



Seagrass-Watch E-Bulletin

26 July 2009

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NEWS

Undersea meadows in peril

08 July 2009, The New Scientist, Volume 203, Issue 2716, 8 July 2009, page 12

A football pitch-sized chunk of undersea meadow is vanishing every 30 minutes, according to the first global assessment of the problem. Seagrass meadows are found in shallow coastal waters around the world. Along with coral reefs, mangrove forests and salt-marshes, they play an important role in nutrient cycling, while also providing a refuge for crustaceans, juvenile fish and endangered species such as dugongs, manatees and sea turtles.

Although marine ecologists have been measuring local seagrass loss for decades, they had never before pooled their information to get a global perspective. So a team led by Michelle Waycott of James Cook University in Townsville, Queensland, Australia, did just that, combining 215 regional studies from 1879 to 2006.

They found that the total area of known seagrass meadows decreased by 29 per cent between 1879 and 2006, and that the rate of this loss is accelerating. "We put tremendous pressure on seagrass beds, but we get a lot of benefits from them," says Susan Williams of the Bodega Marine Laboratory in Bodega Bay, California, one of the report's authors. For example, they provide a nursery habitat for edible shrimp, crab and fish.

The team place much of the blame on sediment dumped by coastal development projects, pollution and nutrient run-off - all of which decrease water quality, starving the plants of the sunlight they need to grow. Overall, the rate of loss is comparable to that for tropical rainforests and coral reefs. But since seagrass meadows are more widely distributed, existing in both tropical and temperate zones, the effect of this loss is more widespread.

"Those numbers are pretty shocking," says Ben Halpern, a marine ecologist with the National Center for Ecological Analysis and Synthesis in California. But marine ecosystems are more able to bounce back than those on land, he says. "We do need to act quickly, but there is real hope that our actions can be effective."

Article by MacGregor Campbell

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

[Related story: http://www.news.com.au/perthnow/story/0,21598,25726670-5017320,00.html](http://www.news.com.au/perthnow/story/0,21598,25726670-5017320,00.html)

New laws to protect dugongs (Australia)

14 July 2009, ABC online

The Queensland Government has introduced new laws to protect dugongs off the coast of Gladstone. Primary Industries Minister Tim Mulherin says under the new rules fishermen around Facing Island have to be within 200 metres of their nets at all times. He says the changes will prevent dugongs from being trapped and drowning. Fishermen who abandon their nets risk a \$1,000 fine and could have their nets seized.

The President of the Wildlife Protection Association of Australia Pat O'Brien says it is a great move, but has also suggested other measures. "One of the issues I think they also need to deal with is the increase in development proposals in the Curtis Island area because dugong aren't just around Facing Island, they're all over the place," he said. "So you know, perhaps they need to look very closely too at any potential impact from development proposals on Curtis Island as well. "It appears that dugong populations have crashed fairly dramatically over the last five years. "Of course it's not just fishermen and nets, there's shark nets as well that are an added threat.

There's a lot of boats in the area now, boat strike is another threat to dugong populations and the loss of seagrass beds."

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

Global warming may impede eelgrass growth (Sequim, Wash., USA)

26 July 2009, By Michelle MA, The Seattle Times

Scientist Ron Thom probably knows more than anyone else about the growth of eelgrass, the humble marine plant commonly found in sheltered bays, inlets and other shallow waters. Each summer, he and other researchers at Pacific Northwest National Laboratory here tread patiently along the muddy tidal flats of Sequim Bay counting, snipping and tagging strands of the plant that's so crucial to shoreline ecosystems.

Thom, a staff scientist at the Marine Sciences Laboratory, started the research almost 20 years ago. It's become the world's longest-running study measuring eelgrass growth. Pollution and shoreline development have killed much of the world's eelgrass. During El Nino, scientists have measured higher sea levels and warmer temperatures in the Northwest - changes similar to those predicted under global warming. So scientists can look at how eelgrass responds during El Nino to see how it might behave as the Earth warms, Thom said. But it's still unclear whether a warmer Earth will help or hurt eelgrass. Shallow-water eelgrass tends to grow faster when sea level is higher, Thom said. But for eelgrass that grows deep below the surface, a rise in the sea level could diminish its access to light, killing the plants, he said.

