31 January 2020

IN THIS BULLETIN

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NEWS

Venice Lagoon's Carbon Sink Eyed as Living Climate Lab (Italy)

30 January 2020, loomberg Environment

Scientists, economists, and artisans in Venice have joined forces to quantify the economic value of protecting its lagoon as a carbon sink, hoping their data can drive policy decisions as climate change threatens the iconic Italian city. The lagoon surrounding the island city draws in more than $1 million worth of carbon every year, according to figures released this week by the nonprofit We Are Here Venice, in collaboration with researchers at the University of Padova and the University of Cambridge.

The study will allow those making future development decisions to take into account the economic costs of anything that reduces the lagoon's carbon sequestration capacity, said Jane da Mosto, executive director of We Are Here Venice, which advocates for "evidence-based approaches to policy making." The organization is working with local businesses, including traditional Venetian glass blowers, to restore lost wetlands. The companies will be able to get credits to offset their carbon emissions.

Researchers found that the lagoon's salt marsh and seagrass sequestered 24,780 tons of carbon per year, with a total economic value of 1.08 millions euros ($1.19 million), Laura Onofri, a professor from the University of Padova, said. Those figures could nearly double by 2050 under sustainable management practices such as lagoon restoration and ecological preservation, she said.
more……https://news.bloombergenvironment.com/environment-and-energy/venice-lagoons-carbon-sink-eyed-as-living-climate-lab

Seagrass meadows get £2.5m for restoration work (England, UK)

29 January 2020, BBC News

A £2.5m funding boost to help protect seagrass in England has been announced by Natural England. The project hopes to protect the endangered underwater meadows and provide habitat restoration in five areas across the south of the country. Other work will include building environmentally-friendly boat moorings and other training. The public body is contributing £1m, with the remaining coming from EU funding.

The areas to benefit - which are Special Areas of Conservation - include the Essex Estuaries, Fal and Helford, the Isles of Scilly, the Plymouth Sound and estuaries, and the Solent Maritime. Natural England said seagrass beds and meadows had been severely reduced in English waters since the Industrial Revolution and needed protection because they were "easily damaged and slow to recover".

Natural England's chief, Marian Spain, said the project was a "win-win-win for the planet, for people who use the sea and for the marine environment by protecting the delicate sea bed ... as well as providing new places for boats to moor". The project will run until October 2023.
more……https://www.bbc.com/news/uk-england-51299215

Related articles
£2.5m project to help Solent wildlife will also tackle climate change (30 January 2020, Portsmouth News)
https://www.portsmouth.co.uk/news/environment/ps25m-project-help-solent-wildlife-will-also-tackle-climate-change-1379551
New £2.5 million project launched in England to restore fragile marine habitats (31 January 2020, Oceanographic Magazine)
https://www.oceanographicmagazine.com/natural-england-seagrass-meadows/
£2.5m project to save Essex river habitat (31 January 2020, Gazette)
https://www.gazette-news.co.uk/news/18199587.2-5m-project-save-essex-river-habitat/

How Does Valeport Help Tor Bay's Underwater Rainforest? (United Kingdom)

29 January 2020, Hydro International

Valeport, has pledged its support to a campaign to protect the vital 'underwater rainforest' which is under threat off Tor Bay, on the SW coast of the UK. To mark the hydrographic and oceanographic instrument manufacturer's 50th anniversary, it will partner with a UK coastal zoo and aquarium to help protect seagrass, a remarkable plant that flowers underwater and forms dense meadows in shallow coastal areas. These meadows capture carbon at a greater rate than tropical forests, making them important in combating climate change. Like coral reefs and rainforests, these underwater gardens are full of life. And like those better-known habitats they are under threat, with global estimates suggesting the planet loses an area of seagrass the same size as two football pitches every hour.
Save Our Seagrass

Valeport will be supporting the Living Coasts research project #SaveOurSeagrass helping to secure the project's future for the next two years as well as providing instruments and expertise to the programme. The research project aims to protect the seagrass meadows in Tor Bay which is a vital nursery bed for young fish and also home to key species such as the short-snouted seahorse. These meadows are threatened by pollution and by indiscriminate anchoring, which can unknowingly rip plants from the seabed. Living Coasts is using the research to begin trialling seagrass cultivation with the aim of helping to replenish the threatened species and contributing to increased marine biodiversity.
Local Volunteer Divers

