



# Seagrass-Watch E-Bulletin

**30 June 2009**

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## NEWS

### **Loss of coastal seagrass habitat accelerating globally (Evergreen, VA, USA)**

29 June 2009, PhysOrg.com

An international team of scientists warns that accelerating losses of seagrasses across the globe threaten the immediate health and long-term sustainability of coastal ecosystems. The team has compiled and analyzed the first comprehensive global assessment of seagrass observations and found that 58 percent of world's seagrass meadows are currently declining.

The assessment, published in the Proceedings of the National Academy of Sciences, shows an acceleration of annual seagrass loss from less than 1 percent per year before 1940 to 7 percent per year since 1990. Based on more than 215 studies and 1,800 observations dating back to 1879, the assessment shows that seagrasses are disappearing at rates similar to coral reefs and tropical rainforests.

The team estimates that seagrasses have been disappearing at the rate of 110 square-kilometers (42.4 square-miles) per year since 1980 and cites two primary causes for the decline: direct impacts from coastal development and dredging activities, and indirect impacts of declining water quality.

"A recurring case of 'coastal syndrome' is causing the loss of seagrasses worldwide," said co-author Dr. William Dennison of the University of Maryland Center for Environmental Science. "The combination of growing urban centers, artificially hardened shorelines and declining natural resources has pushed coastal ecosystems out of balance. Globally, we lose a seagrass meadow the size of a soccer field every thirty minutes."

"While the loss of seagrasses in coastal ecosystems is daunting, the rate of this loss is even more so," said co-author Dr. Robert Orth of the Virginia Institute of Marine Science of the College of William and Mary. "With the loss of each meadow, we also lose the ecosystem services they provide to the fish and shellfish relying on these areas for nursery habitat. The consequences of continuing losses also extend far beyond the areas where seagrasses grow, as they export energy in the form of biomass and animals to other ecosystems including marshes and coral reefs."

"With 45 percent of the world's population living on the 5 percent of land adjacent to the coast, pressures on remaining coastal seagrass meadows are extremely intense," said co-author Dr. Tim Carruthers of the University of Maryland Center for Environmental Science. "As more and more people move to coastal areas, conditions only get tougher for seagrass meadows that remain."

Seagrasses profoundly influence the physical, chemical and biological environments of coastal waters. A unique group of submerged flowering plants, seagrasses provide critical habitat for aquatic life, alter water flow and can help mitigate the impact of nutrient and sediment pollution.

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

*Related articles: <http://www.google.com/hostednews/ap/article/ALeqM5gDOdti0UZamxK9tyQsdullpUaltAD994J4EG0>,*

*<http://www.latimes.com/news/nationworld/nation/wire/sns-ap-us-sci-seagrass-loss,1,7087495.story>*

*<http://www.reuters.com/article/environmentNews/idUSTRE55T18S20090630>*

*<http://www.reuters.com/article/latestCrisis/idUSSYD467573>*

*<http://www.eleconomista.es/telecomunicaciones-tecnologia/noticias/1368640/06/09/Seagrass-losses-reveal-global-coastal-crisis.html>*

### **Villagers back project (Fiji)**

*18 June Fiji Times*

A dairo (sandfish) rearing project in Vanua Levu achieved a major milestone recently, with the release of hatchery-bred juveniles into the sea at Natuvu Village, Wailevu. The project which is the first of its kind in Fiji was introduced last year to address the problem of diminishing stocks of dairo.

Recently, 500 juveniles, each weighing between 1 and 10 grams, were released into experimental pens in the seagrass bed in front of Natuvu Village. This is a pilot release at this stage and none have been released into the seagrass beds for sea ranching yet. The pilot study will look at the relative survival and growth of two different size groups to determine which perform best in the wild after release. The two size groups are small (1-3g) and large (greater than 3g).

Project co-ordinator Cathy Hair said overseas research suggested dairo less than 3 grams in size, which is a bit smaller than a little finger, did not survive well when released into the wild. The Fiji research will confirm whether this holds true for the seagrass bed in Wailevu because their performance may depend on the particular habitat they are released into.

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

### **County cleared for seagrass removal (Brooksville, FL, USA)**

*29 June 2009, Hernando Today*

BROOKSVILLE - The U.S. Army Corps of Engineers signed off on the Hernando Beach dredge permit Friday, setting the stage for the next phase of the project: seagrass removal.

Assistant County Engineer Gregg Sutton said Seagrass Recovery, based in Indian Rocks Beach, has charged the county \$378,000 to do three things: assess the seagrass at the dredge site, remove it to a protection area and then monitor its progress.

