



Seagrass-Watch e-Bulletin

Porthdinllaen, Wales, United Kingdom

31 March 2021

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Tipping Point (FL, USA)

31 March 2021, Florida Weekly

The sudden spike in manatee deaths this winter should cause concern for all Florida residents and visitors. While the images of dead manatees are shocking, their deaths are actually a symptom of a much larger ecosystem problem that imperils multiple facets of Florida's economy. The manatee mortality numbers this winter are largely driven by a die-off of seagrass meadows in the Indian River Lagoon (IRL). Seagrasses serve as the manatees' primary food source, so many of the manatees wintering in the IRL are starving to death. But seagrass beds do far more for Florida than just feed manatees, seagrass improves water clarity and provides shelter and food for juvenile redfish, sea trout, shrimp, bay scallops, crabs, lobsters and other species.

Dying seagrass floating in the water doesn't garner attention the way a floating, rotting corpse does, so the manatee serves as the 1,200-pound canary in the coalmine to alert us to the collapse of the seagrass ecosystem so critical to Florida's greater wellbeing. What is bad for manatees is bad for Florida, its residents and its economy. As of March 19, the Florida Fish and Wildlife Conservation Commission reports a total of 539 verified manatee deaths. Just 78 days into 2021, the state has already reached 85% of the 637 manatee deaths logged for the entirety of 2020. Of the last two decades, 2020 ranked as the fourth most fatal year for manatees, with 2013 the worst year with 830 deaths. However, 2021 has already amassed nearly two-thirds of 2013's death toll in under three months. January and February 2020 saw 143 manatee deaths, but the same two months this year saw deaths nearly triple to 416. Over the last decade, Lee and Brevard counties have consistently proven the deadliest for manatees.

Saving seagrass is the key, for manatees and more. "For 25 years, at least, it's been understood that if you really want to monitor the health of an estuary in Florida, look at the seagrasses," said Dr. M. Dennis Hanisak, research professor and director of the Marine Ecosystem Health and the Indian River Lagoon Observatory programs at the Harbor Branch Oceanographic Institute of Florida Atlantic University. "When the seagrasses are doing well, the implication is all of the things that depend on it, like fishes, crabs and manatees, are going to be in relatively good health. That's why there's been a lot of monitoring of seagrasses and why we know how much seagrass was lost in the lagoon."

[more.....https://fortmyers.floridaweekly.com/articles/tipping-point/](https://fortmyers.floridaweekly.com/articles/tipping-point/)

Related articles

'Likelihood of Extinction': Florida Manatees on the Brink of Dying Out Due to Starvation (12 March 2021, Nature World News)
<https://www.natureworldnews.com/articles/45426/20210312/likelihood-of-extinction-manatees-perishing-at-an-unusual-rate-in-florida.htm>

Florida's Poop Problem Is Killing Manatees (15 March 2021, The New Republic)
<https://newrepublic.com/article/161689/floridas-poop-problem-killing-manatees>

Manatees on Pace to Break Record for Number of Deaths in One Year (27 March 2021, WUSF News)
<https://wusfnews.wusf.usf.edu/environment/2021-03-27/manatees-on-pace-to-break-record-for-number-of-deaths-in-one-year>

US authorities probing alarming spike in manatee deaths (29 March 2021, RTL Today)
<https://today.rtl.lu/news/science-and-environment/a/1695231.html>

Florida manatees are dying in droves this year. Experts blame poor water quality, starvation (01 March 2021, Yahoo News)
<https://news.yahoo.com/florida-manatees-dying-droves-experts-120056812.html>

Qatar waters now boast the world's second largest dugong population (Qatar)

30 March 2021, Doha News

Qatar's waters are home to one of the largest herds of dugongs, with numbers of the shy and lovable marine mammal now reaching 840, marking the largest gathering of these aquatic animals in Qatar in three decades. The abundance of dugongs, is the result of a partnership between the Ministry of Municipality and Environment (MME), Qatar University (QU), and ExxonMobil Research Qatar (EMRQ). The ministry has been committed to protecting dugongs and has frequently visited areas where they are found to conduct research on the animals.

Doha's dugongs are part of a larger group found in the Arabian Gulf and is the second largest group in the world, second only to Australia. Qatar's dugong population is believed to have made its first appearance in the Arabian Gulf around 7,500 years ago, according to AlKuwari. But the aquatic mammal's species, the Sirenia family, dates back almost 60 million years. But Qatar's native sea cow is facing the risk of extinction. This is due to seagrass food sources being threatened by coastal development or industrial activities that contribute to water pollution. Another reason is that dugongs often become victims of accidental entanglement in fishing nets.

On Monday, Sheikha Almayassa bint Hamad shed light on the sea creatures after a visit to the dugong exhibition in the Qatari capital. "Qatar has one of the largest congregation of the Dugong and it's our responsibility to protect this habitat. How do we do this? 1) keep our water clean 2) look out for Dugongs when driving boats 3) not to throw fishing nets and other waste into the sea," the Qatari royal said.

