



Seagrass-Watch e-Bulletin

Bahoi, North Sulawesi, Indonesia

30 September 2020

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NEWS

'Emergency' seagrass project to restore UK's underwater meadows (Wales, UK)

30 September 2020, by Aden-Jay Wood, CGTN

A team of UK scientists has launched an "emergency" seagrass restoration project to try to revive the country's underwater meadows. The group of marine biologists from Swansea University, backed by the World Wide Fund for Nature (WWF) and Sky Ocean Rescue, has embarked on a \$515,000 project named Project Seagrasses to restore

the meadows to their previous state. RAZOR's Jo Colan joined the team of scientists in Dale Fort, Wales as they began the first ever seagrass restoration replanting in the UK.

Richard Unsworth, one of the marine biologists in the team said: "Seagrasses have been decimated around the UK. We think that the UK has lost at least 90 percent of its seagrass. So it remains a scattered, fragmented habitat that used to be a very dominant part of the coast of the UK." Over the summer, the team collected more than 750,000 seeds from across the UK and then transported them back to the University's labs. The seeds were then washed and artificially vernalised (kept at a near-freezing temperature to mimic the winter season.) After that, the temperature was increased, allowing them to germinate, before they were put in bags and dropped into the sea. They used the help of children from a local primary school to help fill the bags with seeds, with the hope it will help the next generation get a better understanding of the importance of the process.

"Well, we face a growing climate emergency and we have to make important rapid steps as a planet to fight that emergency. Seagrasses store vast amounts of carbon in their sediments. And they do that very, very rapidly so it can stay and remain locked away for millennia. We also face a biodiversity emergency, where all populations of all major animals and plants on this planet are in decline," Unsworth explained.

[more.....https://newseu.cgtn.com/news/2020-09-30/-Emergency-seagrass-project-to-restore-UK-s-underwater-meadows-UbwPWrn2Mw/index.html](https://newseu.cgtn.com/news/2020-09-30/-Emergency-seagrass-project-to-restore-UK-s-underwater-meadows-UbwPWrn2Mw/index.html)

***Posidonia oceanica* habitats are slowly disappearing (Montenegro)**

29 September 2020, by Antonela Stjepčević, Total Montenegro News

While we are awaiting the designation of a protected area in the Katič Sea, habitats of the sea meadow *Posidonia oceanica* are slowly disappearing, claims NGO Green Home. The NGO, in cooperation with the Montenegrin Society of Ecologists (CDE) and the Mediterranean Center for Environmental Monitoring, conducted monitoring and analysis of the seagrass *Posidonia oceanica* in the waters of the future protected area in the Katič Sea. Monitoring was conducted at five locations in the space between the Black Cape and Cape Skočidevojka. Ecologists analyzed the *Posidonia* density, distribution to the seabed, lower population limit, and resistance to depth.

Analysis of the data obtained on the condition of the *Posidonia* meadows in the area of the future protected sea area in Katič shows that the situation is good, but not ideal. Particularly, regressive changes were observed, especially compared to 2010 measurements, according to the NGO Green Home. The markers of *Posidonia*'s settlement's borders, placed in 2010 in the seabed of the island of Sveta Neđelja, indicated that the area had been receding. It is most likely that the reduced transparency of seawater caused these regressive changes. In addition to soil leaching, there may be other negative impacts such as wastewater spills, meadow erosion due to anchoring or other physical loads, but also seawater flow, which is very pronounced in some locations - they point out in their statement.

To prevent further degradation of sea meadows, Green Home and its partners have defined recommendations for reducing and removing negative impacts on this critical marine habitat, and ensuring its protection. These recommendations include ensuring continuous monitoring of the state of *Posidonia*, elimination and reduction of negative anthropogenic influences, and the development of educational programs tailored to both local communities and tourists on the importance and protection of marine biodiversity. If we want to protect marine habitats that are in regression, Montenegro must declare the first protected area in the sea, which has been waiting for such a formal act for 13 years - Green Home reports.

