31 July 2020

IN THIS BULLETIN

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NEWS

Ocean Conservation Trust plants first seeds in National Marine Aquarium's seagrass lab (England, UK)

31 July 2020, by Mark Evans, Scuba Diver Magazine

The project at the largest aquarium in the UK is part of a major £2.5 million habitat restoration project funded by EU LIFE and led by Natural England. The laboratory, which was unveiled for the first time in early June to coincide with World Oceans Day, has now been filled with the test batch of around 60,000 seeds, marking an important milestone in the three-year LIFE Recreation ReMEDIES habitat restoration project.

As part of the project, the Ocean Conservation Trust will be cultivating up to 360,000 plants a year in the new laboratory, to help restore up to eight hectares of lost seagrass meadows. A germination rate of around 25 percent is expected within the test batch over the next 50 days, resulting in around 15,000 *Zostera marina* plants that will remain in the National Marine Aquarium's public seagrass exhibit until next spring.

Once the cultivation process has proven successful, three further rounds of planting will take place, with volunteers set to be recruited to help with the planting of around 600,000 seeds in each. The plants will help to restore over eight hectares of lost seagrass meadows within Special Areas of Conservation in waters around the UK.
more……https://www.scubadivermag.com/ocean-conservation-trust-plants-first-seeds-in-national-marine-aquariums-seagrass-lab/

Related article
Sowing the seeds of hope for seagrass aquaculture (30 July 2020, The Fish Site)
https://thefishsite.com/articles/sowing-the-seeds-of-hope-for-seagrass-aquaculture

Plea to save dugongs in Palk Bay (India)

31 July 2020, The Hindu

Pointing out to the decline in the population of dugong, a nature lover from Madurai has moved the Madurai Bench of the Madras High Court on Friday seeking a direction to the Centre and State government to declare a 400 sq.km stretch from Adirampattinam in Thanjavur district and Ammapattinam in Pudukkottai district on the Palk Bay as a Dugong Conservation Reserve.

The petitioner, K. Pushpavanam from Madurai, a law student, said according to data available on the website of Wildlife Institute of India, there were only 200 dugongs in Indian waters. Proper conservation was the only way to save them from extinction.

India was a signatory to the Convention on Conservation of Migratory Species of Wild Animals (CMS). The Ministry of Environment, Forest and Climate Change had constituted a 'Task Force for Conservation of Dugongs.' However, despite the conservation measures, it was unfortunate that dugongs and their habitat were under threat. Human activities leading to destruction or modification of habitat, pollution, rampant illegal fishing activities, vessel hits, hunting and unstructured tourism activities were posing a threat to the dugongs.
more……https://www.thehindu.com/news/cities/Madurai/plea-to-save-dugongs-in-palk-bay/article32242278.ece

Related article
Plea to declare part of Palk Bay as dugong conservation reserve (01 August 2020, Times of India)
https://timesofindia.indiatimes.com/city/madurai/plea-to-declare-part-of-palk-bay-as-dugong-conservation-reserve/articleshow/77293189.cms

Flood damage to Great Barrier Reef minimal, water quality report finds (QLD, Australia)

29 July 2020, by Tom Major, ABC News

North Queensland's coastal and offshore ecosystems fared better than expected during last year's devastating Townsville floods, a study has found. The 2018-19 report card released by the Dry Tropics Partnership for Healthy Waters rated water quality in moderate (C) to very good (A) categories.

Independent chair of the partnership Diane Tarte said water on the offshore Great Barrier Reef scored an A for very good, with low concentrations of suspended sediment. The report found high levels of nutrients in waterways including the Bohle and Black rivers, resulting in low to moderate water quality scores for Halifax and Cleveland bays.

