



Seagrass-Watch E-Bulletin

31 August 2018

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IN THIS BULLETIN

NEWS	2
Policymakers destroying seas around India (India).....	2
Undersea reforestation project aims to bring back the fisheries in Placentia Bay (Canada).....	2
Foresters trained in underwater patrolling (India).....	2
Dredging up Bay seagrass (SA, Australia).....	3
Brown tide to blame for manatee deaths (FL, USA).....	3
Reef Tips: Seagrass Beds by the Numbers (Northern Mariana Islands, USA)	3
Sarasota manatee count drops amidst dark water and red tide (FL, USA).....	3
Dead Green Turtle found on Trat beach with plastic-stuffed stomach (Thailand)	4
Threat to marine powerhouse: doom and gloom for seagrass (Malaysia)	4
Marine Mammals Have Lost a Gene That Now They May Desperately Need (USA)	4
FGCU researchers launch mission to find out if Lake O supercharge red tide conditions (FL, USA)	5
Study shows seagrass helps mitigate rates of ocean acidification (CA, USA).....	5
Fishermen honoured for rescuing dugong (India)	6
The value of seagrass in securing a sustainable planet (Wales, UK)	6
Waning Seagrass and Other Factors Point to Problems in Indian River Lagoon (FL, USA).....	6
Florida gutted water quality monitoring – as killer algae increased (FL, USA).....	7
UVI, NPS Partner to Conduct Seagrass Surveys at Buck Island Reef (USVI).....	7
Red tide impacting Sarasota beaches and marine life (FL, USA)	7
Judge OKs Okinawa Base, Despite Endangered Dugong (USA)	8
Dead dugong found off Phang Nga (Thailand).....	8
CONFERENCES	8
OceanObs'19 (16-20 September 2019, Honolulu, Hawaii, USA).....	8
The 25th Biennial CERF Conference (Mobile, Alabama on 3–7 November, 2019)	8
SEAGRASS-WATCH on YouTube	9
Seagrass & other matters.....	9
World Seagrass Day http://wsa.seagrassonline.org/world-seagrass-day/	9
SeagrassSpotter https://seagrassspotter.org/	9
World Seagrass Association http://wsa.seagrassonline.org	9
World Seagrass Association on Twitter @Seagrass_WSA.....	9
Dugong & Seagrass Research Toolkit http://www.conservation.tools/	9
FROM HQ.....	9
Past E-bulletins	9
Frequently Asked Questions	9
Magazine	9
Virtual Herbarium	9
Future sampling dates.....	9
Handy Seagrass Links	9

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

Policymakers destroying seas around India (India)

29 August 2018, India Climate Dialogue (India)

With nearly 87% of oceans impacted by humans, the urgency to protect marine ecosystems has only increased - to safeguard not just livelihoods and wildlife, but to combat climate change as well. India's coasts and the seas nearby have mangroves and seagrass that play a crucial role in trapping carbon. Marine environments sequester more carbon than terrestrial ecosystems, said Deepak Apte, Director of Bombay Natural History Society (BNHS).

Despite the fact that oceans can play a critical role in offering climate solutions, they are being neglected, over-exploited and polluted, and are not considered a priority when it comes to formulating policies or executing them, experts say. On one hand, increasing human pressures, large-scale fishing, coastal development, sea bed mining, underwater noise and marine plastic pollution are posing a grave danger to oceans. Seagrasses are very crucial for local fisheries, and fish catch is declining over the years, so much so that Tamil Nadu has banned fishing for two months every summer season which is also the breeding season for the fish, Vedharajan Balaji, the Director of the Organization for Marine, Conservation, Awareness and Research (OMCAR), said. After the 2004 tsunami, many organisations gave boats to local fishermen. There was a big surge in the number of fishing boats, which is also damaging the seagrass ecosystem and impacting marine life.

The 15,000 sq. km Palk Bay is rich in biodiversity and home to species like the endangered dugongs. Around Rameswaram, a heritage site located in Ramanathapuram district, seagrass is abundant and extends up to 150 km along the coastline and 8 km into the sea. There are 14 species of seagrass in Palk Bay alone. Threats to sea grasses mean threat for dugongs as well. Balaji said. Balaji, who is working with the local communities on sustainable fishing and livelihoods, has seen first-hand how human pressures on these fragile seagrasses have been increasing.