[more.....https://www.total-montenegro-news.com/lifestyle/5894-posidonia-oceanica](https://www.total-montenegro-news.com/lifestyle/5894-posidonia-oceanica)

Endangered dugong found dead on Marsa Alam beach (Egypt)

28 September 2020, Egypt Independent

The Hurghada Environmental Protection and Conservation Association (HEPCA) has reported the discovery of a dead dugong at the beach on the Red Sea city of Marsa Alam. The animal was three meters long, 90 centimeters wide, and a male. It died after suffering a laceration to its head from a boat propeller, and its remains will be buried.

The Scientific Advisor to the HEPCA, Mahmoud Hanafy, said that the dugong is a vital part of Egypt's tourism industry with people coming from all over the world to see them. Hanafy, who is also a professor of Marine Sciences at the University of the Suez Canal, warned that the dugong population is highly vulnerable. He stressed that the HEPCA will cooperate with local authorities to push for stricter boating regulations, such as placing nets on propellers.

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/endangered-dugong-found-dead-on-marsa-alam-beach/](https://egyptindependent.com/endangered-dugong-found-dead-on-marsa-alam-beach/)

Thailand's sea bed in southern coast legally protected (Thailand)

25 September 2020, Xinhua

Thailand's Ministry of Natural Resources and Environment on Friday said that seagrass, coral reefs and undersea rock formations in Thailand's four southern coastal provinces are now legally protected. The ministry warned that violators found to disrupt the protected sea treasures will face one-year in prison and/or a maximum fine of 100,000 baht (3,167 U.S. dollars).

Seagrass, coral reefs and marine rock formations off Payam Island in Thailand's southern Province of Ranong, as well as the rock formations off Surat Thani, Pattani, Phang-Nga and Krabi provinces, have come under protection of the Marine and Coastal Resources Management Promotion Act, said the ministry. These areas are popular diving sites amongst tourists and professional divers. The act also bans dropping anchors by boats, feeding and catching marine life, and dumping garbage in these areas.

Chatuporn Burutpattana, the ministry's permanent secretary, said that if Thailand does not quickly come to the protection of the small patches of coral reefs, the seas around Thailand's coasts will become barren and devoid of any natural beauty. He also said that Payam Island in Ranong province, rich in coral reefs and sea grass, had been badly damaged by tourists and divers.

[more.....http://www.xinhuanet.com/english/2020-09/25/c_139396757.htm](http://www.xinhuanet.com/english/2020-09/25/c_139396757.htm)

Biscayne Bay reaches water quality crisis (FL, USA)

24 September 2020, by Brooke Harbaugh, Islander News

South Florida's waters and the industries that rely on it are at risk. Built on one interconnected system of estuaries and coasts, neighboring coastal towns can easily look toward each other for predictions and steps toward environmental restoration. Emma Haydocy, director of nonprofit Florida Bay Forever, in Monroe County, urges those in the Village of Key Biscayne to heed the August 10 fish kill in northern Biscayne Bay and to not wait any longer to take action.

In a recent letter to the editor for Biscayne Bay titled "Biscayne Bay a Warning for Florida Bay," Haydocy faults political inaction for such crises. The lack of political will and inaction on behalf of Florida Bay prevented the solution to hypersalinity in the dry season, implementation of (CERP) to take hold. What could have been 15 years of progress instead catalyzed the die-off of more than 40,000 acres of seagrass on Florida Bay. "

Rachel Silverstein, Ph.D, Executive Director of Miami Waterkeeper, a local nonprofit that monitors the health of Biscayne Bay, warns residents of an imbalance in the ecosystem in a recent consensus statement on their website. Silverstein outlined a solution. "Biscayne Bay is very sensitive to nutrient pollution," she wrote. "The remedy for the seagrass die-off, fish kills, and algae blooms must be addressed by curtailing sewage leaks, converting septic tanks to centralized wastewater treatment, cleaning and treating stormwater, and reducing fertilizer overuse". Haydocy, a former National Park Service ranger, says the collaboration between nonprofit professionals like herself and local businesspeople has been central to the restoration mission.

