

# Seagrass-Watch E-Bulletin



**03 May 2014**

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## IN THIS BULLETIN

NEWS .....	1
Abundance of Chesapeake Bay's underwater grasses increases (VA, USA) .....	1
UF/IFAS research findings shed light on seagrass needs (USA) .....	2
Declining catch rates in Caribbean green turtle fishery may be result of overfishing (Nicaragua) .....	2
Dugong carcass found off resort (Malaysia) .....	2
Research links turtle deaths to dredging in harbour (Australia) .....	3
Seagrass conservation in Indonesia protects fisheries (Wales, UK) .....	3
Marine turtle and dugong monitoring on Wunambal Gaambera country (NT, Australia) .....	3
DA bans trade of brown algae and sea grass in the wild (Philippines) .....	4
More disputes likely over environment decisions (Australia) .....	4
Huge gas project proposed for Abbot Point following coal terminal approval (Australia) .....	4
GALLERY .....	5
Wet Tropics , Qld (Australia): 26 - 29 April 2014 .....	5
Napranum, Cape York, Qld (Australia): 03 April 2014 .....	5
CONFERENCES .....	5
The 11th International Seagrass Biology Workshop (ISBW11) (China, 7-10 November 2014) .....	5
SEAGRASS-WATCH on YouTube .....	5
...seagrass matters blog .....	5
World Seagrass Association blog <a href="http://wsa.seagrassonline.org/blog/">http://wsa.seagrassonline.org/blog/</a> .....	5
FROM HQ .....	5
Past E-bulletins .....	5
Frequently Asked Questions .....	5
Seagrass-Watch Magazine .....	5
Seagrass-Watch Shop .....	6
Virtual Herbarium .....	6
Giveaways .....	6
Future sampling dates .....	6
Handy Seagrass Links .....	6

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

## NEWS

### **Abundance of Chesapeake Bay's underwater grasses increases (VA, USA)**

22 April 2014, William and Mary News

An annual survey led by researchers at William & Mary's Virginia Institute of Marine Science shows that the abundance of underwater grasses in Chesapeake Bay increased 24 percent between 2012 and 2013, reversing the downward trend of the previous three years. The increase reflects an upsurge from 48,195 acres to 59,927 acres.

VIMS researchers estimate the annual acreage of underwater Bay grasses through aerial surveys flown from late spring to early fall. This year, the VIMS team for the first time categorized abundance using four different salinity zones, which are home to underwater grass communities that respond differently to storms, drought, and other adverse growing conditions. Reporting grass abundance by salinity zone makes it easier for scientists to connect changes in grass communities with changes in growing conditions through time. Scientists attribute this year's boost in bay-grass abundance to the rapid expansion of widgeongrass in the saltier waters of the mid-Bay, from the Pocomoke Sound to the Honga River south of Cambridge, Maryland.

Lee Karrh, program chief for Living Resource Assessment at Maryland's Department of Natural Resources and chair of the Chesapeake Bay Program's SAV Workgroup, says "Since 1984, Chesapeake Bay Program partners have reported abundance of underwater grasses by geographic zone. These artificial boundaries worked for some time, but the switch to mapping grasses by salinity zones makes more ecological sense. Reworking our historic data was hard work, but doing so makes it easier to understand patterns in grass growth."

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

### **UF/IFAS research findings shed light on seagrass needs (USA)**

*17 April 2014, University of Florida*

Seagrass beds represent critical and threatened coastal habitats around the world, and a new University of Florida study shows how much sunlight seagrass needs to stay healthy. Scientists often use seagrass to judge coastal ecosystems' vitality, said Chuck Jacoby, a courtesy associate professor in the Department of Soil and Water Science and co-author of a new UF study that examines light and seagrass health.

When nutrient levels are too high, microorganisms in the water, called phytoplankton, use these nutrients and light to grow and reproduce until they become so abundant that they block sunlight seagrass needs to survive, said Zanethia Choice, a former UF graduate student who led the investigation. Choice studied seagrass beds in a 700,000-acre swath off the coast of Florida's Big Bend. [She] combined 13 years of light and water quality data and two years of seagrass samples from habitats near the mouths of eight rivers that empty into the Gulf of Mexico. Choice wanted to see how much light was needed to keep the seagrass in this region healthy. She found different seagrass species needed varying amounts of light, ranging from 8 to 27 percent of the sunlight at the water's surface.