Despite the pressures on marine ecosystems important for slowing down climate change, India's policies are overlooking this important role of oceans. Activists and experts have raised red flags over India's new coastal regulation zone notification. The latest amendments aim to not just regularise existing illegal constructions in ecologically fragile coastal zones, but also aim to throw more coastal areas open for development projects. We need to speak of impacts due to policy deficiencies. For example, unregulated coastal infrastructure can have severe consequences for near-shore ecosystems, thus directly affecting communities. The proposed Coastal Zone Notification 2018 will have long-term irreversible impacts on our near shore water and the consequences will spill over to our future generations, Apte said.

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Undersea reforestation project aims to bring back the fisheries in Placentia Bay (Canada)

24 August 2018, CBC.ca

Arnault Lebris, a research scientist at Memorial University's Marin Institute, is leading a team of people who are planting eelgrass on the sea floor in the busy Placentia Bay, Newfoundland. Placentia Bay is a vibrant bay in terms of economy, but may not be so great for the fish habitat there. All the activity has brought pollution from oil spills and marine traffic, and an explosion in the green crab population, Lebris said, and that's depleted the once-abundant eelgrass in the area. And that decline of the eelgrass beds has hampered the cod recovery and the lobster fishery, he said.

For the past two months, he and a small team of divers, researchers and workers with the Conservation Corps have been making eelgrass turfs by attaching shoots to sheets of burlap, and then diving down into the water and securing the turfs to the ocean floor. They're hoping the turfs will take hold and encourage a regrowth of the eelgrass beds that used to thrive in the area, before all the boats and the green crabs showed up.

Lebris is hoping this summer's efforts could lead to a full restoration of the eelgrass beds that have been depleted in Placentia Bay, but he doesn't think that will happen for another five to 10 years. In the meantime, as scientists continue to research ways to improve the province's fisheries, he hopes to see more focus on habitat restoration.

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Foresters trained in underwater patrolling (India)

23 August 2018, The Hindu

As part of the capacity building programme for the conservation of dugong and other marine mammals in the Palk Bay, the Wildlife Institute of India (WII) and Tamil Nadu Forest department have trained recently joined Foresters in underwater monitoring and Scuba diving.

In a week-long special course on 'Underwater biodiversity monitoring with open water Scuba diving' organised recently in the Palk Bay in Mandapam area, five newly joined Foresters in Ramanathapuram, Rameswaram, Mandapam, Kilakarai and Thondi were trained for patrolling and rescuing Dugong and other marine mammals. The training was offered under the Compensatory Afforestation Fund Management and Planning (CAMPA) – Recovery of Dugong and their habitats in India Project.

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Dredging up Bay seagrass (SA, Australia)

22 August 2018, *The Advertiser*

Dredging to keep Glenelg Harbour open will begin on Monday because seagrass is partially blocking the channel. Department for Environment and Water coastal manager Dr Murray Townsend said this year's winter weather had pushed large amounts of shed seagrass leaves into Glenelg Harbour. The dredging is expected to be finished by late September.

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Brown tide to blame for manatee deaths (FL, USA)

22 August 2018, *Okeechobee News*

Attempts to blame manatee deaths (along with all other water problems in South Florida) on freshwater releases from Lake Okeechobee were thwarted at a meeting of the U.S. Army Corps of Engineers and Congressman Brian Mast. Larry Williams with the U.S. Fish and Wildlife Service said the primary interest of Fish and Wildlife Service is threatened and endangered species. He said Congressman Mast asked him for information on how pollution is affecting manatees. He said he did some research and found the manatee deaths are not related to the cyanobacteria bloom in Lake Okeechobee or the St. Lucie waterway.

The strongest evidence we have of pollution effecting manatees is the brown tide more prevalent in the northern part of the Indian River Lagoon. Manatees normally feed on the seagrass, Mr. Williams explained. The brown tide causes the seagrass to die. When the seagrass is gone, the manatees start to eat the seaweed, he continued. Seaweed has a lower nutritional value and it causes a change in the manatees' physiology. The manatees get sick and die. Necropsies on many of the dead manatees found their stomachs were filled with seaweed, he continued. The nutrient load causing the brown tide (*Aureoumbra lagunensis*) bloom is connected to local basin runoff, including leaking septic tank systems and fertilizers, he said. The northern part of the Indian River Lagoon does not receive water from Lake Okeechobee.