[more.....https://www.dohanews.co/qatar-waters-now-boast-the-worlds-second-largest-dugong-population/](https://www.dohanews.co/qatar-waters-now-boast-the-worlds-second-largest-dugong-population/)

Shark Bay Festival to focus on Wirriya Jalyanu (seagrass) and restoration (WA, Australia)

30 March 2021, University News: The University of Western Australia

Next week's Wirriya Jalyanu (seagrass) Festival aims to raise awareness of the devastation to seagrass in the Shark Bay area (Gathaagudu) and restoration efforts by scientists from The University of Western Australia and Malgana Rangers. Wirriya Jalyanu (seagrass) is the dominant ecosystem in the waters of the Shark Bay World Heritage Area. A healthy seagrass ecosystem drives the productivity and cultural significance of the region. In 2011, the bay experienced a marine heatwave and more than 1,300sqkm of seagrass was lost or damaged. Professor Gary Kendrick, from UWA's School of Biological Sciences, said dramatic reductions in iconic and culturally significant species including green sea turtles, dugong, cormorants and sea snakes followed as the disappearance of seagrass meadows meant they lost their food and homes.

Researchers from The University of Western Australia partnered with Malgana Rangers to restore the unique marine environment. Senior Research Fellow Dr Elizabeth Sinclair, from UWA's School of Biological Sciences and Oceans Institute, said as part of the seagrass restoration project, UWA scientists and Malgana Rangers were working together to restore the two dominant species of seagrass in the Shark Bay world Heritage Area – wire weed (*Amphibolis antarctica*) and ribbon weed (*Posidonia australis*).

The Wirriya Jalyanu Festival combines knowledge of the Traditional Owners and western science and provides the local community of Denham and Gathaagudu the opportunity to celebrate seagrass and the animals that live among the seagrass through artistic, scientific and cultural activities for all ages.

[more.....https://www.uwa.edu.au/news/Article/2021/March/Shark-Bay-Festival-to-focus-on-Wirriya-Jalyanu-seagrass-and-restoration](https://www.uwa.edu.au/news/Article/2021/March/Shark-Bay-Festival-to-focus-on-Wirriya-Jalyanu-seagrass-and-restoration)

Carlsberg teams up with WWF to inspire, and help save seagrass (Wales, UK)

25 March 2021, WalesOnline

Carlsberg has released new research ahead of Earth Hour to mark the launch of its partnership with WWF, which inspires Brits to take actions that have the power to make a big impact on the environment. Carlsberg and WWF are now helping to restore the small but powerful plant, seagrass along the UK coastline. Known as 'an underwater Amazon', seagrass meadows can absorb carbon up to 35 times faster than a rainforest. Carlsberg is also playing its role; by removing plastic rings, Carlsberg Snap pack minimises the use of secondary packaging, it also minimises CO2 emissions.

To celebrate the Carlsberg and WWF partnership, Carlsberg has partnered with former England rugby player and father, Matt Dawson to inspire Brits to make small changes that will make a big impact on the planet.

The UK has lost over 90% of its seagrass meadows. By restoring these vital habitats that globally provide spawning, nursery and feeding grounds for sea life, we can help support the productivity of 20% of the world's biggest fisheries.

UK Director of Marketing at Carlsberg, Emma Sherwood-Smith, said: "We are proud to be working with WWF to create a better tomorrow for our planet, while helping consumers make a big difference by making one small change – simply by choosing Carlsberg. For every special edition pack sold, we will be donating 50p to WWF. It's small changes such as these that help us to make big changes for the planet, including restoring the small but powerful wonder plant, seagrass.

[more.....https://www.walesonline.co.uk/news/uk-news/carlsberg-teams-up-wwf-inspire-20253934](https://www.walesonline.co.uk/news/uk-news/carlsberg-teams-up-wwf-inspire-20253934)

Eelgrass will be restored using 1800 tonnes of sand (Sweden)

25 March 2021, Mirage News

Eelgrass meadows have declined dramatically on the Swedish west coast. The County Administrative Board of Västra Götaland and Gothenburg University are studying if coarse sand placed on top of the seafloor can help re-establish threatened eelgrass. "Covering the seafloor, which today consists of fine clay, with a 10-centimetre layer of coarse sand will reduce the cloudiness in the water. In this way, the eelgrass will receive more sunlight and hopefully survive and grow," says Per-Olav Moksnes, researcher at Gothenburg University who is leading the scientific work within the project.

The County Administrative Board of Västra Götaland and Gothenburg University will start the work in March 2021 in a shallow bay at the island of Lilla Askerön, municipality of Tjörn. A total of 10,000 square metres of seafloor will be covered with coarse sand. Once this is done, 80,000 eelgrass shoots will be planted by divers, in what will be the largest restoration attempt to date in Sweden. The shoots used will be collected from a healthy eelgrass meadow nearby," explains Beatrice Alenius, marine biologist at the county administrative board of Västra Götaland.

The measures are part of the County Administrative Board's work with environmental goals and action plan for marine environments to achieve good environmental status. The project is funded by the European Maritime and Fisheries Fund together with the Swedish Agency for Marine and Water Management.
[more.....https://www.miragenews.com/eelgrass-will-be-restored-using-1800-tonnes-of-534477/](https://www.miragenews.com/eelgrass-will-be-restored-using-1800-tonnes-of-534477/)

Scaling up on a shoestring while citizen scientists analyse the Great Barrier Reef (QLD, Australia)

25 March 2021, ZDNet

Due to the large geographical range of the Great Barrier Reef (GBR) -- roughly the same size as Italy -- researchers have only collected data regularly from approximately 5-10% of the reef. In a bid to ramp up data collection, conservation organisation Citizens of the Great Barrier Reef launched the GBR census project in November 2020. The project aimed to bring together stakeholders across tourism, including visitors and divers, science, research, and business to assist with capturing large-scale reconnaissance data from across the GBR.

