#### **29 February 2016**

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# **NEWS**

#### Florida Bay Relapse Threatens Ecosystem (FL, USA)

20 February 2016, NPR

From 1989 to 1994, the estuary between mainland South Florida and the Keys was in collapse. Seagrass died and algae bloomed. Now it's happening again. Florida Bay is a shallow estuary nestled between the South Florida mainland and the Keys. It's been a favorite fishing ground for people like baseball great Ted Williams and President George H. W. Bush. In the early 1990s, the bay's ecosystem collapsed. Since then a massive Everglades restoration program has started replumbing the system, sending fresh water into Florida Bay. Now there are troubling signs that it is not working.

For people who live and work on Florida Bay, the seagrass die-off that started last summer is like some kind of nightmare deja vu. Jim Fourqurean began to map seagrass in the bay in 1982. He was an undergraduate student at www.seagrasswatch.org 1

the University of Virginia. Now he's director of marine research in the Keys for Florida International University. He was there when local fishermen raised the alarm about a seagrass die-off in 1987. South Florida was going through a drought. And Florida Bay no longer gets the freshwater it used to from the mainland Everglades because of development. The bay went super saline, one and a half times as salty as seawater. The drought finally broke in 1991

# Dead dugong washed ashore in Kota Tinggi (Malaysia)

20 February 2016, Astro Awani

A dead dugong was found washed ashore at Pantai Tanjung Logok, near Kota Tinggi on Friday. Johor Fisheries Department director, Munir Mohd Nawi said the animal was found by members of the public at about 10am before they alerted the department.

Munir said dugongs were usually injured and killed after being hit by boat engine blade but the department would wait for a post-mortem to identify the actual cause of dugong's death. He said judging from the external conditions, the dugong was believed dead for more than 24 hours. He said the department had so far been unable to determine where the dugong came from and did not rule out the possibility it was dead much earlier before drifting onto the beach.

#### Report: Excessive summer rain damaged health of Tampa Bay (USA)

17 February 2016, TBO.com

A report released by the Tampa Bay Estuary Program that rates the quality of water in Tampa Bay last year shows a decrease in clarity due to algae blooms mainly caused by the heavy rains that fell on the region in July, August and September. The areas where water quality declined and algae blooms spiked were near storm-water and sewage-treatment plants that overflowed during the rain that dumped, in some areas, more than 20 inches over a two-week period. Treatment plants that were over capacity were forced to release untreated water into the bay and the nutrients contained in that discharge caused algae to bloom. It's the first time in three years that water quality goals were missed, estuary program officials say. What remains unknown is the fate of the bay's seagrass beds which, prior to the rainfall last summer, had continued to grow beyond expectations providing an ecosystem that remains vibrant throughout most of the bay.

Aerial surveys and photographs were recently completed, but the report on seagrass bed health for 2015 won't be completed for another year, estuary program spokeswoman Nanette Holland O'Hara said. Scientists at the end of the summer predicted vast swaths of seagrass beds, which had been growing steadily since the 1980s, would die off because of all the nutrient rich rain water draining into the bay. In the winter of 1997-98, parts of Tampa received about 10 inches of rain in two days, and the resulting algae bloom killed off about 1,200 acres of seagrass in the bay. The next water management district survey of seagrass beds in Tampa Bay is scheduled to be released in the spring of 2017.

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

# Albino turtle discovered on Sunshine Coast beach 'gold' for tourism (QLD, Australia)

10 February 2016, Brisbane Times (Australia)

Say hello to Alby, the "extremely rare" albino turtle stealing the hearts of reptile lovers all over the world. Since the green turtle's Sunday afternoon discovery on Queensland's Sunshine Coast, the small coast care group that found it has been inundated with calls from the US, Britain and even Sweden. The discovery was "worth gold" for Queensland and Australia, according to the state's tourism boss, after the adorable reptile's pictures were beamed around the world.

