Seagrass-Watch e-Bulletin

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31 May 2021

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NEWS

IIT Roorkee researchers discover new fossils that show India was home to a variety of sea cows millions of years ago (India)

31 May 2021, India Today

IIT Roorkee researchers have discovered new fossils that show India was home to a variety of sea cows millions of years ago. Sea cows, or Dugongs, are an endangered species of marine mammals, which feed on seagrass in shallow coastal waters. Although protected in India under the Wild (Life) Protection Act, 1972, these rare animals are fighting for survival in the Indian waters including the Gulf of Kutch, the Gulf of Mannar and Palk Bay (Tamil Nadu), and the Andaman and Nicobar Islands.

World Dugong Day is celebrated every year on May 28 to create awareness about this growing threat to dugongs by human activities such as the destruction and modification of habitats, rampant illegal fishing activities, pollution, vessel strikes, unsustainable hunting or poaching, and unplanned tourism. Interestingly, while there is only one species of dugong today, there was an amazing diversity of these creatures in India in the pre-historic past.

Studies conducted at IIT Roorkee by Prof Sunil Bajpai and his students and collaborators on fossilized remains of dugongs from the Kutch region of Gujarat show that India was home to at least four different species including some very primitive ones that lived in this region about 42 million years ago, and another five species that thrived about 20 million years ago. “Ongoing studies show that the actual diversity could be even higher and India was a major centre of evolution and diversification in the past, not only for dugongs but also for other associated mammals such as whales,” said Prof. Bajpai, Head of the Department of Earth Sciences at IIT Roorkee.
more…….https://www.indiatoday.in/education-today/news/story/iit-roorkee-researchers-discover-new-fossils-that-show-india-was-home-to-a-variety-of-sea-cows-1809058-2021-05-31

How is an artificial mega dam putting Dutch ecosystems in danger? (Netherlands)

30 May 2021, by Sarah Tekath, Euronews

After several devastating floods in the early 20th Century, the Dutch government decided to build a massive artificial dam in the North Sea to protect the country from future floods. In the following decades, however, numerous negative effects on the marine ecosystem have become apparent - particularly for migratory fish and vital seagrass meadows. Now, new projects from environmental organisations in the Netherlands are aiming to restore balance to this ecosystem.

This artificial barrier turned the former saltwater Zuider Zee, into which several rivers flow, into today's freshwater Ijsselmeer, the largest lake in the Netherlands. With the help of sluices in the Afsluitdijk, this freshwater drains through the dam and into the North Sea. The Afsluitdijk has also affected the flora of the Wadden Sea, specifically the seagrass. Dr Laura Govers, ecologist, biologist and lecturer at the University of Groningen, has been studying this special plant since 2007. "Seagrass has almost completely disappeared in the Netherlands," Govers adds. That's why, since 2014, she has been working on a project to bring the marine plant back to the Dutch Wadden Sea.

For this purpose, Govers regularly travels to the Wadden Sea with her team and numerous volunteers to plant seeds. Scientists have developed a special method to prevent them from being washed away by the strong currents. “We collect the seeds from Germany in the fall, store them in artificial seawater that we produce ourselves during the winter, and then mix them with Dutch seabed in our laboratories in the spring. We put this mix into spray guns and plant the seeds in the seabed in the Wadden Sea." The method is proving successful. While there were 10,000 plants in 2018, she estimates, there are now 100,000, covering the equivalent of 170 hectares. "But to create a healthy ecosystem in the Wadden Sea, we certainly need another ten years."
more…….https://www.euronews.com/green/2021/05/31/how-is-an-artificial-mega-dam-putting-dutch-ecosystems-in-danger

Matt Baker 'reluctant' to take part in Countryfile segment: 'Is this alright?' (Wales, UK)

30 May 2021, by Charlie Milward, Daily Express

Matt Baker, 43, was on hand to host another informative edition of Countryfile and at the beginning of the programme, he was seen heading to Porthdinllaen in North Wales. The star of the BBC show was himself being educated about seagrass and how the plant life helps contribute to combatting climate change. However, as he got

dressed in the gear he needed to in order to inspect the water where the life form was growing, he told the guest he was speaking to that he was “reluctant” to take part as he didn’t want to cause any damage.

Arriving at Porthdinllaen Bay, the presenter met with Rob Parkinson, who works for the National Trust and who wants to safeguard the seagrass bed lying in the water. It thrives in the specific area of North Wales because of the sheltered bay and its ability to both capture and disperses carbon into the sediment it grows in. “It’s thought they capture more carbon than a tropical forest but up to 92 percent of UK seagrass has vanished over the last century,” Matt explained. “So the fight is on to protect and propagate what we have,” he added before both he and guest Richard Lilley, from Project Seagrass, were seen getting suited up to enter the water.

With Richard already in the shallow bit of the water, the presenter walked up to him and made his introductions. However, this is where Matt stipulated he was “reluctant” to get involved with the segment as he told the guest: “I feel quite reluctant to be walking on this [seagrass].” “Because, I know and appreciate how precious it is,” he added, with Richard replying: “You’ve heard some good things, yeah?” Matt asked the guest to talk about what they were doing in the water and he said they were taking part in an international program task.
more…….https://www.express.co.uk/showbiz/tv-radio/1443337/Matt-Baker-reluctant-Countryfile-seagrass-climate-change-North-Wales-BBC-video

How the pandemic's helped Tor Bay's seagrass beds - which are home to seahorses (United Kingdom)
28 May 2021, by Andrew Kay, Free Radio

Research into Tor bay's seagrass suggests it's benefited during the pandemic because of fewer boats and marine traffic disturbing it - and work is now underway to ensure the beds continue to thrive. Wild Planet Trust are working to understand and support the seagrass in Tor Bay. They have teamed up with Totnes-based Valeport for a research and monitoring project.

Dr Tracey Hamston, a Conservation Officer at Wild Planet Trust, said: "We've got about six or so seagrass beds in Tor Bay and they are part of the marine conservation zones so they're a designated feature within that zone so they're recognised as being important enough to have that layer of protection. "A recent survey of the seagrass meadows, conducted in October 2020, indicated the seagrass may have benefited from a quieter period of marine traffic, in the spring and early summer of 2020 due to the pandemic.