Phase one of the project saw over 14,000 images collected of about 170 reefs across 680 different sites from the tip of Cape York to the remote southern Swain Reefs. Of those images, approximately 6,000 were submitted by vessels fitted with a Dell device purpose-built to capture images of the reef. Currently, those images are being analysed in real time as part of phase two of the census project. Involved in analysing the images are what the team described as "citizen scientists" who are playing their part to support conservation and coral recovery. Users are encouraged to select a reef image and "colour-in" where they see key elements, such as a coral, sand, and rubble. To date, just over 6,000 analyses have been completed by the public, while half of the images uploaded have also been analysed by researchers. The goal is to have all images analysed by the end of April.

"The endeavour behind citizens is we're trying to build a 21st century conservation organisation, so that requires that shared economy approach of how can you scale without needing billions and billions of dollars," Citizens of the GBR CEO Andy Ridley said. There are plans to launch a scaled-up census in October to survey at least 200 reefs on the GBR while testing the infrastructure's ability to capture reconnaissance data for another habitat, such as seagrass.
[more.....https://www.zdnet.com/article/scaling-up-on-a-shoestring-while-citizen-scientists-analyse-the-great-barrier-reef/](https://www.zdnet.com/article/scaling-up-on-a-shoestring-while-citizen-scientists-analyse-the-great-barrier-reef/)

UNSW receives nearly \$2 million in government funding for collaborative research (NSW, Australia)

25 March 2021, India Education Diary

Associate Professor Paul Gribben from UNSW Science will receive \$643,998 to investigate the role of sediment microbes in improving the health of threatened seagrass species across Australia and Singapore. Around Australia, an estimated five million hectares of seagrass beds in coastal and estuarine waters provide critical environmental and socio-economic services such as wave and storm buffering and enhancing water quality. It is expected the project will improve seagrass restoration outcomes utilising sediment microbes that can be integrated into management and policy.

[more.....https://indiaeducationdiary.in/unsw-receives-nearly-2-million-in-government-funding-for-collaborative-research/](https://indiaeducationdiary.in/unsw-receives-nearly-2-million-in-government-funding-for-collaborative-research/)

Biscayne Bay's Johnson's Seagrass a delicate, threatened species (FL, USA)

24 March 2021, Islander News.com

There are a variety of South Florida animals and species listed as endangered or threatened by the Endangered Species Act, but Johnson's Seagrass (*Halophila johnsonii*), which is unique to Biscayne Bay and the nearby coast, is the first and only marine plant listed. The main reason it's listed is because of habitat loss, according to the National Marine Fisheries Services.

NOAA Fisheries, which is responsible for the stewardship of the nation's ocean resources and their habitat, is actively involved in the rehabilitation of the endangered seagrass. The seagrass is threatened by population increases that cause pollution runoff into the waters where the plant lives. They are also destroyed by dredge-and-fill projects that degrade water quality, bury plants and redistribute sediment. Boating is another destructive factor. And in the Southeast, where the plant mostly grows, increasingly severe storms, the result of global warming, also threaten the plant.

The first attempt to get this tender little plant protected began in 1993. Johnson's Seagrass officially listed as threatened in 1998. In 2000, its habitat was listed as critical, and the area from Biscayne Bay up to Sebastian Inlet was designated its critical habitat. A recovery plan was begun in 2002. Despite its diminutive size, studies indicate that Johnson's Seagrass provides similar ecological and economic benefits compared to the larger seagrasses, such as being a food source, a refuge, and nursery for numerous wildlife species, according to NOAA's recovery plan for the plant.

[more.....https://www.islandernews.com/news/biscayne-bay-s-johnson-s-seagrass-a-delicate-threatened-species/article_36b1ae3e-8cbb-11eb-b0f9-7f1c9a4887ec.html](https://www.islandernews.com/news/biscayne-bay-s-johnson-s-seagrass-a-delicate-threatened-species/article_36b1ae3e-8cbb-11eb-b0f9-7f1c9a4887ec.html)

www.seagrasswatch.org

House panel approves seagrass mitigation bank measure (FL, USA)

23 March 2021, Florida Politics

Coastal developers could swap new marine projects for repairs to seagrass habitat in state-owned submerged lands under a bill approved Tuesday by a House panel Tuesday. Republican Rep. Tyler Sirois of Merritt Island pushed his measure (HB 1335) through the Environment, Agriculture and Flooding Subcommittee Tuesday with visions of improved seagrass estuaries up and down Florida's coasts.

"Seagrass is essential to the health and vitality of Florida's rivers, estuaries, and coastline. It serves as a habitat and food source for a variety of marine life including fish and manatees. Seagrasses are also essential to the protection of our shorelines during storm events because they prevent erosion," Sirois said. This Legislative Session marks the first time the idea of a state-run seagrass mitigation bank has reemerged since former Gov. Charlie Crist vetoed a similar measure in 2008. Since then, the comfort with state-controlled mitigation efforts and the imperative for seagrass restoration efforts have increased as a crisis of environmental health in Florida's seagrass estuaries has mounted, Sirois told the panel.

Still, the 13-3 vote included three Democrats, Reps. Ramon Alexander, Ben Diamond, and Omari Hardy, voting no. They expressed some concerns, as did Crist — a Democrat now but a Republican in 2008 — about state-owned sovereign submerged lands being used to offset private developments. There would have to be demonstrable public interest in those submerged lands, they argued. There also was the concern that giving developers the chance to pay for seagrass mitigation elsewhere could accelerate plans to destroy what exists now.