[more.....https://www.islandernews.com/news/biscayne-bay-reaches-water-quality-crisis/article_32886278-fe89-11ea-af04-3b67d339a025.html](https://www.islandernews.com/news/biscayne-bay-reaches-water-quality-crisis/article_32886278-fe89-11ea-af04-3b67d339a025.html)

Caribbean islands face loss of protection and biodiversity as seagrass loses terrain (Sint Maarten)

24 September 2020, by Royal Netherlands Institute for Sea Research, Phys.Org

Tropical islands have an important ally when it comes to battling storms and sea-level rise: seagrass. During hurricane Irma, an extremely powerful Category 5 storm that hit the North Caribbean in 2017, NIOZ scientist Rebecca James witnessed how native seagrass meadows along the coast of Sint Maarten held their ground, reduced coastal erosion and lowered the chances of flooding. In the years of research during her Ph.D., she saw the pressures on this natural storm protection increasing. In her dissertation, The future of seagrass ecosystem services in a changing world, James warns that further loss of these green meadows will leave tropical islands vulnerable and will exacerbate the negative effects of climate change

The flexible grass, that grows in shallow bays and lagoons throughout the Caribbean, is a natural wave dampener. As it sways back and forth, it removes energy from the waves, keeps the sand on the seafloor stable and, thereby, protects the beach against erosion. A healthy seagrass ecosystem depends on healthy neighbors. And the grasses suffer under the damage done to nearby coral reefs or inland mangroves. As the pressure on seagrass increases from different directions, the importance of an integrated approach to protection, conservation and restoration becomes clear. "My more recent research shows that overgrazing by turtles and an invasive seagrass species (*Halophila stipulacea*) that is currently spreading around the Caribbean, reduce the coastal protection services. This example shows the importance to match conservation efforts of turtles with conservation of their habitats, says James."

To mitigate the negative effects of climate change and protect the biodiversity in our oceans, there is a great need for the natural self-sustaining strategies that seagrass meadows provide. However, James warns that in ecosystems it is not that simple to get back what was once lost. She points out that "Only 37% of seagrass restorations have survived. Projects like these take time, money and support from local communities and stakeholders. Working in coastal areas, waves and storms can undo hours of intensive restoration labor." James urges that we need to act fast to improve the health of seagrass ecosystems.

[more.....https://phys.org/news/2020-09-caribbean-islands-loss-biodiversity-seagrass.html](https://phys.org/news/2020-09-caribbean-islands-loss-biodiversity-seagrass.html)

Dead dugongs washing ashore has Queensland community worried (QLD, Australia)

24 September 2020, by Eliza Goetze, ABC Wide Bay

A dead dugong that washed ashore on the Fraser Coast with a chain around its tail was originally "disposed of" after being caught in shark nets, the Queensland Government has confirmed. Fraser Coast community members raised concerns after several of the marine mammals washed up on shores and riverbanks around the region in recent weeks.

Fraser Coast Fishing Alliance chairman Scott Mitchell said the discovery of the chained dugong at Inskip Point over the weekend was "very sad". Mr Mitchell, who heads the recreational fishing organisation, said residents had also sent him photographs of two other dead dugongs sighted recently in the Mary River. "One dugong washed up on the mangrove line near Power Island, in the lower Mary River near River Heads," Mr Mitchell said. "A second dugong (was) found above the Mary River town reach, which is unusually high up to find those animals." A dead dugong was also photographed on the shore this week at Archies Beach at Bargara, near Bundaberg. But Fisheries Queensland said it had "no further evidence" about the cause of the death of three other dugongs found on Wide Bay beaches this month.

University of Queensland senior lecturer Janet Lanyon said spring was the most likely time to see dead dugongs washing ashore. It's the mating season — meaning more travelling and fighting among competitive males and more injuries. James Cook University professor Helene Marsh said the spate of dugongs washing up was unlikely to be a cause for concern. "There are probably a couple of thousand dugongs in Hervey Bay Great Sandy Strait area," Professor Marsh said. "Between 2000 and 2016, the population has been either stable or increasing slightly over that time." However, Fraser Coast Fishing Alliance's Scott Mitchell said he was concerned about the impact of nets, particularly commercial fishing nets, in the Great Sandy Marine Park Zone.