"Although the seagrass areas in Tor Bay are voluntary no anchoring zones, Wild Planet Trust is actively looking to encourage water enthusiasts and boat users to respect the seagrass by not anchoring at the known seagrass locations and use permitted moorings." Work is now underway to create new eco moorings, Dr Tracey Hamston added: "We are very excited about the prospect of introducing new eco-mooring hopefully, this summer if funding is approved. "These new environmentally friendly moorings will allow boat users to moor up, whilst protecting the seagrass below and allowing the seagrass currently damaged by traditional anchorage methods to recover.
more…….https://planetradio.co.uk/greatest-hits/devon/news/how-the-pandemic-helped-tor-bay-seagrass-beds-which-are-home-to-seahorses/

The marine gardeners reforesting our seas (Greece)
28 May 2021, by Yiannis Elafros, www.ekathimerini.com

Just like our forests, which are being lost at an alarming rate, our valuable seagrass meadows also need to be looked after and reforested to stem the progression of their degradation and destruction. This is why the work being done by a team of “marine gardeners” working on a Hellenic Center of Marine Research (HCMR) program for the revival of Greece’s seagrass meadows is so important.

The program has started with the Amvrakikos Gulf in northeastern Greece, an area declared a national park for its enormous wealth of biodiversity, both on land and at sea. “The plant coverage of the ocean floor has receded gradually, leading to its complete disappearance in some parts. One of the immediate effects has been a significant reduction in fish populations,” HCMR researcher Sofia Reizopoulou tells Kathimerini. According to the experts, pollution from chemical fertilizers, livestock farming and fish farming are the key culprits behind this environmental degradation, but hydroelectric dams have also interrupted the flow of fresh water into the sea, upsetting hydrological conditions.

The HCMR program is part of a larger European Union effort called Life-Transfer and the Greek institute has teamed up with several European universities, as well as working with the Amvrakikos Gulf – Lefkada Management Body for the reforestation of the area’s lagoons. The focus of the program is to transplant meadows of Zostera noltii, Cymodocea nodosa and other types of seagrass that grow in the area. “We started in a pilot phase at the Logaros lagoon, recording the environmental conditions, mapping the meadows, taking samples and training the fishermen who will be contributing to the project. The aim is to start the transplantations in September or October. We’ll begin in areas where coverage is sparse but not entirely gone, while we’ll also be studying the quality of the areas where we

will be getting the transplant material from," Reizopoulou, who is the project's scientific supervisor, explains. The plan is to finish with Logaros by 2025.
more…….https://www.ekathimerini.com/society/1161910/the-marine-gardeners-reforesting-our-seas/

Seagrass gains could help improve health of Indian River Lagoon (FL, USA)
27 May 2021, by Greg Pallone, News 13 Orlando

The Sebastian Inlet District says its 145-acre shoal found a 6-acre increase in seagrass from 2019-2020. "It does represent that seagrass may be recovering, specifically in our area," says James Gray of the Sebastian Inlet District. "From the die off in 2012, we are seeing a gradual increase."

In 2008, the district marked off six shallow-water shoals around the inlet with caution signs to try to keep boaters' props from destroying seagrass. "From 2019-2020 we had no prop scarring recorded," he says. "Before, we had dozens of them."

Spring Hill's Sue Herron frequently fishes all over the Sunshine State. On a recent visit to Sebastian Inlet, Herron and her husband learned good news about the area where they cast their lines. Herron says bring on the fish, and keep up the good work protecting the waterway. "I'm very impressed with it," Herron says.
more…….https://www.mynews13.com/fl/orlando/news/2021/05/27/seagrass-gains-could-help-improve-health-of-indian-river-lagoon

Related article
Seagrass Profits May Help Indian River Lagoon's Health (27 May 2021, BollyInside)
https://www.bollyinside.com/news/seagrass-profits-may-help-indian-river-lagoons-health

Côte d'Azur cities pledge 2.7 million euros to protect Mediterranean seagrass (Monaco)
25 May 2021, by Alizée Mosconi, Monaco Tribune

A 2.7 million euro budget and 11 projects, six of which are on the Côte d'Azur. The Mediterranean Interregional Commission is supporting several initiatives along the French Riviera aiming to reduce the impact anchors are having on seagrass. Seagrass plays a big role in reducing air pollution. By absorbing large amounts of CO2 from the sea, they help remove this gas from our atmosphere. Over in Corsica, 10 to 15% of all carbon emissions are stored by these underwater species.

However, these Mediterranean seagrasses are now facing considerable threats. As increasing urbanisation eats away at the coastline and pollution worsens, sea grass is now also being uprooted by ship anchors as they scrape along the seabed. Due to their slow rate of growth, gaining just one metre in size every 100 years, once this vegetation is damaged, it takes a very long time for it to grow back.

Faced with these threats, local governments along the Riviera are working together as part of the Mediterranean Interregional Commission in order to protect this marine environment. Several communes in Corsica, as well as Antibes, Hyères and Port-Cros National Park, have all agreed to designate specific anchoring zones and put buoys in the sea, as they pledge to develop a more environmentally friendly approach to anchorage.
more…….https://www.monaco-tribune.com/en/2021/05/cote-dazur-cities-pledge-2-7-million-euros-to-protect-mediterranean-sea-grass/

Affinity Water awarded grant for initiatives (England, UK)
25 May 2021, Harwich and Manningtree Standard

A water supply company has been awarded more than £300,000 for its initiatives which seek to improve the efficiency and resilience of its water supplies. Affinity Water, which serves the Tendring district, received the £200m as part of a new challenge which sought to push key players in the water industry to collaborate on environmental fronts. And Affinity Water's two winning schemes were awarded the money after collaborating with other companies, UK universities and Government agencies.

Its Seagrass Seeds of Recovery initiative was awarded £249,791 and it will look to explore innovative solutions which will contribute to tackling the global challenges of climate change and biodiversity loss. It will use nature-based solutions to restore seagrass and improve estuaries and coastal waters by increasing biodiversity and absorbing carbon and nitrogen emissions. The project, it is hoped, will help Affinity Water and other companies in the sector to achieve net zero operational carbon emissions by 2030.
more…….https://www.harwichandmanningtreestandard.co.uk/news/19326357.affinity-water-awarded-grant-initiatives/

Farmers encouraged to embrace regulations and become stewards of our Reef (QLD, Australia)
25 May 2021, Mirage News

As the latest set of Reef Regulations come into force on 1 June, the Australian Marine Conservation Society is encouraging farmers and graziers in northern Queensland to continue to embrace the new rules for the sake of our

Great Barrier Reef. The latest set of regulations, which began rolling out in 2019, allow for the expansion of agriculture in the Reef catchment while ensuring new activities don't result in further degradation of Reef water quality.