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Reef Tips: Seagrass Beds by the Numbers (Northern Mariana Islands, USA)

21 August 2018, *Marianas Variety*

If you observe a satellite view of the Saipan Lagoon, you can see dark green clumps near the shore spreading apart as they reach farther out into the ocean. These dark clumps are most likely *Enhalus acoroides* seagrass habitats, flowering aquatic plants sheltering juvenile fish and invertebrates, such as young Mafute' (black-spot emperor fish) and balate' (sea cucumber). Without seagrass beds, our lagoon would not only lose important fish nurseries but coastal protection and stormwater filtration. Thus, more research, monitoring, and mapping of local seagrass beds must be conducted to comprehend their current and future conditions.

As this summer's CNMI Coral Reef Initiative (CRI) interns under the National Oceanic and Atmospheric Administration (NOAA), Dianne Pablo and I gathered measurements on discrete *Enhalus acoroides* seagrass colonies to understand their health. This seagrass monitoring project is a continuation of work from last year's CRI interns, who built the research foundation and created twenty-five field sampling zones (from Quartermaster to Tanapag) across our lagoon. Our work developed baseline information for future evaluation of change in colony metrics over time.

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Sarasota manatee count drops amidst dark water and red tide (FL, USA)

15 August 2018, *Sarasota Herald-Tribune*

The region's red tide outbreak is not only killing some manatees but also making it harder to find others. During a three-hour survey flight to count manatees in Sarasota County, Mote Marine Laboratory officials spotted only 37 - a fraction of the 70 to 100 animals usually seen during peak summer months, said research scientist Kerri Scolardi. Water clouded with a persistent red tide bloom made it difficult for Mote officials to spot the lumbering sea cows while surveying to maintain the database of manatee abundance and distribution in the county. Scolardi cautioned that the number isn't necessarily indicative of a manatee die-off.

Statewide, since Jan. 1, 29 dead manatees have tested positive for *Karenia brevis*, the lethal organism known as red tide, according to the Florida Fish and Wildlife Conservation Commission. The agency suspects 68 other manatees also died from red tide but those deaths are still being investigated. Sarasota County has reported 12 manatee red tide deaths, while Charlotte County has had 15 and Manatee County one. Lee County has seen 57 manatee deaths from red tide and Collier County 12.

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Dead Green Turtle found on Trat beach with plastic-stuffed stomach (Thailand)

11 August 2018, *The Nation*

Local residents found the dead turtle on Ban Ta Nuek Beach in Tambon Klong Yai of Klong Yai district. It was 5.15 centimetres in length and appeared to be around five or six years old, officials said. They cut open the sea creature's stomach and found plastic bags and pieces of ropes and nets, along with some oyster shells. The officials took tissue samples from its front leg and kept the stomach contents to send to the Rayong Marine and Coastal Resources research and development centre for further study. The carcass was buried at the beach.

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Threat to marine powerhouse: doom and gloom for seagrass (Malaysia)

11 August 2018, *New Straits Times Online*

Dubbed "Flowers of the Ocean", seagrasses have been around since the time of the dinosaurs, and are unique flowering plants that have evolved to live in marine habitats. But unlike terrestrial flowers which inspire swathes of romantic poetry and art, seagrass ecosystems remain marginalised and misunderstood. Yet seagrass is a marine powerhouse. It's the world's third most valuable ecosystem (after estuaries and wetlands).

The richest coastal marine resources in Southeast Asia are found in Indonesia, the Philippines and Malaysia. The knowledge about seagrass is low amongst the public and decision makers, and this ecosystem remains ignored on conservation agendas, according to Benjamin Jones, director and co-founder of Project Seagrass, a UK-based environmental charity dedicated to advancing the conservation of seagrass through education, influence, research and action. Jones contends that while Southeast Asia is a global biodiversity hotspot for seagrass, to what extent they're declining is still unclear. One such 'hope spot' is located in Indonesia, a country that has experienced 30 to 40 per cent loss of seagrass beds in the last 50 years, with as much as 60 per cent around Java.