[more.....https://www.abc.net.au/news/2020-09-24/dugong-deaths-fraser-coast-queensland/12693996](https://www.abc.net.au/news/2020-09-24/dugong-deaths-fraser-coast-queensland/12693996)

Related articles

Four dead dugongs in Queensland "tragic and highly suspicious" (23 September 2020, Mirage News)

<https://www.miragenews.com/four-dead-dugongs-in-queensland-tragic-and-highly-suspicious/>

Dugong washes up on Archies Beach (19 September 2020, Bundaberg Now)

<https://www.bundabergnow.com/2020/09/19/dead-dugong-archies-beach/>

Restoring seagrass meadows in England (England, UK)

23 September 2020, by Emma Nolan, The Ecologist

Ocean Conservation Trust scientists and conservation practitioners based at the National Marine Aquarium in Plymouth are tending to tanks of rotting seagrass. Their work is a vital step in safeguarding this important habitat for future generations.

A widely distributed temperate seagrass species commonly referred to as eelgrass (*Zostera marina*) once formed extensive meadows around the coastal waters of the British Isles but are now categorised as being nationally scarce. Populations of *Z. marina* have declined from reduced water quality, coastal development and poor land use, including disturbance from marine activities. In the last 20 years, massive strides have been taken to slow the rate of loss and try to reverse the declining trend. However, seagrass meadows are not returning to the condition they were once in, and seagrass restoration is now thought to be the way forward in recovering the lost ecological function and ecosystem services seagrass meadows provide.

The Ocean Conservation Trust are partners in a large-scale marine restoration project to restore seagrass beds. The LIFE Recreation ReMEDIES project, Reducing and Mitigating Erosion and Disturbance Impacts affecting the seabed, will be the first of its kind to collect seagrass seed and cultivate and replant seagrass at this scale in England. A team of divers, scientists and conservationists at the Ocean Conservation Trust collected approximately 800,000 *Z. marina* seed this year. Picking the reproductive seed-bearing shoots of *Z. marina* by hand, the team spent 50 hours underwater. In a specially built cultivation facility, the seagrass is currently being held allowing the seed-bearing shoots to rot as they would naturally, the seed drop out, are separated from the vegetative material, cleaned and stored for replanting. Grown in small hessian bags, like sandbags, after approximately three months the seedlings can be transplanted back to the sea, to locations where they will have the best chance of success. Restoring seagrass beds in this way is a first for the UK, and the LIFE Recreation ReMEDIES project is planning to restore 8 hectares of seagrass bed in this way, growing tens of thousands of seedlings over the next three years.

[more.....https://theecologist.org/2020/sep/23/restoring-seagrass-meadows-england](https://theecologist.org/2020/sep/23/restoring-seagrass-meadows-england)

Dagger Island, seagrass restoration get \$250K boost (TX, USA)

16 September 2020, by Jane Kathleen Gregorio, Corpus Christi Business News

A system for protecting important seagrass beds in Redfish Bay around Dagger Island got a big boost of \$250,000 in September from the Coastal Conservation Association Texas and its national habitat program, the Building Conservation Trust. Redfish Bay has the northernmost extensive stands of seagrass on the Texas coast and is but one of three remaining bays that house all five species of native seagrass in Texas. The money will help the Texas Parks and Wildlife Department and Ducks Unlimited, the world's largest nonprofit waterfowl habitat conservation group, continue a TPWD-created protection master plan for the shoreline of Dagger and Ransom islands.

Dagger Island in Aransas Pass has been an iconic tourist and fishing destination for generations. Years of natural and manmade activities, however, have led to its erosion. What used to be a nearly continuous island that ran from the confluence of the Gulf Intracoastal Waterway and the Corpus Christi Ship Channel to Ransom Island in Redfish Bay has degraded into a chain of smaller islands, leaving large stands of seagrasses unprotected.

