31 August 2020

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NEWS

Seagrass Could Play a Major Role in Slowing Climate Change (Wales, UK)

31 August 2020, By Douglas Broom, World Economic Forum

Seagrass covers just 0.2% of the seabed, yet it accounts for 10% of the ocean's capacity to store carbon, according to the United Nations Environment Program. But around the globe, seagrass meadows have declined, and projects like Seagrass Ocean Rescue are working to reverse the trend. The scheme, which is backed by wildlife conservation organization WWF, is seeding coastal waters around the UK to create new seagrass beds.

The UK has lost up to 92% of the seagrass in its coastal waters and estuaries, according to the project. Its work to help restore these meadows involves an "experimental" 20,000 square meter area in Pembrokeshire, South Wales. There, seagrass seeds are planted on the seafloor in hessian bags, held together on lines of rope. As the hessian degrades, the seeds, collected by divers from underwater meadows in waters off the southern coasts of England and Wales, germinate and establish on the ocean bed. The goal is to plant 1 million seeds, as well as inspire projects in other areas around the UK.

Globally, over a third have been lost in the past 40 years, according to Project Seagrass, the charity behind Seagrass Ocean Rescue. Destructive fishing, pollution and climate change are contributing to this decline, it says. Scientists say that seagrass has been regarded as the "ugly duckling" of marine conservation, but the growing climate emergency and the need to find new ways to capture and store carbon make its restoration vital. The UN has called it a "secret weapon in the fight against global heating." Seagrass also helps support sustainable fisheries. One-fifth of the world's biggest fisheries depend on seagrass meadows to act as fish nurseries, Project Seagrass says. The World Economic Forum's Ocean Action Agenda calls for urgent action to reverse the decline in ocean health, pointing out that over 100 million households worldwide depend on fishing for their livelihoods and seafood is the primary source of protein for 3 billion people.

more…….https://www.ecowatch.com/seagrass-conservation-climate-change-2647411748.html?rebelltitem=5#rebelltitem5

They tried to fix the Lake Worth Lagoon with a muck trap, then they forgot about it (FL, USA)

28 August 2020, by Kimberly Miller, Palm Beach Post

An experiment to slow ecological Armageddon in the Lake Worth Lagoon was started in 2007 when thousands of pounds of licorice-colored goo was scraped from the depths of the C-51 canal to create a slime trap. The 15-foot deep gash was designed to collect sediment in runoff before it could choke off sunlight from paddle grass and slather oysters in muck. Then the pilot project was largely forgotten.

While periodic measurements of muck depth have been made, there have been few studies of the trap's effectiveness even as 18 trillion gallons of Lake Okeechobee water flowed to the lagoon in 2016. But next month, the water management district plans to complete a study of how much sediment is collected by the trap compared to how much still flows to the beleaguered lagoon and whether it's worth the $2 million it would cost to redredge the trap to its original 2007 capacity of 100,000 cubic yards.

Palm Beach County environmentalists and lagoon managers are eager to see the results and to have more attention paid to the 21-mile long waterway that can be overshadowed by its northern cousins – the St. Lucie and Caloosahatchee. The St. Lucie and Caloosahatchee estuaries bear the brunt of damage when a swollen Lake Okeechobee needs to release water, but stormwater from 30 municipalities and a 300,000 acre watershed drain into the Lake Worth Lagoon. The lagoon can't return to its natural state, a time before inlets were dug and runoff was funneled its way, but environmentalists hope to stitch together an ecosystem with what's there now – one seagrass bed at a time.

more…….https://www.palmbeachpost.com/story/weather/2020/08/28/lake-worth-lagoon-suffers-storm-water-runoff/3444393001/

VN border province adjusts zoning in Phu Quoc protected area for marine conservation (Viet Nam)

27 August 2020, The Phnom Penh Post

The Mekong Delta province of Kien Giang has adjusted the zoning of the marine protected area of Phu Quoc National Park on Phu Quoc Island. Of the more than 40,909ha of the Phu Quoc Marine Protected Area, the strictly-protected zone covers more than 7,087ha, including some 6,658ha for seagrass conservation in the northeast of the island and nearly 429ha for coral conservation in the south.

The zone for ecological recovery covers more than 11,537ha, including some 11,363ha for seagrass ecosystem recovery in the northeast and 174.68ha for coral ecosystem recovery in the south. There is also 1,212ha for seagrass and another 8,605ha for coral in the 9,817ha service-administrative zone. A buffer zone of about 12,467ha has also been set up to minimise the impact of socio-economic activities on seagrass and coral conservation.

To promote conservation and tap the potential the protected area holds, Kien Giang authorities are perfecting cooperative models between the Phu Quoc National Park and related parties, with consideration given to using new technologies to recover ecosystems and resources and creating new livelihoods for local people. Authorities are also stepping up communications to raise public awareness, developing aquatic breeding facilities, strictly managing fishing activities, and boosting environmental monitoring.
more…….https://www.phnompenhpost.com/international/vn-border-province-adjusts-zoning-phu-quoc-protected-area-marine-conservation

Planting seagrass: 'If you stop killing sea life and protect it, then it does come back' (Wales, UK)

26 August 2020, by Richard Scrase, Geographical

On a sunny but bitterly cold February day a line of small children snaked their way from Dale to Dale Fort on the Haverfordwest estuary. They were the last of more than 2,000 volunteers who over the last year have collected, stored and inserted seagrass seeds into little hessian bags, ready for planting. These seagrass seeds were soon to join others on the seafloor a few hundred metres off-shore from Dale to restore two hectares of seagrass meadow. This restoration is the latest attempt to reverse a century of destruction. According to Swansea University's Dr Richard Unsworth: 'Once every estuary in the UK had its seagrass meadows, from the Humber to the Thames, the Morey Firth to the Mersey. Now, seagrass is found in perhaps five per cent of that area.'