Interest snowballed quickly after Sherida Holford found the little hatchling on a regular turtle monitoring trip on Sunday. Green turtles themselves were relatively rare at Castaways Beach, where loggerheads were more common, with an albino never seen before. The Queensland government's Threatened Species Unit chief scientist, Dr Col Limpus, said he was yet to see a record of an albino nesting anywhere in the world.

Alby, who was keen to make it to the ocean as quickly as possible, only spent about 10 minutes on the sand as volunteers took photos and some measurements, before rushing off to the water. Unfortunately things don't look good for the white reptile. Survival rates for green turtles are already low, about one in 1000, and the cute chelonian could have even more of a disadvantage thanks in part to its lack of camouflage. It's impossible to tell the gender of a sea turtle hatchling, which is determined by the temperature of the sand iin which it's born. Ms Holford said the Noosa Beach produced mostly male turtles and she expected Alby would have followed suit. Queensland Tourism Industry Council chief executive Daniel Gschwind said the story would keep the Sunshine Coast in the minds of overseas tourists.

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

#### Superintendent reflects on first year at park (FL, USA)

10 February, KeysNews.com

A significant seagrass die-off that wreaked havoc on parts of the Florida Bay, completion of a general management plan and a visit from President Obama were just a few of the matters that Pedro Ramos dealt with during his first year as superintendent of Everglades National Park.

Ramos said, by far, his absolute low for 2015 was the seagrass die-off that tortured the dilapidated bay last summer. Due in part to drought-like conditions throughout the area, the die-off decimated about 5,000 acres of bay bottom, or 7.8 square miles, according to Florida Fish and Wildlife Conservation Commission officials. The dry conditions this summer coupled with a lack of fresh water being sent down through the Everglades by the South Florida Water Management District were among the factors that triggered the die-off in the northern region of the Florida Bay, according to experts.

He said two of his high points over the previous year were the implementation of the park's general management plan and a visit by Obama in April for Earth Day. The former, roughly 12 years in the making, lays out a plan that, among other things, called for about 26 percent, or 102,838 acres, of Florida Bay to be designated as pole-troll only zones. It designated another 6 percent, or 25,588 acres, as pole-troll-idle zones. Boaters are not able to use their primary gas-powered engines in these areas. These new rules, park officials and environmentalists hope, will protect the seagrass beds that they said have endured years of propeller scaring as well as give a boost to the declining bonefish population there.

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

#### Sensors track Lake O discharges in real time (FL, USA)

10 February 2016, TCPalm

For the first time, Lake Okeechobee discharges into the St. Lucie River and Indian River Lagoon are being documented in real-time by a network of remote-controlled water quality monitors. Two types of monitors from two Fort Pierce-based research groups are reading and recording measurements, including water flow, salinity, cloudiness and contaminants entering the estuaries from Lake O as well as several canals and streams.

Florida Atlantic University's Harbor Branch Oceanographic Institute in Fort Pierce has four Land/Ocean Biogeochemical Observatory, or LOBO, sensors in the river and one in the lagoon. Among its 24 Kilroy sensors spread throughout the Indian River Lagoon, the Ocean Research & Conservation Association has four in the river and three in canals draining into it. The monitors already are providing so much information, said ORCA founder and CEO Edith "Edie" Widder,

If the current discharges continue into the warm weather of summer, scientists will be able to gauge what conditions are needed and how long it takes for algae blooms to appear in the estuary. With sensors spread throughout the river, Widder said, "we'll be able to follow the plume of water as it enters the estuary and as it moves toward the St. Lucie Inlet. The monitors will tell us what's in the water and what it's doing to the environment." About 91 percent of the water that flows into the river goes out the inlet. The other 9 percent heads north in the lagoon toward Jensen Beach. A LOBO is positioned between the Stuart and Jensen Beach causeways to monitor the water as it moves north. As a sea grass expert, Hanisak is watching that sensor closely.

