



# Seagrass-Watch E-Bulletin

**31 October 2015**

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## NEWS

### **Dead 'dugong' found near shoreline of Antique province (Philippines)**

31 October 2015, *Inquirer.net*

A fisherman found an eight-foot, 350-kilogram dugong near the coastline of Tibiao town, Antique province on Friday. Nery Absalon, a fisherman from Barangay Malabor, saw the floating dead mammal, and asked the help of the two fishermen Ian Estefano and Jcar Namion from the village to drag it to shore.

The fishermen and fish brokers in the village suspected that a "lantip" or a wide-bladed knife was used in slicing the belly and forelimb or flipper of the mammal. The mammal was sent to the police station in town for blotter report.

Chief Police Inspector Belinda Martinez of Tibiao believes that "it was intentionally done so that the fish would not float." "The big rock wrapped with a net which was used as a sinker is not commonly found in Tibiao. This means that the culprit of the dugong is from the other place and was only washed ashore," said Gil Bandoja, municipal mayor of Tibiao. Community Environment and Natural Resources Office (CENRO) Culasi examined the carcass and collected the sinker used to kill the mammal.

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

### **Seagrass: unsung ecological hero, potential economic powerhouse (WA, Australia)**

*26 October 2015, ABC Online*

Seagrass meadows provide carbon capture and storage at a rate up to a hundred times greater than rainforests. Paul Lavery is a professor of marine ecology at Edith Cowan University, and he is excited about seagrass, [because] seagrass meadows are phenomenally productive carbon sinks. 'They pack a huge punch in terms of the amount of carbon they can lock away,' says Lavery, who believes the carbon storage capacity of the soil beneath seagrasses to be, per square metre, between ten and one hundred times that of terrestrial systems. In fact, the amount of carbon dioxide stored in aquatic ecosystems is so great that biologists had to give it its own label: blue carbon.

Australia's coastline offers the largest and most diverse seagrass assemblage in the world. 'But we also have some of the best examples of destroying seagrass meadows in the world.' Mining and coastal development throw up sediment, blocking the light needed for seagrass to photosynthesise. Run-off in rainier seasons can result in 'nutrient-laden water', which sounds as though it would be healthy for aquatic plants but unfortunately isn't. Oh, and there's the pressures brought about by climate change and trawling. But, says Lavery, the biggest problem facing Australian seagrasses has to be dredging. As the Australian economy became more dependent on exports, port numbers increased and their size expanded. And that has necessarily involved a lot of sediment dredging.

And that's a problem for blue carbon, because seagrass meadows can only effectively sequester carbon when it's locked away permanently. When deep sediments are disturbed—by dredging or natural causes such as cyclones or flooding—the carbon stored within the sediment can be released. Concerns have been raised over the cost and efficiency of carbon capture and storage as a means of carbon emission abatement in Australia. According to Lavery, many of the problems with carbon capture and storage could be cheaply and efficiently solved by the use of seagrass meadows. Unfortunately for Lavery, he has seen a gradual shift away from the use of seagrass in global carbon trading schemes.

So, what does he see as the way forward: scientists need to be able to provide very reliable information on how much carbon is stored and where its stored; and economists to make it apparent to decision makers about how this carbon can be factored into trading systems. Lavery points to forestry systems that provide an economic incentive for conserving productive ecosystems—particularly through United Nations programmes such as REDD+, which provides financial incentives to countries shown to reduce their emissions from deforestation.

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

### **Geographe beaches in south-west WA seagrass-free thanks to groyne reconfiguration work (WA, Australia)**

*26 October 2015, ABC Local*

For the first spring in more than four years, Port Geographe beaches, in south-west Western Australia, are not covered with stinking piles of seagrass. The State Government spent \$28 million to reconfigure the groynes at Port Geographe, which had been causing tonnes of seagrass to collect on the beach each winter. The Department of Transport said no bypassing or dredging would be required this year but some sand would be trucked in to correct erosion at Wonnerup Beach. Coastal infrastructure general manager Steve Jenkins said the reconfiguration was showing promising signs of working so far.

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

### **Current management is not enough to halt pollution on the Great Barrier Reef (Australia)**

*16 October 2015, The Conversation AU*

When the most recent report card for the Great Barrier Reef was released last year, it painted a depressing picture of the reef's condition. The condition of the reef, measured by coral, seagrasses and water quality, remains poor. Reductions in nutrients and sediment from rivers flowing into the reef is well less than the targeted reductions. Particularly noticeable is the small reduction in dissolved inorganic nitrogen (17% compared with a target of 50%). The report card also showed that the uptake of best management practices by the sugarcane and grazing industries has little or no chance of reaching the target of 90% of farms by 2018.