Living Coasts Curator Clare Rugg said: "This is going to be a tremendous collaboration. Valeport's support will allow us to continue our scientific research, aided by local volunteer divers who collect data on the seagrass. Living Coasts is testing ways to propagate seagrass, and we look forward to Valeport supporting our research with their instruments and expertise."
more……https://www.hydro-international.com/content/news/how-does-valeport-help-tor-bay-s-underwater-rainforest

Why Venice is actually a textbook case for flood prevention (Italy)

28 January 2020, by Aisling Irwin, Horizon magazine

When the worst floods since 1966 submerged the city of Venice in November 2019, the blame was laid on its incomplete mobile flood gates. But elsewhere in the Venetian lagoon, there was a different story to tell. The coastal sides of Lido and Pellestrina islands didn't flood thanks in part to a submerged breakwater. The breakwater is just one element in a combination of many different interventions that paradoxically make Venice a textbook case of how to tackle coastal erosion and flooding, according to Professor Barbara Zanuttigh, an expert in coastal engineering at Bologna University in Italy and a 2019 recipient of the EU's Horizon Impact Award.

Because coasts are at risk from multiple hazards, such as erosion, floods and habitat deterioration, Prof. Zanuttigh says that a joined-up approach in which everyone has a stake and which harnesses engineering, ecological and social responses is vital. Taking such a holistic approach is critical to adapt to climate change, she says. Lagoon activity has depleted seagrass and salt marshes and that is not just a problem for the fish and the birds, says Prof. Zanuttigh: seagrasses stabilise the sea floor while the marshes dissipate waves. These all helped protect lagoon settlements and the lagoon as a whole in November's flood, says Professor Adriano Sfriso, a specialist in aquatic plants at the University of Venice.

Recently Prof. Sfriso, as part of a project known as Life SERESTO, has led fishermen and hunters in planting seagrasses over an area of lagoon floor equivalent to about 15 golf courses. 'The aim was to show that great works and means to restore the environment are not needed, whilst the participation of the stakeholders plays a key role,' said Prof. Sfriso. To achieve the overall goal of coastal protection, ecosystem preservation and safety of the urban area, the multitude of interventions need to mesh together, Prof. Zanuttigh and Prof. Sfriso say. For example, seagrasses could mitigate the effects of mobile gate closures by cycling nutrients when there is no tide to flush the lagoon.

more…….https://horizon-magazine.eu/article/why-venice-actually-textbook-case-flood-prevention.html

Fishing industry lines up to protect sea grass with preserve (FL, USA)

27 January 2020, by Mike Wright, Citrus County Chronicle

Capt. William Toney has plied the waters off Citrus County all his life. A fourth-generation Homosassa fishing guide and commercial fishermen, Toney thought he knew all there was to know about the coastline. He didn't know this: Seagrasses to the north and the south are designated aquatic preserves. But the coastlines of Citrus, Hernando and Pasco counties have no such designation, leaving them open for potential damage. Now something is being done about it.

Rep. Ralph Massullo, R-Lecanto, and Sen. Ben Albritton, R-Bartow, have each filed identical bills to create the Nature Coast Aquatic Preserve, plugging a notch left unprotected along the Gulf Coast. It would be the state's 42nd aquatic preserve. Protection from damage caused by road runoff or other pollution sources is the key behind the bill. Toney said he learned of the need from Cameron Jaggard, principal associate with The Pew Charitable Trusts. Toney met with the Legislative Delegation and set about lining up support from guides and commercial fishermen throughout the three counties for a bill designating the Nature Coast Aquatic Preserve.