Active restoration can accelerate the slow pace of natural restoration. Swansea scientists have spent six years perfecting a planting system. Small degradable hessian bags are strung on a rope at metre intervals, each filled with sand and around 50 seagrass seeds. These ropes are weighed at each end and manually dropped onto the seafloor from a small boat. The bag protects the seeds from being eaten by crabs and the sand provides a neutral, aerobic environment that enhances seed germination. The seedlings grow through the weave of the hessian and the bags decompose. At Dale the seeds were collected in the summer of 2019 by volunteers from the Channel Islands and the Isle of Man. Divers, snorkelers and folk simply wading out during low tide gathered around a million seeds. The blades containing the seeds were snapped off – causing no harm to the plant – and then taken to laboratories where they were prepared.

Nature recently published an article called 'Rebuilding marine life'. In it Professor Callum Roberts from the University of York said: 'Overfishing and climate change are tightening their grip, but there is hope in the science of restoration…' One of the overarching messages is, if you stop killing sea life and protect it, then it does come back. We can turn the oceans around and we know it makes sense economically, for human wellbeing and, of course, for the environment. In the seagrass planting in Dale, there is that hope.
more…….http://geographical.co.uk/opinion/item/3801-planting-seagrass-if-you-stop-killing-sea-life-and-protect-it-then-it-does-come-back-richard-scrase

Australia Floats Plan to Better Protect Great Barrier Reef (QLD, Australia)

25 August 2020, by Nathanial Gronewold, Scientific American

Australian officials plan to redouble their efforts to save the Great Barrier Reef from the effects of global warming. Australia's Department of Agriculture, Water and the Environment is floating a 30-year plan to protect the natural wonder. The proposal calls for controlling surface runoff and shore-based water pollution that can harm the reef, along with improved coastal infrastructure planning. The draft also outlines rehabilitation efforts to be taken out to 2050.The Australian and Queensland governments are planning to spend up to $2 billion over the course of a decade as part of an initial phase of reef protection and recovery efforts.

The draft "Reef 2050 Long-Term Sustainability Plan" points to climate change as the single greatest threat to the future of the Great Barrier Reef. The government's plan says Australia must accelerate domestic efforts to lower greenhouse gas emissions and do everything necessary to convince other governments to do the same. It also proposes stricter regulation of land- and water-based activities in and around the reef. And it recommends involving Aboriginal communities more in Great Barrier Reef management.

The management plan emphasizes the necessity of minimizing pollution from coastal surface runoff. This means reducing fertilizer use for agriculture and ensuring the survival of coastal habitats that mitigate water quality issues. The plan also calls for greater protections for seagrass communities.
more…….https://www.scientificamerican.com/article/australia-floats-plan-to-better-protect-great-barrier-reef/

New report reveals action needed to prevent further decline of Darwin Harbour's health (NT, Australia)

24 August 2020, Mirage News

A new report finds the health of Darwin Harbour is in decline due to a failure of successive governments to implement a Harbour wide plan with strategic oversight and adequate funding to protect its environmental, cultural, social and economic values. The report – Darwin Harbour Health Check – commissioned by the Keep Top End Coasts Healthy

Alliance found that as one of Australia's largest working Harbours, it has immense environmental, recreational, cultural and economic values. Despite this, the Harbour's health is failing due to the increasing pressure from a range of industrial and urban developments.

Adele Pedder, Coordinator for Keep Top End Coasts Healthy said: "Our capital is surrounded by the waters of the Harbour, providing a beautiful backdrop to the daily lives of locals, a source of recreation, and providing healthy food in the fish and crabs caught by many fishers and their families. "It's home to a number of nationally threatened species including dugongs, coastal dolphins, sawfish, saltwater crocodiles and three of the world's seven species of marine turtles. It's a centrepiece for the tourist experience and facilitates the passage of many marine-based industries. "The Northern Territory Government's draft Darwin Harbour Strategy 2019 provides a clear blueprint for turning these threats around and securing the future of the harbour. "This Strategy now needs to be funded and implemented if we are to protect the cultural, environmental, social and economic values of our Harbour and our coasts," said Pedder.
more…….https://www.miragenews.com/new-report-reveals-action-needed-to-prevent-further-decline-of-darwin-harbour-s-health/

Tired of 'dead ends,' Bradenton renews efforts to regulate Palma Sola horseback riding (FL, USA)

19 August 2020, by Ryan Callihan, Bradenton News

The Bradenton City Council has renewed its effort to regulate horseback riding along the Palma Sola Causeway. The practice has caused constant headaches for Bradenton officials who have been told they have no jurisdiction over the land because the Palma Sola Causeway is maintained by the Florida Department of Transportation. According to state statute, horses are defined as "vehicles" that are allowed to use the beach freely. But council members voted unanimously Wednesday to have City Attorney Scott Rudacille look into the city's options.