Despite at least 15 years of concerted action by the Australian and Queensland governments, including a large investment (around A\$500 million), the ecological health of the reef is not improving and in fact may be continuing to deteriorate. The Great Barrier Reef had a terrible year in 2011, with extensive coastal flooding and Cyclone Yasi, followed by increased crown-of-thorns infestations. There has been some recovery from these events, but overall the ecological condition of the Great Barrier Reef is precarious. The Australian and Queensland governments have in response adopted the Reef Plan 2050. But this is not enough to arrest the decline.

We believe that there are four areas that can be improved to help the reef's prospects:

1. Focus on 'hot spots' - where large loads of contaminants are generated
2. Best management practises - Voluntary adoption needs to be combined with sensible regulation to enforce adoption where this is not occurring fast enough.
3. Reducing the level of farming
4. Governance - establish catchment management authorities for the reef catchments with the necessary legislative backing.

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

### **CSA completes seagrass mitigation project in Miami Harbour (FL, USA)**

*23 October 2015, Dredging News Online*

CSA Ocean Sciences (CSA) has completed transplantation of over 115,000 seagrass plants into a newly filled dredge hole north of the Julia Tuttle Causeway in Miami, Florida as part of the overall environmental mitigation requirements for the deepening and widening of Miami Harbour. The 'deep dredge' project took two years to complete and is the first federal navigation project in the southeast built to accommodate post-Panamax vessels.

During August and September 2015, CSA staff planted 14.3 acres of the 17-acre mitigation site using donor manatee grass (*Syringodium filiforme*) harvested from a nearby healthy seagrass community in Biscayne Bay. CSA utilized methods developed and published by Dr Mark Fonseca. Seagrass plants were carefully extracted from the sediments of an approved seagrass bed, sorted, and assembled into 29,000 individual bare root 'planting units' while ensuring they remained bathed in ambient seawater using a custom-made on-board circulating system. Divers meticulously planted each planting unit by hand to ensure the growing tips of the plant were buried to the appropriate depth below the sediment surface. To provide passive fertilization to the plants through the introduction of coastal bird feces, over 1,150 bird roosting stakes were installed within the planted areas of the mitigation site.

In early October, CSA conducted the first monitoring survey to assess the success of planting and verify that the planting units remained firmly anchored in the sediment. A comprehensive evaluation of the entire planted area and all planting units was conducted and, despite frequent feeding by manatees on the planted seagrass, the percent survival was documented at 97.6 per cent - much higher than the mandated 70 per cent survival rate. Dr Fonseca noted that "barring any unforeseen disturbances, this is on course to be one of the largest and most successful actively planted, commercial (seagrass mitigation) projects to date."

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

### **Scientists find some thrive in acid seas (QLD, Australia)**

*20 October 2015, Science Codex*

Researchers from James Cook University have found that ocean acidification may not be all bad news for one important sea-dwelling plant. A JCU team led by Dr Catherine Collier studied seagrass growing near underwater volcanic vents in PNG. The researchers found that the more acidic the water was, the more the plant grew.

Dr Collier said every one of the ten varieties of seagrass so far tested had done better in acidified water. But there were still questions over whether other aspects of climate change would adversely affect them. She said more investigation, incorporating other variables in the seagrass environment, needed to be done.

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

*Related article:*

[http://www.eurekalert.org/pub\\_releases/2015-10/jcu-sfs101915.php](http://www.eurekalert.org/pub_releases/2015-10/jcu-sfs101915.php)

<http://www.scienceworldreport.com/articles/31599/20151020/ocean-acidity-sea-grass-better-growth-acidic-water-according-new.htm>

### **Report finds Barrier Reef seagrass health remains poor but recovery continuing (QLD, Australia)**

*15 October 2015, ABC Local*

The latest report has found seagrass meadows remain in a poor state, since they were devastated by Cyclone Yasi in 2011, but could return to a good condition within two years if the weather remained favourable. The Burdekin recorded some of the best improvements in the health of seagrass.