On the island of Kaledupa in Wakatobi National Park, Sulawesi, researchers have worked together with locals to bring about change for the seagrass beds. Started in 2012, the Wakatobi Seagrass Programme is a collaborative research initiative led by scientists Leanne Cullen-Unsworth and Richard Unsworth, and supported by Cardiff University and Swansea University. Jones is part of the team that have that been working on addressing threats through a bottom-up approach of community-level and action. Local non-governmental organisation, FORKANI, the project's community partner, is pivotal in inspiring this change. It proposed the idea to provide fruit trees to land owners living adjacent to river beds. Because of mangrove destruction and terrestrial run-off, the trees serve to repopulate the riverine systems, increase water retention and reduce impact on seagrass. To date, they have planted 6,000 trees along seven river beds. Moreover, once awareness was raised on the importance of seagrass to their livelihoods and nutrition, seagrass education was later incorporated into local school curriculums.

Since more than 30 years ago, scientists have reported the need to stop the degradation of seagrasses and to step up protection and management of this vulnerable ecosystem. The biggest challenge is that we simply don't know where they are, how much they are and how much we're losing. Project Seagrass launched the 'Seagrass Spotter' this year - a free database which allows for citizen scientists around the world to participate in the conservation effort instead of a handful of researchers. Accessible with a mobile phone, anyone can upload a photo of seagrass and key in basic information such as the shape of the leaves, the location, etc. Jones explains that there's no other global citizen science programme like Seagrass Spotter, and showcases how science can be translated into what communities and marine natural resource managers and decision-makers can use.

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Marine Mammals Have Lost a Gene That Now They May Desperately Need (USA)

09 August 2018, *New York Times*

Dolphins, manatees, sea lions, elephant seals and other animals no longer produce an enzyme that protects land mammals against harmful chemicals, including some pesticides. About 50 million years ago, dog-like mammals returned to the seas, eventually evolving into whales and dolphins. Around then, too, an early cousin of elephants took the plunge, giving rise to manatees and dugongs. About 20 million years later, bearlike mammals also waded back into the sea, evolving into seals, sea lions and walruses. Each of these marine species adapted to the aquatic life in its own way. Manatees and dugongs slowly graze on seagrass. Seals and their relatives dive deep underwater after prey, but still haul themselves onto beaches to mate and rear pups. Whales and dolphins have made the most radical adaptations, including blowholes, baleen and echolocation. But a study recently published reveals a common bond: In all three groups of mammals, many species stopped making the same enzyme. Now that loss may come

back to haunt them. The enzyme provides an essential defense against certain kinds of harmful pesticides. The new study raises the possibility that marine mammals may be particularly vulnerable to these chemicals, which are carried from farm fields into coastal waters.

“It’s too important not to pay attention to,” said Nathan L. Clark, a co-author of the new study and an evolutionary biologist at the University of Pittsburgh. The scientists ended up with a short list of genes that were repeatedly shut down in marine mammals. At the top of the list was a gene called PON1. Wynn K. Meyer, a postdoctoral researcher at the University of Pittsburgh and co-author of the new study, said she was taken aback when she found out what the gene is best known for: a defense against some toxic chemicals. These chemicals are called organophosphates, a class of compounds that includes certain pesticides as well as nerve agents like sarin gas. PON1 encodes an enzyme called paraoxonase that can quickly break down organophosphates. Dr. Meyer and her colleagues found that all marine mammals have broken copies of the PON1 gene, with a few exceptions: walruses, fur seals and spotted seals.

To see if the gene were truly kaput, the researchers gathered blood plasma from a range of mammal species. They then added pesticides to the plasma. The plasma from land mammals quickly broke down the chemicals. But plasma from dolphins, manatees, sea lions and elephant seals failed to clear the pesticides. But paraoxonase breaks also down oxygen-bearing molecules that can damage our cells, causing a variety of problems like a buildup of plaque on the walls of blood vessels. People who make low levels of paraoxonase run a greater risk of atherosclerosis and heart disease. So why did marine mammals lose such an important gene? One possibility is that their bodies abandoned paraoxonase when they started taking long dives. Marine mammals may have evolved a new, more powerful way to defend against oxygen-bearing molecules, making PON1 unnecessary. But what does this legacy means today with the introduction of organophosphates as pesticides? Some organophosphate pesticides are widely used on farms, despite decades of research indicating that they can cause brain damage in children. In some parts of the world, marine mammals may be exposed to the chemicals on a regular basis. Dr. Clark and his colleagues plan to examine manatees and dolphins for a buildup of organophosphates with a test now given to farm workers.