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

# Adelaide coast and sea quality degraded by stormwater after heavy rain, MP Paul Caica warns (SA, Australia)

10 February 2016, ABC Online

Stormwater discharge and other pollution is seriously degrading Saint Vincent Gulf off the Adelaide coast, former South Australian environment and water minister Paul Caica says. The western suburbs Labor MP said recent heavy rain had seen big volumes of stormwater pour into the gulf along the metropolitan coastline and turn the sea dark brown.

Mr Caica recalled better times at suburban Henley Beach in his coastal electorate of Colton. "I remember as a young person that I would get to the end of the Henley jetty, jump off with my goggles, snorkel and flippers, head north towards the Grange jetty, come in to the shore a little bit and there would be beautiful seagrass beds," he said. "Today you've got to go about two kilometres out from the shoreline to see any seagrasses at all." He blamed human impact for the dieback of seagrass.

Mr Caica acknowledged recent environmental efforts to reduce the volume of stormwater reaching the gulf, through more water treatment and recycling efforts. He said he realised too that Adelaide needed pipes which could quickly flush stormwater away from residential areas to reduce any risk of flooding. SA Environment and Water Minister Ian Hunter said some pollution after heavy rain remained inevitable. "The State Government has invested significantly in improving stormwater infrastructure, contributing \$4 million per year, indexed, for stormwater projects. The Minister said that had resulted in an almost 75 per cent reduction in nitrogen discharged into metropolitan coastal waters. "Our work has helped halt seagrass loss in some areas of the gulf and is enabling recovery in others," Mr Hunter said.

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#### A&M-Galveston professor on a journey to save dugongs (TX, USA)

10 February 2016, Bryan-College Station Eagle

A researcher at Texas A&M University at Galveston is making waves overseas in his quest for the preservation of the endangered marine species of the dugong. Christopher Marshall, an assistant professor in marine biology and wildlife and fisheries science at Texas A&M-Galveston, has spent more than two years in the Middle Eastern nation of Qatar developing procedures to further understand and potentially save the endangered mammals from extinction.

Qatar is home to the second-largest dugong population in the world, following Australia, with more than 6,000 recorded in the area. In July 2014, ExxonMobil Research Qatar joined forces with Qatar University and Texas A&M-Galveston to provide funding and technical assistance for research in the Arabian Gulf. Projects, including a marine stranding network, have been set up to monitor the status of dugongs. According to Marshall, the researchers within the network respond to reports of marine animals washing ashore. They are able to collect data from the stranded animal to determine the cause of death, and depending on its condition, gather particular body parts for research.

# Indian River Lagoon: Restored oyster beds prompting sea grass regrowth (FL, USA) 05 February 2016, TCPalm

When Jim Oppenborn started placing mesh bags of oyster shells along the Indian River Lagoon shoreline at downtown Fort Pierce a year ago, a surprising thing happened. Seagrasses quickly grew up around the miniature artificial reefs. Far from a problem, though, the appearance of the seagrasses was a rare but not unheard-of extra benefit of Oppenborn's effort to propagate oyster beds in the intertidal lagoon waters.

No one knows exactly why seagrasses may spring up around man-made oyster beds, according to Oppenborn and Vincent Encomio, Florida Oceanographic Society's scientific research director. The best guess to explain the welcome side effect, both scientists said, is that the piles of shells donated by seafood restaurants create virtual baffle boxes. Although only 6 inches to a foot tall, they can block waves and currents and allow sediments bearing the makings of sea grass to drop out and take root in the lagoon floor. Oppenborn also said Fort Pierce's newly built breakwater islands may have been a factor too.

Oppenborn had placed more than 3,800 square feet of oyster beds when the seagrasses and a foot injury halted his progress. With the help of volunteers, he hopes to resume the project soon with another 3,000-plus square feet about 7 feet further out in the lagoon than originally planned. Encomio said his project will start again in the spring as oyster reproduction ramps up.

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

#### Brown tide befouls Indian River Lagoon (FL, USA)

05 February 2016, Florida Today

Brown tide appears to be growing worse in Brevard County. The Indian River and Banana River lagoons recently tested at some of the highest concentrations of brown tide algae ever recorded, levels potentially lethal to juvenile shellfish and other marine life.