TPWD in partnership with Ducks Unlimited will design and oversee project construction. Together, the partners worked to enhance 5,236 acres of seagrass beds, intertidal wetlands, and coastal islands in the Redfish Bay State Scientific Area. The project to restore and protect portions of Dagger Island will help protect seagrasses and other essential wetlands from wave energy caused by winds and large-vessel traffic on the Corpus Christi Ship Channel. [more.....https://www.ccbiznews.com/news/dagger-island-seagrass-restoration-get-250K-boost](https://www.ccbiznews.com/news/dagger-island-seagrass-restoration-get-250K-boost)

Welsh seagrass meadow sows hope for global restoration (Wales, UK)

16 September 2020, by Paul Simons, The Guardian

Seagrass is a wonder plant but unrecognised and sorely neglected. It is an unsung hero in the fight to clean up carbon dioxide and the climate emergency. Seagrass also gives sanctuary to many marine wildlife and provides a nursery for 20% of fish species used by world fisheries. It protects coasts from erosion by absorbing wave energy, produces oxygen and helps clean the sea by absorbing polluting nutrients washed off the land.

Seagrass is in sharp decline across the globe and has almost disappeared from Britain's coast over the past 100 years, owing to developments of coastlines, pollution in the sea and damage from boats. But this year a restoration project got under way in Pembrokeshire, planting 1m seagrass seeds on the seabed at Dale Bay to create a 20,000 square-metre meadow.

The restoration programme by the University of Swansea, WWF and the Sky Ocean Rescue charity hopes the Pembrokeshire project will spur large-scale seagrass restoration projects elsewhere in Britain and in the world. [more.....https://www.theguardian.com/science/2020/sep/15/welsh-seagrass-meadow-global-restoration-pembrokeshire-climate-plant-project](https://www.theguardian.com/science/2020/sep/15/welsh-seagrass-meadow-global-restoration-pembrokeshire-climate-plant-project)

Indian River lagoon is pea-soup green, raising fears of another 'bloom of doom' (FL, USA)

15 September 2020, by Jim Waymer, Florida Today

Tiny single-celled algae have begun to cast a huge pea-soup green shadow over the Indian River Lagoon, setting the stage for a repeat of the massive fish kill four years ago, when dead sea life fouled canals and choked the lagoon during a smelly summer of environmental chaos.

The algae can block sunlight from seagrass. The cumulative nitrogen and phosphorus we contribute via leaky septic tanks, sewage spills, fertilizers and from tailpipes triggers the algae fallout. But wet weather can make it worse. So far, the current green algae bloom covers parts of the northern lagoon and Banana River. What happens in coming weeks with temperature and rains will dictate whether the lagoon region relives the severe fish kills of 2016. Excess algae consume oxygen dissolved in the water, killing fish and other marine life. The water management district is tracking the algae bloom and dissolved oxygen levels via sensors deployed throughout the lagoon, targeted samples of the algae, and ongoing sampling. Scientists also try to determine the extent of the bloom from satellite imagery when there are gaps in cloud cover and no glint from the water's surface.

Brevard's not alone with its recent algae onset. According to a weekly Florida Department of Environmental Protection report for the week of Aug. 28 to Sept. 3, algae bloom conditions were seen by the samplers at six sites in Florida. Satellite imagery for Lake Okeechobee and the Caloosahatchee and St. Lucie estuaries from Sept. 2 showed about 65% coverage of low- to high-algae bloom potential on the lake. No bloom potential was observed on the visible portions of either estuary.

[more.....https://www.floridatoday.com/story/news/local/environment/lagoon/2020/09/10/indian-river-lagoon-green-algae-raising-risk-big-fish-kill/5744718002/](https://www.floridatoday.com/story/news/local/environment/lagoon/2020/09/10/indian-river-lagoon-green-algae-raising-risk-big-fish-kill/5744718002/)

Seagrass paves the way for carbon-neutral Rotto (WA, Australia)

11 September 2020, by Michelle Wheeler, Particle

Scientists at ECU and UWA have measured the amount of carbon dioxide absorbed by seagrass meadows near WA's Rottneest Island. They conservatively estimated that seagrass absorbs about 810 tonnes of carbon dioxide every year. That's a cool 22% of the island's total annual carbon emissions.

