30 April 2020

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IN THIS BULLETIN

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NEWS

CSA Ocean Sciences Performing Seagrass Surveys for Essential FPL Projects (FL, USA)

27 April 2020, GISuser

CSA Ocean Sciences Inc. (CSA), has recently performed pre- and post-construction seagrass surveys associated with the repair of three marine power distribution cables in West Palm Beach, Miami Beach, and Bay Harbor Islands. The repair of the cables, owned by Florida Power & Light Company (FPL), is considered essential work.

Seagrasses were found at two of the three project locations, including turtle grass (*Thalassia testudinum*) and paddle grass (*Halophila decipiens*), which required post-construction surveys to be conducted following repairs. The pre- and post-construction survey results were provided to UESI and FPL.

more……https://gisuser.com/2020/04/csa-ocean-sciences-performing-seagrass-surveys-for-essential-fpl-projects/

Scientists create new way to find endangered dugongs (Japan)

26April 2020, by Hayato Murai, Asahi Shimbun

Researchers have developed a new way to locate habitats of the elusive dugong by analyzing DNA left behind in the water from its skin and saliva. If it proves effective, it could lead to better preservation of a species nearing extinction. The new technique, created by scientists from the Ryukoku University's Graduate School of Science and Technology in Otsu and the Toba Aquarium in Toba, Mie Prefecture, is expected to lead to a better understanding of the marine mammal's ecology and distribution.

Yumiko Hiraishi, 24, a graduate student at the school, and her colleagues, used polymerase chain reaction (PCR) technology to make copies of their DNA sequences for analysis. The researchers isolated a DNA arrangement unique to dugongs from available sequences of the marine creature, allowing them to produce an artificial copy of its DNA. The Toba Aquarium, the only facility in Japan with a dugong, named Serena, provided water samples collected from Serena's tank. The new method was also successfully tested using a DNA sample from a dead dugong found in March 2019 in Okinawa.

Currently, scouting for dugong habitats requires a lot of work and money for aerial location or diving surveys. But the new discovery is expected to lead to discovering where they live much more easily through lab examinations of seawater samples from many different locations--specifically, by identifying environmental DNA discharged from debris the animals leave behind floating in the water, like saliva and peeled skin fragments. That would eliminate the need for experts to travel to research sites.

more…….http://www.asahi.com/ajw/articles/13266588

Thailand's tourist drought leaves space for shy sea mammal (Thailand)

23 April 2020, by Preeyapa T. Khunsong and Jerry Harmer, Associated Press

It's rare to see a threatened species of sea mammal in shallow waters in southern Thailand but thanks to travel restrictions that have stripped popular destinations of crowds of tourists, a large group of dugongs has made their presence known. Drone video footage released by the Department of National Parks shows a 30-strong herd of dugongs on Wednesday off Libong island in Trang province. They were feeding on seagrass and occasionally surfaced to breathe. Naturalists report other marine animals are also taking advantage of the tourism slump that is leaving coastal regions tranquil and undisturbed.

Human intrusion and marine pollution have made dugong sightings in southern Thailand rare in recent years. "It's quite unusual," marine scientist Thon Thamrongnawasawat told The Associated Press on Thursday when asked about the dugongs. "This species of mammal is very sensitive to speed boats and people. When they are gone, they feel free to gather in a large group and come close to shore." Thailand's [dugong] population is put at around 250. Thon said there were also reports this week of large schools of sharks coming unusually close to shore in several places in southern Thailand, and a sighting of a pod of false killer whales.

more…….https://apnews.com/760b5cbe9c0880a887a88841efa059ad

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Posidonia needs considering in national energy and climate plan (Majorca, Spain)

14 April 2020, Majorca Daily Bulletin

The Balearics Environment Commission has prepared a report for the national ministry of ecological transition's energy and climate plan. The commission draws 32 conclusions that need to be taken into account for the Balearics, the ministry's plan being a comprehensive one for the whole of Spain. One of the points concerns *Posidonia* seagrass, the commission stressing that *Posidonia* is a carbon dioxide sink in the same way that forests and agricultural land are. The ministry's plan does not at present cover *Posidonia* or wetlands, which the commission also highlights.

Antoni Alorda, the commission's president, says that *Posidonia* is a "submerged forest and must be recognised as such". Forest mass and *Posidonia* meadows absorb 66% (5.6 million tonnes) of carbon dioxide produced in the Balearics, the *Posidonia* being responsible for 600,000 tonnes. Alorda adds that the national plan "should be more specific in its guidelines". The EU has been urging Spain to produce the plan so that it can be given complete approval by the end of this year.
more…….https://www.majorcadailybulletin.com/news/local/2020/04/14/65539/posidonia-needs-considering-spain-energy-and-climate-plan.html

Scientific paper details marine spatial planning at Red Sea project (Saudi Arabia)

13 April 2020, by Anup Oommen, Construction Week Online

Details on the marine spatial planning models that informed the master planning of The Red Sea gigaproject – which is being developed on an area spanning 28,000 km^2, and includes more than 90 islands, mountain, canyons, dormant volcanoes, as well as cultural and heritage sites – has been published in the scientific journal Frontiers in Marine Science. The paper was co-authored by a multinational team of researchers including scientists from King Abdullah University of Science and Technology (KAUST), the National Technical University of Athens and the University of Thessaly, as well as executives from The Red Sea Development Company (TRSDC), the master developer responsible for Saudi Arabia's gigaproject.