Tom Wheatley, a manager with The Pew Charitable Trusts who works to conserve marine life in the Gulf of Mexico, said the organization learned after looking at a map that Citrus, Hernando and Pasco counties did not have protection for its 450,000 acres of seagrasses. Massullo said the designation would prohibit drilling or dredging without permission from the Cabinet, but no other usage regulations. "All the normal activities involving boating — fishing, snorkeling, scalloping — would still be allowed," he said. Wheatley said the designation would allow the Florida Department of Environmental Protection to develop a management plan in coordination with the local community.

more…….https://www.chronicleonline.com/news/local/fishing-industry-lines-up-to-protect-sea-grass-with-preserve/article_022d7de6-414e-11ea-ba88-1be42b133d38.html

Related article

Help protect our slice of paradise (26 January 2020, Citrus County Chronicle)

https://www.chronicleonline.com/opinion/columnists/help-protect-our-slice-of-paradise/article_9008cc46-4087-11ea-bf4e-7f6fb9f2e92f.html

Mangroves and sea grasses 40-50 times more efficient at storing carbon than terrestrial forests (WA, Australia)

25 January 2020, by Robyn Williams on The Science Show, ABC News

It was only 10 years ago that scientists discovered how efficient coastal marine ecosystems such as mangroves, sea grasses and tidal marshes are at capturing and storing carbon. They absorb carbon from water and use it to build plant material which becomes buried and locked away on the muddy sea floor. Recent work has revealed these systems are 40-50 times more efficient at absorbing and locking away carbon than terrestrial forests. Seagrasses are very sensitive to warm water. During a marine heat wave event during 2010-2011, 1,000Km of sea grass was killed

around Shark Bay in Western Australia. And development continues to impact coastal environments. Since European settlement, the Australian coastline has lost 25% of its coastal seagrasses, 50% of tidal marshes and 50-70% of mangroves. Despite conservation efforts, the losses continue.
more…….https://www.abc.net.au/radionational/programs/scienceshow/mangroves-and-sea-grasses-40-50-times-more-efficient-at-storing/11893246

Australia's marine ecosystems imperiled by fires (Australia)
23 January 2020, by Alex Fox, The Hill

The unprecedented fires in Australia have killed an estimated 1 billion land animals, but the environmental destruction wrought by the flames will also extend to aquatic plants and animals, Hakai reports. More than 17 million hectares have been reduced to ash since the fires ignited in September. These mountains of ash will eventually be washed into coastal lakes, estuaries and seagrass and seaweed beds by rain. Also, in many areas the vegetation, which would normally filter and slow this storm runoff, has been burnt up. The denuded landscape will also erode more quickly as water flows across it, meaning runoff will carry more silt and debris. The fine particles of ash and silt can clog fish gills and carpet seagrass and seaweed beds — blocking the sunlight they require for photosynthesis.

The glut of charred plant matter blended into the stormwater means it's also high in nutrients, which may sound like a good thing, but an excess of nutrients can cause huge blooms of algae. Many aquatic ecosystems in Australia are particularly adapted to surviving on low levels of nutrients, which makes them even more sensitive to the massive influxes anticipated in coming months. Many commercial species, such as flathead, snapper, prawns and types of shellfish, begin their life cycles in coastal lakes and beds of seagrass or seaweed which are likely to be negatively affected by the slurry of ash and silt coming their way. The damage to these ecosystems could shrink populations of the species that depend on them, according to researchers.

The Australian government has dedicated $35 million to restoring and protecting ecosystems and wildlife damaged by the fires, but, according to the AMCS, the program and its funding don't explicitly target marine or freshwater ecosystems. However, some of the work on land supported by the fund, such as erosion control, will help to mitigate the flow of ash and mud into aquatic ecosystems. Though damage to underwater ecosystems is less visible than blackened forests and barbecued wildlife, the AMCS told Hakai that Australia's waterways and coast are in trouble and need funding to help them recover.
more…….https://thehill.com/changing-america/sustainability/environment/479628-australias-fires-will-damage-the-countrys-marine

Related article
Australia's Marine Animals Will Be the Fires' Unseen Victims (22 January 2020, Hakai Magazine)
https://www.hakaimagazine.com/news/australias-marine-animals-will-be-the-fires-unseen-victims/

Javanese men nabbed for illegal entry (PNG)
20 January 2020, by Miriam Zarriga, Post-Courier

A ship has been caught fishing illegally in PNG waters of Mari in the South Fly district in Western Province. A sectional task force was sent to Mari where they chased three boats. Two managed to escape while one was overrun and boarded by police officers who found nets, shark fins, fish meat, dugong ribs and teeth.