Jaimi Webster, Great Barrier Reef Water Quality Manager at AMCS, said the Reef Regulations can provide farmers and graziers with opportunities to scale up their practices, while benefiting our Reef, its marine wildlife and the industries like tourism which rely on a healthy Reef. Some industry bodies have embraced the change and used the regulations to develop Best Management Practice programs that not only meet the needs of the industry, but also meet the regulations. For those already accredited against a recognised Best Management Practice program, complying with the latest regulations will not be much extra work. For those not BMP accredited, scaling up to those standards will bring benefits to their farms and our Reef, Ms Webster said.

Inshore reef habitats like seagrass are increasingly threatened by the amounts of fertilisers and sediment flowing from agricultural lands in the adjacent catchments. "Sediment in the water reduces the sunlight available to seagrasses and inshore corals and can smother and kill them. Excess nutrients are an additional stress factor for many coral species and can result in harmful algal blooms, which is a food source for juvenile crown-of-thorns starfish.
more…….https://www.miragenews.com/farmers-encouraged-to-embrace-regulations-and-565701/

A cleaner Tin Can Inlet is in sight (QLD, Australia)
24 May 2021, Rainbow Beach Cooloola Coast Community News

Cooloola Coastcare has received a Gympie Regional Council Environmental Levy Grant to commence Tin Can Inlet Rehabilitation Stage 2. This is part of a long-term project that started in 2017 with the Cooloola Underwater Biodiversity Assessment and has continued every year, edging closer to addressing one of the main culprits for sediment and loss of sea life in Tin Can Inlet.

Based on the scientific report by the marine biologist, a group of 16 key stakeholders from state government, council, community groups, fishing industry, recreational fishers and boaters and the public identified the first step should be changing the moorings for Environmentally Friendly Moorings. They are working to secure state government funding for this process, to replace damaging block and chain moorings.

The goal is to create a cleaner Tin Can Inlet with thriving fish stocks and a healthy dugong population who depend on the seagrass for food. Volunteers are needed over the next few months to assist in building a specially designed sled with cameras for mapping the seagrass and deploying it in the Inlet from a boat around the nine mooring fields.
more…….https://rainbowbeachcommunitynews.com.au/a-cleaner-tin-can-inlet-is-in-sight/

Feel Good Drinks claims first for UK soft drinks by becoming climate positive (United Kingdom)
22 May 20213, by Daniel Selwood, The Grocer

Feel Good Drinks has become climate positive – in what the Nichols incubator brand claims is a first for the UK's soft drinks category. The business' achievement came by offsetting more than twice the 206 tonnes of carbon it produced in 2020. Working with sustainability certification provider Planet Mark, Feel Good used the likes of Gold Standard's clean water programme and the CommuniTree reforestation initiative to offset 497 tonnes of carbon.

The Lyme Regis brand has made a long-term commitment towards tackling climate change, underpinned by a nine-year action plan. Feel Good said it intended to be climate net zero by 2030 across its direct carbon emissions, indirect emissions from the likes of generation of the energy it uses and "all other indirect emissions that occur in a company's value chain". Feel Good hoped "to not only help protect the natural environment that gives us so much but also educate consumers as to how we can mitigate the issue and protect our planet" he added.

It comes after Nichols relaunched Feel Good in January as a separate incubator business with a focus on sustainability. At the same time, the brand unveiled its '3% for People and Planet Fund' – which donates 3% of sales to charities and non-profits that support personal and planetary wellbeing. They include Project Seagrass, which seeks to protect and restore seagrass ecosystems. "Authentic partnerships are important to us, and so we are genuinely looking forward to working with Feel Good Drinks towards a world in which seagrass meadows are thriving, abundant and well managed for people and planet," said Richard Lilley, co-founder & CEO of Project Seagrass.
more…….https://www.thegrocer.co.uk/sustainability-and-environment/feel-good-drinks-claims-first-for-uk-soft-drinks-by-becoming-climate-positive/656363.article

Saving the Bay: VIMS researchers work to reverse declining seagrass in Lynnhaven and Chesapeake Bay watershed (VA, USA)

20 May 2021, by Alex Littlehales, 13newsnow.com WVEC

The warmer weather also comes with warmer water, warm enough for Enie Hensel and her team to venture out to the Broad Bay beside First Landing State Park in Virginia Beach. “Seagrass used to be everywhere, essentially lining shorelines," Hensel said, a postdoctoral researcher at Virginia Institute of Marine Science. On a two-acre plot in Broad Bay, Hensel’s team is currently testing two different kinds of seagrasses: *Zostera* and *Ruppia*. In collaboration with the U.S. Army Corps of Engineers, Hensel and her team are working to reverse what she calls a massive decline in seagrasses throughout the Chesapeake Bay watershed.

In the Chesapeake Bay Foundation's State of the Bay report, "underwater grasses" received a "D-minus" grade. The report is based on 13 environmental factors to provide a snapshot of the Bay's current environmental conditions. Underwater grasses are one of the several categories that are either failing or close to it. Pollution and climate change have played a major part in a once bountiful resource now depleted, Hensel says.

A decline in underwater seagrasses can lead to other environmental troubles, according to Hensel, like water clarity levels, erosion, and more. “We’ve been interested in the Lynnhaven and Broad Bay area for many years," says JJ Orth, a long-time professor with VIMS. He says it's a years-long issue they've been working to fix, by testing not only if restoration is possible but the best way to do it. On a field day in April 2021, Hensel's team collected data from seeds planted in the fall of 2020, while also planting another round of seagrass seeds. Hensel says so far, they've observed that grasses have taken root, an optimistic finding that shows seagrass restoration in the Lynnhaven River system and Chesapeake Bay watershed is possible.
more…….https://www.13newsnow.com/article/tech/science/environment/saving-the-bay-vims-researchers-reverse-declining-seagrass-watershed/291-342ad5f7-92ed-4952-a286-1433ee643b65

Resilience and adaptability the key to Harbour health, says new report (WA, Australia)

20 May 2021, Media Statements

Water Minister Dave Kelly today released the Oyster Harbour (Miaritch): Condition of the estuary 2016-19 report on three years of water quality monitoring. The report summarises the main drivers of estuary health (flow and catchment condition), and the response of the estuary in terms of water quality and seagrass habitat.