ECU research collaborator Camila Bedulli, who led the study, says seagrasses are 'true' flowering plants. She says seagrass meadows, tidal marshes and mangroves collectively make up what's known as the 'blue carbon' ecosystem. And they're excellent carbon dioxide traps. "They have the capacity [to store] carbon dioxide 40 times faster than terrestrial forests," Camila says. But this hasn't always been well recognised. ECU marine biologist Dr Oscar Serrano says research into seagrass is about two decades behind forests on land.

Camila says seagrass is one of the world's most valuable ecosystems, also providing food, habitat and nursery areas for fish, turtles and dugongs. Seagrasses also play an important role in maintaining the soil structure. At Rottneest, Camila says historical boat moorings and anchors have destroyed some of the seagrass. She says the researchers have been working with the Rottneest Island Authority to restore these areas. Protecting and restoring Rottneest's seagrass could pave the way for the island to become carbon-neutral, Camila says. "This study is helping a lot to quantify how blue carbon is important and can be put into the framework," she says.

[more.....https://particle.scitech.org.au/earth/seagrass-for-a-carbon-neutral-rotto/](https://particle.scitech.org.au/earth/seagrass-for-a-carbon-neutral-rotto/)

Construction site wastewater contributing to Biscayne Bay problems (FL, USA)

10 September 2020, by Christina Vazquez, WPLG Local 10

Sediment is a contributing factor say water quality experts in the on-going fight to save Biscayne Bay. Since this summer's historic fish kill, a new resolution passed by the Miami City Commission on Thursday directs the city manager to investigate options to enhance penalties for construction permit holders caught violating code by dumping wastewater from construction sites into streets. Those dumping wastewater, which funnels through storm drains into Biscayne Bay would face steep fines.

Dredging and building-development sediment blocks light and makes it difficult for seagrass to grow, according to Rachel Silverstein, executive director of Miami Waterkeeper. "We have lost 80 percent of seagrass in some parts of Biscayne Bay," Silverstein said. "Like around the Julia Tuttle basin where we also happened to see this fish kill recently," she said. "You lose the seagrass you lose the eco-system."

In scuba gear, Silverstein dives to the bottom of the Bay where she shows dredging sediment from one project they've connected to the Port Miami expansion. Since the massive fish kill, she is also fielding citizen reports of building development sediment that shade and smother the seagrass. "We are absolutely getting flooded with reports of pollution and many of these incidents are coming from construction sites so we are getting lots of reports of sediment plumes getting out into the water, we are getting reports of illegal dumping," Silverstein said. "On a large-scale development, a thousand bucks for illegally dumping into the Bay is nothing — it is the cost of business. We need to up those penalties to actually deter bad behavior," said Miami Commissioner Ken Russell.

[more.....https://www.local10.com/news/local/2020/09/10/construction-site-sediment-dumped-into-drains-contributing-to-biscayne-bay-problems/](https://www.local10.com/news/local/2020/09/10/construction-site-sediment-dumped-into-drains-contributing-to-biscayne-bay-problems/)

Rare dugong found washed up on beach in southern Thailand (Thailand)

09 September 2020, One News Page

A rare dugong was found washed up on a beach in southern Thailand. Officials from the local marine center arrived at the scene after fishermen found the dead animal in Trang province on September 5. The 8.5ft-long female marine mammal had no visible injuries so they were baffled as to what could have caused its death. Director Narong Khoneiad from the Jao Mai Beach national park said it may be the first dugong to die in the country this year. The team took the Dugong's body back to the marine centre to perform a post-mortem examination.

Marine chief Santi Nilawat was assisted by veterinarian Piyarat Khumraksa and his staff in checking the dead animal's internal organs. They found a massive 700 grams tumour inside the marine creature's liver, suggesting that the animal died of natural causes. In Thailand, the death rates of dugongs decreased in the past two years as the numbers of seagrass, which they fed on, have also increased.