Five men of Javanese origin were apprehended, interviewed and charged with one count each of illegally entering the country. They have been detained at the Daru police station cells. South Fly Commander Brian Kombe confirmed the arrests and charges saying because of no support from stakeholders, including the National Fisheries Authority, foreign illegal fishing boats continue to enter the waters of PNG, particularly in Western Province, and killing dugongs for their ribs and teeth.

The boat could not be moved and is stuck at Mari. Officers, the captain of the boat intentionally spoiled the boat before he was taken to Daru, so we cannot move the boat to Daru wharf. A mechanic will be sent to Mari to fix the boat bring to Daru.
more…….https://postcourier.com.pg/javanese-men-nabbed-for-illegal-entry/

Longboat's canal plan: what to dredge, who will pay? (FL, USA)
19 January 2020, by Steve Reid, Longboat Key News

The Town has a goal to dredge canals within the community to keep them navigable and to maintain property values. In 2016, the town undertook the task of determining what canals needed to be dredged as well as developing a seagrass mitigation plan. That plan includes planting up to four acres of seagrass as mitigation in the dredging project. The Town has a three-foot depth minimum as a design criteria for canals.

The difficulty with the Greer Island (a.k.a., Beer Can Island) project is that it is an environmentally sensitive area replete with sea grass. It also requires numerous permits, potentially even from the Florida Department of Transportation (FDOT) for working around the bridge. The Town expects to apply for the permits for the Greer Island

project next month and permitting could take a year to complete. Brownman says the cost for the Greer Island project alone ranges between $475,000 and $1.15 million.

Brownman said that there is currently about $890,000 budgeted for the overall canal dredging project, leaving an unfunded balance of $3.3 million to $4.2 million. Although the issue will be discussed at a Jan. 21 workshop, the issue is being presented as informational at this point. But Brownman is clear in that the budget is under pressure based on the current cost estimates and only supports the design, engineering and permitting phase at this point.
more…….http://www.lbknews.com/2020/01/19/longboats-canal-plan-what-to-dredge-who-will-pay/

Losing Mexican manatees (Mexico)

17 January 2020, by Gabriel Núñez-Nogueira and Melina Uribe-López, Science Magazine

Over the past 2 years, the Antillean manatee (*Trichechus manatus*) in Tabasco, Mexico, has shown an alarming increase in mortality. In 2018, the Mexican government reported 48 manatee deaths attributed to algal blooms. By the end of June 2019, another 13 manatees had been found dead. It is estimated that a few hundred manatees remain throughout the Mexican territory, but population counts have not been updated since 1999.

Despite the manatees' classification as endangered by Mexico and vulnerable by the International Union for Conservation of Nature, Mexico has yet to invest the economic resources required to save them. Their habitat is exposed to contamination by agrochemicals, by-products of oil industry, and urban waste such as pesticides, hydrocarbons, and toxic metals. Manatees are important to Mexico's culture, ecology, and tourism. The species requires urgent financial and technical support, starting with short- and medium-term diagnostics and monitoring studies to clarify the causes of mortality.

The rescue of manatees in Tabasco has become urgent because the manatee is one of only four extant species of sirenids, along with the dugong (*Dugong dugon*), which is also threatened. Mexico, and international conservation allies, must prioritize manatee protection by addressing the effects of human activities and climate change on their habitat.
more…….https://science.sciencemag.org/content/367/6475/257.1

Scientists in Oyster Share Their Studies at an Open House Jan. 7 (VA, USA)

16 January 2020, by Stefanie Jackson, Eastern Shore Post

Scientists at the University of Virginia's Eastern Shore research site, known formally as the Anheuser-Busch Coastal Research Center, are learning about climate change and sea-level rise and their effects on coastal habitats, marine life, and ultimately, people living on the Eastern Shore and around the globe. Their work is part of the Virginia Coast Reserve's Long-Term Ecological Research program, which has continued for more than 30 years. The program was established in collaboration with The Nature Conservancy and is funded by the National Science Foundation.