Eelgrass is declining worldwide and has disappeared completely from a number of sites in Puget Sound, said Jeff Gaeckle, a sea-grass ecologist with the state Department of Natural Resources. The good news is that overall in Puget Sound, eelgrass isn't declining year to year. But several locations, mostly in Hood Canal and the San Juan Islands, are seeing decreases, which has scientists concerned, Gaeckle said.

[Full story and source: http://www.miamiherald.com/news/environment/story/1158221.html](http://www.miamiherald.com/news/environment/story/1158221.html)

Fishermen, ecosystem among the major losers in proposed projects (Nairobi, Kenya)

27 July 2009, East African

Apart from the fear that the proposed Lamu port and refinery could lead to the displacement of 6,000 people, there are concerns that the project could cause serious damage to the delicate marine ecosystem. It will involve mass

uprooting of mangrove trees that act as breeding ground for rare fish. It will also cause water pollution due to possible oil spillage from the refinery.

Lamu is known worldwide for its biodiversity and as a breeding ground for exotic fish species for the entire East African coastline from Somali to Mozambique while the Kiunga Marine National Reserve is part of the Manda Bay buffer zone.

The bay around Manda Island is known to support corals, seagrass beds and lush stands of mangrove, while marine turtles use these areas regularly in the winter as feeding grounds. Also likely to be endangered is the Dugong fish, commonly known as the seacow, which is unique to Lamu. These creatures depend on shallow sea grass beds exclusively for their survival and the cutting of the mangrove trees would have an impact on one of Kenya's most threatened fish species.

National Environment Management Authority of Kenya principal corporate communications officer Wangari Kihara told The EastAfrican that the organisation will carry out environmental impact assessment from September and if it is found that the projects is likely to cause serious damage to the marine ecosystem, it will advise against it.

Full story and source: <http://www.theeastafrican.co.ke/magazine/-/434746/629670/-/15mctsz/-/>

Grasses grow deep in the bay (Sarasota, FL, USA)

22 July 2009, Sarasota Herald-Tribune

For the first time in years, life-sustaining seagrass is growing in Sarasota Bay waters as deep as 10 feet, an indicator that the water is getting cleaner, experts said Tuesday. Seagrasses, which provide habitat and food for a myriad of ocean life, typically grow only in depths where water is clean enough to let in sufficient sunlight. So the fact the grasses are being seen in waters up to 10 feet deep means the water is cleaner and letting in more sunlight.

"For an urbanized bay, this is fairly extraordinary," said Mark Alderson, executive director of the Sarasota Bay Estuary Program, a federal and local group that adopted what has turned into a \$500 million plan to clean up the bay.

The original goal, though it was never a formal one, was to have sea grass growing at depths of six feet, Alderson said in a presentation to the Sarasota County Commission. Experts wondered if the huge jump in sea grass growth in the bay -- a 32-percent increase between 2006 and 2008 -- was mainly a result of the drought. The theory was that water quality improved due to reductions in polluted runoff draining into the bay.

But Sarasota Bay's water quality is improving at the same time as bays in other drought-stricken areas are seeing no improvement. Also, the bay continues to be clear even though rainfall this year is hitting closer to normal levels, said Sarasota County Commissioner Jon Thaxton.

Full story and source: <http://www.heraldtribune.com/article/20090722/ARTICLE/907221027/2055/NEWS?Title=Grasses-grow-deep-in-the-bay>

The Coorong is dead but can be revived (Melbourne, Victoria, Australia)

23 July 2009, The Age

The Coorong as we once knew it is no more. Traditional freshwater plants, fish and birds — including the trademark pelican — are being replaced by a smaller number of salt-tolerant species as a result of record low flows in the Murray River.