Sutton said he will meet with Florida Department of Environmental Protection officials next week and update them on other aspects of the project, including rock disposal, a wildlife survey and an overall dredging plan. Sutton estimates it will be mid-July before work begins on extracting the seagrass.

*Full story and source: <http://www2.hernandotoday.com/content/2009/jun/29/county-cleared-seagrass-removal/news/>*

### **Lake Macquarie much healthier, naturally (Newcastle, Australia)**

*29 June 2009, Newcastle Herald*

Water clarity in Lake Macquarie has improved by 96 per cent over the past decade, figures show. The Lake Macquarie Improvement Project has spent \$27 million since 1999 to make the lake healthier.

Seagrass cover, the foundation of the lake's ecosystem, had increased by 25 per cent or 2.5 million square metres over that period. The improvement project will end this week and its co-ordinator Jeff Jansson will retire.

Mr Jansson said the lake was "very degraded and water quality was poor" when the project started. While the science shows the lake has improved markedly, the best and most pleasing indicator was public sentiment, he said. People often comment on the lake's improved water quality.

Project chairman and Mayor Greg Piper paid tribute to hundreds of volunteers who contributed to the program, helping rehabilitate wetlands and planting 600,000 plants. The State Government and Lake Macquarie City Council jointly funded the project, which originated from a state pollution report in the 1980s that found sediments and nutrients to be major causes of the lake's poor health. Mr Jansson said the project's success reflected "a change in thinking aimed at preserving and replicating natural systems, rather than adopting traditional hard engineering solutions".

*Full story and source: <http://www.theherald.com.au/news/local/news/general/lake-macquarie-much-healthier-naturally/1553372.aspx>*

### **Row over protection plans for Dorset's seahorses (UK)**

*20 June 2009, Dorset Echo*

A row has broken out over a protection zone to save seahorses off Dorset. A voluntary anchor-free zone is being introduced at Studland Bay which is home to the country's largest breeding seahorse colony. Wardens will then patrol and photograph the area to create a map of boating activity during the busy summer season. Experts will compare data from the seagrass in the anchor-free zone and a control zone where boats can anchor to judge the impact on the seahorse territory.

But locals fear it will turn in to a 'naming and shaming' exercise with boats that are anchored in the bay named on the internet. They believe the seagrass and seahorses are thriving and should be left alone. They also argue that the village will suffer economically if the hundreds of boats that come each weekend in summer decide to stay away.

Steve Trehwella, from the Seahorse Trust, said: "Although we welcome the fact that Crown Estate and Natural England have paid for a study of the eelgrass it's a start but unfortunately I think they are just going to spend huge amounts of money proving what we already know that there is lots of damage down there".

*Full story and source: [http://www.dorsetecho.co.uk/news/4448682.Row\\_over\\_protection\\_plans\\_for\\_Dorset\\_s\\_seahorses/](http://www.dorsetecho.co.uk/news/4448682.Row_over_protection_plans_for_Dorset_s_seahorses/)*

*Related article: [http://www.bournemouthecho.co.uk/news/4446932.Studland\\_residents\\_hit\\_back\\_over\\_claims\\_boats\\_harm\\_seahorse\\_habitat/](http://www.bournemouthecho.co.uk/news/4446932.Studland_residents_hit_back_over_claims_boats_harm_seahorse_habitat/)*

### **Tampa Bay continues to regain seagrass (Seminole, FL, USA)**

*18 June 2009, Tampa Bay Newspapers*

Tampa Bay gained more than 1,300 acres of seagrass between 2006 and 2008, and now supports more seagrass than at any time measured since the 1950s, according to the most recent aerial surveys of the bay.

Overall, the amount of seagrasses in Tampa Bay increased by 5 percent, according to surveys conducted by scientists with the Southwest Florida Water Management District's Surface Water Improvement and Management (SWIM) program. This slightly exceeds the 4.7 percent increase tallied between 2004 and 2006, the last time seagrass coverage was assessed.

Scientists cautioned that these latest gains may be due, in part, to the ongoing drought, since less rain means less stormwater runoff flowing to the bay. Nutrient-laden runoff clouds the water, preventing sunlight from reaching the underwater grasses. The increase also may be partially a function of even clearer water than usual when the aerial photos were taken, allowing better views of seagrasses in deeper waters.