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FGCU researchers launch mission to find out if Lake O supercharge red tide conditions (FL, USA)

09 August 2019, Wink News

Dr. Bill Mitsch, a wetland ecologist and professor at Florida Gulf Coast University, is on a mission to find out if Lake Okeechobee releases are supercharging red tide conditions. A team of researchers lead by Dr. Mitsch spent the day collecting water samples from the Caloosahatchee River as well as red tide along the coast. We want to know if the nitrogen we believe is feeding the frenzy of red tide *plus plus plus* is the nitrogen coming out of Lake O, Dr. Mitsch said.

If his theory is proven correct, Dr. Mitsch believes this will be the concrete evidence needed to finally push lawmakers to solve this puzzle: and that’s to add 100,000 acres of wetlands near Lake Okeechobee to act as a natural filter for the water discharges. The water samples will be sent to the University of California, Davis, where the results will be determined in a few months.

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Study shows seagrass helps mitigate rates of ocean acidification (CA, USA)

08 August 2018, Point Reyes Light

A recent study conducted by the Carnegie Institution of Science based on data from Tomales Bay indicates that seagrass has an important role to play in curtailing the rate of ocean acidification. The study was able to draw on the deep pool of available knowledge about Tomales Bay to set water conditions based on the season, light levels, depth and tides. The question is whether or not marine plants—not just seagrass, but also kelp—can buffer water,” Dr. Kowek, the lead author of the study, said.

Ocean acidity has increased by 30 percent since the start of the Industrial Revolution, and current forecasts expect it to double compared to pre-industrial levels by 2100. The rise in acidity has particularly grave implications for shellfish, whose calcium carbonate shells dissolve in acidic water. Restoration of seagrass could help temper the rate of acidification through photosynthesis. Recent studies estimate that Tomales Bay have about 23 percent seagrass coverage, although grasses in the west side of the bay have been threatened by extensive water runoff after heavy rains, which lower salinity levels. Eventually [seagrass] will come back, said study coauthor Jay Stachwitz.

Research indicates that seagrass meadows are most productive in shallow water with lots of light, where water moves through relatively slowly. Dr. Kowek hopes the results incentivize decision-makers along the coast to prioritize seagrass meadow restoration. But, he said, part of making smart decisions is understanding the potential of seagrass meadows but also understanding their limitations.

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Fishermen honoured for rescuing dugong (India)

08 August 2018, *The Hindu*

The Wildlife Institute of India (WII) has honoured a set of fishermen with cash award for rescuing and releasing back into the sea, a 10-foot long dugong, entangled in their fishing net while fishing at Keezhathottam in Thanjavur district. Tamil Nadu Biodiversity and Greening Project Director Jagdish presented the cash award of ₹10,000 to Naguran and his fishermen colleagues at a brief programme organised by the WII at OMCAR Palk Bay centre at Velivayal in Thanjavur district, WII. The WII has also honoured Mr. Chelladurai, an active member of the Friends of Dugong Network, who coordinate the rescue operation and was part of the previous two dugong rescue operations in 2016 with token cash award of ₹3,000.

Naguran and other fishermen were fishing when the adult dugong got entangled in the fishing net. Finding that the marine mammal was struggling for life, the fishermen along with WII, Tamil Nadu Forest department, the Marine police of the Coastal Security Group, Fisheries Department staff OMCAR rescued the mammal and released it back into the sea.

The CAMPA (Compensatory Afforestation Management and Planning Authority) – Dugong Recovery Project of the WII, which aimed towards the conservation of dugongs and their habitats in the country with the participation of all related stakeholders, deemed this response from the fishing community, as one of their biggest successes, the WII release said.

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The value of seagrass in securing a sustainable planet (Wales, UK)

08 August 2018, *Phys.Org*

Researchers believe that improving knowledge of how seagrasses are important for biodiversity, fisheries and our global carbon cycle in turn needs to be reflected with greater protection for these sensitive habitats. In a recent issue of *Science*, Dr. Richard Unsworth from Swansea University and Dr. Leanne Cullen-Unsworth from Cardiff University state that seagrass conservation is crucial for climate mitigation, sustaining fisheries productivity and food security.