The UF/IFAS study will give water resource managers, such as the state Department of Environmental Protection, water-clarity targets they can use to set proper nutrient levels for water bodies, Jacoby said. Reducing nutrient levels can promote the health of seagrass and coastal waters. UF researchers are trying to make sure nutrients do not pollute the seagrass beds off the coast of the Big Bend, and they hope their results will guide managers as they strive to prevent any damage.

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

### **Declining catch rates in Caribbean green turtle fishery may be result of overfishing (Nicaragua)**

*16 April 2014, Science Codex*

20-year assessment of Nicaragua's legal, artisanal green sea turtle fishery has uncovered a stark reality: greatly reduced overall catch rates of turtles in what may have become an unsustainable take, according to conservation scientists from the Wildlife Conservation Society and University of Florida. During the research period, conservation scientists estimated that more than 170,000 green turtles were killed between 1991 and 2011, with catch rates peaking in 1997 and 2002 and declining steeply after 2008, likely resulting from over-fishing. The trend in catch rates, the authors of the assessment results maintain, indicates the need for take limits on this legal fishery.

Caribbean coastal waters of Nicaragua contain extensive areas of seagrass, principal food source for green turtles, the only herbivorous sea turtle species. Green turtles in turn support a number of indigenous Miskitu and Afro-descendent communities that rely on the marine reptiles for income (by selling the meat) and as a source of protein.

The catch data used by the researchers to estimate trends was gathered by community members at 14 different sites located in two geographically political regions of the Nicaraguan coast. The research team analyzed the long-term data set to examine catch rates for the entire fishery, each region, and for individual turtle fishing communities using temporal trend models. In individual communities, catch rate declines ranged between 21 percent and 90 percent in green turtles caught over the 20-year period. The steep declines in green turtle catch rates, the researchers maintain, indicate a potential decline of green turtle populations that use Nicaragua's foraging grounds, particularly smaller rookeries in the Caribbean. The scientists note that the study results highlight the need for not only close monitoring of rookeries in the region, but also in-water aggregations of green turtles. Further, future research efforts should include the use of molecular technology to better refine Caribbean green turtle genetic stocks, specifically to identify populations most at risk from turtle fisheries.

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

### **Dugong carcass found off resort (Malaysia)**

*14 April 2014, The Star Online*

The recent discovery of a decomposing carcass has raised questions about the fate of a rare marine mammal believed to be found only at an island off Sabah's northern Kota Belud district. The body of an adult 1.5m-long dugong was found by staff and guests of a resort at Pulau Mantanani at about 3pm last Friday.

Bembaran Beach Resort owner Zamzani Pandikar Amin said the dugong could be one of the 12 to 15 mammals that were found grazing on seagrass at the shallow reefs around the island. "Sighting these animals is becoming rare

compared to 10 years ago. This is a big loss of these unique creatures," he said, adding that, as far as he knew, Mantanani was the only known grazing ground for dugongs in Malaysia.

Zamzani said as there were no obvious external injuries on the carcass, it could have died from internal wounds. He said among the possible causes was fish bombing which was still prevalent around the island.

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

### **Research links turtle deaths to dredging in harbour (Australia)**

*07 March 2014, The Reporter*

A major dredging project in Gladstone harbour may have been linked to a spate of turtle deaths in the area, new research by James Cook University has claimed. The research looked at links between turtle health and marine water quality across the Great Barrier Reef, and contradicts previous State Government reports that largely blamed a flood for the problems.

Led by JCU water quality expert Dr Jon Brodie, the report said a dredging project underway in the harbour in 2011-12 may have exacerbated turtle health problems. The report found that turtle strandings and deaths across the reef in recent years were suspected to be the result of a "herpes virus" in association with a secondary factor, "the isolation of which remains elusive". While the 2010 flood was a possible link in the Gladstone harbour strandings and deaths, having reduced seagrass cover, it was also "likely that the elevated metals found in stranded turtles resulted from metals mobilised through dredging".

Dr Brodie's research cited a previous study into metals in the blood of 56 turtles that were stranded or died at the time, finding it was likely "that the large scale dredging in Gladstone Harbour may be associated with these elevated metals". While the Gladstone Ports Corporation, which undertook the dredging, has consistently claimed the turtle strandings and deaths were not associated with the dredging, the JCU study joins a growing number of counter-claims.

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

### **Seagrass conservation in Indonesia protects fisheries (Wales, UK)**

*03 April 2014, World Fishing*

Research by Swansea University and partners shows that protecting seagrass meadows throughout Indonesia is critical for national food security and important fisheries exports. The research by scientists at the Seagrass Ecosystems Research Group at Swansea and Cardiff Universities, and in collaboration with an Indonesian NGO (FORKANI) and the Wildlife Conservation Society, has examined how seagrass meadows that are a globally threatened ecosystem are important for marine fisheries throughout Indonesia.