It's not the first time Bradenton officials have tried to do something about horseback riding. Several efforts in the past 10 years have been unsuccessful. But after the Pinellas Board of County Commissioners voted to ban the practice near the Sunshine Skyway Bridge last year, Bradenton officials say they may be able to use a similar approach. Pinellas staff argued that horseback riding in Tampa Bay killed off seagrass banks along the shore and banned horseback riding in the name of environmental protection.

In a presentation to the City Council, Public Works Director Jim McLellan used satellite imagery of Palma Sola to show that seagrass has shown steady growth in the bay since 2004, but there are no recent images that demonstrate the impact horseback riding has had. "In Pinellas, you can actually see the pathways that horses took through the seagrass," he explained. Robert Lombardo, who lives along Palma Sola Bay, said the issue has gotten worse ever since Pinellas enacted its ban. According to Julie Espy, program administrator of the Florida Department of Environmental Protection's Water Quality Assessment Program, horse droppings may have a negative impact on Palma Sola Bay.
more…….https://www.bradenton.com/news/local/article245083810.html

Related articles
Bradenton city council members revisit topic of horseback riding on The Palma Sola Causeway (20 August 2020, WWSB)
https://www.mysuncoast.com/2020/08/20/bradenton-city-council-members-revisit-topic-horseback-riding-palma-sola-causeway/
Bradenton still looking to regulate horseback riding on Palma Sola Causeway (26 August 2020, Sarasota Herald-Tribune)
https://www.heraldtribune.com/story/news/local/manatee/2020/08/26/bradenton-still-looking-to-regulate-horseback-riding-on-palma-sola-causeway/3443511001/
Bradenton City Council joins horse debate (29 August 2020, The Anna Maria Island Sun Newspaper)
https://www.amisun.com/2020/08/29/bradenton-city-council-joins-horse-debate/

Importance of native seagrass in the fight against erosion (Bonaire)

18 August 2020, Curacao Chronicle

Seagrass fields play an important role in shallow water environments. Seagrass fields are also an important factor in protecting coastlines by dissipating wave energy, reducing tidal currents, and trapping sediments thus minimizing erosion. This is particularly true for Bonaire's native seagrass, *Thalassia testudinum*, a favorite food item for grazing turtles. However, opportunistic invasive species, such as *Halophila stipulacea*, have started encroaching on native fields. This species has smaller leaves, thus reducing its energy reduction capabilities, along with having smaller, more shallow roots and rhizomes, limiting its ability to stabilize sediment. This invasive species is also less capable of withstanding large storms.

A collaborative effort between the NIOZ Royal Netherlands Institute for Sea Research, Utrecht University, University of Groningen, Wageningen University and Research, Radboud University Nijmegen and Delft University of Technology conducted a study to understand the ecosystem services provided by native and invasive species of seagrass. Researchers set up an experiment to directly measure the sediment stabilization capacity of various seagrass patches. This experiment explored the impact of both invasive species and increasing grazing by megaherbivores. The study took place in Lac Bay, a shallow bay located on the east coast of Bonaire. Historically this bay had been dominated by the native seagrass (*T. Testudinum*), however, a recent census shows an increase

in the presence of the invasive species (*H. stipulacea*) since it was first report in 2010. This bay is an important foraging area for the local turtle population.

Through this experiment, it was shown that meadows with dense, tall, ungrazed native seagrass (*T. testudinum*) were able to effectively anchor sandy sediment in a variety of different wave conditions. As canopy density and coverage decreased, there was an overall decrease in seagrass' ability to stabilize sediment, allowing for increased erosion. It was also demonstrated that seagrass patches of invasive *H. stipulacea* that are in deeper waters accumulate fine sediment during calm periods. This fine sediment, however, is easily resuspended when there are strong waves, which increases the vulnerability of the seafloor to erosion over the long-term. In areas of highly grazed shorter grass, the blades of grass were not able to offer as much protection and similar erosion patterns were seen as in areas without vegetation. Sea turtle conservation has had great success within the Caribbean, the results of which can be seen locally with the increase of the green sea turtle populations within Lac Bay. Parallel conservation efforts of these important habitats are required, especially with the increasing pressure on already degraded native seagrass fields.
more……https://www.curacaochronicle.com/post/main/importance-of-native-seagrass-in-the-fight-against-erosion/

'This Is Unforgivable': Anger Mounts Over Mauritius Oil Spill (Mauritius)

17 August 2020, by Abdi Latif Dahir and Elian Peltier, The New York Times

Zareen Bandhoo was at work last week in the central Mauritius town of Curepipe when she heard that oil was spilling from a ship into the island nation's pristine lagoons. In the days since, as Mauritius has confronted one of its worst environmental disasters, Ms. Bandhoo has been hard at work. She has donated money and food for cleanup operations, and has teamed with friends and colleagues to help limit the damage to the island's picturesque coast. Together, they made makeshift booms from fabric and sugar cane leaves to contain the oil, collected hair and plastic bottles to absorb and clean up the slick, scrubbed contaminated beaches, and raised awareness online about the extent of the damage.

Their efforts are representative of the grass-roots initiatives undertaken by Mauritians amid mounting anger and frustration that officials did not act soon enough to address the spill — even though the Japanese-owned bulk carrier ran aground on a coral reef off the Indian Ocean island on July 25. "This could have been avoided," said Ms. Bandhoo, 24, who works as an assistant in a food supply business. She said that the authorities "started doing things only when it was too late, and this is unforgivable, truly." The only comfort she could salvage from the crisis, she said, was how citizens have reacted so far. "The solidarity of Mauritians has been overwhelming," she said.