James Cook University's Len McKenzie said this year's El Nino conditions could be a mixed blessing for seagrass. "Anything that reduces light will have a detrimental impact on seagrass," he said. "So if we have less run-off events,

less rain, that's possibly a good thing for seagrass. "Alternatively though, if you have a lot of winds, it can actually re-suspend sediments, particularly along our coastal areas, which could be detrimental." He said there were encouraging signs seagrass was continuing to recover.

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

### **Outrage after government re-approves Indian company Adani's Carmichael mine (QLD, Australia)**

*16 October 2015, SBS*

Australia's largest proposed coal mine has been given another green light, but conservationists are seething at what the government claims is "possibly the most exhaustive environmental assessment" in the country's history. The \$16.5 billion Carmichael coal mine, slated for Queensland's Galilee Basin, and its associated rail link were again approved by federal Environment Minister Greg Hunt on Thursday.

The plans, by Indian mining giant Adani, hit a speed bump in August when the Federal Court set aside Mr Hunt's previous approval because the government conceded it had made a technical error. Mr Hunt said he was imposing 36 of the strictest conditions in Australian environmental history. While the number of conditions is similar to the previous approval, Mr Hunt said extra elements had been added.

The Queensland government labelled it a significant milestone for a project that offered jobs, economic development benefits and potential royalty income. But the approval was lambasted as "grossly irresponsible" by the Australian Conservation Foundation. The mine could deplete 297 billion litres of groundwater and produce 128 million tonnes of carbon dioxide every year, said ACF president Geoff Cousins. The Australian Marine Conservation Society feared for the health of the Great Barrier Reef due to increased dredging and shipping.

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

### **Action plan for conservation of sea turtle, dugong ready (India)**

*15 October 2015, The Hindu*

Gulf of Mannar Marine National Park has drawn up an action plan for conservation of sea turtles and dugong in the Gulf of Mannar region and is all set to distribute 'Turtle excluder devices' (TED) to fishermen, Deepak S. Belgi, Wildlife Warden of the park, has said.

Elaborating on the action plan, he said that the conservation programme would be implemented under Tamil Nadu Biodiversity Conservation and Greening Project with demonstration of the efficacy of the TED, a specialised device that allowed sea turtles to escape when caught in fishing nets used for bottom trawling during November-December. Installation of the TED in fishing nets would result in two to three per cent catch loss, but would greatly help in maintaining ecological balance, he said. There were five species of sea turtles – Olive, Green, Loggerheads, Leatherhead and Hawksbill – in the Gulf of Mannar region, he noted.

As part of the dugong conservation project, the park had completed seagrass mapping work from Rameswaram to Adhirampattinam near Point Calimere in the Palk Bay. A boat survey was also done to assess dugong population from Rameswaram to Thondi, but no dugong could be sighted. "However, we found traces of dugong feeding on seagrass," he said. An aerial survey had also been completed and the action plan was being readied. The park proposed to educate the fishing population on the need to conserve dugong and provide them compensation for the rescue and rehabilitation of dugong, he added.

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

### **BN demands Penang gov't tell-all about reclamation plans (Malaysia)**

*14 October 2015, Free Malaysia Today*

Opposition lawmakers have demanded the Pakatan Harapan-led Penang government publicly unveil its plan to reclaim the environmentally sensitive Middle Bank in the Penang Channel. Opposition Leader Jahara Hamid said it was imperative they be transparent about the project as it was an urgent matter of public interest.

The 607ha Middle Bank is located between the ferry terminal at the island's northeast and the Penang Bridge, near the Sungai Pinang river mouth. The area, almost twice the size of Pulau Jerejak, houses the Peninsular's second largest seagrass bed after Johor's Sungai Pulai estuary. The seagrass, visible during low tide, resembles a huge verdant carpet and functions as a natural fertile breeding ground for marine life. Marine researchers have found that this seagrass bed is rich with marine species, including sea anemones, hermit crabs, cockles, clams, sea urchins, fan shells, sea cucumbers, turtles, dugong and octopuses. However, under the state government's transport master plan, the Middle Bank area has been earmarked for reclamation to pave the way for the development of a transportation hub.

The controversial plan has drawn flak from various quarters including environmentalists, civic organisations, BN representatives and even state backbenchers like Tanjung Bungah assemblyman Teh Yee Cheu. Critics have



claimed that the reclamation project, if carried out, would not only destroy the island's natural heritage but also cause irreparable damage to the environment and the delicate balance of the eco-system there. Jahara said BN was firm on its stand to oppose any reclamation on the Middle Bank. She said some 400 fishermen from six coastal areas would also lose their source of income if the Middle Bank seagrass was destroyed.