The recent surveys conducted in the Wakatobi National Park in SE Sulawesi build on previous case studies by the authors in Indonesia and throughout the Indo-Pacific that clearly show how seagrass is both locally threatened as well as being a source of hugely important local food. The recent studies that included in water fish surveys, fisheries landing surveys and household interviews found that at least 407 species of fish are present in Indonesian seagrass meadows and that in the Wakatobi 68% of fishing activity is in seagrass. Fisheries surveys also revealed that 62% of fish caught use seagrass meadows. Of significance was the favoured status of seagrass fish species such as the White-spotted spinefoot (*Siganus canaliculatus*) known locally as 'Kola'. 60% of people favoured fish species that use seagrass meadows as habitat.

Explaining the significance of the research, Dr Richard Unsworth said: "This case study in the Wakatobi highlights the role of seagrasses in supplying every day food needs to local people. Unfortunately these important seagrass meadows in the Wakatobi and throughout Indonesia are being degraded at an alarming rate from a range of diverse factors including poor water quality, coastal development and destructive fishing practices. Seagrass meadows need to be placed high on the Indonesian conservation agenda, not just to protect biodiversity but to protect national food security and economically important fisheries exports".

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

### **Marine turtle and dugong monitoring on Wunambal Gaambera country (NT, Australia)**

*30 April 2014, nailsma.org.au*

The Wunambal Gaambera Aboriginal Corporation's Uunguu Rangers explain how they are working together with NAILSMA and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to improve marine turtle and dugong monitoring on their country.

*source: <http://nailsma.org.au/hub/resources/video/marine-turtle-and-dugong-monitoring-wunambal-gaambera-country>*

## **DA bans trade of brown algae and sea grass in the wild (Philippines)**

25 April 2014, *Philippine Star*

The Department of Agriculture (DA) has prohibited the trade of brown algae and seagrass in the wild to preserve marine ecosystems. Through Fisheries Administrative Order 250, Agriculture Secretary Proceso Alcala has banned the collection, gathering, sale and export of brown algae and seagrass to prevent loss of shelter and food base of marine organisms dependent on algae and seagrass beds for survival. He said the high commercial value and global market demand for algae seaweeds has resulted to uncontrolled harvesting in the wild.

"The mangroves, coral reefs, seagrass beds, and seaweed forests being parts of the marine ecosystems are important natural resources of the state, inter-dependent with each other, serve significant ecological functions where a balance in the over-all condition each must be maintained to ensure the survival of diverse fish and aquatic species," Alcala said. Alcala noted that natural re-colonization and recovery of damaged seagrass and algae areas would take decades.

Fisheries director Asis Perez said violators of the ban are punishable with a maximum imprisonment of two to 10 years and a fine of P100,000 to P500,000. The Bureau of Fisheries and Aquatic Resources (BFAR), however, may still issue a special permit to collect, harvest and export seaweed and seagrass for scientific and educational purposes.

[full story: http://www.philstar.com/business/2014/04/25/1315756/da-bans-trade-brown-algae-and-sea-grass-wild](http://www.philstar.com/business/2014/04/25/1315756/da-bans-trade-brown-algae-and-sea-grass-wild)

## **More disputes likely over environment decisions (Australia)**

22 April 2014, *The Canberra Times*

The federal government is braced for a flood of court cases challenging decisions made under its environmental laws. Internal Environment Department documents highlight a "marked increase" in cases brought against it since 2011-12 and warn of worse to come. The department says litigation against high-profile environmental decisions made under the controversial Environmental Protection and Biodiversity Conservation (EPBC) Act, is one of the biggest risks facing the department.

The department is currently fighting 16 cases in the courts but received 52 requests for reasons, relating to just 17 decisions, between November 2013 and the beginning of April. It could even find itself in multiple court actions for the same decision, against a mining company unhappy with restrictions placed on its new project and at the same time being sued by environmental activists saying the conditions are not strict enough.

Environment's internal strategic review is frank in its assessment of the amount of time, and taxpayers' money, it expects to spend in court in the coming months and years. "The key litigation risk areas for the department relate to challenges by community and interest groups to high-profile environmental decisions made under the Environmental Protection and Biodiversity Conservation Act," the document states. In one such high-profile case, the department is being taken to the Federal Court by a Queensland conservation group trying to use the EPBC to overturn Environment Minister Greg Hunt's approval of dredging and dumping in the Great Barrier Reef World Heritage Area for the contentious Abbot Point coal port.