[more.....https://www.onenewspage.com/video/20200909/13334761/Rare-dugong-found-washed-up-on-beach-in.htm](https://www.onenewspage.com/video/20200909/13334761/Rare-dugong-found-washed-up-on-beach-in.htm)

Seagrass loss fuels carbon emissions: study (QLD, Australia)

07 September 2020, Mirage News

Action is needed to protect and restore disappearing local seagrass meadows. USC Senior Lecturer in Physical Geography Dr Javier Leon contributed to new modelling that found an increase in CO2 emissions equivalent to five

million cars each year has been caused by the loss of seagrass meadows around Australia's coastline since the 1950s. The collaborative study, led by the Centre for Marine Ecosystems Research at Edith Cowan University, calculated that since the mid-20th century around 161,150 hectares of seagrass had disappeared nationally, resulting in a two percent increase in Australia's annual carbon dioxide emissions.

The paper, published recently in *Global Change Biology*, was based on data derived from current research by ECU PhD student Cristian Salinas on carbon stocks of Cockburn Sound off the coast of Western Australia. Researchers used modelling to assess how environmental factors such as water depth, hydrodynamic energy, soil accumulation rates and soil grain size related to changes in soil carbon storage following seagrass loss. Dr Leon performed the analysis of spatial data and mapping for the project that including researchers from the International Atomic Energy Agency and Saudi Arabia's Red Sea Research Centre. He also contributed to wave modelling that showed without seagrass acting as a buffer, hydrodynamic energy from waves, tides and currents also played a significant role in causing carbon loss by moving the seabed sand.

Researchers found hydrodynamic energy from water movement was much higher in the shallow water and associated low levels of carbon were recorded in these bare areas. However, seagrass established in shallow waters was found to have significantly more carbon stored compared to those growing in deeper areas, highlighting the importance of preserving nearshore meadows. Dr Leon said there were wide-ranging local implications for the vast seagrass meadows stretching from Moreton Bay to the Fraser Coast.

[more.....https://www.miragenews.com/seagrass-loss-fuels-carbon-emissions-study/](https://www.miragenews.com/seagrass-loss-fuels-carbon-emissions-study/)

Warning over damage to marine life by huge loss of topsoil into the sea (England, UK)

05 September 2020, *The Cornish Times*

Soil that entered the sea as a result of a huge mudslide during last week's extreme rain could have a devastating effect on the seabed in the marine conservation zone, an environmentalist has warned. Last week's landslip during Storm Francis cut off access to a beach in Whitsand Bay as torrents of mud and water came off fields and over the cliffside road. The full potential impact of the loss of topsoil into the sea became evident later, said Claire Wallerstein of the Rame Peninsula Beach Care Group, when a red plume of sediment in the sea close to the site eventually spread across the whole bay.

The Whitsand and Looe Bay Marine Conservation Zone was designated to protect important species including the pink sea fan coral and the ocean quahog, a bivalve mollusc that can live for up to 400 years. Fields left bare through the winter on the Rame Peninsula already contributed to a similar event in February, said Claire, when mud from steep-sided maize fields ran off into watercourses and into the sea. Topsoil and slurry run-off from those events could cause smothering and algae growth, with impacts on the seagrass beds in Cawsand Bay – the very seagrass that plays a role in sequestering carbon and helping to mitigate against climate change. The UK has lost 95% of its seagrass beds in recent decades.

"Farmers obviously work incredibly hard and the last thing they want is to be losing topsoil or crops. And we all need to eat food, ideally much more of it locally grown," said Claire. "But there needs to be more focus on what's being grown, how and where, to help combat the impacts of extreme weather events. The world has lost half of its topsoil in the last 150 years and we need to hold onto it! Not only can it cause potentially serious problems in the marine ecosystem, but once it's lost we won't be able to get it back to grow our food.

[more.....https://www.cornish-](https://www.cornish-times.co.uk/article.cfm?id=127690&headline=Warning%20over%20damage%20to%20marine%20life%20by%20huge%20loss%20of%20topsoil%20into%20the%20sea§ionIs=news&searchyear=2020)

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Long Island Sound's Ecosystem Engineers (NY, USA)

01 September 2020, *fishersisland.net*

Eelgrass, or *Zostera marina*, is a type of seagrass found in the estuaries and coastlines of the northern hemisphere. Eelgrass around Fishers Island has been found growing up to 5 feet in length. With sunlight, clean, clear water and appropriate nutrient, temperature, and salinity levels, eelgrass will form extensive underwater meadows. These underwater meadows provide valuable benefits for marine organisms and people.