With the right science and the political and financial will, seagrass meadows can thrive and contribute to ensuring our planet stays within its sustainable boundaries. The authors of the study point to their research and conservation work in the Coral Triangle as an example of hope. In Indonesia where they've documented large scale seagrass loss, they have importantly also led the development of a range of seagrass conservation initiatives that are beginning to raise hope for the sustainability of these amazingly productive habitats. By developing long-term collaborations with community NGO's we've been able to understand the problems facing these ecosystems from a more holistic stand point and develop bespoke locally based solutions, Dr. Richard Unsworth, from Swansea University's Biosciences department, said. In the Wakatobi National Park in Indonesia we've facilitated the restoration of small river catchments with trees through the creation of an incentive scheme. Farmers in the Wakatobi are now growing fruit trees to protect the seagrass and coral reefs.

Seagrass meadows aren't charismatic habitats, so selling their conservation value remains difficult, however the research they describe in the recent *Science* article illustrates that the world needs to place a much greater level of importance on the conservation of seagrass.

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Related article

A call for seagrass protection (03 August 2018, Science Magazine)
<http://science.sciencemag.org/content/361/6401/446>

Waning Seagrass and Other Factors Point to Problems in Indian River Lagoon (FL, USA)

07 August 2018, *WMFE*

Environmental researchers are releasing a comprehensive study of the Indian River Lagoons' health and researchers like the Marine Resources Council's Leesa Souto say indicators in the south portion of the lagoon are concerning. She says contaminated freshwater discharged from Lake Okeechobee is causing toxic algae blooms that threaten the local economy. As production go down and dolphins start starving it's affected in our area's quality of life. 15000 jobs that rely on the lagoon are going to start being lost.

A 2016 Florida Taxwatch study found that more than 15 percent of all fish and shellfish harvested in the U.S. come from the Indian River Lagoon, accounting for roughly \$140 million in the local economy. The report analyzed 20 years of environmental data, including information from water quality stations throughout the area.

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Florida gutted water quality monitoring – as killer algae increased (FL, USA)

07 August 2018, Tampa Bay Times

When Florida Sea Grant director Karl Havens, began hearing about a deepening algae bloom in his own backyard in Lake Okeechobee this summer, he struggled to find information that could tell him what was going on. State scientists sample water in the lake, but too infrequently to track rapidly evolving algae blooms. Instead, Havens had to rely on satellite images. No one is out on the lake collecting water samples of the bloom.

Over the last decade, monitoring for water quality has plummeted. While one crisis after another hit Florida, state and federal funding that paid for a massive coastal network with nearly three decades of information dwindled from about 350 stations to 115, according to Florida International University's Southeast Environmental Research Center. In 2014, the state cut funding to about 30 percent of the stations in Biscayne Bay where half the seagrass has died in the last six years. Better monitoring alone wouldn't have spared the state from a summer-long algae bloom on the lake, but could have provided more warning about the lake and critical information for better understanding and fighting red tide and other water woes around the state.

But playing catch up now doesn't get to the root of the problem, scientists say. District scientists check 13-14 lake stations monthly for levels of chlorophyll, an indication that a bloom might be forming, and send the results to the state's environmental regulators. But that's not enough to understand the life and evolution of a bloom, or when and where it forms, Havens said. It's also far less than what's needed to build a forecast model. One of the hurdles that scientists face is cost. To maintain a reliable data set, researchers need to follow the same protocols and repeat sampling frequently. Seagrass monitoring, for example, has dropped to once a month in places, not enough to track or understand changes. The more water-quality data you have, the better off you're going to track how those projects are affecting Florida Bay and elsewhere, said Margaret "Penny" Hall, a seagrass biologist at the state's Fish and Wildlife Research Institute. But it's really hard when you're trying to pay for the projects themselves. Everybody's just doing their very best with less and less money.

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UVI, NPS Partner to Conduct Seagrass Surveys at Buck Island Reef (USVI)

03 August 2018, Saint Croix Source

The National Park Service (NPS) began a partnership with the University of the Virgin Islands to conduct seagrass surveys at Buck Island Reef National Monument (NM). Researchers will be snorkeling and diving in the seagrass beds to the west and south of West Beach. These surveys will be part of a larger effort to understand the capacity of seagrasses to sequester and retain carbon that might otherwise rise up and trap heat in the atmosphere.