The Wakashio, a Japanese-owned but Panama-flagged bulk carrier, held 200 tons of diesel and 3,800 tons of fuel oil -— 1,000 of which leaked into the sea. Nagashiki Shipping, the company that owns the vessel, said that over 460 tons had been manually recovered. But according to satellite imagery, the oil spill covered an area of over 10 square miles this week, growing by more than eight times since the ship began to leak. The spill is threatening biodiversity hot spots, including the Ile aux Aigrettes nature reserve and Blue Bay Marine Park, a renowned snorkeling and diving area. "The reefs protect us from waves, and the sea grass belts and the mangrove play a critical role in absorbing carbon dioxide," said Sunil Mokshanand Dowarkasing, an environmental expert and a former lawmaker. "It's a tragic story, which brings sorrow and anger."
more……https://www.nytimes.com/2020/08/14/world/africa/mauritius-oil-spill.html

Related articles
'Massive poisonous shock': Scientists fear lasting impact from Mauritius oil spill (13 August 2020, KFGO News)
https://kfgo.com/2020/08/13/massive-poisonous-shock-scientists-fear-lasting-impact-from-mauritius-oil-spill/
Mauritius oil spill: Volunteers put health on the line to clean up environmental disaster (17 August 2020, The New Daily)
https://thenewdaily.com.au/news/world/2020/08/23/mauritius-oil-spill-health-effects/
Long-term Threat To Mauritius Ecology After Spill: Japan Experts (25 August 2020, UrduPoint News)
https://www.urdupoint.com/en/world/long-term-threat-to-mauritius-ecology-after-s-1010715.html
Mauritius oil spill: how coral reefs, mangroves and seagrass could be affected (26 August 2020, The Conversation UK)
https://theconversation.com/mauritius-oil-spill-how-coral-reefs-mangroves-and-seagrass-could-be-affected-144954
WWF Statement on the recent oil spill off the coast of Mauritius (12 August 202, WWF International)
https://wwf.panda.org/wwf_news/?499951/WWF-Statement-on-the-recent-oil-spill-off-the-coast-of-Mauritius
Protected wetlands in Mauritius marred by oil spill boasts mangrove forests, coral species (13 August 2020, Firstpost)
https://www.firstpost.com/tech/science/protected-wetlands-in-mauritius-marred-by-oil-spill-boasts-mangrove-forests-coral-species-8703631.html
The treasured wetlands of Mauritius (13 August 2020, Macau Business)
https://www.macaubusiness.com/the-treasured-wetlands-of-mauritius/

Newest Seagrass Sanctuary First in 30 Years (FL, USA)

17 August 2020, by Nano Riley, The Gabber

Florida's got a new watery preserve just offshore of Pasco, Hernando and Citrus Counties. The newly christened Nature Coast Aquatic Preserve creates one of the world's largest contiguous seagrass meadows, protecting 400,000 acres of seagrass habitat for marine wildlife, including nineteen endangered species. There are over forty marine

sanctuaries in Florida waters – this is the first new one in thirty years, and is open for recreation, sport fishing and scalloping. And that's important because seagrass is in trouble worldwide.

In Tampa Bay, it's good news for seagrass, said Ed Sherwood, executive director of the Tampa Bay Estuary Program, which protects Florida's largest estuary. "We're meeting our goals. We understand a lot more since the '50s, when no one paid attention to the environment and dredge-and-fill destroyed the seagrass around Boca Ciega Bay," said Sherwood. "In 2014 we exceeded our goals – 38,000 acres of seagrass – to conserving over 40,000," he said, referring to the restored meadows thriving in the Tampa Bay estuary.
more…….https://thegabber.com/newest-seagrass-sanctuary-first-in-30-years/

College students set sail for science (QLD, Australia)
15 August 2020, by Derek Schlennstedt, Bundaberg Now

Five lucky year 10 students from Bundaberg Christian College embarked on a five-day marine research trip along the Great Barrier Reef. The college was one of six Queensland schools selected to participate. The students left Monday afternoon (10 August) from the Port of Bundaberg as part of the Science Under Sail program. They were able to experience the life of a marine researcher onboard a sailing vessel, as they help collected data that will be used to manage marine resources.

Coordinator Amanda Kelk said this was the second year the school had taken part in the Science Under Sails program. "This program provides a unique opportunity for students to participate in citizen science data collection under the supervision of professional researchers," Amanda said. "They go out for five days on the boat and are taught how to collect samples of seagrass and monitor all the different types of seagrass, which then helps monitor the health of the reef.

Director of Science under Sails, Nicola Udy, said students learn how to use scientific equipment and gain hands-on, real-world experience that contributes to their science studies and understanding. "We'll be trying to find where seagrass is growing and not growing, where coral is or not, and even if it's just bare sand, recording that is important to understanding what's on our sea floor," Nicole said. "We use a camera on a sled, which is towed behind the boat and skids along the bottom and records what's on the bottom and we get a live feed up to the boat.
more…….https://www.bundabergnow.com/2020/08/15/college-students-set-sail-for-science/

Drones driving community conservation of the sea cow (WA, Australia)
15 August 2020, Phys.Org

Dr. Christophe Cleguer is on a mission to save the dugong. In doing so, he's saving a critical habitat for a host of other marine species. The species acts as a bellwether for the overall ecosystem—seagrass meadows with dugongs are healthy. And when areas of seagrass are healthy, they provide a habitat for other sea life and play an important role in sustaining clean seawater and safeguarding coasts from erosion. But these big creatures, commonly referred to as "sea cows," can be difficult to find and research by boat so a higher vantage point is required to locate, track and study them.