The brown tide algae (*Aureoumbra lagunensis*) makes up almost all of the phytoplankton in the water, recent tests show. That puts at risk some 180,000 live oysters that thousands of volunteers have helped to grow and place onto www.seagrasswatch.org 4

three pilot reefs in the lagoon, as well as countless other lagoon life. And if the lagoon remains in bloom into the spring, the tiny algae could cloud sunlight from reaching seagrass, sunlight that the seagrass needs to photosynthesize during the vital bottom plant's peak growing season.

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

#### Rescued dugong released into wild (NSW, Australia)

04 February 2016, Gold Coast Bulletin

Rescued dugong Merimbula has been given the happy ending he deserves, being released back into the wild. Following an intensive three-month long rescue and rehabilitation operation he was given a new home in Moreton Bay.

Affectionately known as Merimbula, the 340 kilogram male dugong was rescued from Merimbula Lake and relocated — via a RAAF Hercules — to Sea World on the Gold Coast in January. For the past two weeks, Merimbula has been residing in Sea World's back-of-house specialist quarantine area, where he has undergone a series of thorough health checks including testing for infectious diseases and receiving doses of antibiotics to improve his deteriorating skin condition.

It had also been under the 24/7 care of dugong experts from SEA LIFE Sydney Aquarium and veterinary specialists from Sea World. SEA LIFE Sydney Aquarium dugong expert and Marine Mammal Supervisor, Andrew Barnes, said rescue and relocation operations like these were a testament to the positive work the team does within the marine conservation space.

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Related articles:

Merimbula's 'Doug the dugong' released back into wild (The Canberra Times)
http://www.canberratimes.com.au/act-news/merimbulas-doug-the-dugong-released-back-into-wild-20160204-gmlzj8.html
Rescued NSW dugong released back into wild (NEWS.com.au)

http://www.news.com.au/national/breaking-news/rescued-nsw-dugong-released-back-into-wild/newsstory/a45d4dd5ddf61051f99ed39d96b77497

#### Seagrass doubles it chances in last-ditch reproductive strategy (WA, Australia)

04 February 2016, Science Network Western Australia

Although seagrasses are the very foundation of the entire Shark Bay marine ecosystem, the species of seagrass called *Posidonia australis* maintains a tenuous grip on life, growing in extreme conditions of temperature and salinity, at the edge of its distribution. Desperate to improve their chances of survival, this seagrass has employed both known methods of reproduction that have only been recorded in one other seagrass species in the world so far—across the globe in the Mediterranean. This attempt to increase their odds of survival was discovered by UWA School of Plant Biology and Oceans Institute senior research fellow Elizabeth Sinclair and her team while examining seagrass meadows at Useless Loop in Shark Bay.

Dr Sinclair's team determined the Shark Bay seagrass produced flowers and fruit, but they were surprised to discover the flowers did not contain seeds, and that small plants were growing in the place of some flowers. Genetic markers were able to show that the small plants were identical to the seagrass plants they were growing on. "This process is known as pseudovivipary—a situation whereby normal sexual flowers are replaced by a vegetative growth form," Dr Sinclair says.

Dr Sinclair theorises that the plant is attempting this reproduction technique in the hope the baby plants will float away and take root elsewhere. But she doubts this strategy will be successful as seagrass roots are, almost unbelievably, sensitive to salt water, and none of the small plants have been observed since they separated from the flowering stems.

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

# 'Data mysteriously not included': Gladstone Harbour report (QLD, Australia)

03 February 2016, Gladstone Observer

Scientists behind the first report on the state of Gladstone Harbour's health say the harbour is environmentally "satisfactory". The Healthy Harbour Report Card 2015, released this week, collected data from 13 different factors including water and sediment and habitat such as seagrass. The report concludes that while seagrass and coral are in poor shape, overall water quality is improving, levels of chemicals have decreased and coral is starting to recover in some areas.