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

### **Tuas water plant: Monitor impact on surrounding seas, experts urge (Singapore)**

*12 October 2015, Channel News Asia*

Environmental experts have recommended a slew of monitoring measures to be taken for the construction and operation of the Tuas Water Reclamation Plant, which national water agency PUB said it will review and implement progressively as construction begins in 2017. The Tuas Water Reclamation Plant, which is part of the Deep Tunnel Sewerage System that will meet Singapore's long-term needs for water collection, treatment, reclamation and disposal, will serve the western part of Singapore. Construction of the discharge point for treated used water — called the outfall — will begin after 2021 at Tuas Basin. The plant will handle used water from around 2024.

In an Environmental Impact Assessment (EIA) report commissioned by PUB, experts at DHI Water and Environment said the discharge of treated used water is expected to have minor to moderate negative impact on surrounding corals and seagrass, and slight negative impact on mangroves. There will also be an increased risk of algal blooms, which are of minor negative impact to overall ecology and biodiversity. These are largely due to the levels of nitrates and phosphates in the discharged water. The good news: There will likely be no impact on marine animals such as dugongs and sea turtles.

The EIA report, currently available for public inspection, suggested the annual monitoring of seagrass beds once the plant begins operation, given the "ecological importance of seagrass meadows in the Southern Islands and presence of internationally protected species".

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

### **Early sign of algae bloom detected in Florida Bay (FL, USA)**

*11 October 2015, Miami Herald*

A slimy toxic algae bloom in Florida Bay that researchers thought was years in the future might be just around the corner. South Florida Water Management District scientist Fred Sklar told district board members last week that levels of chlorophyll are starting to rise in shallow water where miles of seagrass meadows died over the summer. The last time so much grass died in 1987, it took five years for algae blooms to erupt that would devastate the bay for two decades.

The crisis in Florida Bay also has escalated a prolonged fight over water in South Miami-Dade. Farmers have long complained that groundwater is being kept too high, drowning crops. Scientists and environmentalists argue that the bay, which desperately needs more water to flow in from the Everglades, is being sacrificed to save farms. The 1990s algae bloom started with the death of more than 15.5 square miles of seagrass after a prolonged drought. So far, scientists have recorded about 13 square miles of dead seagrass around Johnson Key and in Rankin Lake, a shallow bight tucked into a horseshoe-shaped mud bank now beginning to show signs of an algae bloom.

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

### **Baby dugong saved in Red Sea protectorate (Egypt)**

*06 October 2015, Ahram Online*

A rare dugong found stranded on the shores of the Red Sea at the Wadi El-Gamal protectorate was saved by environmental activists, reported Al-Ahram's Arabic website. Dr Ahmed Shawky, the expert of natural protectorates at Wadi El-Gamal, told Al-Ahram's Arabic website that the baby dugong was found on the shore near the office of Wadi El-Gamal protectorate early Tuesday.

Shawky added that the environmental activists returned the rare marine creature to the shallow water near the protectorate office and they kept an eye on its behaviour until it found its way to the open sea. Dugongs, which are rare sea mammals that live in the Red Sea, are a vulnerable species on the verge of extinction. Wadi El-Gamal protectorate is part of the national parks in the Red Sea governorate, south of Cairo.

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

### **Tauranga Harbour health stable (New Zealand)**

*01 October 2015, New Zealand Herald*

The environmental health of Te Awanui (Tauranga Harbour) and its catchment is stable and showing signs of improvement according to a report presented to Bay of Plenty Regional Council's Regional Direction and Delivery Committee yesterday. However the report noted that the harbour is still vulnerable to the effects of land use and run-

off, which require ongoing efforts by locals, landowners and council staff if long term harbour health is to be maintained and improved.

Regional Direction and Delivery Committee Chair, Councillor Paula Thompson said some interesting trends were starting to emerge from 10 years of water and other environmental monitoring data collection. The report also outlined work that's been completed by Regional Council staff over the last 12 months to care for land, water and wildlife in the Tauranga Harbour catchment. It highlighted catchment-wide improvements in phosphorous levels; the general good health of aquatic wildlife populations; and noted that sediment contamination levels were within safe limits. Seagrass beds in the southern harbour are showing signs of recovery, but land run-off has caused some shellfish and seagrass decline, especially in upper estuaries of the northern harbour.