Seagrass meadows in Cleveland Bay, a major food source for the endangered dugong, experienced a decline in biomass. But the report found that seagrass coverage remained above the long-term average. "All the seagrass meadows survived the flood — however, they have been knocked about, and overall condition is less than what we expected," Ms Tarte said.
more……https://www.abc.net.au/news/2020-07-29/townsville-flood-damage-to-reef-minimal-says-report/12498250

Department of Transport releases recommendations on Port Geographe review (WA, Australia)

27 July 2020, by Jemillah Dawson, Busselton Dunsborough Mail

The Department of Transport is seeking community feedback on its review of the Port Geographe coastline reconfiguration performance. The technical review has made ten recommendations. The review which began in February 2020 has recommended changes to the current wrack dispersion and sand bypassing programs as well investigations of options to address ongoing sea[grass] wrack accumulation and erosion issues.

For 22 years Port Geographe residents have endured the effects of unnatural seagrass wrack along the coastline and multiple interventions with little success. In early December 2019, 450 residents rallied to show their frustration over the build up of seagrass. At the time there was 20,000 cubic metres of built up sea grass on Western Beach. As a result of the outcry, the Department of Transport partnered with the City of Busselton to establish a technical

working group in February to assess the performance of the reconfigured structures and recommend actions to further improve performance.

Department director of coastal facilities Donna West said while five recommendations have been prioritised to develop a program of works for the next two years,10 of the 34 ideas assessed had been recommended.
more…….https://www.busseltonmail.com.au/story/6852113/review-on-sea-wrack-open/

Improving coastal restoration by temporarily imitating nature (Netherlands)

22 July 2020, by Radboud University, Phys.Org

Coastal ecosystems are in rapid decline around the world. Restoring them is very expensive and is often unsuccessful. But an international team of researchers discovered a way of increasing restoration success of salt marshes and seagrass meadows, using biodegradable mats made with the by-products of potato processing.

Mussels, oysters, seagrasses and salt marsh grasses all are ecosystem engineers, making them an important foundation of a healthy coastal ecosystem. "The waves and currents in these systems make these environments hostile to live in, so individual ecosystem engineers give each other a helping hand by nudging up together. This causes these species to display what's known as 'emergent traits', properties that are found in the population level, but that do not exist when an individual is alone," says lead author Ralph Temmink, a Ph.D. candidate at Radboud University. A single seagrass plant is easily swept away by waves in a storm. However, an entire meadow of seagrass can withstand that same storm. Experiments in the Netherlands, Sweden, Bonaire and the US showed that salt marsh grasses and seagrasses were more likely to survive and grow when young plants were protected by the mats.

"A real strength of this research is that we saw the results not just in a single species in a single region, but across different species and ecosystems in both tropical and temperate regions," says Marjolijn Christianen, a researcher at WUR who coordinated the international seagrass research. "This means that it's a general principle for restoration ecology. We were only able to demonstrate this thanks to the joint efforts of experts in seagrass and salt marsh ecology on different continents."
more…….https://phys.org/news/2020-07-coastal-temporarily-imitating-nature.html

Li-Maramaranja: Dugong hunters of excellence (NT, Australia)

13 July 2020, ABC Local

Li-Maramaranja: Dugong Hunters of Excellence is a documentary film by Sam Frederick. The film takes its name from a traditional song shared by Yanyuwa elders. It shows Li-Anthawirriyarra sea rangers and marine scientists catching and tagging dugong in the Gulf of Carpentaria to track their movements and better estimate the population. The data shows these animals don't stray far from Yanyuwa country.

Dr Rachel Groom says they seem to love where they live. "There are some dugongs that have been tagged and they can do 800km trips in matter of a few days and we certainly didn't find that." Shaun Evans is one of the Li-Anthawirriyarra rangers who features in the film and he told Rebecca McLaren he's always felt connected to the natural environment of his home. The film is available to watch online, https://www.youtube.com/watch?v=C2jITGs51rk&feature=youtu.be.
more…….https://www.abc.net.au/radio/darwin/programs/evenings/shaun-evans/12451676

1500-hectare reclamation in Cordova to push through (Philippines)

10 July 2020, by Morexette Marie B. Erram, INQUIRER.net

A proposal to reclaim land up to 1,500 hectares in the fishing town of Cordova on Mactan Island, Cebu will push through. This after local officials announced that SM Prime Holdings Inc. (SMPH) renewed their commitment to invest in Cordova town during an online meeting with them and officers from concerned government agencies last Thursday, July 9, 2020.