*Full story and source: [http://www.tbnweekly.com/editorial/outdoors/content\\_articles/061809\\_out-05.txt](http://www.tbnweekly.com/editorial/outdoors/content_articles/061809_out-05.txt)*

### **Seagrass issues brought center stage (Rockport, TX, USA)**

*16 June 2009, Rockport Pilot*

Representatives from the Texas Parks and Wildlife Coastal Fisheries Division hosted a news media boat tour Friday, June 12, out of Aransas Pass to provide a firsthand look at problems and opportunities facing coastal seagrasses. The tour took place in the Redfish Bay State Scientific Area (SSA) which encompasses part of Aransas Bay near Rockport.

A comprehensive seagrass conservation plan was adopted 10 years ago to identify problems, designate objectives, and develop long- and short-range strategies and actions to protect and preserve Texas seagrasses. The plan also included monitoring of specific areas to determine the status and trends of Texas seagrasses.

As those tasked with protecting seagrass focus on the issues, boaters, too, can do their part. Boaters can protect seagrass when in shallow water by lifting their motors to avoid scarring the beds with propellers. Lift (boat motors), drift, pole or troll through these waters to prevent damage to seagrass beds. People can also take care of what ends up in stormwater drains. Toxics, like paint or oil, and trash should be properly disposed to avoid ending up in the bay where they can degrade water quality and seagrass habitats. Likewise homeowners can do their part by limiting the amount of fertilizer they put on their lawns to the manufacturer's recommended amount.

*Full story and source: <http://www.rockportpilot.com/articles/2009/06/16/news/doc4a37e0aada576577606322.txt>*

## Issue 37 Seagrass-Watch Magazine

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>

In this issue two of the worlds leading scientists on seagrass physiology (Mats Björk and Sven Beer) debate the affects of ocean acidification and the role seagrass could play in mitigating the effects. The discussion is largely based on their recent paper "Seagrass photosynthesis controls rates of calcification and photosynthesis of calcareous macroalgae in a tropical seagrass meadow" by I.S. Semesi, S. Beer and M. Björk (Mar. Ecol. Prog. Ser. 382: 41-47 (2009)). Let's hope that our high-productivity meadows may be looked upon as areas that are safe from ocean acidification, further highlighting the need for their protection from decline.

In this issue you can read about the latest Reef Rescue Marine Monitoring Program sampling in the Great Barrier Reef (Queensland, Australia). Find out what has been happening in the southern Great Barrier Reef region and around Townsville.

You'll also find articles on traditional owners monitoring their sea country in Torres Strait, and how an increase of volunteers in Hervey Bay will hopefully reinvigorate monitoring in the region. There are also articles on the training workshops in Cooktown, Bali and Singapore. Catch up with the Raffles Girl School's project to monitor the productivity and health of seagrass at Labrador Park (Singapore) and hear from schools in the Torres Strait. We finish this issue with some facts on estuarine crocodiles and advice on how to be croc wise.

## SEAGRASS-WATCH WORKSHOPS 2009

### Australia

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

For more information: <http://www.seagrasswatch.org/training.html#wrkshop09>

## 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/>

## GALLERY

### Chek Jawa (Singapore): 27 June 2009 <http://www.seagrasswatch.org/gallery.html>

*Bright and early this morning, we're back on Chek Jawa to see how things are growing there. We've got our spiffy "Seagrass Monitoring in Progress" banner up to tell visitors what we're doing and how they too can join us to make a difference for our shores! The seagrasses are thick all the way from the sand bar near the beacon to the high shore near the boardwalk. Also on the sand bar, in the thick carpet of grass was an odd wiggly bare patch. Could it be a dugong feeding trail?*

### Tuas (Singapore): 25 June 2009 <http://www.seagrasswatch.org/gallery.html>

*This is the 2nd monitoring session in Tuas this year. Today the tide was really really really good and we could see many many many marine creatures. As usual for the tuas site, we usually have a short recap of the monitoring technique to be used before we start the monitoring. We were at first so worried about the weather as it was pouring yesterday but today it was fine! I must say the seagrass growing near the fenceline were really big and fat and that is a good sign as it shows that the marine ecosystem is doing pretty well in the Tuas area. After 30 mins of monitoring, we started our marine creature treasure hunt!*

### Goold Island (Qld, Australia): 23 June 2009 <http://www.seagrasswatch.org/gallery.html>

*Girringun rangers, Traditional Owners and a couple Park's rangers and I visited Goold Island on Tuesday June 23, do some seagrass monitoring. It was a great trip over in the barge. While we waited for the tide to drop we inspected some weed control work that the rangers had been doing and looked at the fish trap. As low tide approached we went out and did our thing.*

## 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.