Covering an area of 15.6 square kilometres, Oyster Harbour is also known as Miaritch in Menang Noongar language. Water quality and seagrass cover in Oyster Harbour declined in the late 1970s and 1980s due to catchment clearing and excessive nutrient inputs. Seagrass has recovered remarkably well in the past 20 years because of improved catchment management activities and significant seagrass transplanting, leading to better water quality.

The Report recommends management should continue to focus on building resilience and adaptability where possible. As part of the McGowan Government's $25 million investment in the Healthy Estuaries WA program, $7 million has been allocated over four years to help improve water quality and restore the values of three south coast estuaries - Oyster Harbour, Wilson Inlet and Torbay.
more…….https://www.mediastatements.wa.gov.au/Pages/McGowan/2021/05/Resilience-and-adaptability-the-key-to-Harbour-health-says-new-report.aspx

Northern Ireland's marine carbon stores help fight climate change (Northern Ireland, UK)

18 May 2021, by Conor Macauley, BBC NI

Carbon stored in Northern Ireland's marine and coastal environment can help play an important role in the fight against climate change. That is according to a new report by Ulster Wildlife. It found that salt marshes, seagrass and seabed sediments can store more than 30,000 tonnes of carbon a year.

Many habitats performing this function are not in protected marine areas, like Rathlin Island or Strangford, Belfast and Carlingford loughs. With careful management they could have the potential to do much more - perhaps even tripling their carbon storing capacity. In order for them to reach their full potential, they need to be protected and restored, and new ones developed.

Some 1,550 sq miles (2,500 sq km) of Northern Ireland's marine environment is protected, but in most cases detailed conservation plans are not yet in place. Ulster Wildlife said the report showed the importance of designating new protected areas and setting up pilot projects to establish how carbon could be most effectively sequestered in them.
more…….https://www.bbc.com/news/uk-northern-ireland-57152059

Group calling for FDEP to ban cruises from using southern dock on Cayo Costa (FL, USA)

17 May 2021, by Rob Manch, Fox 4

An environmental group says cruises are destroying part of Cayo Costa Island. The group “Save Cayo Costa” has started a petition to get the state to ban large boats from using the island’s southern dock. “It’s the wrong place to drop people off. No facilities, no bathroom, no park staff, no monitoring endangered species habitat," said Dick Anderson, a member of Save Cayo Costa. The group's petition to ban the cruises already has more than 2,000 signatures.

“The grass flats can be destroyed when large 45-foot boats with twin engines bring thousands of people there every year," said Anderson. Those sea grasses provide a breeding ground for fish, and food for sea turtles and manatees, but Armstrong said the island itself is being damaged as well. Back in 2016, the Florida Department of Environmental Protection (FDEP) put out a report that included a graphic, showing the damage to the sea grass in red around the southern coast of Cayo Costa. But at the bottom of the report, it said “There appears to be adequate water for ingress/egress from Captiva Pass to the dock without impacting sea grass beds.” So Captiva Cruises, which is the main company serving the island, continues to use the southern dock.

more…….https://www.fox4now.com/news/protecting-paradise/group-calling-for-fdep-to-ban-cruises-from-using-southern-dock-on-cayo-costa

Brevard's politicians see no quick fix to stopping the manatee famine (FL, USA)

14 May 2021, by Jim Waymer, Florida Today

Brevard's politicians are at a loss about what immediate measures can be taken to stop the man-made seagrass famine that is threatening manatees throughout Florida with mass starvation. But all agree that it's time to rethink how Florida and the county are addressing the problem of the Indian River Lagoon, home to the state's largest manatee population, and now its most horrific sea cow mass graveyards.

Millions in state and local money is already on its way to help the Indian River Lagoon in 2021, but the many millions spent in recent years to help clean up the lagoon have failed to prevent manatees from dying at record pace this year. The fallout has state and local politicians echoing what environmental conservationists have been warning about for years: Florida can't keep doing things the same ways and expect different results.

Brevard County already had begun to recognize the need to shift gears. Last year, County Commissioners approved using $55.5 million in anticipated sales tax revenue to help pay for 43 new projects to improve the lagoon. The new projects fell in line with the County Commission's 2019 directive to shift money away from muck removal to those that address sewage and wastewater. This year's state budget includes $854.5 million in water quality improvement spending statewide, including $616.7 million for a wastewater grant program and $10 million for a septic tank upgrade program. The Indian River won't be cured until local governments get smarter about how they develop along the watershed and steer new homes clear of the floodplains that help filter water before it flows to the lagoon.

more…….https://www.floridatoday.com/story/news/local/environment/2021/05/12/brevard-county-florida-politicians-see-no-quick-fix-stop-manatee-starvation-famine-seagrass-loss/5054522001/

Related article

A decade later, RiverKidz focus on manatee deaths, seagrass loss, Lake O discharges (27 May 2021, TCPalm)
https://www.tcpalm.com/story/news/local/indian-river-lagoon/2021/05/27/return-manatees-to-endangered-species-list-riverkidz-tell-interior-department-amid-record-deaths/7415715002/

Seagrass loss at the heart of the peril to manatees, Indian River Lagoon (23 May 2021, Daytona Beach News-Journal)
https://www.news-journalonline.com/story/opinion/editorials/2021/05/23/fight-preserve-seagrass-essential-indian-river-lagoon/5184340001/

Clams Can Boost Seagrass Restoration: Study (NC, USA)

07 May 2012, by Lena Beck, Coastal Review Online

A study published recently in Frontiers in Marine Science investigated how restoration efforts usually take place, and how they might be improved by different planting strategies. Dr. Y. Stacy Zhang and her team reached out to 750 individuals and organizations involved in restoration in 23 countries. Of those, Zhang received 152 responses. Participants filled out a 20-question form about their restoration strategies and practices. Demographically, respondents included academic, nonprofit and governmental agencies. The results indicated that 86% of respondents planted using dispersed arrangements, as opposed to planting large patches of seagrass. Additionally, efforts rarely attempted to restore seagrass alongside other species from the natural habitat. Zhang hypothesizes that there could be different reasons why more people don’t attempt multispecies restoration. One reason could be funding constraints.

Zhang experimented with different intra- and interspecific planting arrangements. An “interspecific” approach means planting different species alongside each other. In the case of this experiment, Zhang implemented the use of clams in some of the seagrass plots. The “intraspecific” approach meant planting members of the same species alongside each other, instead of in a dispersed arrangement. What they found was that interspecific planting significantly aided in the growth of the seagrass seeds, both in shoot size and patch expansion. On average, seed patches with clams

expanded by 500%, while those without barely changed. Zhang hypothesizes that seagrass seeds have different nitrogen needs than more mature plants. The clams were able to facilitate a boost in nitrogen for the seeds.