Dr Ian Poiner, one of the lead researchers, said while there was room for improvement, the harbour was in reasonable shape for a busy, diverse industrial port. However that view is being challenged by Dr Matt Landos, a veterinary scientist who specialises in marine life. According to Dr Landos, who has studied the detailed version of the report, water quality data has been consistently averaged out, offering minimal insight into the impacts on sea www.seagrasswatch.org 5

creatures. The report attributes the poor coral health to major flooding in 2011 and 2013 when large volumes of fresh water were dumped into the harbour.

Dr Poiner said most importantly the report - a collaboration between government, community and scientific and commercial fishing organisations - provided a basis which can be used to track the harbour's future health by comparing successive years. Dr Poiner also rejected Dr Landos's criticism of the science included in the report but agreed that averaging water quality data was an issue. The detailed report, including the data used to create the report card, can be read at rc.ghhp.org.au.

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

## Call for input on Abbot Point, Hay Point ports legislation (QLD, Australia)

03 February 2016, Mackay Daily Mercury

Legislation set to underpin future growth at Abbot Point and Hay Point ports is open for public comment. The State Government's master planning for priority ports draft guidelines has opened for submissions after the Sustainable Ports Development Bill passed through State Parliament November 12 last year. A key feature of the bill was to mandate master plans for all priority ports, including Gladstone, Abbot Point, Townsville and Hay Point. The draft legislation is described as a framework to see port infrastructure, surrounding land use, supply chains and "social, economic and environmental relationships" optimised.

Although the government says health of the Great Barrier Reef is central to the legislation, the Mackay Conservation Group's Peter McCallum has started preparing a submission of concerns. He said the group was also concerned about the impact of coal dust on residents living close to the ports and by the impact port expansion would have on "highly sensitive" nearby ecosystems.

#### Environmental groups outraged over Adani approval (QLD, Australia)

02 February 2016, Brisbane Times

Environment advocates have been quick to express their disappointment following the news the state government has granted an environmental authority for the controversial Adani coal mine project in the Galilee Basin. While the environmental approval is still one less hurdle the India-based company has to overcome, it is still to secure funding for the \$16 billion project and receive a mining licence from the state. But the authority has drawn criticism from green groups, including the Environmental Defenders Office, with Queensland principal solicitor Sean Ryan announcing the group's "disappointment" with the decision.

Last year, the Queensland Land Court found Adani had exaggerated the benefits the project would bring, agreeing it was most likely to create just under 1500 net jobs a year, rather than the 10,000 it had been promoting and that Adani's modelling had "probably overstated the selling price of the coal and therefore the royalties generated by the project and the corporate tax payable". But it rejected testimony that the mine would not be financially viable.

Greenpeace Australia's Shani Tager said the government had "sold out" the Queensland environment. Australian Conservation Foundation CEO Kelly O'Shanassy said the foundation, which was challenging the federal government approval of the mine in court "could not understand the decision".

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

Related articles:

Adani mine clears environment hurdle (The Australian)

http://www.theaustralian.com.au/news/latest-news/adani-mine-clears-environment-hurdle/news-story/ba23bfad07ee2b2cdd07a629ffe95be2

Adani's mega coal mine clears Australia environmental hurdle (Yahoo7 News)

https://au.news.yahoo.com/world/a/30716964/adanis-mega-coal-mine-clears-australia-environmental-hurdle/ Adani secures final environmental permit for \$12.5bn Carmichael coal mine in Australia (Mining Technology)

http://www.mining-technology.com/news/news/dani-secures-final-environmental-permit-125bn-carmichael-coal-mine-australia-4799460

#### Red tide devastates sea front economy (UAE)

01 February 2016, Khaleej Times

The incidence of red tides points to declining marine ecological functionality in line with the shrinking of coral reefs and seagrass beds says the Abu Dhabi Global Environmental Data Initiative or AGEDI supported by the Environment Agency - Abu Dhabi (EAD) that released the findings of its Ecosystem Services Assessment as part of Phase II of its Blue Carbon Project.