A three-year study, led by the CSIRO, found the most remote southern lagoons were now experiencing "extreme hyper-salinity", with water between four and six times saltier than seawater. The findings will add to political heat around the reform of the Murray-Darling river system, with the report nominating the removal of water from the system as a key factor in the Coorong's deterioration.

The report cited the almost complete decline of a crucial seagrass, *Ruppia tuberosa*, in the south lagoon as a significant ecological tipping point. Decline of the plant directly influenced the departure of birds such as pelicans, black swans and fairy terns from the south of the Coorong, while just one type of fish was still found in the lagoons — albeit rarely.

But all hope is not lost, according to CSIRO researcher Dr Sebastien Lamontagne. He said a freshwater influx could still help. "It's not necessarily a huge amount of water that is required, even a small amount of water over the barrages can make a difference," he said. He said other parts of the Coorong and lower lakes were not as badly affected as the southern lagoon.

Full story and source: <http://www.theage.com.au/environment/the-coorong-is-dead-but-can-be-revived-20090722-dtl3.html>

Anglers take boat speed issue to county (Tampa, FL, USA)

25 July 2009, Tampa Tribune

Those pushing for quick boat access to a proposed restricted area where boaters must use a trolling motor or hand pole will ask the county to fight their battle with the state and federal governments. Some members of a citizens committee that has been working on five proposals for a pole and troll zone in Little Cockroach Bay plan to set up a meeting with Hillsborough County Commissioner Al Higginbotham.

Although not all committee members agree with putting high-speed motorboat paths through a manatee zone with delicate seagrass, some say without those corridors to give boaters quick access to Little Cockroach Bay, there will be little compliance in the pole and troll zone or the manatee protection zone that surrounds it. The county's Environmental Protection Commission has been working with a citizens group for about two years to devise a plan that would prohibit power boating in an area where seagrass beds have been severely scarred by propellers.

The U.S. Fish & Wildlife Service, the Florida Fish & Wildlife Conservation Commission and the state Department of Environmental Protection gave all the plans a thumbs-down, saying they aren't willing to give up manatee protection for the boaters. The EPC wants to get a pole and troll zone in place by the end of the year, agency official Tom Ash has said. Little Cockroach Bay runs from the Little Manatee River south to the boat ramp at Cockroach Bay Road. It is one of many areas pocked by propeller scars, committee member Gus Muench said. Everyone agrees something should be done to protect manatees and seagrass, said committee member John Paiva. But boater access is the key to making it work, he said.

Full story and source: <http://southshore2.tbo.com/content/2009/jul/22/ss-anglers-take-boat-speed-issue-to-county/>

Dredge project set to begin (Tampa, FL, USA)

16 July 2009 Tampa Tribune

Barring any delays or weather-related problems, the Hernando County beach dredge project could be finished by February 2010. That's according to County Engineer Charles Mixson, who said the entire project is coming in at \$7.5 million, about \$1.5 million under budget. But before the actual dredging begins, there will be several weeks of prep work. For example, Mixson said it should take four to six weeks to start moving the rocks in the channel. The seagrass removal should take four to six weeks. It could be six to eight weeks before the dredge gets in, he said.

Once completed, Mixson said the channel will be 60 feet wide at the bottom and six feet deep at mean low tide. The channel will be straightened and extend out about three miles to Watts Tower, he said. The dredge project, ongoing since 1994, has faced several delays as environmental concerns and costs piled up.

Full story and source: <http://www2.hernandotoday.com/content/2009/jul/16/dredge-project-set-begin/>

Grounding leaves 'pretty good ditch' (Tavernier, Florida, USA)

15 July 2009, KeysNet

A 55-foot boat missed a shortcut into Whale Harbor off Islamorada, leaving the trawler grounded on a grass flat for several hours early Monday -- and nearly half a mile of seagrass damage in its wake. The operator of the boat, named Freedom, has been cited for damaging protected resources of the Florida Keys National Marine Sanctuary.