Zhang's study emphasizes the idea that a multispecies approach to restoration could increase their success rates. According to Zhang, restoration work is currently undergoing a transition from focusing on a single species to a whole ecosystem. The effectiveness of this approach was supported by the results of the study. Positive interactions amongst species can bolster seagrass shoot growth and patch expansion. According to Zhang, taking this type of view and expanding the body of knowledge surrounding inter- and intraspecific planting could help coastal restoration efforts become more effective long term.
more…….https://coastalreview.org/2021/05/clams-can-boost-seagrass-restoration-study/

How drone technology is helping researchers study dugongs in the Pilbara (WA, Australia)
12 May 2021, ABC News

Drone technology is making it easier — and tens of thousands dollars cheaper — for researchers to study the health of the Pilbara's dugong population. Murdoch and Edith Cowan Universities have collaborated with researchers, government departments and the CSIRO to study the seagrass habitats of north-west WA, which dugongs use for food foraging.

Researchers used drones to conduct 240 flights in the Pilbara waters, covering almost 12 square kilometres per day, sighting 149 dugongs and analysing their seagrass habitats. Dr Amanda Hodgson and Dr Christophe Cleguer, from the Harry Butler Institute of Murdoch University, worked with international researchers during two years of field trips to test the drone technology. Dr Hodgson said it allowed researchers to conduct aerial surveys in a way never done previously. In the past, researchers would have used a manned aircraft for the same work, costing tens or hundreds of thousands of dollars.

Scientists say new methods they have developed with drones will make it more affordable and easier for inexperienced scientists globally to get the technology and skills to study dugongs more frequently at their local level to improve their conservation. It is hoped these methods will help researchers across the world collect more frequent information about dugongs and their habitats, for both management and conservation.
more…….https://www.abc.net.au/news/2021-05-12/studying-dugongs-with-drones/100122416

Related article
New drone techniques to survey wildlife (07 May 2012, Phys.Org)
https://phys.org/news/2021-05-drone-techniques-survey-wildlife.html

Environmentalists concerned about 13% seagrass decline in Tampa Bay (FL, USA)
11 May 2021, FOX 13 Tampa Bay

Between 2018 and 2020, as much as 13% of the seagrass acreage was lost. That's more than a 5,000-acre decline in seagrass, with the worst impacts in Old Tampa Bay. A seagrass die-off on the state's east coast is blamed for this year's unusually high number of manatee deaths. Experts say the sea cows are starving. The Tampa Bay Estuary Program, which monitors the health of Tampa Bay, says the amount of seagrass fell below their recovery goal for the first time since 2012.
more…….https://www.fox13news.com/news/environmentalists-concerned-about-13-seagrass-decline-in-tampa-bay

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Environmentalists concerned about 13% seagrass decline in Tampa Bay (11 May 2012, FOX 13 Tampa Bay)
https://www.fox13news.com/news/environmentalists-concerned-about-13-seagrass-decline-in-tampa-bay
Some Florida manatees still struggle with starvation after peak die-off (20 May 2021, Tampa Bay Times)
https://www.tampabay.com/news/environment/2021/05/19/some-florida-manatees-still-struggle-with-starvation-after-peak-die-off/

Local fisherman see an abundance of dead seagrass in Manatee County (FL, USA)
10 May 2021, WWSB

Seagrass has been reportedly dying off Holmes Beach in Manatee County and local fishermen say the source of this problem is from blue-green algae called *Lyngbya*. Fishermen like Capt. Scott Moore said this problem is an issue for marine life. "The problem is when you lose your seagrass, you lose your fish and your crabs," said Moore. "Just remember if you like to eat fried grouper, the grouper grew up in this bay you're not gonna wanna have this going on."

Moore said this issue has only gotten worse. "It's gotten progressively worse over the past 3-5 years," said Moore. "The red tide scenario did not help because when you have red tide and dead fish, you have natural nutrients." Moore said he wants to educate people so they know how this could hurt local fishing, which will ultimately hurt the local economy.
more…….https://www.mysuncoast.com/2021/05/10/local-fisherman-see-an-abundance-dead-seagrass-manatee-county/

Marine Conservation Society and Rewilding Britain Release New 'Blue Carbon' Report (United Kingdom)

11 May 2021, DIVE Magazine

The Marine Conservation Society has released a new report in partnership with Rewilding Britain which outlines the importance of the UK's seas in helping the UK to reach its goal of net-zero emissions by 2050. It is hoped that the report, entitled Blue Carbon – Ocean-based solutions to fight the climate crisis will persuade politicians and the public alike that 'rewilding' the ocean's ecosystems will aid in the removal of carbon dioxide from the atmosphere to be stored in 'natural solutions', a process becoming known as 'blue carbon'

The role of the world's forests in carbon sequestration has been well established for some time, however, the marine equivalents of seagrass meadows, mangroves and other oceanic plant life such as seaweed are often overlooked. 'Carbon contained in marine and coastal ecosystems must be considered in the same way as our woodlands and peatbogs [and is] critical to the UK's carbon strategy,' said Dr Chris Tuckett, Director of Programmes at the Marine Conservation Society 'Our report outlines how vital blue carbon solutions are to an effective strategy which reaches net-zero by 2050. 'We're calling on the UK Government and devolved administrations to act with urgency to invest in, co-develop and implement a four-nation Blue Carbon Strategy,' said Dr Tuckett.