The assessment explored how much stakeholders would be willing to accept as compensation for inability to access coastal waterways that provide amenity services such as tourism recreation or fishing for an extended period of time. The lack of access was presented as a result Harmful Algal Blooms or HABs - also known as red tides as a proxy though disruption of amenity service can result from a variety of other causes. The assessment also studied willingness to pay for the sites' preservation.

According to the report a first estimate of compensation required to offset the inability to access coastal waterways was found to be Dh3 billion per year. Such a finding can ultimately help inform a potential compensation framework for complex land-use decision-making in the rmirate.

Coastal ecosystems provide a myriad of essential ecosystem services; they support fisheries protect shorelines and are important for cultural heritage and identity and they also provide opportunities for recreation and tourism - a significant amenity. In the Abu Dhabi over the last four to five decades the abundance and quality of coastal ecosystems have generated high levels of amenity services such as visual aesthetics and helped market the emirate as a destination of choice. According to a study the impact on revenue among the studied beach-front Abu Dhabi hotels was estimated to be Dh517 million per year.

Full article: http://www.menafn.com/1094568011/UAE--Red-tide-devastates-sea-front-economy

# **CONFERENCES**

## The 13th International Coral Reef Symposium (ICRS) (Hawai'i, 19-24 June 2016)

Theme: Bridging Science to Policy.

The world's major coral reef science meeting, the International Coral Reef Symposium (ICRS), is held every four years. It is the primary international meeting focused on coral reef science and management. The Symposium will bring together an anticipated 2,500 coral reef scientists, policy makers and managers from 70 different nations in a forum to present the latest research findings, case histories and management activities, and to discuss the application of scientific knowledge to achieving coral reef sustainability. ICRS2016 will include a Taxon-specific session on seagrass: Session H, 26 - Integrating seagrass science and management in a coral reef framework

Key Dates

March 2016 - Session Schedule Posted and Presenters Notified of Session Assignments April 2016 - Full Scientific Program Schedule Posted 16 May 2016 - Registration Cancellation Deadline (Last Day to Receive a Refund) 19-24 June 2016 - Meeting

for more information, visit <a href="http://sgmeet.com/icrs2016/default.asp">http://sgmeet.com/icrs2016/default.asp</a>

## The 12th International Seagrass Biology Workshop (ISBW12) (Wales, 17-23 October 2016)

Theme: Declining seagrasses in a changing world.

The International Seagrass Biology Workshop (ISBW) is the only international meeting specifically tailored to seagrass scientists, professionals and students. The International Seagrass Biology Workshop (ISBW) provides a good opportunity for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest findings. The ISBW12 will be held from 17-23 October 2016 at Nant Gwytheyrn, Gwynedd, Wales, organized by Project Seagrass and the Seagrass Ecosystems Research Group. The conference email address is ISBW2016@projectseagrass.org.

We as scientists know the devastating effects that humanity is having on our worlds seagrass meadows. Although much work is needed to keep documenting, understanding and highlighting the problems facing seagrass we as a research community need to also provide a voice of optimism about how we can make changes to ensure survival of these precious ecosystems. We must go beyond science, and use it to inform policy and management, and ultimately to catalyze change. We know that there are many examples of this, from stakeholder led management and successful restoration to improvements in water quality and the management of boating activities. We encourage participants to contribute stories of seagrass conservation success in order to strengthen this theme. We also encourage submission of research stories that aim to provide evidence to make future successes.

#### Let's make ISBW12 a conference that celebrates seagrasses and has a spirit of #oceanoptimism

The workshop therefore has 4 key themes that will form the structure of the sessions held throughout the week. These are:

- Resilience and a changing environment
- Ecosystem services
- Restoration and management
- Raising the profile of seagrass meadows

for more information, visit http://isbw12.org/

# **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 40,416 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 Richard Unsworth and notes from the field by Dr Siti Yaakub.

#### **FROM HQ**

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