Additional citations are expected after a federal damage-assessment team completes a more detailed survey of the grounding site later this week. One boater estimated the propeller scar from the Freedom covers about four-tenths of a mile. Sanctuary staffers visited the scene Monday but were unable to begin surveying because of ongoing salvage activity and water turbidity, said Karrie Carnes, sanctuary communications director. The assessment team is slated to return Friday.

Groundings resulting in damage to seagrass habitats are subject to both federal and state fines. Penalties can include fines and the costs of assessing damage, restoration of habitat, and long-term monitoring of restored habitat. In the Keys national marine sanctuary, boats can be fined an initial \$100 for a grounding, and \$75 per square yard of damage. "Seagrasses require anywhere from two to 10 years to recover from propeller damage, says the state Department of Environmental Protection.

Full story and source: <http://www.keysnet.com/news/story/120859.html>

Snorkeling scientists study seagrass beds in Jackson Co. (Biloxi, MS, USA)

09 July 2009, Jackson County, MS (WLOX)

A team of scientists is busy studying seagrass in Jackson County. The researchers are surveying underwater seagrass beds in the Grand Bay Estuarine Research Reserve. The ongoing study could benefit future coastal restoration projects. The study will focus on where and how that marine vegetation grows.

"Sometimes they grow and cover the entire bay. And the next year you might not see any of them. So, we want to see what is the trend. What causes those kind of annual and spatial variations. And how we can single out the most important factors to come up with a model that can help with restoration projects," said Dr. Hyun Jung "J" Cho, a researcher from Jackson State University.

Dr. Biber is a partner in the project. He's applying the knowledge gathered here to germinate seagrass seeds in the lab, then grow the plants in nurseries. "As we realize that our seagrass resources are becoming more threatened, becoming more endangered, I think there's going to be a further push to try and do this kind of nursery activity to try and grow these plants," said Dr. Biber. By discovering what makes seagrass grow best, that knowledge can be applied to future restoration projects.

Full story and source: http://www.wlox.com/Global/story.asp?S=10665792&nav=menu40_3

Related story: <http://www.sunherald.com/local/story/1463690.html>

Seagrass transplant trial in Whangarei harbor (Wellington, New Zealand)

03 July 2009, Radio New Zealand

An attempt to restore seagrass in Whangarei harbour is beginning to pay off. Northland Regional Council has been experimenting with transplanting clumps of seagrass from One Tree Point to Takahiwai - where it had been wiped out.

The council says the grass has a host of environmental benefits, and is crucial in providing a nursery for young fish. Seagrass covered 14 square km of the harbour 60 years ago, but the council says only small pockets remained by the 1970s, because of dredging and increased sedimentation. The council says plots of transplanted seagrass have taken well. In nine months, the seagrass has recolonised the areas it was taken from.

The \$50,000 trial is funded by Northport and carried out by tangata whenua and NIWA. NIWA scientists recently discovered that almost all snapper found off the west coast of the North Island came from the Kaipara harbour: the only one where seagrass is still plentiful.

Full story and source: <http://www.radionz.co.nz/news/stories/2009/07/03/1245bb3917cd>

Seagrass study sounds Cockburn Sound alarm bell (Australia)

03 July 2009, NEWS.com.au

Cockburn Sound is one of the worst examples of seagrass destruction in the world, according to a major international study published this week. Co-author Professor Gary Kendrick of the University of WA's School of Plant Biology said seagrass destruction contributed to global warming, coastal erosion and the extinction of fish and other aquatic species.

Prof Kendrick said seagrass destruction in Cockburn Sound from 1968 to 1980 had been 80 per cent. "It has improved since then but still ranks with Chesapeake Bay in the US as one of the worst," he said.

Prof Kendrick said seagrass destruction or depletion in Cockburn Sound was constantly monitored and the subject of major annual reports. "There has been a switch in the causes in recent history from primary production to industries," he said. "More recently it has ranged from 10 to 15 per cent. In the global picture there are concerns about reductions of even 1 per cent."

Full story and source: <http://www.news.com.au/perthnow/story/0,21598,25726670-5017320,00.html>

SEAGRASS-WATCH on YouTube

Seagrass: Pastures of the sea <http://www.youtube.com/watch?v=66Y5vgswj20>

Presentation on what seagrasses are and why they are important.