The report projects that globally, the rewilding of 'key blue carbon securing marine and coastal ecosystems' could sequester up to 1.83 billion tonnes of carbon dioxide - approximately 5 per cent of the global total required to reach net zero. This figure does not include the amount of carbon stored in fish and other marine life or in coral reefs and seabed sediments, which would mean the overall total of sequestered carbon through rewilding could be much greater.

more……http://divemagazine.co.uk/eco/9369-mcs-uk-blue-carbon-report

Related articles

Rewild oceans to meet UK's net zero goals, campaigners say (03 May 2021, Powys County Times)
https://www.countytimes.co.uk/news/national-news/19276434.rewild-oceans-meet-uks-net-zero-goals-campaigners-say/
Rewild Britain's coastal waters to cut carbon emissions, marine conservation campaigners urge (04 May 2021, The Times)
https://www.thetimes.co.uk/article/52e91d7e-ac3e-11eb-bda6-057976012425
Rewild oceans to meet UK's net zero goals, campaigners say (04 May 2021, Jersey Evening Post)
https://jerseyeveningpost.com/news/uk-news/2021/05/03/rewild-oceans-to-meet-uks-net-zero-goals-campaigners-say/

Recognising what remains to be known (New Zealand)

10 May 2021, Otago Daily Times

New Zealand has [a] seagrass limpet, *Notoacmea scapha*, which lives on our own *Zostera*. *Zostera* beds are easily seen at low tide in Otago Harbour. My laboratory decided to investigate whether *Notoacmea scapha* was a seagrass specialist, or simply an opportunistic generalist, able to live on all sorts of surfaces. We used genetics to see whether limpets from seagrass were the same as those attached to shells, stones and rocks.

As seems often to be the case, the answer turned out to be quite complicated. *Notoacmea scapha* is not confined to seagrass: it is perfectly happy attached to cockles and small stones, although shells from seagrass look very different from those living on other substrates. But surprisingly, the limpets on the cockle and stones were not all one species! In fact, there were two further species, with shells almost identical to those of *Notoacmea scapha* from stones and cockles. Bizarrely, these two species, both previously unrecognised by scientists, never live on seagrass.

One of these new species, which we christened *Notoacmea rapida*, behaves quite distinctively from all its relatives. It lives under rocks sitting on the mud or other rocks on sheltered shores. If you turn over one of these rocks, it immediately and quickly crawls away from the light, looking to hide back under its home rock. I thought at the time, 'this one is different; I haven't seen that sort of speed from a snail before'. We are in a race to discover and save these species before they become extinct. Some are even on our very doorstep.

more……https://www.odt.co.nz/lifestyle/magazine/recognising-what-remains-be-known

Seagrass in Sarasota Bay drops to 12-year low (FL, USA)

08 May 2021, YourObserver.com

Following a variety of environmental and man-made factors, Sarasota Bay is experiencing a 12-year low in seagrass growth. Preliminary results from the Southwest Florida Water Management District show an 18% decline in seagrass across Sarasota Bay, Roberts Bay and Little Sarasota Bay from 2018 to 2020. The loss equates to a total loss of 2,300 acres of seagrass. Blackburn Bay showed a slight increase of about 13 acres, but the total acreage of seagrass coverage in the area is down from 12,853 in 2018 to 10,540 in 2020, officials reported. Seagrass levels have not been so low since 2008.

Although there are many reasons for the loss, factors such as red tide, Hurricane Irma and various human impacts have increased the level of harmful nutrients in the bay. The aerial surveys that show the loss were done during the

winter months of 2019 and 2020. Sarasota Bay Estuary Program executive director David Tomasko said sewage spills near the bay or into its waters and the Piney Point discharge of nitrogen-rich water could make matters worse.

Until 2016, the Bay was showing increased levels of seagrass recovery due to resident and municipal initiatives, such as upgrading wastewater treatment plants and converting septic systems to sewer systems.
more…….https://www.yourobserver.com/article/seagrass-in-sarasota-bay-drops-to-12-year-low

Related article
Sarasota Bay losing vital seagrass, research shows (23 May 2021, Sarasota Herald-Tribune)
https://www.heraldtribune.com/story/news/environment/2021/05/23/sarasota-bay-lost-18-its-seagrass-research-shows/5028855001/

Aus Government's $30m investment for water quality is good news for Reef (QLD, Australia)
07 May 2021, Mirage News

The Australian Marine Conservation Society (AMCS) has welcomed the Australian Government's $30m funding announcement to address pollution from land-based run-off. Inshore ecosystems, such as seagrass meadows on which threatened dugongs and turtles depend, have been severely degraded by sediment and nutrient pollution. Poor water quality from fertiliser and sediment pollution has been devastating the Reef for decades, sediment and algal blooms (caused by nitrogen rich run-off) is smothering our seagrass, putting dugongs and other wildlife at risk of starvation.

Reef protection regulations were introduced in 2019 by the Queensland government to reduce chemical and sediment run-off from agricultural activities in the Reef catchments. The most recently published Reef Report Card has shown progress on water pollution targets and management actions is too slow: The overall inshore marine condition received a 'D' based on water quality, seagrass and coral health.

While important gains have been made in tackling some pollutants there is still a lot of work to be done to clean up our Reef's waters, so this $30m is a welcome investment in supporting innovative projects that will contribute to meeting the targets," said said Jaimi Webster, the AMCS GBR Water Quality Manager.
more…….https://www.miragenews.com/aus-governments-30m-investment-for-water-556241/

It stores pollution 30 times faster than forest. What is blue carbon? (WA, Australia)
06 May 2021, The Sydney Morning Herald

At Australia's westernmost point lies the Coral Coast. Nearby a dugong's nose breaks the water only to breathe and then it sinks back down, out of sight. Western Australia's Shark Bay, on the Coral Coast stretching from Cervantes to Ningaloo, is the dugongs' stronghold, home to the largest stable population in the world. And Shark Bay, Ningaloo and its neighbour Exmouth Gulf, along with the Great Barrier Reef, are shaping up as some of the world's most significant hotspots for blue carbon.

Oscar Serrano, a postdoctoral research fellow at Edith Cowan University and one of Australia's pre-eminent blue carbon experts, was one of the lead authors of a report published in 2021 by UNESCO, which for the first time assessed the vegetation fields in its 50 marine World Heritage Sites. Significant hotspots included the Everglades National Park in Florida, the West Norwegian fjords and France's lagoons of New Caledonia, but none were as impressive or diverse as Australia's. More than half the extent of the blue carbon ecosystems were in Ningaloo, Shark Bay and the Great Barrier Reef alone. Shark Bay and Ningaloo have significant extents of all three [blue carbon ecosystems] but particularly seagrass, and Shark Bay has the world's biggest seagrass meadow. The report quantifies the carbon locked away in these fields and shows they contain 40 per cent of the total blue carbon held in World Heritage marine areas. Together, Australian blue carbon ecosystems sequester 20 million tonnes of carbon dioxide a year. That's like taking 4 million cars off the road.