Highlights of the event included a presentation on marine heatwaves – significant increases in water temperatures – which have occurred sporadically over the last 35 years. Water temperatures above 28 degrees Celsius (82 degrees Fahrenheit) are dangerous to marine plants. Marine heatwaves that began in 2012 and continued through 2017 were responsible for the massive killing of seagrass meadows off Eastern Shore of Virginia coasts in 2015. The record high temperatures were recorded at a buoy in Wachapreague.

Researchers at the Oyster lab are participating in the restoration of the seagrass beds, which are the preferred habitat of some bivalves like bay scallops. Scientists studied how the seagrass restoration may affect populations of certain types of marine life. For example, since the restoration began, researchers have found more clams living inside the seagrass than outside, but more blue crabs outside the seagrass than inside. The most populous fish in the seagrass are silver perch and anchovies. The restoration is important in light of climate change, because seagrass – as well as salt marsh – helps remove carbon dioxide from the atmosphere.
more…….https://www.easternshorepost.com/2020/01/16/scientists-in-oyster-share-their-studies-at-an-open-house-jan-7/

Putting more controls (NY, USA)

15 January 2020, by Ambrose Clancy, Shelter Island Reporter

Shelter Island, along with only one other location in the Northeast, according to the New York State Department of Environmental Conservation (DEC), has thriving meadows of underwater seagrass in its coastal waters. Fifteen years ago, species relying on seagrass contributed $1.9 billion in sales of seafood and $1 billion in earned income, according to a Nature Conservancy report. But today, almost 65 percent of the seagrass meadows are gone, beginning their long and perilous decline since the mid-1970s, according to a DEC report. The New York State Seagrass Protection Act of 2012 calls for the development of seagrass areas and working with local governments, businesses, fishermen, environmental groups and individuals to come up with plans to stop the erosion of the natural resource.

A plan drafted by Councilman Jim Colligan two years ago was presented to the public and met with fierce criticism, especially from the Island's baymen, who were outraged that they had not been consulted. They then put together their own plan that on Tuesday Mr. Colligan said was inadequate. He admitted he'd made a mistake by not including the men and women who work on the water in drafting a plan, saying he had to "eat crow."

But a new initiative could be in the cards, with Supervisor Siller saying he wants to meet with baymen and listen to their concerns. He also said he wants to meet with business leaders in a group session, as well as scheduling a meeting with residents in a similar session at a time and venue to be determined.
more……https://shelterislandreporter.timesreview.com/2020/01/15/putting-more-controls-on-distributing-town-money/

Seagrass shows potential in sea cucumber diets (Portugal)

14 January 2020, by Rob Fletcher, The Fish Site

Seagrass debris has the potential to improve the culture of sea cucumbers, according to new research. Scientists from the University of Algarve's Centro do Ciências do Mar (CCMAR), investigated the use of debris from two different species of seagrass – *Zostera noltii* and *Cymodocea nodosa* – as food sources for broodstock of the sea cucumber species *Holothuria arguinensis* during breeding periods. The work was undertaken to address a key knowledge gap in the culture of this species, which became the first sea cucumber species to be cultured in Europe, in 2014.

The sea cucumbers were given feed equivalent to 30 percent of the tanks' total sea cucumber biomass each week. Feed rations of seagrass and sediment were then calculated from this value, according to the following percentages: 40% sediment, 15% *Z. noltii*, 40% *Z. noltii*, 15% *C. nodosa* and 40% *C. nodosa*. The researchers noted that *H. arguinensis* fed with diets containing 40 percent *Z. noltii* showed the highest growth, however, the individuals fed with *C. nodosa* lost weight. *H. arguinensis* showed a reduction in its feeding rate as the organic matter content in the diets increased. However, the sea cucumbers did not show any important change relating to proximate composition, protein, lipid, mineral contents and fatty acids profile among the feeding groups, or in comparison with individuals collected from the wild.