Cordova is a third-class municipality that borders Lapu-Lapu City on the south of Mactan Island. It owns around 3,500 hectares of foreshore land, making it one of the biggest seagrass beds in the country. The project, according to local officials of Cordova, is targeted to be completed by 2028 and is composed of four artificially-made islands with a total land area of 1,500 hectares. It will soon be developed into an integrated 'world-class lifestyle' destination featuring a cruise terminal, marina, beach, eco-parks, golf course, churches, retail centers, civic centers, cultural centers, and promenades with inland transportation consisting of buses and a train with a railroad.

Cordova Mayor Mary Therese Sitoy-Cho, added that further consultation, particularly with Cordova's fishing communities, are needed before the proponents can proceed with the construction. According to the mayor, fisher folks of Cordova are urging the local government and developers of the project to ensure their fishing routes will stay open, and that the town's mangrove areas will not be severely impacted.
more…… https://cebudailynews.inquirer.net/325705/1500-hectare-reclamation-in-cordova-to-push-through

Save the seagrass ecologists urge Mallorca beach-goers (Spain)

09 July 2020, by Cathy Elelman, Euro Weekly News

The GOB Ecological Group is once again running a campaign on Mallorca's beaches to raise awareness about the importance of preserving *Posidonia* and to explain how the public can contribute to its conservation. Every week throughout July and August the group is at one of four beaches in Portocolom, Alcudia, Colonia de Sant Pere or Andratx. They set up a small marquee from which they offer information in four languages and every day organise different education workshops.

GOB has also devised a "*Posidonia* trivia" game and will stage a lottery for winners to win a t-shirt. The ecologists point out that *Posidonia* is an essential marine plant on the Balearic Island coast, performing many functions in the ecosystem, like oxygenating the water, providing a habitat for invertebrates and a refuge and breeding ground for many species of fish. It also helps to protect beaches in relation to sand formation and defending the coast from erosion during stormy weather.

more…… https://www.euroweeklynews.com/2020/07/09/save-the-seagrass-ecologists-urge-beach-goers/

Managing Buccoo Marine Park (Trinidad and Tobago)

09 July 2020, Trinidad News

The Buccoo Reef Marine Park was reopened on Monday with new regulations. The Buccoo Reef Marine Park is the only natural marine seascape in Trinidad and Tobago with an interconnected ecosystem of a coral reef, seagrass bed and mangrove habitat. Since the 1970s, Buccoo Reef area has been protected, yet, over these 50 years, we have used the park more as a commercial enterprise than a precious resource. The marine park has to date not been effectively been managed.

The new regulations for access to the Marine Park will be rolled out in a phased manner in the short, medium and longer terms. The first phase of the management will see the regulation of the vessels in the area. Tour boats may be permitted to be in the park area to carry out tours. Fishing vessels may transit the park, but fishing (or the removal of any organism in the park) is prohibited. All persons who wish to use the park will need to apply for a permit. The park will be open during the hours of 9am to 5pm, and activities in the night would be regulated for specific activities, such as the bioluminescence tour. By registering the number of tour boats that use that area, the authority can determine the suitable sites for moorings and regulate the maximum time on each mooring. This means there should be reduced incidence of damage to the reef and the seagrass beds from anchors or mishaps with juggling boats.

Long-term strategies include seagrass management and coral farming. If regulations result in higher fish populations, especially important algae and seagrass grazers including large grazers such as green turtles, lobsters, urchins, fish and even certain species of sea birds, this may trigger a positive feedback that will improve the health of the seagrass beds and coral reefs.

more……ttps://newsday.co.tt/2020/07/09/managing-buccoo-marine-park/

South Africa's oil and gas company gives way to Mozambicans (Mozambique)

08 July 2020, The Zimbabwe Daily

Following massive outcries from the public and environmentalists, South African petrochemicals giant Sasol, has opted to give up its license to explore for gas in Bezaruto. Last week, the Marine Megafauna Foundation said the Vilanculos and Inhassoro communities were overwhelmingly opposed to the project due to the high likelihood of negatively affecting marine tourism and fishing.