[more.....https://floridapolitics.com/archives/414252-house-panel-approves-seagrass-mitigation-bank-measure](https://floridapolitics.com/archives/414252-house-panel-approves-seagrass-mitigation-bank-measure)

Climate Activist In Mauritius Holds Worlds First Underwater Protest (Mauritius)

20 March 2021, Kalinga TV

In a first, a climate activist in Mauritius has protested while she is underwater. She is claimed to have this unique protest for the first ever time. In the remote stretch of western Indian Ocean the 24-year-old Mauritian marine scientist and climate advocate Shaama Sandooyea donned a snorkel and dived below the choppy waves to float in protest above the world's largest sea-grass meadow.

Holding a placard reading "Youth Strike for Climate" and "Nou Reklam Lazistis Klimatik" in Mauritian language, which means "We Demand Climate Justice" the climate activist held her breath under the water to fight the climate change. "We can't keep treading water on the climate crisis," says Sandooyea. "I've taken a stand here in this beautiful, remote area of the Indian Ocean to deliver a simple message – "We need climate action and we need it now," she added.

The area she did her protest is close to her home. She says, she felt compelled to become an activist from a young age after seeing how vulnerable this stretch of ocean was due to climate change and witnessing incidents like the recent oil spill in the area.

[more.....https://kalingatv.com/world/climate-activist-in-mauritius-holds-worlds-first-underwater-protest/](https://kalingatv.com/world/climate-activist-in-mauritius-holds-worlds-first-underwater-protest/)

Indian River Restoration Project (FL, USA)

18 March 2021, Hometown News

The City of Satellite Beach and its community partners are looking for volunteers during the months of March and April for a pilot project to help restore the Indian River Lagoon. The project involves re-building habitats in the lagoon by constructing oyster and clam reefs, and planting sea grass. The effort is being organized by the City of Satellite Beach and its community partners. They are starting on the west side of Samsons Island.

Samsons Island had a seagrass habitat on its west side in the past. In 2007 there were 35 acres of documented seagrasses there. Then in 2011 the 'super bloom' devastated the seagrass populations throughout the Indian River Lagoon, especially at that location. This restoration project aims to promote biodiversity by restoring three critical habitat-mosaics: oysters, clams, and seagrasses.

Constructing the three habitats together allows for greater resiliency at the project site, reducing the severity of the impacts from natural and urban influences.

[more.....https://www.hometownnewsbrevard.com/news/indian-river-restoration-project/article_0a9c7f1c-8721-11eb-bed5-ab5aa89f1cd3.html](https://www.hometownnewsbrevard.com/news/indian-river-restoration-project/article_0a9c7f1c-8721-11eb-bed5-ab5aa89f1cd3.html)

Related articles

Seagrass volunteers needed for Samson Island (25 March 2021, Hometown News)
www.satellitebeach.org/departments/recreation_department/volunteer_opportunities.php

Spring into action on Manatee Appreciation Day March 31 (USA)

18 March 2021, Fox 4

Spring into action to protect imperiled manatees with Adopt-A-Manatee® or by celebrating Manatee Appreciation Day on Wednesday, March 31, with Save the Manatee Club. The last Wednesday in March, Manatee Appreciation Day serves as a reminder to celebrate and safeguard these gentle giants who face various threats in the wild.

Unfortunately, many manatees in Florida have lost their lives this winter season to dwindling seagrass resources as well as cold weather. Despite their large frame, manatees actually have relatively little body fat compared to other marine mammals and are quite susceptible to cold water temperatures. Joined with the risks manatees face from watercraft collisions and entanglement, manatees need our appreciation and support more than ever.

Save the Manatee Club is commemorating Manatee Appreciation Day this year by sharing manatee facts, videos, quizzes, and Q&A sessions with experts online all day at savethemanatee.org/MAD, facebook.com/savethemanateeclub, and [@adoptamanatee](https://adoptamanatee) on Instagram. Save the Manatee Club also invites manatee lovers to Adopt-A-Manatee to support manatee conservation. Every adoptable manatee is a real, living manatee studied by research teams who provide updates on the manatee's whereabouts and behavior. Proceeds from the Adopt-A-Manatee program help fund many different manatee protection efforts, from advocating for protected warm-water and vegetation-rich habitats to supporting agencies and organizations that work together to rescue, rehabilitate, and release sick and injured manatees.

[more.....https://www.fox4now.com/news/protecting-paradise/spring-into-action-on-manatee-appreciation-day-march-31](https://www.fox4now.com/news/protecting-paradise/spring-into-action-on-manatee-appreciation-day-march-31)

DFW backs resolution against designation of coral critical habitat in CNMI (Guam)

19 March 2021, The Guam Daily Post

Division of Fish and Wildlife Director Manny Pangelinan testified in the House of Representatives on Tuesday in support of House Joint Resolution 22-2, which opposes the proposal of the National Oceanic and Atmospheric Administration-National Marine Fisheries Service to designate certain areas as critical habitats for threatened corals in U.S. waters. Among these areas are the near-shore waters surrounding Rota, Aguijan, Tinian and Tatsumi Reef, Saipan and Garapan Bank, Farallon de Medinilla, Anatahan, Pagan and Maug.