In the context of the global carbon cycle, "blue carbon" habitats like seagrass meadows are substantial carbon sinks. Recent work shows that within these habitats, sediment carbon concentrations vary spatially. These relationships are not well understood for seagrass species common to the U.S. Virgin Islands (USVI). Previous work on St. Thomas explored carbon storage in two native seagrass species: (*Thalassia testudinum* and *Syringodium filiforme*), the invasive seagrass: (*Halophila stipulacea*) and un-vegetated sand. Results suggest that *H. stipulacea* may be storing carbon in a comparable amount to native seagrass species.

Collecting additional sediment cores around Buck Island seeks to answer the question of carbon storage in seagrass habitats with time since establishment, which is another key variable that may play a role in predicting carbon storage in these habitats.

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Red tide impacting Sarasota beaches and marine life (FL, USA)

02 August 2018, FirstCoastNews.com WTLV-WJXX

Red tide is so bad it can clear out a beach. Nokomis Beach is desolate. A red flag flies high, warning there's no swimming. The water is dark. The smell is strong. The algae bloom is taking down much larger marine life. Mote is caring for 10 sea turtles, said Gretchen Lovewell, Mote's Stranding Investigation program manager.

The newest one, Augusta, was brought in a few hours ago found off Caspersen beach. She was really lethargic. She has brief activity, then goes comatose again. Volunteers will try to flush the toxins out of her system. As they ingest crabs and fish and seagrass, they come in lethargic and don't know which way is up. They suffer too long in the water and ultimately drown, explained Lovewell. Augusta is the 120th sea turtle rescue this year. Mote says 58 percent fell ill to red tide but they can recover.

Further south, manatees are red tide's victims. Manatees ... get it breathing the air and eating sea grass, so they're getting from two pathways, said Lovewell.

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Judge OKs Okinawa Base, Despite Endangered Dugong (USA)

02 August 2018, Courthouse News Service

Despite fierce opposition from environmental groups over potential harm to the endangered dugong, a federal judge ruled Wednesday that a military base the U.S. government plans to build in Okinawa, Japan, can move forward. U.S. District Judge Edward Chen said the Pentagon had done all it could to consider the impact of the base on the sacred marine mammal, including commissioning biological and cultural reports, interviewing cultural experts, and relying on a Japanese environmental impact report that included extensive public and Okinawa Prefectural Government comment.

Environmental groups had fought to stop the base from being built, challenging its planned construction in a 2003 lawsuit. Pentagon officials plan to build the Futenma replacement base next to Henoko and Oura bays, and includes a V-shaped set of runways built on top of landfill dumped into the bays. But the plaintiffs say the dumping could ravage the seagrass beds on which the dugongs feed and that noise, excessive light and pollution from construction could harm the animals. At a hearing on cross-motions for summary judgment in June, Earthjustice attorney Sarah Burt, who represents the environmental groups, said the government did too little in evaluating the base's effect on the dugong.

In his ruling, Chen found the Pentagon's efforts passed legal muster, and that its finding of "no adverse effect" on the dugong was reasonable. Burt said she will be conferring with her clients as to their next steps, but the fight continues even outside the courtroom. For the plaintiffs, for the local communities in Okinawa, the fight goes on. They've been organizing and campaigning and trying to make their voices heard to protest against the increasing militarization of their communities for a long time now. This lawsuit is just one tool. The law is a powerful tool, but they will continue organizing and fighting for their way of life.

[more.....www.seagrasswatch.org/news_Aug2018archives.htm](http://www.seagrasswatch.org/news_Aug2018archives.htm)

Dead dugong found off Phang Nga (Thailand)

01 August 2018, The Nation

A 250-kilogram dugong, found dead off Phang Nga over the weekend, has been brought to Phuket for further examination. Officials from the Phuket Marine Biological Centre (PMBC) were notified that the body of the dugong had been found by local fishermen in Phang Nga. The dugong, which was brought back to Phuket for a full autopsy, was a mature male measuring 2.46 metres long and weighing 250 kilograms. Its body had already started to decompose.