Of particular concern was the proximity of the project to the last remaining viable population of dugong in Africa, which stands at only a few hundred strong. The International Union for the Conservation of Nature (IUCN) just declared this area an important marine mammal area (IMMA). Concerns were also voiced about Sasol's ability to adequately deal with the waste pollution generated from this type of project, as well as the short and long term impacts the various stages of the project could have on the local marine ecosystem and the potential eyesore it would cause. Moreover, local communities in this region are critically dependent on coastal resources for subsistence and for their livelihoods," said the Marine Megafauna Foundation in a statement.

more……https://thezimbabwedaily.com/africa/496174-south-africas-oil-and-gas-company-gives-way-to-mozambicans.html

Chesapeake seagrass beds declined 38 percent in 2019 (VA, USA)

14 July 2020, by Kirk Moore, National Fisherman

Seagrass beds in Chesapeake Bay, a vital habitat for blue crabs and other species, declined by 38 percent in 2019, a trend researchers link to higher than usual river flows that year. The federally funded Chesapeake Bay Program released findings from its annual survey July 8, reporting a mixed bag of results from across the bay region and its rivers. The overall 38 percent estimated decline is down from a 108,078-acre tally in 2018.

“The largest decline in terms of total area – an estimated 34,986 acres – was observed in moderately salty waters, particularly in the Tangier Sound area, which experienced a 18,452-acre decline,” according to a summary by the bay program. “Experts attribute the losses largely to a decline in widgeon grass.” The 2019 drop-off in widgeon grass recalls “a similar situation that occurred in 2001-2003, where a rapid increase in widgeon grass in 2001 and 2002 was followed by a 50% decline in 2003,” according to bay program officials. “Though the precise cause for the decline in 2019 is unknown, higher than average river flows may have contributed by reducing water clarity and blocking sunlight from reaching the grasses.”

Advocates with fishing and environmental groups point to overall long-term improvements as evidence that long regional efforts to reduce pollution and improve water quality are working. “The past two years have tested the resilience that our SAV beds have been building since the Chesapeake Bay pollution diet was implemented. The good news is that many of the bay's tributaries stood up well against the high flows and associated sediment and nutrient runoff from 2018 and 2019, and SAV acreage even continued to expand in some,” said Brooke Landry, a biologist with the Maryland state Department of Natural Resources who chairs the Chesapeake Bay Program’s SAV working group.

“But there's still much more work to do in order to mitigate unpredictable impacts from climate change. The Chesapeake Bay Program and its partners are committed to that effort and will continue working toward improving water quality and reversing these recent losses,” said Landry.
more……https://www.nationalfisherman.com/mid-atlantic/chesapeake-seagrass-beds-declined-38-percent-in-2019

Related article
Chesapeake Bay Foundation: 38% decline in sea grass between 2018-2019 (08 July 2020, 13newsnow.com WVEC)
https://www.13newsnow.com/article/tech/science/environment/chesapeake-bay-foundation-38-decline-in-sea-grass-between-2018-2019/291-f6f613c0-0158-493b-93b1-4a1e2ed9f37f

Dugong delight: huge herd snapped in Queensland's crystal clear waters (QLD, Australia)
09 July 2020, by Stacey Whitlock, The Islander

You might not have heard of them, much less seen a dugong. But imagine coming across dozens of them between Moreton and Peel islands, off the coast of south-eastern Queensland. Niki and Doug Feilding, who own Gold Coast boat building business Regatta Marine, had spent two weeks out on their boat and were taking a leisurely trip from Moreton Island to Peel Island when they spotted the herd.