As part of Dr. Cleguer's research, unmanned aerial vehicles, or drones, are being used to survey and assess dugongs and their habitats. The vast amount of data generated by these aerial surveys is making a significant impact on the way dugong conservation and management is undertaken. "Over the past three years, we have developed a new methodology around the use of small and mid-size drones in marine research including survey design, data collection and processing as well as the analysis of data. The exciting outcome is that we are starting to develop some detailed maps around dugong population numbers and density. We hope that the research work using this new technology will fast-track the conservation of dugongs and their seagrass habitats," explained Dr. Cleguer.

"One of the goals of my research is to empower communities to manage their own conservation and marine management efforts and use drone methods that have been developed in order to learn how to protect their own local dugong populations and habitats." Dr. Cleguer is working with Murdoch University Research Fellow, Dr. Amanda Hodgson, on expanding the use of these smaller and cheaper drones in developing countries. The focus is on places where dugong populations are prevalent to help communities build capacity in their local conservation efforts. Both researchers are involved in the recently started Seagrass Ecosystem Services Project funded by the International Climate Initiative and administered and implemented by the Convention on Migratory Species. The goal of this project is to improve conservation of seagrass meadows and the biodiversity they support in Indonesia, Malaysia, the Philippines, Thailand, and Timor-Leste.
more…….https://phys.org/news/2020-08-drones-sea-cow.html

Furry engineers: sea otters in California's estuaries surprise scientists (CA, USA)
15 August 2020, The Guardian

When Brent Hughes started studying the seagrass beds of Elkhorn Slough, an estuary in Monterey Bay on California's central coast, he was surprised by what he found. In this highly polluted estuary, excessive nutrients from

agricultural runoff spur the growth of algae on seagrass leaves, which kills the plants. Yet in 2010, Hughes noticed that the seagrass beds were thriving. “Any model would suggest there should be no seagrass there and yet it was expanding.” says Hughes, a biologist at Sonoma State University. Hughes set out to solve the mystery.

He was not making any progress until he was approached by a boat captain named Yohn Gideon who had been running wildlife tours in the slough since 1995. Over the years, the captain had handed clickers to his passengers, asking them to count the sea otters they saw. Hughes overlaid the captain’s sea otter counts with historical seagrass coverage data and realised the two graphs were almost perfectly in sync. When sea otter numbers went up, seagrass went up, too.

Hughes discovered a trophic cascade that made the seagrass beds the healthiest of any estuary he had seen on the west coast. Sea otters have a huge appetite, eating 25% of their body weight every day, munching on a variety of marine invertebrates, including sea urchins, clams and crabs. With fewer crabs to prey on them, California sea hares grow larger and became more abundant. The slugs feed on the algae growing on the seagrass, leaving the leaves healthy and clean. The discovery that sea otters could also be important players in estuaries came as an ecological surprise. Estuaries were not considered in the US fish and wildlife service’s plan for the recovery of the sea otter in California. Now, scientists and wildlife managers are turning to estuaries as potential places where sea otter numbers could grow.
more…….https://www.theguardian.com/environment/2020/aug/14/natures-furry-engineers-sea-otters-in-california-estuaries-surprise-scientists-aoe

Related articles
Endangered Sea Otters Can Protect Plant Life In Highly Polluted Ecosystems: Research (18 August 2020, The Swaddle)
https://theswaddle.com/endangered-sea-otters-can-protect-plant-life-in-highly-polluted-ecosystems-research/

Manatee deaths expected to rise in fall as algae blooms appear. But not in Volusia-Flagler (FL, USA)

14 August 2020, by Abigail Mercer, The Daytona Beach News-Journal

With red tide season approaching, Florida is expected to see an uptick in manatee deaths in the upcoming months. But experts with Florida Fish and Wildlife Conservation said this week it’s not likely that manatees in Volusia and Flagler counties will feel those effects.

Martine DeWit, a veterinarian with FWC, said the red tide algae bloom, caused by a higher-than-normal concentration of a microscopic alga called *K. brevis*, is the only type of algae that causes harm to manatees. It typically makes an appearance beginning in September, and can last several months. “Even after the bloom goes away, we still see manatee problems up to two months after, because manatees get exposed to the algae through sea grass.” DeWit said.

As of July 23, there have been nine confirmed manatee deaths due to red tide this year. Of those, eight are from Lee County and one is from Charlotte County in southwest Florida. In the past five years, the annual count of manatee deaths due to red tide all remain under 100, except for 2018, when DeWit said the red tide lasted all year long. During that time, red tide killed 288 manatees. Manatee deaths this year are already on the rise. The numbers statewide suggest 2020 is on pace to reach the manatee death count in 2018 and 2013, when Florida recorded more than 800 deaths. Both those years, algae blooms played a role in some deaths. As of Aug. 8, there have been more than 400 manatee deaths this year, compared to last year’s 606 deaths. Out of those deaths, 23 of them were in Volusia County and two of them were in Flagler County.
more…….https://www.news-journalonline.com/story/news/2020/08/14/red-tide-likely-wont-impact-volusia-flagler-manatees/3353518001/

Climate Change Affecting More Than Just Humans on Long Island (NY, USA)

13 August 2020, by Priscila Korb, Patch.com

Many of us have seen how global climate change has affected the environment, and some say the situation continues to get worse. That's why Long Island teen Joanna Ziegler, a member of the Students for Climate Action, has been working to learn more about climate change and asking local legislators to take charge of this issue through the group – not only for the sake of humankind, but for the wellbeing of marine and wildlife.