As a result, the researchers conclude that: "*H. arguinensis* could be fed with *Z. noltii* debris during tanks maintenance along breeding period, ensuring its growth and maintaining its nutritional profile."
more……https://thefishsite.com/articles/seagrass-shows-potential-in-sea-cucumber-diets

Superyachts will no longer be able to anchor in areas of seagrass (France)

13 January 2020, by Rory Jackson, Superyacht News - The Superyacht Report

French anchorage laws are to change for yachts over 24m in order to protect endangered marine plant species, most notably *Posidonia*. The new regulations are due to be in place for the 2020 yachting season in France. The ECPY, spearheaded by its president Thierry Voisin, is in consultation with the necessary authorities as a means of ensuring that any ratified regulatory changes will not be draconian to the extent that they cause the yachting industry in France, and the communities that it supports, irreparable damage.

"To date, France has not been enforcing any rules relating to superyacht anchorages and protected marine plant species," explains Voisin. "Rules relating to the protection of *Posidonia* are already being enforced in Spain and, as a result of pressure from the European Union, similar rules will be enforced in France for the 2020 season. If the rules in France resemble those in Spain, it may lead to a number of arrests and, for repeat offenders, significant fines." The changes to French anchorage law were originally announced on 3rd June 2019 in accordance with Prefectoral Decree No. 123/2019, which establishes the general framework for the anchoring and stopping of vessels in the French inland and territorial waters of the Mediterranean. However, importantly, there is yet to be any confirmation on exactly how the new laws will be applied.

"Yachts over 24m will not be allowed to drop their anchors into the seagrass. Seagrass, typically, takes around 60 years to grow and reach maturity and is, therefore, sensitive to disruption," continues Thierry. "The ECPY fully supports the need to protect this vital marine resource. However, we consider current proposals about the enforcement of the new laws to be unacceptable. We are working closely with the Prefecture Maritime Mediterranee to create a solution that works for all."
more……https://www.superyachtnews.com/crew/superyachts-over-24m-will-no-longer-be-able-to-anchor-in-areas-of-seagrass

Sindh govt to rehabilitate wetlands in Indus Delta (Pakistan)

08 January 2020, The Express Tribune

The Sindh government has decided to initiate a project under public-private partnership model, to revegetate degraded wetlands in the Indus Delta, so as to benefit the province's poverty-stricken coastal communities. The cost of the project is projected to be $25 million. Addressing the meeting, Sindh Local Government, Forests and Religious Affairs Minister Nasir Hussain Shah informed the participants that vegetation in coastal areas is in fact "a vast carbon

reservoir." If properly revegetated, these wetlands have immense potential to benefit coastal communities as well as the provincial government, he added.

Forests Secretary Rahim Soomro said entering a public-private partnership was the only way through which vast chunks of degraded wetlands in the Indus Delta could be rehabilitated. Agreeing with Soomro, Sindh Chief Minister Syed Murad Ali Shah said that public-private partnership model would help with addressing the budgetary, technical and managerial constraints entailing the endeavour and directed forest department officials to initiate the process establishing a public-private partnership for the purpose.

At this, Nasir apprised the CM that a private firm has shown interest in providing assistance for the rehabilitation of wetlands through a public-private partnership model and has committed to deliver services for the development, sustainability and management of the wetlands. The firm has proposed its services for rehabilitating wetlands stretching over approximately 250,000 hectares of the Indus Delta, in Thatta Suajawal and Badin Districts, under a project titled 'Sindh Blue Carbon Initiative' (SCBI), he said. "The project will cost around $25 million and the agreement will last for 60 years, however, this period may be extended up to 100 years at a later stage," he added.
more…….https://tribune.com.pk/story/2132532/1-sindh-govt-rehabilitate-wetlands-indus-delta/

Related article
Sindh cabinet okays plan to involve private sector in revegetating wetlands (08 January 2020, DAWN)
https://www.dawn.com/news/1526872/cabinet-okays-plan-to-involve-private-sector-in-revegetating-wetlands

Alderney seagrass planted in Wales (Guernsey, United Kingdom)
03 January 2020, ITV News

Seagrass from Alderney is being planted off the coast of Wales as part of a new environmental project. The grass has been donated to Swansea University as it can store double the amount of carbon than soils on-land. The seagrass can also survive in warmer waters.