The seasoned Moreton Bay travellers were astonished to see the creatures together in a big group. "It's a rare sight," Ms Fielding said. "I counted close to 100." According to the Environment Department, Moreton Bay dugongs are mostly found on the Moreton and Amity banks, with some also sighted in Pumicestone Passage and the southern bay. They often gather in herds of about 100. Moreton Bay is the southern-most place were dugongs are found along Queensland's east coast. Moreton Bay dugongs travel as far north as Hervey Bay.
more……https://www.theislanderonline.com.au/story/6825476/dugong-delight-huge-herd-snapped-in-crystal-clear-waters/

Love renews call for protective groyne at Jurien as fish die in seagrass wrack (WA, Australia)
08 July 2020, by Geoff Vivian, The West Australian

Jurien Bay has had another fish kill, with seagrass wrack near the marina littered with rotting carcasses. Resident Ian Stiles said he spotted the mess on Sunday morning with his grandchildren from Paraburdoo. Mr Stiles said winter storms uprooted seagrass which entered the marina. “It sinks to the bottom and dies, and decomposing it forms H2S (hydrogen sulfide) gas and sucks the oxygen out of the water and we end up with dead fish,” he said.

Member for Moore Shane Love said the smell deterred tourists. Mr Love has campaigned for a groyne since 2004 and asked questions in Parliament several times, most recently last year. The Midwest Times understands a groyne has been priced at $7 million.

Department of Transport director Steve Jenkins said dissolved oxygen levels had again deteriorated in the harbour in the past week with further ingress of seagrass as a result of winter storms. He said dredging had affectively removed accumulated seagrass wrack in the past. Mr Jenkins said his department continued to monitor the problem.
more……https://thewest.com.au/news/midwest-times/love-renews-call-for-protective-groyne-at-jurien-as-fish-die-in-seagrass-wrack-ng-b881599440z

Revealed: how underwater plants and corals can help animals survive marine heatwaves
07 July 2020, MENAFN The Conversation

Hotter oceans, with less oxygen, sounds like bad news for marine life. But new research published in Science Advances has shown how marine plants and organisms that live along the coasts – algae, seagrasses, mangrove and corals – can add oxygen to the water. This extra oxygen protects animals from heat stress and will make them more resilient to climate change.

Scientists have often studied the effect of temperature on the physiological response of marine animals. But the role of the oxygen produced by plants, algae and corals has been overlooked. To see if this effect would be apparent across a variety of animals, a total of 249 animals from six species belonging to four distantly related groups [were examined]. In the lab, we measured their tolerance to increased water temperature at normal and high levels of oxygen. In this way, we could mimic the real condition these animals experience in the environment. The animals we tested are all unable to 'thermoregulate' like mammals, and so their metabolisms accelerate with the temperature. The warmer it is, the more oxygen is required.

We found that high levels of oxygen allowed them to cope with higher temperature. This is because oxygen is the combustive agent that helps them produce more energy from their food. It makes sense, therefore, for these animals to live close to organisms like seagrass or coral which can guarantee a good supply of oxygen during the warmest hours of the day, when photosynthesis is also at its peak. If more oxygen can make marine species more resilient to temperature stress then oxygen – and the organisms that generate it – must be taken into account in environmental policies along the coasts.
more…….https://menafn.com/1100448085/Revealed-how-underwater-plants-and-corals-can-help-animals-survive-marine-heatwaves

New study sparks fresh call for seagrass preservation (WA, Australia)
07 July 2020, by Edith Cowan University, Phys.Org

An increase in carbon dioxide emissions equivalent to 5 million cars a year has been caused by the loss of seagrass meadows around the Australian coastline since the 1950s. The stark finding was made possible by new modelling done by marine scientists at the Centre for Marine Ecosystems Research at Edith Cowan University (ECU) in Western Australia.

Ph.D. student Cristian Salinas calculated that around 161,150 hectares of seagrass have been lost from Australian coasts since the 1950s, resulting in a 2 per cent increase in annual carbon dioxide emissions from land-use change. The figures derive from Mr Salinas's research into the current carbon stocks of Cockburn Sound off the coast of Western Australia. Cockburn Sound lost around 23 sqkm of seagrass between the 1960s and 1990s due to nutrient overflow caused by urban, port and industrial development. Mr Salinas said the finding is significant because seagrass meadows play such a vital role in mitigating the impacts of climate change.