Alison Branco, the coastal director for The Nature Conservancy on Long Island, believes the recent legislation is a step in the right direction to help raise awareness. She said that, in the past decade, she has noticed more people, particularly Long Island residents, becoming more conscious of issues pertaining to the environment. However, she believes that the biggest threat is not actually coming from climate change itself, but the activities by humans in an attempt to protect themselves from the rising sea levels. According to Branco, efforts to harden the shoreline, which involves creating an artificial border of concrete, boulders, or rocks between the land and the sea can impact the population of fish, shellfish and bay scallops on Long Island. Branco also noticed that climate change has affected seagrass, which is used as a habitat for fish and shellfish.

Kaitlyn O'Toole, a graduate student at Stony Brook University's School of Marine and Atmospheric Sciences, studied seagrass in local bays and noted that the rising water temperatures are causing Long Island's marine species to die off. O'Toole said that she did not see the gravity of the situation until she went underwater for her research in the Great South Bay. O'Toole found that many species of seagrass in the area have been dying due to the higher temperatures recorded in the waters. She said that most seagrass die off if temperatures go above 25 degrees Celsius, which she has been recorded in the bay. This means fish which are used commercially and recreationally can die off, making it difficult for Long Island fisheries to stay in business.

Ziegler says the bulk of the responsibility falls on local politicians, to pass legislation as they did with the plastic bag and straw bans, in order to help the environment. In addition, she said that people can do their part by buying a green vehicle or installing solar panels. Climate change is not a new issue and since Long Island is surrounded by water, it affects us and our local marine and wildlife more than some other areas. With the right steps and legislation, the hope is that marine and wildlife can soon begin to thrive again.
more……https://patch.com/new-york/sayville/climate-change-affecting-more-just-humans-long-island

Fiji needs to take care of marine life, food chains: official (Fiji)
13 August 2020, Xinhua

According to a government statement, while launching a seagrass nursery and a conservation site at Maui Bay in Sigatoka of Nadroga, one of Fiji's provinces on the western side of the main island of Viti Levu, Fiji's Minister for Waterways, Environment and Agriculture Mahendra Reddy said that seagrass played a vital role in the food chain for marine life and helped in sedimentation retention and prevents coastal erosion.

Seagrass has enriched biodiversity and provides one of the most highly productive ecosystems in the world as these meadows provide shelter and food to an incredibly diverse species of marine life. "A wide range of vertebrate and invertebrate species organisms rely on seagrass patches for their nursing grounds determining the overall health of the coastal ecosystem," Reddy said. He said while seagrass provides significant ecosystem services to the marine ecosystem, human behavior such as improper solid waste disposal and reclamation of land for coastal development, common in Fiji, was threatening its existence.

Seagrass ecosystems are threatened by climate change from thermal pollution, ocean acidification, increased frequency of storms, and changes in water flow, Reddy added. The minister also stressed the importance of the Public-Private Partnership for the conservation and protection of Fiji's marine eco-system.
more……http://www.xinhuanet.com/english/2020-08/13/c_139287974.htm

New seagrass species found in Boracay island (Philippines)
13 August 2020, by Johannes Chua, Manila Bulletin

A seagrass mapping and assessment of Boracay Island has revealed that the island now has nine species of seagrass, with the newest recorded species *Halophila spinulosa* discovered at Sitio Tambisaan, Manoc-manoc, Malay, Aklan. Experts have said that this is due to the ongoing rehabilitation of the island, which resulted into a healthy marine ecosystem.

There are 16 species of seagrass found in the Philippines and nine of them are recorded existing in the island of Boracay, including the newly recorded *Halophila spinulosa* or the fern seagrass. Boracay Island has approximately 95.37 hectares of seagrass bed. Barangay Balabag in the island yields the highest percentage cover with 81.84 percent, followed by Barangay Manocmanoc and Yapak with 53.85 percent and 53.68 percent, respectively, according to the report on “Assessment, Mapping, and Delineation of Coastal and Marine Resources and Marine Protected Areas in Boracay Island, Malay, Aklan” which is subjected for regional review.

A team of professionals from the Dagatnon Environmental Consulting Services conducted the seagrass mapping and assessment in the island early this year. It was conducted in connection to the Coastal and Marine Ecosystem Management Program (CMEMP) that aims to manage, address, and effectively reduce threats of degradation on coastal and marine ecosystem for the sustainability of ecosystem services, food security, and climate change resiliency.
more……https://mb.com.ph/2020/08/13/new-seagrass-species-found-in-boracay-island/

Related articles
A new seagrass species thrive in Boracay Island (15 August 2020, Panay News)
https://www.panaynews.net/a-new-seagrass-species-thrive-in-boracay-island/

Biscayne Bay fish kill is a warning sign, researcher says (FL, USA)
12 August 2020, FIU News

A fish kill this week is a clear sign the health of Biscayne Bay is at risk, FIU Institute of Environment researchers said. Researchers set out Wednesday to survey Biscayne Bay between the 79th Street and Julia Tuttle causeways, where dead fish were seen bobbing along the surface.