The National Marine Fisheries Service, or NMFS, stated in the Federal Register that comments regarding the proposal must be received by Jan. 26. In response, Department of Lands and Natural Resources Secretary Anthony Benavente asked the NOAA to conduct public hearings on Tinian, Saipan and Rota; extend the comment period for another 60 days; and provide detailed critical habitat boundaries on nautical charts with maps available for public review a minimum of 30 days before the end of the comment period.

Pangelinan, in his testimony, told House members that the NMFS "did a poor job" in putting together a proposal to designate critical habitat. The map for the critical habitat, he added, was done in an "overzealous manner, which does not consider to exclude areas such sea grass, managed areas" surrounding the CNMI. He believes that the process should be approached with best management practice. Pangelinan also said there are already many laws and regulations that provide for the protection and conservation of coral and its habitat.

[more.....https://www.postguam.com/news/cnmi/dfw-backs-resolution-against-designation-of-coral-critical-habitat-in-cnmi/article_c20d3d22-87ac-11eb-a468-972a0a05be26.html](https://www.postguam.com/news/cnmi/dfw-backs-resolution-against-designation-of-coral-critical-habitat-in-cnmi/article_c20d3d22-87ac-11eb-a468-972a0a05be26.html)

How Industrial Fishing Creates More CO2 Emissions Than Air Travel

17 March 2021, TIME

It's been well established by now that the agricultural systems producing our food contribute at least one fifth of global anthropogenic carbon emissions—and up to a third if waste and transportation are factored in. A troubling new report points to a previously overlooked source: an industrial fishing process practiced by dozens of countries around the world, including the United States, China, and the E.U. The study, published in the scientific journal *Nature*, is the first to calculate the carbon cost of bottom trawling, in which fishing fleets drag immense weighted nets along the ocean floor, scraping up fish, shellfish and crustaceans along with significant portions of their habitats.

According to calculations conducted by the report's 26 authors, bottom trawling is responsible for one gigaton of carbon emissions a year—a higher annual total than (pre-pandemic) aviation emissions. Not only does the practice contribute to climate change, it is extremely damaging to ocean biodiversity—the "equivalent of ploughing an old-growth forest into the ground, over and over and over again until there is nothing left" according to lead author Enric Sala, a marine biologist who is also National Geographic's Explorer in Residence. The study found that well placed marine protected areas (MPAs) that ban fishing would actually boost the production of marine life by functioning as fish nurseries and biodiversity generators capable of seeding stocks elsewhere. According to the study results, protecting the right places could increase the global seafood catch by over 8 million metric tons a year, despite the challenges of overfishing and climate change.

Bottom trawling, however, would have to stop, says Sala. While mangroves, kelp forests and seagrass meadows are good at capturing carbon, the bottom of the ocean, piled deep with marine animal debris, is a far greater carbon sink. But when the trawlers' weighted nets scrape the sea floor that carbon is released back into the water. Excess carbon in water turns it acidic, which is damaging to sea life. If, as a 2018 study on the economics of fishing the high seas points out, bottom trawling is the least profitable method of harvesting the ocean's bounty while producing the most carbon, it makes little sense for industry to continue, says Sala. Now, armed with the science along with the math, countries could conceivably put a halt to bottom trawling while selling the offsets to pay for marine protection.

[more.....https://time.com/5947430/bottom-trawling-carbon-emissions-study/](https://time.com/5947430/bottom-trawling-carbon-emissions-study/)

New Jupiter Inlet buoys alert boaters to fragile seagrass beds in Loxahatchee River (FL, USA)

17 March 2021, Palm Beach Post

For boaters, paddleboarders and swimmers passing through the Jupiter Inlet, five buoys markers will serve of floating reminders of nearby seagrass habitats. The informational markers and a sign were installed March 1 – which is World Seagrass Day – around a seagrass bed near Dubois Park. The installation is part of an effort to preserve and raise awareness of a resource vital to marine and wildlife species, Jupiter Inlet Foundation President MB Hague said.

The seagrass levels in the Loxahatchee River have declined for much of the past decade, but have steadily increased in the Jupiter Inlet, studies from the Loxahatchee River District show. In its most recent study conducted in October, the district found roughly an 89 percent average of seagrass. "You don't have to look far to realize that seagrasses are declining, certainly throughout many different areas of Florida, but also worldwide," said Bud Howard, director of information services for the district. Howard said it is difficult to determine what has led to the overall decline in the Loxahatchee River estuary. "It's a combination of factors. "It's everything from reduced water clarity that affects the amount of light that can get down to seagrasses. Boat traffic, I think has got to be part of the factor. There's bigger boats and more boats than have ever been in the Jupiter area."

Hague said that concerns raised by residents near the Jupiter Inlet prompted efforts to increase awareness about the presence of the waterway's seagrass beds. Through donations, sponsorships and a grant awarded by the town of Jupiter, the foundation secured more than \$10,000 to purchase the buoy markers and have them installed. "They used a very environmentally acceptable way of anchoring, because we needed minimal impact with a very small footprint going into the seagrass bed, and did not want anything like a concrete block that would drag along and harm the seagrass," she said. Hague said the foundation plans to continue its conservation efforts through public education. She urged boaters, swimmers, snorkelers and paddleboarders to use caution when approaching seagrass habitats.

