxiety quickly subsides when he considers how far the restoration work has come, and where it might go. "We can work something out to keep this going," he said.

Full story and source: <http://hamptonroads.com/2008/06/harvesting-seeds-hopes-sea-grass-revival>

http://www.dailypress.com/news/dp-local_seagrass_0629jun29,0,6199524.story

Swallow Caye's manatees a healthy sign for cruise tourism (Belize City, Belize)

06 June 2008, The Reporter Belize

The manatee population in Belize's Drowned Cayes suggests that the current level of tourism in the areas is sustainable, at least with respect to manatees. These are the findings of Caryn Self-Sullivan, Ph.D., who has been studying Belize's conservation of Antillean (West Indian) Manatees for the past eight years, as research for her doctoral thesis at Texas A&M University.

The increase in cruise ship tourism has not decreased the high probability, 37%, of seeing manatees all year round in the mangroves and seagrasses between the Belize Barrier Reef and Belize City, Self-Sullivan told a group of environmental journalists at a meeting in San Pedro last Friday, May 30.

She admitted there is some seasonal variation at Gallows Reef. She notes that development in the Stake Bank area has raised concerns that such development could alter this balance.

Full story and source: <http://www.reporter.bz/index.php?option=content&task=view&id=2808&Itemid=2>

NOAA Teams Up With Local Experts to Restore Alabama Shorelines (Washington, DC, USA)

03 June 2008, NOAA

NOAA has announced plans to invest \$1 million over three years to help restore Alabama's Mobile Bay, partnering with local organizations and citizens to reverse the loss of wetlands caused by coastal development.

As part of an innovative restoration practice called "Living Shorelines," NOAA's Restoration Center will work with a number of organizations including the University of South Alabama, the Association of National Estuary Programs, and Mobile Bay National Estuary Program to use natural techniques to reduce coastal erosion, improve water quality, and prevent future damage from boat wake, storms, and climate change.

Since 1999, NOAA's Restoration Center has invested more than \$7 million in the state of Alabama. In cooperation with its partners, NOAA has restored salt marshes and seagrass, created and restored oyster reefs, and educated communities about the value of habitat and restoration. Altogether, these projects have engaged more than 1,100 volunteers and resulted in the restoration of approximately 90 acres of coastal habitat.

Full story and source: http://www.noaanews.noaa.gov/stories2008/20080603_mobilebay.html

GALLERY

Cyrene Reef (Singapore): 08 June 2008 <http://www.seagrasswatch.org/gallery.html>

6am and the Team is back on Cyrene Reef to monitor the fabulous seagrasses on this submerged reef right in the middle of our port! We soon made a safe landing with Melvin and his crew of the Dolphin and were off to monitor the seagrasses. Today we were also joined by Dr Raju who is a GIS expert and has kindly offered to help map out the Reef.

Although it lies right next to major shipping lanes to a world class container port, and just across a narrow channel from world class industrial and petrochemical plants, this reef has rich seagrasses, star-studded sand bars and living reefs.

Pelican Bay, Great Sandy Strait (Qld, Australia): 03 June 2008

<http://www.seagrasswatch.org/gallery.html>

Bowen (Qld, Australia): 17 May 2008 <http://www.seagrasswatch.org/gallery.html>

Rodds Bay, Gladstone (Qld, Australia): 04 - 05 May 2008 <http://www.seagrasswatch.org/gallery.html>

RD1: 04 May 2008

RD2: 05 May 2008

Motupore Island (PNG): 05 - 08 May 2008 <http://www.seagrasswatch.org/gallery.html>

NEW PUBLICATIONS

Workshop proceedings

Mellors, JE and McKenzie, LJ (2008). Seagrass-Watch: Guidelines for the Girringun Rangers. Proceedings of a Workshop for Monitoring Seagrass Habitats in Girringun Sea Country, 3rd & 4th June 2008. (Seagrass-Watch HQ, Townsville). 33pp. [1.8Mb] <http://www.seagrasswatch.org/training.html>

Mellors, JE and McKenzie, LJ (2008). Seagrass-Watch: Proceedings of a Workshop for Monitoring Seagrass Habitats in Bowen, 17th May 2008. (Seagrass-Watch HQ, Cairns).24pp. [1.1Mb]
<http://www.seagrasswatch.org/training.html>

Marine Ecology Group

Coles, R., Grech, A., Dew, K., Zeller, B. and McKenzie, L. (2008). A preliminary report on the adequacy of protection provided to species and benthic habitats in the east coast otter trawl fishery by the current system of closures. Department of Primary Industries and Fisheries, Brisbane, Australia. 52pp. [5.7Mb]
<http://www.seagrasswatch.org/meg.html>

De'ath, G., Coles, R., McKenzie, L. and Pitcher, R. (2008) Spatial distributions and temporal change in distributions of deep water seagrasses in the Great Barrier Reef region.. Report to the Marine and Tropical Sciences Research Facility. (Reef and Rainforest Research Centre Limited, Cairns) 21pp. [414kb]
<http://www.seagrasswatch.org/meg.html>

FROM HQ

Frequently Asked Questions <http://www.seagrasswatch.org/faq.html>

Seagrass-Watch News Issue 33 <http://www.seagrasswatch.org/newsletters.html>

Seagrass-Watch Shop <http://www.seagrasswatch.org/shop.html>

Virtual Herbarium <http://www.seagrasswatch.org/herbarium.html>

Giveaways <http://www.seagrasswatch.org/shop.html#GIVE1>

- Seagrasses of Australia
- Phytoplankton Guide
- Bookmarks
- Stickers
- Seagrass-Watch Newsletter 28, 30, 31, 32, 33 (hardcopy)

Future sampling dates <http://www.seagrasswatch.org/sampling.html>

Handy Seagrass Links <http://www.seagrasswatch.org/links.html>

DISCLAIMER

News articles posted as a free community service for the purposes of non-commercial education, research and study; review and the reporting of news; and archived for reference of students and researchers as a 'fair dealing' activity under Australian Copyright Law.

Seagrass-Watch HQ does not guarantee, and accepts no legal liability whatsoever arising from or connected to the accuracy, reliability, currency or completeness of any material contained in this bulletin. Seagrass-Watch HQ recommends that readers exercise their own skill and care with respect to their use of the information in this bulletin and that readers carefully evaluate the accuracy, currency, completeness and relevance of the material in the bulletin for their purposes. This bulletin is not a substitute for independent professional advice and users should obtain any appropriate professional advice relevant to their particular circumstances. The material in this bulletin may include the views or recommendations of third parties, which do not necessarily reflect the views of Seagrass-Watch HQ (or those of the Queensland Government) or indicate its commitment to a particular course of action.

Seagrass-Watch HQ is supported by the Australian Government's Marine and Tropical Sciences Research Facility (Department of the Environment, Water, Heritage and the Arts) represented in North Queensland by the Reef and Rainforest Research Centre, the Great Barrier Reef Marine Park Authority (GBRMPA), the Queensland Department of Primary Industries & Fisheries and by private donations.

Seagrass-Watch E- Bulletin is compiled by Len McKenzie & Rudi Yoshida.