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

### **Palau set to create one of world's biggest marine sanctuaries (Palau)**

*27 October 2015, ABC online*

Palau's president Tommy Remengesau is set to sign a law turning most of the country's waters into a marine sanctuary, which will be one of the biggest in the world. The sanctuary will be about the size of California — making it the world's sixth largest area in which commercial fishing and oil drilling will be banned.

More than a year after it was first announced, the marine park will be signed into law today after Palau's congress passed the bill. Seth Horsmeyer from The Pew Charitable Trusts, which provided technical support on the project, said the people of Palau support the sanctuary. The 500,000-square-kilometre reserve covers 80 per cent of Palau's territorial waters. Mr Horsmeyer said there would be tight rules surrounding the sanctuary.

*Full Story: <http://www.abc.net.au/news/2015-10-26/palau-set-to-create-one-of-worlds-biggest-marine-sanctuaries/6884846>*

### **Fitzroy Delta to stay natural in latest Qld port plans (QLD, Australia)**

*26 October 2015, Rockhampton Morning Bulletin*

The business-boosting Gladstone Ports master plan is busy boosting business in all the region's ports except Rockhampton's, but Port Alma and Fitzroy Delta have been offered an environmentally friendly incentive for being scrapped from the new plans. The release of an amended proposed boundary had 88,000 hectares of land under the Port of Gladstone, the majority of the Gladstone State Development Area, part of the Gladstone Regional Council area and marine components covered by the economic plan. But not Port Alma, the Fitzroy Delta, Keppel Bay or North Curtis Island.

A spokesperson for Minister of State Development and Minister of Natural Resources and Mines Dr Anthony Lynham said development in the greater Fitzroy Delta was prohibited under the Reef 2050 Long-Term Sustainability Plan. "Port Alma will continue as a vital port into Queensland and continue to operate fully with maintenance dredging," the spokesperson said. "However the Palaszczuk government's commitments under the Reef 2050 Long-Term Sustainability Plan states no expansion with capital dredging can be allowed. "The natural asset value of the Greater Fitzroy Delta is estimated to be between \$540 million and up to \$2.9 billion and it traps up to 3.5 million tonnes of sediment per annum and contributes significantly to clear visibility in the Great Barrier Reef."

*Full Story: <http://www.themorningbulletin.com.au/news/fitzroy-delta-to-stay-natural-great-barrier-reef-p/2818726/>*

### **Illegal Fishing Destroying Kep's Ocean Ecology (Cambodia)**

*24 October 2015, The Cambodia Daily*

A dozen diesel-powered boats crawl across Kep Bay, creating a rumble so low that it shakes the pier. They drag weighted, electrified nets across the inshore shallows, scooping up sea life indiscriminately and destroying vital breeding grounds in the process. And they trawl so close to shore that you can hear their radio exchanges. It's a familiar, almost nightly, scene. It causes nearly irreversible ecological destruction and creates tension between local fishing communities. And it is completely illegal, although authorities often turn a blind eye to it.

Under Article 49 of the Fisheries Law, trawling inshore areas (those less than 20 meters deep) is forbidden. Under Article 20, using electric fishing gear is strictly prohibited in all areas. Both crimes are punishable by jail time, and authorities found to be complicit or willfully ignorant also face prison terms and fines. But despite the regulations, fishing boats along Kep's coastal strip continue to trawl the ocean unobstructed, many with electrified nets.

The electrified trawling nets scrape across the seabed, uprooting seagrass and indiscriminately stunning fish, crustaceans and other sea life such as sea cucumbers and starfish. The U.N.'s Food and Agriculture Organization has labeled bottom trawling the "most destructive" fishing method in the world, likening it to clear-cutting forest.

*Full Story: <https://www.cambodiadaily.com/news/illegal-fishing-destroying-keps-ocean-ecology-98170/>*

## **Proposed Marriott boat slips draw fear (FL, USA)**

23 October 2015, by Tracey McManus, Tampa Bay Times

It is only an idea at this point. A business venture being thrown around. But talk of the Marriott Suites on Sand Key potentially building 40 boat slips on the Intracoastal Waterway has instilled fear and anger in many of its neighbors. The proposed spot for the boat slips is directly behind the hotel, adjacent to the Clearwater Community Sailing Center in the same water where children, wounded veterans and inexperienced boaters learn to sail.