[more.....https://www.palmbeachpost.com/story/news/local/jupiter/2021/03/17/new-jupiter-inlet-buoys-alert-boaters-fragile-loxahatchee-river-seagrass-beds/4709680001/](https://www.palmbeachpost.com/story/news/local/jupiter/2021/03/17/new-jupiter-inlet-buoys-alert-boaters-fragile-loxahatchee-river-seagrass-beds/4709680001/)

Everglades poised for a 'phenomenal' wading bird season with right water balance (FL, USA)

14 March 2021, Finger Lakes Times

South Florida is in for a "phenomenal" wading bird year after a record-breaking rainy season increased the amount of fish in historical nesting grounds while a dry winter has created the perfect conditions for nesting. As the water dries up in the northern marshes of water conservation areas and western marl prairies, large colonies of great and snowy egrets and wood storks that have already started nesting have been spotted during surveillance flights by the South Florida Water Management District.

"Now we are seeing the birds move to areas that are more in line with where they historically nested," said Lawrence Glenn, the district's water resources chief. The extraordinary wet season also freshened up coastal areas in Florida Bay, which has been hammered by seagrass die-offs and algae blooms that worsened with high salinity levels in the past few years. "This year we are seeing some of the freshest conditions we've had in a while," he said. "We are not worried about a seagrass die-off currently."

And better water conditions are helping the recovery of seagrass beds in the bay. Large areas of turtle grass, the dominant species in Florida Bay, were devastated by a die-off in 2015, and were again hammered by Hurricane Irma in 2017. That species is still sparse on the bay bottom, but shoal grass, which is considered a pioneer species, is quickly expanding and creating better conditions for overall seagrass recovery, Glenn said.

[more.....https://www.fltimes.com/news/nation/everglades-poised-for-a-phenomenal-wading-bird-season-with-right-water-balance/article_8e577071-c3c3-5817-bb54-e02a9f2a2812.html](https://www.fltimes.com/news/nation/everglades-poised-for-a-phenomenal-wading-bird-season-with-right-water-balance/article_8e577071-c3c3-5817-bb54-e02a9f2a2812.html)

'Forever plant' seagrass faces uncertain future (Spain)

14 March 2021, BBC News

The green, underwater meadows of *Posidonia* seagrass that surround the Balearic Islands are one of the world's most powerful, natural defences against climate change. A hectare of this ancient, delicate plant can soak up 15

www.seagrasswatch.org

times more carbon dioxide every year than a similar sized piece of the Amazon rainforest. But this global treasure is now under extreme pressure from tourists, from development and ironically from climate change.

Posidonia oceanica is found all over the Mediterranean but the area between Mallorca and Formentera is of special interest, having been designated a world heritage site by Unesco over 20 years ago. Here you'll find around 55,000 hectares of the plant. In the marine protected areas of Ibiza, there is even a clone estimated to have sprouted from a seed released into the seafloor 200,000 years ago. But despite its ability to live almost infinitely, *Posidonia* in the Balearics faces an ongoing threat from boats dropping their anchors which crush, tear and destroy the meadows. One study showed that between 2008 and 2012, *Posidonia* meadows in Formentera were reduced by 44% because of the impact of anchoring. The plant also grows extremely slowly. The damage caused by one yacht's anchor in a single day several years ago would take almost 1,000 years to restore.

Government action to protect *Posidonia* in the Balearics has been ramped up in recent years and public awareness of the importance of the species is rising. But some researchers believe that putting a financial value on the carbon that's locked up by *Posidonia* could release the funds to save it. This would be welcome news in Ibiza and Formentera. If the carbon that's already been sequestered by the seagrass increases in value, then it will pay to protect and even attempt to restore the *Posidonia* meadows.

[more.....https://www.bbc.com/news/science-environment-56378397](https://www.bbc.com/news/science-environment-56378397)

Protecting Hobsons Bay's coastline for future (Vic, Australia)

11 March 2021, *Mirage News*

The future of Hobsons Bay's iconic coastline and marine areas is in safe hands with the release of a draft report that will guide the management of these beloved spaces over the next 10 years. At its Council meeting on Tuesday 9 March, Council released the draft Hobsons Bay Coastal and Marine Management Plan (CMMP) for public exhibition from Monday 15 March to Sunday 11 April.

The draft plan, developed in accordance with the Marine and Coastal Act 2018 and Council's Climate Change Action Plan, will provide strategic direction to protect Hobsons Bay's coastline from erosion, storm surge and population growth, while enhancing it as a local asset. Management of coastal areas includes everything from mangroves, coastal swamps, saltmarsh, seagrass meadows, parklands, wetlands, waterways, beaches, flora, fauna and cultural sites.

Developed in consultation with the community and numerous stakeholder groups and agencies over the past two years, the draft CMMP and its vision are based on more than 10,000 separate items of feedback. Projects outlined within the draft CMMP are divided into short term, medium term, long term and ongoing and include: risk assessments of current coastal infrastructure to determine their fit for purpose rating and if they are able to cope with changes in sea level; ensure ageing infrastructure is effectively maintained, upgraded or replaced; the implementation of nature-based solutions to marine management; link in with Council's Urban Forrest Strategy to plant trees for shade and protection along the coastline; develop a marine and coastal citizen science monitoring program; and install interpretative signage.

[more.....https://www.miragenews.com/protecting-hobsons-bays-coastline-for-future-526593/](https://www.miragenews.com/protecting-hobsons-bays-coastline-for-future-526593/)

Egyptian authorities rescue dugong stuck in fishing net (Egypt)

09 March 2021, *Egypt Independent*

Egypt's Environment Minister Yasmine Fouad said on Monday that snorkeling guides in the Red Sea Protected Areas saved a dugong trapped in a fishing net in the Marsa Mubarak area near the city of Marsa Alam. A report was received from a tourist boat that there were fishing nets on the dugong's body in the Marsa Mubarak area around the tail area. Fouad immediately instructed crews to act quickly and take measures to save the dugong.