PMBC officials said that initial investigations could not clearly determine the cause of death as the creature's organs had started to rot. However, it is believed that the dugong died quite suddenly, as food was still found in its digestive system. A large bruise, measuring 25 centimetres, was found on its skin. The dugong's DNA is yet to be tested.

[more.....www.seagrasswatch.org/news_Aug2018archives.htm](http://www.seagrasswatch.org/news_Aug2018archives.htm)

CONFERENCES

OceanObs'19 (16-20 September 2019, Honolulu, Hawaii, USA)

Theme: Connecting Science and Society

The OceanObs'19 conference is a community-driven conference that brings people from all over the planet together to communicate the decadal progress of ocean observing networks and to chart innovative solutions to society's growing needs for ocean information in the coming decade.

More information: visit: <http://www.oceanobs19.net/#main>

The 25th Biennial CERF Conference (Mobile, Alabama on 3–7 November, 2019)

Theme: "Responsive | Relevant | Ready"

CERF2019 endeavors to connect science and society in the collective goals of preserving the coastal and estuarine habitats, resources, and heritage. Through the conference, attendees will discuss the nature of research agendas that are directed at finding and solving problems, and how to engage stakeholders in that process. CERF2019 goal is to balance a natural and social scientific agenda with the food, music, and art emblematic of the central Gulf of Mexico. In keeping with tradition, CERF2019 hopes to create a seriously fun and memorable 25th Biennial CERF Conference.

More information: visit: <https://www.erf.org/cerf-2019>

Follow on twitter @CERFScience, #CERF2019

Session and workshop proposal deadline: 20 September 2018

Schedule-at-a-Glance: <https://www.erf.org/2019-schedule-at-a-glance>

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 48,536 views to date)

Seagrass & other matters

World Seagrass Day <http://wsa.seagrassonline.org/world-seagrass-day/>

A global campaign for World Seagrass Day: Raising public awareness on the importance of seagrass meadows is central to efforts in the protection and conservation of seagrass meadows worldwide. The international seagrass research and conservation community, together with the undersigned, call on the United Nations to declare a World Seagrass Day to recognize the importance of seagrass meadows to the health and well-being of the planet, as well as the people, communities, flora, and fauna that rely on them. Show your support by signing the petition.

SeagrassSpotter <https://seagrassspotter.org/>

SeagrassSpotter seeks to expand the number of people studying seagrass from a handful of scientists to hundreds and potentially thousands of 'citizen scientists.'. As part of efforts to build a sustainable monitoring network, and by leveraging the enthusiasm of everyone from fishers to SCUBA divers to people on vacations at the beach, we'll create a more comprehensive picture of seagrass meadows around the globe. This in turn will inspire new scientific research and practical conservation measures that can help protect ocean habitats. Working together with citizen scientists all over the world, we'll accomplish big things for seagrass and other vulnerable marine species, but only with your help.

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

Keep up to date on what's happening with the around the world from the WSA. The World Seagrass Association is a global network of scientists and coastal managers committed to research, protection and management of the world's seagrasses. WSA members come from many countries and include leading scientists in marine and seagrass biology. The association supports training and information exchange and raises global awareness of seagrass science and environmental management issues.

World Seagrass Association on Twitter [@Seagrass_WSA](https://twitter.com/Seagrass_WSA)

Everything seagrass related. World Seagrass Association official account. Follow to stay up-to-date with global seagrass info. Moderator: LM Nordlund

Dugong & Seagrass Research Toolkit <http://www.conservation.tools/>

Dugongs and seagrass are under threat from human activities. By using this Toolkit you should be able to gather information to:

- understand better the status of dugongs, seagrass and communities at your research site;
- understand threats to dugongs and seagrasses and help find solutions to those threats;
- understand the communities that value or may affect dugongs and seagrasses.

The toolkit will guide you to the techniques and tools most suitable to your team capacity, budget and timeline. By using the toolkit, you will also be helping to standardise data sets and methods across different countries and sites, allowing for better comparison of global dugong and seagrass conservation status. The Toolkit is designed for use by marine natural resource managers and decision-makers (government and non-government) and for dugong and seagrass researchers. The Toolkit will assist organisations to assess funding proposals by describing the scope of work, choice of techniques and tools, and budget.

FROM HQ

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

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

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