Researchers believe fish were killed when the bay's saltwater became so hot, it could no longer retain oxygen in the amounts necessary for marine life to thrive. They are using an autonomous surface vehicle equipped with sensors to measure temperature, dissolved oxygen, turbidity and chlorophyll, which can be an indicator for algae. What they find could provide more details on the health of the bay. The vessel allows researchers to collect more data over a larger area.

Many factors over time have contributed to the current state of Biscayne Bay, said Piero Gardinali, a chemistry professor who is director of the institute's Freshwater Resources Division. Seagrass is dying, temperatures have been rising, nutrients have been entering the bay and there have been sewage leaks. After years and decades, all of these factors could have contributed to the fish kill. Students and faculty from the FIU CREST Center for Aquatic Chemistry and Environment will also collect samples to determine whether nitrogen, phosphorus or other potentially harmful nutrients or pollutants may have played a role. Results from the survey should be available the week of Aug. 17.

more…….https://news.fiu.edu/2020/biscayne-bay-fish-kill-is-a-warning-sign-researcher-says

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Scientists worry about larger marine life suffering in Biscayne Bay (12 August 2020, WPLG Local 10)
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Stingrays desperate for oxygen part of critical tipping point at Biscayne Bay (13 August 2020, WPLG Local 10)
https://www.local10.com/news/local/2020/08/13/stingrays-desperate-for-oxygen-part-of-critical-tipping-point-at-biscayne-bay/
'Unprecedented' Biscayne Bay Fish Kill Creates Rancid Smell Along Waterway Shorelines (13 August 2020, CBS Miami)
https://miami.cbslocal.com/2020/08/13/unprecendented-biscayne-bay-fish-kill-creates-rancid-smell-along-shores-of-the-waterway/
Thousands of Dead Fish Wash Up on Shores of South Florida's Biscayne Bay (15 August 2020, The Weather Channel)
https://weather.com/news/news/2020-08-14-thousands-of-dead-fish-wash-up-in-biscayne-bay-fish-kill
The Seagrass Died. That May Have Triggered A Widespread Fish Kill In Biscayne Bay (14 August 2020, WLRN)
https://www.wlrn.org/2020-08-14/the-seagrass-died-that-may-have-triggered-a-widespread-fish-kill-in-biscayne-bay
In race to prevent more fish kills, governments deploy pumps on Biscayne Bay shores (15 August 2020, Miami Herald)
https://www.miamiherald.com/news/local/community/miami-dade/article244991350.html
FWC Concludes Low Dissolved Oxygen Levels In Biscayne Bay Led To Massive Fish Kill (17 August 2020, CBS Miami)
https://miami.cbslocal.com/2020/08/17/low-oxygen-biscayne-bay-fish-kill/
Biscayne Bay Needs Better Pollution Rules, An Oversight Board And A Chief Officer, Task Force Says (18 August 2020, WLRN)
https://www.wlrn.org/2020-08-18/biscayne-bay-needs-better-pollution-rules-an-oversight-board-and-a-chief-officer-task-force-says
'Decades Of Warning Signs' Preceded Biscayne Bay Fish Kill (18 August 2020, WLRN)
https://www.wlrn.org/2020-08-21/decades-of-warning-signs-preceded-biscayne-bay-fish-kill
Green, brown algae water a murky mess in and around Biscayne Bay (21 August 2020, WPLG Local 10)
https://www.local10.com/news/local/2020/08/22/green-brown-algae-water-causing-murky-mess-in-and-around-biscayne-bay/
Miami Waterkeeper: North Miami algae bloom related to Biscayne Bay fish kill (21 August 2020, WSVN 7News)
https://wsvn.com/news/local/miami-waterkeeper-north-miami-algae-bloom-related-to-biscayne-bay-fish-kill/
FIU experts available to discuss Biscayne Bay (24 August 2020, FIU News)
https://news.fiu.edu/2020/fiu-experts-available-to-discuss-biscayne-bay
'Like Groundhog day': New report has same old findings on how to save Biscayne Bay (31 August 2020, FL Keys News)
https://www.flkeysnews.com/news/local/environment/article245306740.html
This summer, skip the fertilizer (11 August 2020, Florida Keys Weekly)
https://keysweekly.com/42/this-summer-skip-the-fertilizer/

12-foot dugong carcass washes ashore in Mannar (Sri Lanka)

11 August 2020, Ceylon Daily News

The carcass of a 12-foot-long dugong weighing 700kg washed ashore in Mannar, last Saturday. A group of fishermen had spotted it and informed the authorities. The carcass of the marine mammal had been caught in a net when it was discovered, and Fisheries officials believe that the net had been laced with poison.

It was also reported that Fisheries officials, together with the Wildlife Conservation Department, also seek to obtain a court order to conduct a postmortem on the cadaver. However, a senior official of the Fisheries Department, when contacted by the Daily News, said he was unaware of the proceedings.