Immediately, a state of emergency was announced and snorkeling guides volunteered for the rescue operation. A net stuck on the animal's tail was finally removed. Marsa Alam is home to a small dugong population, and the city has many tourism companies that take tourists to watch and swim with the creatures.

[more.....https://egyptindependent.com/photos-egyptian-authorities-rescue-dugong-stuck-in-fishing-net/](https://egyptindependent.com/photos-egyptian-authorities-rescue-dugong-stuck-in-fishing-net/)

Seagrass meadows shrank by 92% in UK waters - restoring them could absorb carbon emissions (United Kingdom)

06 March 2021, *The Conversation*

New research uncovers the decline of another jewel in the UK's marine environment: seagrass meadows. Our study is the first to analyse all published data on this habitat in the UK, gathered from newspapers, diaries and other sources throughout history. We found that at least 44% of the UK's seagrass has been lost since 1936 – most of it since the 1980s. But when we modelled which coastal areas were likely to have been suitable for seagrass, we found that as much as 92% of it might have disappeared.

Thankfully, there are still 8,493 hectares (20,987 acres) of mapped seagrass in UK waters. But seagrass may have once covered 82,000 hectares of seabed – an area as large as 115,000 football fields. The first estimates of seagrass around the UK emerged in the 1930s. Descriptions and anecdotes suggest it was a common sight at the coast. Seagrass abounded in sheltered and protected spots, and there were plentiful populations in the lochs of Ireland and the west of Scotland. While accurate data on the past size and extent of seagrass meadows is rare, the information we do have paints a picture of widespread loss. The seagrass that has persisted is in a poor state – beset by pollution, coastal development, and disturbance from boating. These losses have numerous and complex causes, but most involve poor water quality resulting from sewage discharges and nutrients running off farmland.

Our findings highlight the massive opportunities in restoring these habitats. Reviving the UK's seagrass meadows could help fight the climate emergency, rebuild wildlife populations and put beleaguered fisheries back on a path to productivity. Work led by the WWF is replanting seagrass in West Wales, oysters are being laid in the Durnoch Firth and coastlines are being reshaped to encourage saltmarshes in Somerset. But these projects must aspire to a bigger vision of coastal biodiversity, mirroring achievements in the US. In Virginia, thousands of hectares of seagrass have been planted. This is the scale of ambition the UK needs. The evidence of its decline is stark, but seagrass was once common throughout UK waters and could be again. The opportunity for the restoration of this vital habitat is immense.

[more.....https://theconversation.com/seagrass-meadows-shrank-by-92-in-uk-waters-restoring-them-could-absorb-carbon-emissions-and-boost-fish-156459](https://theconversation.com/seagrass-meadows-shrank-by-92-in-uk-waters-restoring-them-could-absorb-carbon-emissions-and-boost-fish-156459)

Related article

Restorative aquaculture: seagrass (29 March 2021, The Fish Site)
<https://thefishsite.com/articles/restorative-aquaculture-seagrass>

Blue carbon: how three Australian marine sites lock away 2bn tonnes of CO2 (WA, Australia)

03 March 2021, *The Guardian*

Three of Australia's world heritage-listed marine sites have more than 2bn tonnes of carbon dioxide locked away in their vast seagrass meadows, coastal mangroves and tidal marshes, according to a new report from a UN agency. The three Australian sites – the Great Barrier Reef in Queensland, and Shark Bay and the Ningaloo coast in Western Australia – have almost 40% of the blue carbon stored across all world heritage sites, according to data in the report.

“These are real hotspots for blue carbon,” said Dr Oscar Serrano, a co-author of the report and a marine ecologist at Edith Cowan University in WA. Mangroves, tidal marshes and seagrass meadows around the world are known to have vast stores of carbon that have been accumulating for thousands of years. If left undisturbed, the carbon stays locked away in sediments. But Serrano said many areas were at direct risk from developments, as well as from rising sea levels and marine heatwaves.

The Great Barrier Reef holds the biggest stocks of blue carbon across all the 50 world heritage marine sites, according to the data: 1.8bn tonnes of CO2-equivalent (CO2-e). About 1.4bn tonnes is stored in the reef's 4.5m hectares of seagrass, and the rest in 207,000 hectares of mangroves and 186,000 hectares of tidal marshes. Shark Bay is estimated to store 164m tonnes of CO2-e, mostly in 342,000 hectares of seagrass. The Ningaloo coast world heritage area is holding on to 4.6m tonnes of CO2-e, also mostly in its 26,000 hectares of seagrass. The carbon stored in Australia's marine world heritage sites is about the same as four years of annual greenhouse gas emissions by the country. The Australian government is developing a methodology that would allow carbon credits to be generated for restoration projects focused on increasing blue carbon stocks in marine ecosystems.