Al Wajh lagoon – which includes more than 90 islands – features valuable habitats including coral reefs, seagrass, and mangroves that are home to several species, such as sea turtles and seabirds. Prof Carlos Duarte, a research chair in Red Sea Ecology at KAUST, added: "Coastal development and marine conservation have traditionally been antagonistic goals, given that coastal development typically alters ecosystems and increases stress on the marine environment," Duarte added: "Our study shows that, by embracing conservation as a primary goal from the outset, stakeholders involved in sustainable development can successfully reconcile the needs of development with the delivery of net positive conservation outcomes."

The paper explores actions to achieve the targets of a 30% net conservation, which exceeds the level of protection that might be expected from designating the entire lagoon as a Marine Protected Area. The research team tested five conservation scenarios and used the results to develop a three-layer conservation zoning model to achieve conservation outcomes equivalent to the "business as usual" scenario in the presence of development. The team then designed additional actions to remove existing pressures. Measures included beach cleaning campaigns; the regulation of fisheries to rebuild fish stocks; the expansion of biologically diverse habitats, such as mangroves, seagrass, and coral reefs by 30%; and the use of electric-only marine and land vehicles to avoid pollution and noise.

The master plan for the development conserves 58% of the marine area of the site, with the development footprint accounting for only 5% of the total area. The resulting conservation to development ratio of 10:1, the paper notes, is unprecedented in any documented coastal development plan. Both the development zone, and the 37% of the marine area not assigned, will be subject to strict conservation and sustainability guidelines.

more……https://www.constructionweekonline.com/projects-and-tenders/264431-scientific-paper-details-marine-spatial-planning-at-red-sea-project

Related article
Scientific paper details Marine Spatial Planning at Red Sea Project (09 April 2020, ZAWYA)
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We Can Still 'Substantially Recover' Marine Life But We Need To Hurry, Scientists Say (United Kingdom)

12 April 2020, by Elizabeth Alberts, The Rising

The future for the world's oceans often looks grim. Fisheries are set to collapse by 2048, according to one study, and 8 million tons of plastic pollute the ocean every year, causing considerable damage to delicate marine ecosystems. Yet a new study in Nature offers an alternative, and more optimistic view on the ocean's future: it asserts that the entire marine environment could be substantially rebuilt by 2050, if humanity is able to step up to the challenge.

The key to success, the authors say, is lessening the impact and stresses on the ocean, while restoring damaged ecosystems, and trying to reduce carbon emissions that drive climate change. This study examines nine parts of the ocean in detail — salt marshes, mangroves, seagrasses, coral reefs, kelp, oyster reefs, fisheries, megafauna, and the deep ocean — and suggests critical and realistic steps that can be taken to restore and protect these areas.

Restoring the oceans would be no small feat, and would require stable governmental policies, a large financial investment, and the continued evolution of scientific advances and technologies, the authors say. Action would also need to take place within a very short space of time. But the biggest obstacle to restoring the oceans is mitigating the effects of climate change, according to Callum Roberts, a co-author of the study and professor at the University of York in the U.K. Despite the challenges, Roberts says he believes the oceans are incredibly resilient. This is evident in marine protected areas (MPAs), where fishing and other human activities are prohibited, Roberts says.
more……https://therising.co/2020/04/12/recover-marine-life-optimistic-study/

Abu Dhabi's endangered dugong population is benefiting from environmental protection (Abu Dhabi, UAE)

10April 2020, by Colin Armstrong, Time Out Abu Dhabi

The Environment Agency - Abu Dhabi (EAD) has announced that the mortality rate of dugongs has decreased significantly in the past year. Recorded deaths of wild dugongs were the lowest in five years for the 2019-2020 peak season. The decrease is due to the enforcement of new Ministerial Resolutions concerning fishing nets and changes to fishing practices in the waters off of the Abu Dhabi coast.