Dugongs are considered a threatened species by the Union for Conservation of Nature (IUCN) and have been classified as 'Vulnerable to Extinction'. A small group of these marine herbivores are found in the Northwest waters of the island where seagrass is found, namely Palk Bay and the Gulf of Mannar.

more…….http://www.dailynews.lk/2020/08/11/local/225547/12-foot-dugong-carcass-washes-ashore-mannar

GICIA Update: Mercabo Cove Project showing signs of change (FL, USA)

07 August 2020, by Misty Nicholes, Boca Beacon

The GICIA's Mercabo Cove Project is showing signs of progress. Construction firm TSI Disaster Recovery along with Project Engineer and Manager, Hans Wilson of HWA, are keeping the project on schedule. At this time construction

continues, but once the hardscape is complete the planting of native plants and grasses will begin. The final phase of the restoration will be the installation of seagrass in the improved and restored Cove.

In recent weeks, nearly 13,400 cubic yards of fill has been trucked to the site and placed in the main channel. This has brought the depth of the main canal to a depth that is suitable for seagrass growth and regeneration. The flushing channel, which will connect the Cove to the bay allowing tidal flow and flushing of the cove area, is currently being excavated.

The GICIA's goal for the Cove, which is slowly coming to fruition, is to transform the basin area of this former industrial marine site into a marine sanctuary. The Mercabo Cove Project has been designed to ensure long term benefits including improved water quality, enhanced fish and bird habitat, reduced seawall maintenance costs and visually enhanced views of the preserve site. Construction began on March 2 and is right on schedule .
more…….https://bocabeacon.com/wordpress/news/gicia-update-mercabo-cove-project-showing-signs-of-change/

Florida Algae Blooms May Harm Places Where Fish Find Food (FL, USA)

06 August 2020, by Holly Binns, The Pew Charitable Trusts

The Indian River Lagoon in east Central Florida is one of the most biodiverse estuaries in North America—home to more than 4,300 species of plants and animals, including manatees, dolphins, roseate spoonbills, tarpon, and red drum. But in recent years, harmful algal blooms fueled by nitrogen pollution have taken a toll on this ecosystem and its resident wildlife. One of the worst blooms, in 2011, wiped out 32,000 acres of seagrass. That catastrophic event captured the attention of Michelle Shaffer, a University of Central Florida Ph.D. student in integrative biology who is analyzing the effects of seagrass loss in the Indian River Lagoon on predator fish and their forage fish prey.

She's found that in some places, populations of predator and prey fish have decreased since the decline of seagrass habitat in 2011. Seagrass hosts varieties of small prey fish, such as pinfish and mullet, also called forage fish. Larger fish such as snook and spotted seatrout visit the grasses to shelter, breed, and eat forage fish. Shaffer is also documenting the dietary needs of some of the larger predator fish and which of their prey depend upon seagrass. This research will help identify important foraging linkages between seagrass habitat and large predator fish, many of which are highly sought by recreational anglers.

The Florida native is creating an interactive mapping tool that will help the public and fishery managers track the abundance of predator and prey and how that correlates with seagrass coverage over time. Such data will help inform management decisions and allow the public to better understand how science can illuminate the workings of the lagoon, which contributes $7.6 billion to the state's economy through jobs and activities such as fishing, boating, and other water-related activities.
more…….https://www.pewtrusts.org/en/research-and-analysis/articles/2020/08/06/florida-algae-blooms-may-harm-places-where-fish-find-food

CONFERENCES

The 14th International Seagrass Biology Workshop (ISBW14) (Annapolis, Maryland, USA Summer 2022)

Theme: " Signs of Success "

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 an excellent opportunity for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest findings.

The ISBW14 Chesapeake Bay will be held in Summer 2021 at the Graduate Annapolis Hotel, Annapolis, Maryland. This will be the first time ISBW has been hosted in the U.S.A. and the iconic Chesapeake Bay is the logical setting. Chesapeake Bay is an iconic estuary with a strong scientific and management history. The resurgence of seagrasses (including brackish water submersed aquatic vegetation) in the bay is the largest documented in the world, and clearly a "sign of success" to inspire seagrass scientists globally.

More information:
To get important updates, visit: https://isbw14.org/
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14th International Coral Reef Symposium (ICRS 2020) (Bremen, Northern Germany, 2021).

Theme: Tackling the Challenging Future of Coral Reefs

The ICRS is the leading global conference on coral reef science, management and conservation, sanctioned every 4 years by the International Coral Reef Society (ICRS). For the first time in its history, an ICRS will be held in Europe. ICRS 2020 will be the key event to develop science-based solutions addressing the present and future challenges of coral reefs, which are globally exposed to unprecedented anthropogenic

pressures. The five-day program will present the latest scientific findings and ideas, provide a platform to build the essential bridges between coral reef science, conservation, politics, management and the public, and will promote public and political outreach.

Key Themes which include seagrass ecosystems:

Theme 3: Ecosystem functions and services
Theme 6: Unexplored and unexpected reefs
Theme 9: Global and local impacts
Theme 10: Organismal physiology, adaptation and acclimation

More information:
To get important updates, visit: https://www.icrs2020.de/

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 51,494 views to date)

Global distribution of seagrass meadows *https://www.youtube.com/watch?v=OPbmam_sitk*

Presentation on new scientific paper examining the global distribution of seagrass meadows by McKenzie, Nordlund, Jones, Cullen-Unsworth, Roelfsema and Unsworth *https://doi.org/10.1088/1748-9326/ab7d06*

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
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

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Future sampling dates *https://www.seagrasswatch.org/upcomingevents/*

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