Mr Salinas said the study provided a clear baseline for carbon emissions from seagrass losses in Australia and warned of the need to preserve and restore the meadows. The inclusion of seagrass into the Australian Emission Reduction Fund could contribute to achieve this goal, he said.
more…….https://phys.org/news/2020-07-fresh-seagrass.html

Related articles
More than 160000 hectares of seagrass lost from Australian coasts since the 1950s (07 July 2020, Oceanographic Magazine)
https://www.oceanographicmagazine.com/news/seagrass-preservation-australia/
To curb climate change, scientists call for robust seagrass preservation efforts (07 July 2020, UPI.com)
https://www.upi.com/Science_News/2020/07/07/To-curb-climate-change-scientists-call-for-robust-seagrass-preservation-efforts/1471594125332/
Seagrass Loss Is Causing Massive CO2 Rises (08 July 2020, Technology Networks)
https://www.technologynetworks.com/tn/news/seagrass-loss-is-causing-massive-co2-rises-337112
New study sparks reminder for seagrass preservation (09 July 2020, New Kerala)
https://www.newkerala.com/news/2020/121105.htm
Seagrass is good at storing CO2, but it's vanishing (10 July 2020, Axios)
https://www.axios.com/seagrass-carbon-storing-vanishing-967f87e7-4fdd-40bf-9a07-ef6edead30fa.html

Hainan repairs seagrass beds to boost marine diversity (China)
06 July 2020, CGTN

Seagrass beds around the Gaolong Bay in Wenchang City of south China's Hainan Province is undergoing massive transformation. In the past few years, seagrass beds along the bay have degenerated into barren "deserts" due to human activities. The experiment on seagrass restoration started at the end of March 2019. Given the strong currents and the large tidal range along the east coast of Hainan Island, it is hard to plant seagrasses on a large scale. Researchers decided to plant sickle seagrass (*Thalassia hemprichii*) and tape seagrass (*Enhalus acoroides*) on mudflats for a trial. "We checked the repaired place every two months. After a year, we found that the survival rate of tape seagrass was over 88 percent, against sickle seagrass of more than 56 percent," said Chen Shiquan, associate researcher, Institute of Ecological Study at the Hainan Academy of Ocean and Fisheries Science.

To avoid the cultivated seagrass from being flushed away before growing on the seabed, the research team used iron square grids to pin the fishing net, preventing erosion of sediments and slowing down the water currents. Chen said they would continue cultivating plants in the seabed to stabilize the degenerated seagrass beds to restore the foraging grounds and habitat for numerous marine species.
more…….https://news.cgtn.com/news/2020-07-06/Hainan-repairs-seagrass-beds-to-boost-marine-diversity--RTZubfYNmU/index.html

CONFERENCES

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

Theme: " Signs of Success "

The International Seagrass Biology Workshop (ISBW) is the only international meeting specifically tailored to seagrass scientists, professionals and students. The International Seagrass Biology Workshop (ISBW) provides an excellent opportunity for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest findings.

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

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

Theme: Tackling the Challenging Future of Coral Reefs

The ICRS is the leading global conference on coral reef science, management and conservation, sanctioned every 4 years by the International Coral Reef Society (ICRS). For the first time in its history, an ICRS will be held in Europe. ICRS 2020 will be the key event to develop science-based solutions addressing the present and future challenges of coral reefs, which are globally exposed to unprecedented anthropogenic pressures. The five-day program will present the latest scientific findings and ideas, provide a platform to build the essential bridges between coral reef science, conservation, politics, management and the public, and will promote public and political outreach.

Key Themes which include seagrass ecosystems:

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

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

SEAGRASS-WATCH on YouTube

Seagrass: Pastures of the sea *http://www.youtube.com/watch?v=66Y5vgswj20* or *http://www.seagrasswatch.org/seagrass.html*

Presentation on what seagrasses are and why they are important (over 51,359 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/*

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.