Seeds from underwater seagrass meadows in Longis nature reserve, off the coast of Alderney, will be sent to the University to germinate before being planted underwater at a new meadow in Wales.
more…….https://www.itv.com/news/channel/2020-01-03/alderney-seagrass-planted-in-wales/

GICIA announces Mercabo Preserve tour dates (FL, USA)
03 January 2020, Boca Beacon

The Gasparilla Island Conservation and Improvement Association (GICIA) is excited to announce the 2020 dates for the Mercabo Preserve Site Tours. This year's tours will educate guests about the GICIA's successful acquisition of the parcel, the completed upland restoration and the soon-to-begin Mercabo Cove project.

This innovative project is planned to begin in early March and will transform the basin area of the Mercabo Preserve into a marine sanctuary. The long-term benefits of this project will include improved water quality, enhanced native fish and bird habitat, reduced seawall maintenance costs and improved aesthetics of the site. One of the most interesting design elements of the project is the construction of a tidal creek that will allow the free flow of tidal water out of the east section of the basin into the Bay. This will allow flushing and significantly improve water quality in the entire Cove system. Project plans also include the addition of clean fill, which will reduce water levels and allow for the possible reintroduction of seagrasses.

Healthy seagrass beds are an important part of the marine environment because they absorb nutrients, slow the flow of water and trap and stabilize the sediment, which improves water clarity and quality. Healthy seagrass areas are one of the most productive ecosystems in the world and are critically important to juvenile tarpon, snook, the federally listed smalltooth sawfish, turtles and manatees.
more…….https://bocabeacon.com/wordpress/news/gicia-announces-mercabo-preserve-tour-dates/

How is the Indian River Lagoon looking three years into multi-million dollar cleanup? (FL, USA)
02 January 2020, by Dan Billow, WESH Orlando

It's been three years since Brevard County residents voted to tax themselves $400 million for the cleanup on the Indian River Lagoon. Fisherman Danny Smallwood says he's encouraged. A little over three years ago, fish were dying by the thousands in the lagoon, and a plague of brown algae had turned the water to the color of coffee. "I do see a lot of sea grass, and when there isn't grass on the bottom, it tends to be more sandy, not as mucky," Smallwood said.

Now, the Brevard Indian River Lagoon Coalition said a lot has been done to help. Officials said septic systems that may have been leaking sewage into the lagoon have been converted to sewer systems that send sewage to treatment plants. Eighteen other cleanup projects have been completed, with 64 more projects getting underway.

Those projects include muck-dredging: scraping the black muck off the bottom of the lagoon so that seagrass can grow in the sand. That should help the fish come back, but fisherman Cicchetti Antonio said he hasn't seen it.

The goal is to let nature do the healing by removing sources of nitrogen that cause runaway algae growth. Brevard County is three years into a 10-year cleanup. So far, taxpayers have spent $125 million on the cleanup. The tab should rise to $400 million by the time it's finished.
more……https://www.wesh.com/article/doorbell-camera-captures-man-pleading-for-help-after-carjacking/30379691

Related article
Lots accomplished in Indian River County in 2019; prepare for 2020 challenges (02 January 2020, TCPalm)
https://www.tcpalm.com/story/opinion/columnists/laurence-reisman/2020/01/02/indian-river-county-saw-big-issues-2019-but-2020-busy/2793406001/

CONFERENCES

The 14th International Seagrass Biology Workshop (ISBW14) (Annapolis, Maryland, USA on 09–14 August 2020)

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 2020 will be held in August 2020 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, 5 – 10 July 2020).

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/program/session-program/

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 50,841 views to date)

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 *http://www.seagrasswatch.org/publications.html#ebulletin*
Frequently Asked Questions *http://www.seagrasswatch.org/faq.html*
Magazine *http://www.seagrasswatch.org/magazine.html*
Virtual Herbarium *http://www.seagrasswatch.org/herbarium.html*
Future sampling dates *http://www.seagrasswatch.org/sampling.html*

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