Seagrass meadows provide habitat for hundreds of species, including recreationally and commercially important fish and shellfish. Bay scallops, lobsters, winter flounder, summer flounder, tautog, striped bass, black sea bass and bluefish can all be found in eelgrass at various life stages and times of the year. A study by Pohle et al. published in 1991 showed that juvenile bay scallops have higher rates of survival in areas with denser meadows of eelgrass. Some animals, like sea turtles, Canada Geese and Brant (another type of goose) even feed on seagrass leaves. Because of their ability to create habitat for so many other species, eelgrasses are often called 'ecosystem engineers' and seagrasses are federally classified as Essential Fish Habitat (EFH). Other examples of EFH include wetlands and coral reefs.

When eelgrass is protected and conserved, many organisms benefit which in turn benefit coastal communities and economies, like Fishers Island. The island's eelgrass ecosystem supports commercial and recreational fishing opportunities. The beaches of Fishers Island are protected from storms by the eelgrass meadows just offshore that absorb the resulting wave energy. Without the 347 acres of eelgrass that surrounds us, Fishers Island could be a very different place.

[more.....https://fishersisland.net/long-island-sounds-ecosystem-engineers/](https://fishersisland.net/long-island-sounds-ecosystem-engineers/)

Early signs of recovery in marine habitats 'extremely encouraging'

01 September 2020, by Rod McLoughlin, Jersey Evening Post

Marine habitats – including seagrass and maerl – have been flourishing and demonstrate the benefits of protecting offshore areas. Sam Blampied, from the University of Plymouth, is currently collecting data to show the extent of these recovering marine habitats. She said that it was too soon to try to quantify the changes that have taken place so far, but she described the early signs as 'extremely encouraging'.

Marine protection means that fishermen are prohibited from trawling and dredging. The restrictions encourage the growth of valuable species like crab, lobster and scallops, which thrive in shallow waters. Miss Blampied said that it did not make commercial or ecological sense to allow lobsters to be dredged in the search for less valuable species. Charles Clover, director of environmental charity Blue Marine Foundation, said that marine protected areas could play a vital role in helping the Island become carbon neutral. The charity is working with the Société Jersiaise and government to monitor the recovery of threatened species which could help in carbon sequestration – one method of reducing the amount of carbon dioxide in the atmosphere. Mr Clover said that latest findings relating to seagrass and maerl showed how quickly the marine environment could recover when it was left alone and protected from harmful fishing practices like trawling and dredging.

The charity now intends to conduct an exercise to chart the probable impact of these so-called blue-carbon habitats on the Island's efforts to reduce its carbon footprint. Although one of the areas – the Minquiers – only received its protection designation in 2017, scientists have observed an increase in seagrass. The Blue Marine Foundation say that marine protected areas currently cover around 6.6% of the Island's territorial waters but that many areas, including those containing vital blue-carbon habitats, remain unprotected from trawling and dredging. Their research aims to build an evidence-based case for the creation of further MPAs, bringing benefits not just for marine life but climate change mitigation, recreation and local fisheries.

[more.....https://jerseyeveningpost.com/news/2020/09/01/early-signs-of-recovery-in-marine-habitats-extremely-encouraging/](https://jerseyeveningpost.com/news/2020/09/01/early-signs-of-recovery-in-marine-habitats-extremely-encouraging/)

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:

www.seagrasswatch.org

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 51,642 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](https://twitter.com/Seagrass_WSA)

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

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

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

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

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

FROM HQ

Past E-bulletins <https://www.seagrasswatch.org/ebulletin/>

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

Magazine <https://www.seagrasswatch.org/magazine/>

Virtual Herbarium <https://www.seagrasswatch.org/herbarium/>

Future sampling dates <https://www.seagrasswatch.org/upcomingevents/>

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