Serrano, who is advising the government on how blue-carbon projects can be banked against emissions-reduction targets, says that in future, any big polluter will need to invest in blue and green offsets to reach stated carbon-abatement goals. He says the capacity of blue carbon per square metre is vastly greater than green. Seagrass is harder to account for as it can't be mapped with aerial imagery, instead requiring boats and human labour, which are expensive. Blue carbon may be an effective diplomatic tool for Australia. The government's $30 million for blue carbon includes $10 million to support three restoration projects in developing countries, most likely in the Pacific. Conserving, protecting and rehabilitating marine habitats is a worthwhile thing in itself, and blue carbon an interesting and legitimate scientific field, says Monash University biogeochemist Perran Cook. But, there are a number of issues to first overcome. Saving and preserving blue-carbon ecosystems might not be the complete answer. But it could be a start.
more…….https://www.smh.com.au/environment/climate-change/it-stores-pollution-30-times-faster-than-forest-what-is-blue-carbon-20210427-p57mx2.html

Pupils across Wales make call for action on climate change during virtual event (Wales, UK)

05 May 2021, Wales247

Last week (26-30 April), more than 2,000 pupils from 50 primary schools took part in environmental charity Keep Wales Tidy's biggest ever virtual event. Eco-Schools from across Wales joined a series of online climate change workshops and challenges. Each day, pupils learned about different aspects of the global climate emergency, including the importance of protecting forests and the rise of fast fashion.

They came up with creative solutions and some easy wins for reducing our carbon footprint, from reducing what we purchase and consume to using more sustainable forms of transport. They have also been inspired to get involved in nature-based solutions, including planting trees, supporting seagrass planting projects and peat restoration.

The message from all schools was clear – we must act now to protect our environment for the future. Lesley Jones, Chief Executive for Keep Wales Tidy said: "It was fantastic to see so many Eco-Schools taking part in our climate change workshops; sharing creative ideas for how to achieve a more sustainable, resilient world.
more……https://www.wales247.co.uk/pupils-across-wales-make-call-for-action-on-climate-change-during-virtual-event

Can marine protected areas reduce marine disease? (NY, USA)

04 May 2021, Environmental Health News

Marine diseases, often caused by parasites, viruses, and injuries, keep making headlines. For coral, shellfish, and finfish, warming temperatures are impairing immune responses during disease outbreaks. At the 2021 One Planet Summit, 50 countries part of the High Ambition Coalition (HAC) for Nature and People, committed to protecting 30 percent of their coastal waters by 2030. Marine protected areas (MPAs) are government-designated marine ecosystems that are closed off from human exploitation. With the development of more MPAs, there will likely be shifts in the disease dynamics of marine ecosystems. The question is, will this be beneficial for species who have been ravaged by parasitism, viruses and injury infections?

EHN reveals the various ways MPAs could benefit these vulnerable populations. When fishing decreases, so do parasites that infect hosts at the bottom of the food chain. When parasites do not have hosts to infect, they cannot spread disease. Also, areas that prohibit human stressors can prevent wear-and-tear, alleviating the impacts of infection. For example, a study, published in Ecology, found that corals within no-take marine reserves, where fishing-related injuries are nonexistent because there are strict fishing bans, had four times less disease than those that were unprotected.

A third way that MPAs can prevent disease spread is through protecting ecosystems that filter out pathogens. Seagrass is one example. Seagrass ecosystems can reduce exposures to bacterial pathogens of humans, fish and invertebrates by effectively filtering them out. A study in Indonesia noticed that among the seagrass, pollution levels were 50 percent lower than in barren spaces. Coral disease near seagrass was also 50 percent lower. Greater protection of seagrass generates all-around benefits for marine ecosystems. When seagrass beds have been protected, the species richness, abundance, and sizes of the fish they support increase. They also shield invertebrates from acidification and sequester twice as much carbon as terrestrial forests. Much evidence points to MPAs as an effective tool for disease mitigation for targeted species. With more research, disease prevention could be added to the myriad of benefits scientists have pinned to MPAs, such as fisheries growth, economic opportunity, and ecosystem recovery after disaster.
more……https://www.ehn.org/ocean-protected-areas-2652806319.html

What Volusia County homeowners can do to help save the Indian River Lagoon (FL, USA)

03 May 2021, WKMG News 6 & ClickOrlando

Conservationists and Volusia County homeowners are teaming up to help save manatees and other marine life in the Indian River Lagoon. Scientists blame the lack of seagrass, which is being killed off by algae growth from pollution runoff and development of seawalls. "The seagrasses will come back we just have to give them that little bump," said Kelli McGee, the executive director of the Riverside Conservancy.

McGee said the organization is now using a grant to restore a quarter mile of shoreline on the Indian River Lagoon and it's asking waterfront property owners in Volusia County to volunteer their shorelines. "We will put structures in the water that mimic the natural structures that are found whether it be oyster reefs, mangrove roots, things that can retrofit seawalls," she said. McGee said it won't cost the property owners anything and they'll do all the work. She said it could also help prevent flooding and erosion.

County councilman Dan Robins has helped install and test out micro-reefs under several docks along the Halifax River. He is working with the conservancy to create the living shorelines and explore other options. He thinks the project could have an enormous impact if more homeowners get on board and take initiative themselves to fix the lagoon. McGee said the project is just starting and they're working with other local organizations that are replanting

seagrass. “We’re in the beginning stages but now we’re finally ready to standardize the practice somewhat to make it available to more people,” she said.
more…….https://www.clickorlando.com/news/local/2021/05/03/researchers-asking-for-volusia-county-homeowners-to-volunteer-help-save-indian-river-lagoon/

New research shows long-term recovery possible for areas impacted by seagrass die-off (FL, USA)

03 May 2021, Science Daily

Nearly 10,000 acres of lush seagrass, *Thalassia testudinum*, vanished from Florida Bay between 1987 and 1991, leading to massive ecological changes in the region near the Florida Keys. Researchers from the University of South Florida, the Florida Fish and Wildlife Conservation Commission (FWC) and the University of North Carolina Wilmington documented the response of seagrasses after the die-off. Their detailed data collection for over 20 years across the large area of impact has provided unique insight into seagrass resiliency or the ability of a coastal ecosystem to recover after the extensive loss. This study, published in Scientific Reports, provides a framework for how future recovery of a new seagrass die-off, recorded in 2015 in the same location, may still be possible.