[more.....https://www.theguardian.com/environment/2021/mar/03/blue-carbon-how-three-australian-marine-sites-lock-away-2bn-tonnes-of-co2](https://www.theguardian.com/environment/2021/mar/03/blue-carbon-how-three-australian-marine-sites-lock-away-2bn-tonnes-of-co2)

Related article

These 3 World Heritage marine sites store billions of tonnes of CO2 (10 March 2021, World Economic Forum)
<https://www.weforum.org/agenda/2021/03/unesco-marine-world-heritage-climate/>

Scientist warn about loss of Seagrass habitats (NC, USA)

02 March 2021, *WITN*

Scientists say seagrass habitats are declining in North Carolina. Seagrass plays a crucial role for many fish, crabs, and other shellfish, and it also does a lot more. Dr. Jud Kenworthy is a Seagrass Ecologist. He says seagrass is also important to protect our shoreline and estuaries. Dr. Joel Fodrie from UNC's Institute of Marine Sciences says that seagrass is very important although people may not realize it.

From 2006 to 2013, the Albemarle-Pamlico National Estuary Partnership surveyed parts of the states more than 100,000 acres of seagrass and noticed a nearly 6% decrease in the habitat. Scientists say many factors are contributing to the decline of the habitat but say water quality is one of the biggest. They hope that with their research they can better understand what it will take to protect and restore seagrass, not just here in North Carolina but along the entire Eastern Coast of the U.S.

[more.....https://apnep.nc.gov/](https://apnep.nc.gov/)

Drones brought in to protect marine life around Britain's coast (Wales, UK)

01 March 2021, by Joe Peskett, Commercial Drone Professional

Marine wildlife charity Project Seagrass has acquired fixed-wing drones to help protect sea life off the coast of Scotland. The two Swiss-made WingtraOne drones were supplied by Coptrz and will be used to map the coastal seascape from May.

Dr Richard Lilley, CEO Project Seagrass, said: "The recent development of high quality drones such as the WingtraOne is having a positive impact on the ability of scientists to map the habitats of the coastal seascape. "The combination of high quality satellite imagery, combined with detailed multispectral drone images, and habitat ground truthing, is significantly enhancing the detail with which scientists are now able to map coastal habitats.

The WingtraOne PPK VTOL is a fully autonomous drone specifically designed for long-distance surveying applications. The WingtraOne is capable of flying for up to 55 minutes and it has been designed to cover long distances. James Pick, UAV strategist for the Surveying Industry at Coptrz, said: "As Prime European Distributors of the Wingtra One, we are proud to be supporting projects like the Seagrass Project with training, supply of equipment and support. It is exciting to see the potential of drones being utilised by companies such as Project Seagrass." [more.....https://www.commercialdroneprofessional.com/drones-brought-in-to-protect-marine-life-around-britains-coast/](https://www.commercialdroneprofessional.com/drones-brought-in-to-protect-marine-life-around-britains-coast/)

Greenpeace to study biological diversity in Seychelles' waters along the Mascarene Plateau (Seychelles)

01 March 2021, Seychelles News Agency

Greenpeace International will carry out research in Seychelles' waters from February 27 to March 30 as part of an expedition within the Mascarene Plateau through which the island nation will learn more about its underwater life. The research will be done while the vessel – Arctic Sunrise – makes its transit towards the Saya de Malha Bank which is part of the Mascarene Plateau region between Seychelles and Mauritius.

The Saya de Malha Bank, which lies to the southeast of Seychelles, "constitutes one of the largest shallow tropical marine ecosystems on Earth. It is home to one of the few shallow water coral reef ecosystems in the high seas and contains the most extensive seagrass meadow in the world." The research's target is to collect information about the biological diversity present at the Saya de Malha Bank, following the scientific expedition visiting unique sites in the international waters of the Atlantic Ocean.

Through photographic and video surveys, seagrass meadows and coral reefs will be monitored. The marine megafauna is expected to be surveyed and possibly detected via passive acoustic monitoring, visual observations and photo identification. The length of time it will take to get the results of the research will vary depending on the type of research carried out. Michaud said that some information can be provided immediately while others will need to be analyzed and hence will take more time to acquire.

[more.....http://www.seychellesnewsagency.com/articles/14427/Greenpeace+to+study+biological+diversity+in+Seychelles%27+waters+along+the+Mascarene+Plateau](http://www.seychellesnewsagency.com/articles/14427/Greenpeace+to+study+biological+diversity+in+Seychelles%27+waters+along+the+Mascarene+Plateau)

Maritime communities celebrate World Seagrass Day (Fiji)

01 March 2021, FBC News

Maritime communities in Macuata today gathered in Korotubu Village to celebrate World Seagrass Day. Organised by C3 Fiji, several activities focused on raising awareness about seagrass and preserving our marine ecosystem was organized for the day.

C3's Senior Program Officer Maleli Qera says the seagrass has always been regarded as the Ugly Duckling of the ocean, with little to no recognition compared to other marine species. He says the seagrass is the 'pulse of the ocean' as it contributes to the largest percentage of oxygen supplies in the ocean that allows other living species to survive.

Chief Guest British High Commissioner, George Edgar, says the seagrass is important as a storage for carbon as a way of preventing further losses of greenhouse gases into the atmosphere. Edgar adds, he is pleased to see the awareness being conducted in the communities and although it might seem small scale, they do make a difference locally. March is marked worldwide as Seagrass Month and March 1st is celebrated as World Seagrass Day.

[more.....https://www.fbcnews.com.fj/news/maritime-communities-celebrate-world-seagrass-day/](https://www.fbcnews.com.fj/news/maritime-communities-celebrate-world-seagrass-day/)

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) (Virtual, 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 52,299 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.

www.seagrasswatch.org

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

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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.