Marriott general manager Michael Miraglia says there's really nothing to worry about. The hotel is still in the planning stage and will not submit an application to the city until they receive results of an environmental study determining how boat slips may impact the Intracoastal's seagrass.

Citing danger to sailing students, manatees and sea grass, the Environmental Advisory Board passed a motion on Wednesday expressing "strong opposition" to the building of the slips. *Full Story:* <http://www.tampabay.com/blogs/baybuzz/proposed-marriott-boat-slips-draw-fear/2250976>

## **Scientist offers hope amid global warming problems from seagrass loss (Australia)**

21 October 2015, Phys.Org

The tiny holes humans tear in the ocean floor on an almost daily basis have major consequences for global warming for generations, a leading Deakin University scientist has found. But Dr Peter Macreadie, an Australian Research Council Discovery Early Career Researcher Award Fellow investigating the field of blue carbon, argues that some simple solutions can be found under the guidance of science.

The research team has uncovered new evidence to show that disturbing seagrasses in coastal environments can release ancient carbon and reduce the capacity of seagrass ecosystems to offset carbon emissions into the future. The problem was exacerbated by the often lengthy time it took for seagrasses to regrow once disturbed. Dr Macreadie said seagrass disturbance occurred around Australia and the world on a daily basis due to coastal development. He said that on a positive note, the new research showed that seagrass areas that had recovered were once again capturing and storing carbon.

Dr Macreadie recommended better regulations to protect seagrasses, and, importantly, to make those who destroy seagrasses pay the realistic price of their damage.

*Full Story:* <http://phys.org/news/2015-10-scientist-global-problems-seagrass-loss.html#jCp>

*Related article:*

<http://www.ibitimes.com.au/disturbing-seagrass-reduces-their-capacity-store-carbon-australian-study-1476997>  
<https://www.newscientist.com/article/dn28373-seagrass-gardens-are-needed-to-cap-the-carbon-bomb-in-the-oceans/>  
<http://www.abc.net.au/news/2015-10-21/damaged-seagrass-meadows-release-ancient-carbon/6870268>

## **Far north Queensland canegrowers transform a drain into a reef water filter (QLD, Australia)**

21 October 2015, Queensland Country Life

Babinda growers Ray and Rosemary Vicarioli have transformed a deep, dangerous and eroded drain to ensure the water running from their cane paddocks is as clean and clear as possible before it flows into a natural creek and down towards the ocean. It's not glamorous work but it's the kind of project farmers are tackling to do their bit to safeguard the future of the Great Barrier Reef.

With an average annual rainfall of around 4,000mm a year, managing water is a big part of farming in the foothills of Mount Bartle Frere in far north Queensland. Supported by a grant from the Australian Government Reef Programme, the couple spent two weeks of solid work re-forming the 120m long drain. Together they laid 24 big pipes to take most of the water flowing down the gully. These were covered with sand before narrower seepage pipes were laid over the top to take water from the adjacent cane fields. Then the channel was filled with layers of gravel, sand and dirt – which all work to filter sediment from the water as it seeps through. The top has been planted with grass to prevent future erosion. A final, rocky silt trap catches any surface water that remains before the junction of the drain and Menzies Creek.

The project extends work Ray did with his father further up the hill some years ago and builds on revegetation the family has done along the creeks which flow through their farm – the tree planting is now a habitat for wildlife and birds. Paddock contouring designed to minimise water velocity and Ray's commitment to minimal tillage farming methods and cutting his cane green (with the leaves left on the paddock as a mulch blanket) also contribute to keeping soil and nutrients on the property.

*Full Story:* <http://www.queenslandcountrylife.com.au/story/3436738/babinda-growers-turn-drain-into-water-filter>

## **Dying seagrass and 'yellow fog' signal trouble for Florida Bay (FL, USA)**

02 October 2015, by Jenny Staletovich, Miami Herald

The seagrass in Florida Bay is dying, a sign that the ailing bay could be going from bad to catastrophic. Years of flood control on top of a prolonged drought wilted the bay over the summer, making already hot water twice as salty as it should be. When scientists hustled out to investigate last month, they found miles of dead seagrass: up to 6 square miles in Rankin Bight and 7 square miles in meadows around Johnson Key, a flat once famed for redfish and snook. A cloud of sulfur had spread in water just off the Flamingo Visitor Center, leaving behind a stinky stain scientists call "yellow fog." It may cover 25 square miles already.