But the Environment Department's top public servants in Canberra believe the Abbott government's environmental policies will fundamentally change their role in approvals processes and potentially limit their exposure to legal action. The government is looking to sign deals with the states that would establish a "one-stop shop" for environmental approvals, sidelining the EPBC Act, which has been on the books since the Howard government.

[full story: http://www.canberratimes.com.au/national/more-disputes-over-environment-decisions-likely-20140421-370mp.html](http://www.canberratimes.com.au/national/more-disputes-over-environment-decisions-likely-20140421-370mp.html)

## **Huge gas project proposed for Abbot Point following coal terminal approval (Australia)**

10 April 2014, *Sydney Morning Herald*

A huge liquefied natural gas export terminal is being planned for Abbot Point on the Queensland coast, coming just months after the Great Barrier Reef Marine Park Authority approved plans to dump 3 million tonnes of dredge spoil in the sensitive region as part of coal export expansion. Hong Kong-based Energy World Corporation has submitted plans to pipe gas 1000 kilometres from the Cooper Basin to Abbot Point, and then export as much as 2 million tonnes of LNG per year to Asia, according to documents posted on the federal environment ministry's website.

The so-called CAPLNG facility would require dredging of at least 500,000 cubic metres of material to be disposed of on land. The Australian Marine Conservation Society estimates the dredging would amount to about 800,000 tonnes.

The Energy World proposal is currently listed as a "Referral detail" under the commonwealth's Environment Protection and Biodiversity Conservation Act. A referral is needed if a project is likely to have a significant impact including on the Great Barrier Reef Marine Park, or World Heritage Properties – both of which apply for CAPLNG.



The government is currently examining the proposals to determine whether it needs to be assessed under national environment law, a spokesman for Environment Minister Greg Hunt said.

full story: <http://www.smh.com.au/environment/conservation/huge-gas-project-proposed-for-abbot-point-following-coal-terminal-approval-20140410-36erg.html#ixzz2yXwunnvd>

## GALLERY

**Wet Tropics , Qld (Australia): 26 - 29 April 2014** <http://www.seagrasswatch.org/gallery.html>

Green Island: 26 April 2014

Dunk Island: 27 April 2014

Lugger Bay: 28 April 2014

Yule Point: 29 April 2014

**Napranum, Cape York, Qld (Australia): 03 April 2014** <http://www.seagrasswatch.org/gallery.html>

## CONFERENCES

**The 11th International Seagrass Biology Workshop (ISBW11) (China, 7-10 November 2014)**

Declining seagrasses in a changing world.

The International Seagrass Biology Workshop (ISBW) gives a good chance for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest achievements. The ISBW11 will be held from 7-10 November 2014 at Sanya city, Hainan Province, China, organized by South China Sea Institute of Oceanology, Chinese Academy of Sciences. ISBW11 convenor is Dr Xiaoping Haung.

The following symposia themes were chosen for ISBW11:

- 1) Key Ecological Processes;
- 2) Ecosystem Vulnerability and Resilience;
- 3) Biodiversity and Ecosystem Services;
- 4) Management and Restoration.

Important dates:

22 March 2014 - Registration open

30 May 2014 - Opening of online payment

30 May 2014 - Beginning of hotel reservation

10 August 2014 - The last day of abstract submission

01 September 2014 - End of early bird payment

25 September 2014 - Notification of abstract acceptance

15 October 2014 - End of online payment

25 October 2014 - Notification of final list of participants to the ISBW11

07 November 2014 - ISBW11 begins

for more information, visit <http://isbw11.csp.escience.cn/dct/page/1>

## SEAGRASS-WATCH on YouTube

**Seagrass: Pastures of the sea** <http://www.youtube.com/watch?v=66Y5vgsWj20> or

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

Presentation on what seagrasses are and why they are important (over 32,996 views to date)

## ...seagrass matters blog

**World Seagrass Association blog** <http://wsa.seagrassonline.org/blog/>

Keep up to date on what's happening around the world from the WSA with regular updates from WSA President Dr Giuseppe Di Carlo and *notes from the field* by Siti Yaakub.

## FROM HQ

**Past E-bulletins** <http://www.seagrasswatch.org/publications.html#ebulletin>

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

**Seagrass-Watch Magazine** <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.