USF Distinguished University Professor Susan Bell and colleagues at FWC, began to detail what was happening across a roughly 15 square mile stretch of the bay. For more than 10 years, researchers saw little to no change. However, after another decade of monitoring, researchers reported a return to pre-die-off levels of *Thalassia testudinum* in the region. The study shows that the entire sequence of die-off, algal blooms and recovery took 17-23 years. "What we discuss are a number of features that underlie the seagrass recovery: the system was remote, remnants of seagrass leftover after the die-off served as a catalyst for repopulation and having multiple species of seagrass present increases the likelihood for recovery," said Bell.

In the last case, two opportunistic seagrass species were first to increase in abundance after the die-off and likely facilitated the return of *Thalassia*. Bell believes this study can serve as a framework for other regions experiencing seagrass die-off, including once again in Florida Bay, which is still in the midst of the die-off that began in 2015.
more…….https://www.sciencedaily.com/releases/2021/05/210503135621.htm

Decomposing manatees on Indian River Lagoon show record die-off, locals rally for change (FL, USA)

04 May 2021, cw34.com

This year is on pace to be one of the deadliest years for Florida’s manatees in the past decade. State officials said more than 670 manatees have died already in Florida in 2021. For comparison, 637 manatees died in all of 2020 and 607 in 2019. Patrick Rose, an aquatic biologist and executive director of the Save the Manatee Club, said polluted canals and rivers across our region have led to a decline in seagrasses, their main source of food. The Indian River Lagoon, a common warm water gathering place for manatees, is the scene of the state’s largest number of deaths. Manatees are now decomposing on a remote beach on Merritt Island in the Indian River Lagoon.

The southern end of the Indian River Lagoon has suffered from a series of algal blooms from Lake Okeechobee that wiped out much of its seagrass. Due to the recent depletion of local seagrass, manatees are not finding much food, so they are going hungry and at risk for malnutrition.

Over the weekend, researchers and locals gathered on the Ernest Lyons Bridge in Martin County, near Hutchinson Island to rally for area manatees. The Florida manatee was controversially downgraded from ‘endangered’ to ‘threatened’ in 2017. That status was also a hot button issue during the Save the Manatee Rally.
more…….https://cw34.com/news/local/decomposing-manatees-on-indian-river-lagoon-show-record-die-off-locals-rally-for-change

Related articles
'Rally for the manatees' held in Stuart (02 May 2021, WPTV.com)
https://www.wptv.com/news/protecting-paradise/rally-for-the-manatees-held-in-stuart
Decomposing manatees on Indian River Lagoon show record die-off, locals rally for change (04 May 2021, cw34.com)
https://cw34.com/news/local/decomposing-manatees-on-indian-river-lagoon-show-record-die-off-locals-rally-for-change

CONFERENCES

The 14th International Seagrass Biology Workshop (ISBW14) (Annapolis, 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 2022 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 PUBLICATIONS:

Seagrass ecosystems of the Pacific Island Countries and Territories: A global bright spot

L.J. McKenzie, R.L. Yoshida, J.W. Aini, S. Andréfouet, P.L. Colin, L.C. Cullen-Unsworth, A.T. Hughes, C.E. Payri, M. Rota, C. Shaw, P.A. Skelton, R.T. Tsuda, V.C. Vuki, R.K.F. Unsworth

Seagrass ecosystems exist throughout Pacific Island Countries and Territories (PICTs). Despite this area covering nearly 8% of the global ocean, information on seagrass distribution, biogeography, and status remains largely absent from the scientific literature. We confirm 16 seagrass species occur across 17 of the 22 PICTs with the highest number in Melanesia, followed by Micronesia and Polynesia respectively. The greatest diversity of seagrass occurs in Papua New Guinea (13 species), and attenuates eastward across the Pacific to two species in French Polynesia. We conservatively estimate seagrass extent to be 1446.2 km2, with the greatest extent (84%) in Melanesia. We find seagrass condition in 65% of PICTs increasing or displaying no discernible trend since records began. Marine conservation across the region overwhelmingly focuses on coral reefs, with seagrass ecosystems marginalised in conservation legislation and policy. Traditional knowledge is playing a greater role in managing local seagrass resources and these approaches are having greater success than contemporary conservation approaches. In a world where the future of seagrass ecosystems is looking progressively dire, the Pacific Islands appears as a global bright spot, where pressures remain relatively low and seagrass more resilient.
https://www.seagrasswatch.org/mckenzie-et-al_2021b-2/

Seagrass ecosystem contributions to people's quality of life in the Pacific Island Countries and Territories

L.J. McKenzie, R.L. Yoshida, J.W. Aini, S. Andréfouet, P.L. Colin, L.C. Cullen-Unsworth, A.T. Hughes, C.E. Payri, M. Rota, C. Shaw, R.T. Tsuda, V.C. Vuki, R.K.F. Unsworth

Seagrass ecosystems provide critical contributions (goods and perceived benefits or detriments) for the livelihoods and wellbeing of Pacific Islander peoples. Through in-depth examination of the contributions provided by seagrass ecosystems across the Pacific Island Countries and Territories (PICTs), we find a greater quantity in the Near Oceania (New Guinea, the Bismarck Archipelago and the Solomon Islands) and western Micronesian (Palau and Northern Marianas) regions; indicating a stronger coupling between human society and seagrass ecosystems. We also find many non-material contributions historically have been overlooked and under-appreciated by decision-makers. Closer cultural connections likely motivate guardianship of seagrass ecosystems by Pacific communities to mitigate local anthropogenic pressures. Regional comparisons also shed light on general and specific aspects of the importance of seagrass ecosystems to Pacific Islanders, which are critical for forming evidence-based policy and management to ensure the long-term resilience of seagrass ecosystems and the contributions they provide.
https://www.seagrasswatch.org/mckenzie-et-al_2021a-2/

SEAGRASS-WATCH on YouTube

Seagrass: Pastures of the sea *http://www.youtube.com/watch?v=66Y5vgswj20* or https://www.seagrasswatch.org/podsnmore/
Presentation on what seagrasses are and why they are important (over 52,523 views to date)

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

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

SEAGRASS & OTHER MATTERS

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

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

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

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

Dugong & Seagrass Research Toolkit http://www.conservation.tools/
Dugongs and seagrass are under threat from human activities. By using this Toolkit you should be able to gather information to:
understand better the status of dugongs, seagrass and communities at your research site;
understand threats to dugongs and seagrasses and help find solutions to those threats;
understand the communities that value or may affect dugongs and seagrasses.

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

FROM HQ

Past E-bulletins *https://www.seagrasswatch.org/ebulletin/*
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Seagrass-Watch E- Bulletin is compiled by Len McKenzie & Rudi Yoshida.