But what really concerns them is this: the last time the bay looked so bad, a massive algae bloom followed. The bloom lasted for years, turning gin clear water a sickly pea green and unleashing a scourge in Everglades National Park that anglers and scientists still regard as a turning point for the bay. "It looks like this die-off will be every bit as extensive as the episode in the 1980s," said Paul Carlson, a marine ecologist with the state's Fish and Wildlife Research Institute in St. Petersburg, who investigated the earlier crash.

After the 1980s disaster, the state began monitoring 17 spots in the bay, trying to understand what set of conditions might trigger a die-off. They focused on turtle grass, which was hit hardest and grows more slowly, and shoal grass, which can grow faster in harsher conditions. Knowing which grass grows where can give them a good idea of what's going on in the water. In 1997, as grass began recovering, researchers found the amount of shoal grass had taken over western Rabbit Key basin after the turtle grass died. Overall, shoal grass more than doubled, an indication of harsher conditions. Over the summer, on the heels of a dry winter that spiked salinity in Taylor Slough, a biologist at Everglades National Park spotted what she suspected was the beginning of a die-off and contacted the researchers who had studied the 1980s event, Carlson said. When Hall's team got there, they found two of the five basins hit hardest in the 1980s dead or dying. A third showed signs of trouble. They think without rain, the hot water turned saltier and heavier, creating a kind of lid, trapping sulfur in mud and keeping oxygen out. Seagrass can normally tolerate low levels of sulfide, the sulfur that occurs naturally in the mud. But the higher levels caused it to die. Once dead, the decaying grass released even more nutrients and continued the cycle.

Full Story: <http://www.tampabay.com/news/environment/dying-seagrass-and-yellow-fog-signal-trouble-for-florida-bay/2248154>

Related article:

<http://floridawaterdaily.com/2015/10/05/dying-seagrass-and-yellow-fog-signal-trouble-for-florida-bay/>

<http://www.miamiherald.com/news/local/environment/article37583577.html>

<http://keysnews.com/node/70176>

## **CONFERENCES**

### **Coastal & Estuarine Research Federation 23rd Biennial Conference (CERF2015) (Portland, Oregon, USA, 8-12 November 2015)**

Theme: Grand Challenges in Estuarine and Coastal Science: Securing our Future

The CERF 2015 scientific program offers four days of timely, exciting and diverse information on a vast array of estuarine and coastal subjects. Presentations will examine new findings within CERF's traditional scientific, education and management disciplines and encourage interaction among coastal and estuarine scientists and managers. Additionally, the Scientific Program Committee plans to convene special sessions and workshops that promote intellectually stimulating discussions of the Grand Challenges in Coastal and Estuarine Science:

Managing and mitigating the risks of climate change – *shifts in precipitation and hydrologic patterns; wetland and species migrations; sea level rise; drought and water scarcity; severe storms, etc.*

Synergistic effects of ocean acidification with hypoxia, eutrophication or other conditions – *synthesis of information (e.g., from 2013 CERF) with new research results and methods for mitigating effects*

Polar estuaries and coasts – *physical oceanography, ice cover, biogeochemical interactions and impacts to coastal ecosystems*

Making data work – *advancement, management and integration of modern datasets (observing, genomics, bioinformatics) and capabilities to yield predictive models and tools*

Cities by the sea – *scientific exploration of dense and growing populations, economies and the built environment on coastal ecosystems; success stories from green infrastructure*

Estuaries under threat – *environmental change and variability associated with population growth, resource acquisition and scarcity, war/conflict, biodiversity loss and interactions in the next 50 years*

Multiple uses – *managing multiple, conflicting uses of coastal resources across the natural and sociological continuum; integration, quantification and valuation of ecosystem goods and services*

CERF 2015 sessions will include oral, poster and combined oral/poster formats. Those making submissions should be prepared to either act as a convener or chair of the session/workshop they are proposing, or identify an appropriate chair.

for more information, visit <http://www.erf.org/cerf2015>



## **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) 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](mailto:ISBW2016@projectseagrass.org).

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

## **GALLERY**

**Hervey Bay , QLD (Australia): 26 - 27 October 2015** <http://www.seagrasswatch.org/gallery.html>

**Shoalwater Bay - Gladstone Harbour (QLD, Australia): 25 - 28 September 2015**  
<http://www.seagrasswatch.org/gallery.html>

## **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 39,102 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**

**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>

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

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

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

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