SEAGRASS-WATCH magazine Issue 37

The latest issue of Seagrass-Watch news (the official magazine of the global seagrass and assessment program) is now available online at <http://www.seagrasswatch.org/magazine.html>

SEAGRASS-WATCH WORKSHOPS 2009

Australia

Broome, WA, August 23-24 (Registration closes 17th August 09)

For more information: <http://www.seagrasswatch.org/training.html#wkshop09>

CONFERENCES

CERF 2009 (Oregon (USA), 1 -5 November 2009)

Coastal and Estuarine Research Federation Conference (CERF) will host a seagrass program titled, "Seagrass Ecosystem Health in a Global Perspective". Seagrass Ecosystem Health in a Global Perspective will include four half day sessions:

- Seagrass Physiological Stress: In Sickness and in Health (SCI-108)
- Seagrass Assessment: Think Globally, Monitor Locally (SCI-105)
- Seagrass Ecological Health: Diagnosing the Canary (SCI-106)
- Seagrass Management and Policy: Proactive Sustainability (SCI-107)

More information: <http://erf.org/cerf2009/>

ICSED2009 (Trang (Thailand), 2 – 4 December 2009)

International Conference on Seagrass Ecology and Dugong 2009: "Rehabilitation & Sustainability"

The conference will focus on current seagrass ecology issues and sustainable small-scale seagrass fisheries. The conference will contribute to the resolution of important issues which are threatening to both humans and seagrass aquatic organisms. The attendees are expected to share a viewpoint of global seagrass management based on their own backgrounds and experience. Conference topics will include:

1. SEAGRASS BIODIVERSITY AND ECOSYSTEM FUNCTIONING

To include:

- Hotspots, patterns and drivers in seagrass biodiversity in Asia.
- Relationship between ecosystem functioning and biodiversity.
- Reef-seagrass-mangrove connections: the landscape approach
- Relationship between ecosystem functioning and the sustainable use of seagrass biodiversity across Asia

2. CONSEQUENCES OF SEAGRASS BIODIVERSITY CHANGE

To include:

- Impacts of degradation on ecosystem structure in marine food webs and on dugong
- Red tides, Harmful Algal Blooms (HABs)
- Seagrass Ecosystems, dugong and global climate change

3. CONSERVATION OF SEAGRASS BIODIVERSITY AND DUGONG

To include:

- Applications of scientific, social and cultural data and information; resource valuation
- Habitat restoration using artificial systems
- Marine Protected Areas: Successes, failures and future prospects

4. INTEGRATED COASTAL MANAGEMENT AND GOVERNANCE MECHANISMS

To include case studies on:

- Role of NGOs, POs, the local government and the community
- Linking science to policy
- Integrated decision support systems

Important dates:

30 August 2009: Deadline for abstract submission

30 September 2009: Notification of acceptance

15 October 2009: Deadline for full paper submission

15 October 2009: Deadline for early registration

More information: <http://icsed2009.rmutsv.ac.th/index.html>

GALLERY

Far Nth Qld(Australia): 19 - 22 July 2009 <http://www.seagrasswatch.org/gallery.html>

Great low tides greeted Seagrass-Watch HQ as it completed the third round of monitoring in the Wet Tropics for 2009. Eight Seagrass-Watch sites were monitored over 4 days from Yule Point in the North to Mission Beach in the South (covering 200km of coastline).

Magnetic Island (Qld, Aust): 07 July 2009 <http://www.seagrasswatch.org/gallery.html>

The July monitoring was somewhat similar to that of July 2008 but the normally low winter seagrass cover was even lower this year (around 12% overall compared with around 20% in 2008).

Shelley Beach (Qld, Aust): 04 July 2009 <http://www.seagrasswatch.org/gallery.html>

FROM HQ

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

Seagrass-Watch News Issue 37 <http://www.seagrasswatch.org/magazine.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>

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

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

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