In December 2018, the EAD coordinated with the Ministry of Climate Change and Environment to amend regulations on surface fishing and the use of encircling nets – which can cause deaths among dugongs. "In the past season, recorded dugong deaths were the lowest for the past five years," said Ahmed Al Hashmi, acting executive director of EAD's Terrestrial and Marine Biodiversity. "This shows the success of the resolution on the regulation of surface fishing via encircling nets. It is also evidence of the fruitful collaboration with other relevant authorities to protect endangered marine species such as dugongs and sea turtles. The statistics show that the deaths of dugongs during peak seasons coincide with seasonal barber fishing – locally known as Hiyali. Peak seasons are where dugongs are close to coastal areas and islands. "Our inspection team worked closely with the Critical Infrastructure and Coastal Protection Authority to increase monitoring of the illegal use of fishnets in reserves and marine areas. "We have also partnered with the relevant authorities to raise awareness about marine wildlife and environmental legislation."
more……https://www.timeoutabudhabi.com/news/438650-abu-dhabis-endangered-dugong-population-is-benefiting-from-environmental-protection

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Abu Dhabi's dugong population saved by fishing net ban (07 April 2020, The National)
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Carcass of rare dugong found in Lamu (Kenya)

06 April 2020, by Kalume Kazungu, Daily Nation

A carcass of the endangered dugong, a marine mammal that eats seagrass, has been found by conservancy rangers at Pezali area in Shanga-Rubu on Pate Island, Lamu County. Dugongs are known as nguva in Kiswahili. Confirming the spotting on Sunday, Pate Marine Community Conservancy (PMCC) Manager Nadhir Hashim said the rare mammal's carcass was found by one Athman Shee Kupi, a corporal working at the conservancy. The carcass estimated to be two to three days old was found lying in a mangrove forest.

The spotting of the Dugong sparked both sadness and excitement among fishermen and locals who showed up in the area to see the animal. According to Mr Hashim, the endangered mammal species has not been sighted in Kenya's coastal waters for years. He said the cause of death is yet to be established though he suspects it might

have been trapped in mangroves or consumed toxic plastic since the stomach did not appear normal. The PMCC manager insisted on the need for concerted effort from all to ensure endangered species of animals, including dugongs, are well protected along the Kenyan coast and the world at large.

Mr Kupi, who was the first person to spot the carcass, said it was disappointing for him to find the animal dead. “I would be a very happy person if I’ve found the animal alive rather than dead. In fact I shed my tears shortly after seeing the dead dugong. I am a conservationist and I’ve really been at the forefront in protecting these endangered species of animals,” he said. It is estimated that the remaining population of dugongs in Kenya is less than 10, but an aerial census survey led by Kenya Wildlife Services in 2017 recorded zero sightings of the marine mammal whose lifespan is up to 70 years and above.
more…….https://www.nation.co.ke/counties/lamu/Carcass-of-rare-dugong-found-in-Lamu/3444912-5515540-ehe4i8z/index.html

Kings Bay restoration project continues its momentum (FL, USA)
06 April 2020, Citrus County Chronicle

We’re all hungry for some good news these days, and we got some recently from the Save Crystal River (SCR) group. SCR, working with its contracted partner Sea & Shoreline, is continuing to remove muck from the bottom of King’s Bay and to plant native seagrass in its place. As SCR president Lisa Moore said, the restoration team is still “going full steam ahead and making a difference every single day.” The goal is to continue through the 100th birthday of Crystal River, on July 2, 2023. SCR has already accomplished more than some said was possible.

SCR and its partners have already removed nearly 40 acres of invasive *Lyngbya*, uncovered more than 400 spring vents and planted more than 130,000 eelgrasses. This year’s goal is to clean another 31.35 acres of bay bottom, on the way to completing 92.6 acres by 2023. SCR’s King’s Bay restoration project is rightfully being praised as a model for environmental cleanup and marine conservation.

There are concerns, though, that could jeopardize that success. One is funding. Actions to fight the COVID-19 pandemic and its repercussions statewide have been prioritized by state leaders, so SCR may not receive the level of funding previously identified. SCR and its partners should press on with this important project, especially now when there are few manatees and no tourists in residence. But they should do so safely.
more…….https://www.chronicleonline.com/opinion/editorials/kings-bay-restoration-project-continues-its-momentum/article_03069bbc-728b-11ea-b91a-7bae4306d1b2.html

Water quality: Indian River Lagoon, St. Lucie River are gorgeous, but seagrass is wiped out (FL, USA)
02 April 2020, Tyler Treadway, TCPalm

Because recreating on the Indian River Lagoon is an "essential activity" under Gov. Ron DeSantis' safer-at-home order, you'll be able to see just how clear local waters have become. What you won't be able to see: the seagrass that should be growing in the lagoon.

The clear water is the result of a dry winter and early spring, said Leesa Souto, executive director of the Marine Resources Council in Palm Bay. The lack of rain results in a lack or rainfall runoff draining pollutants, especially algae bloom-feeding nitrogen and phosphorus, into the lagoon. The Florida Oceanographic Society gave water quality in the lagoon and St. Lucie River in Martin and southern St. Lucie counties a "B-plus" grade in a report issued Thursday. Most areas received "good" or "ideal" grades, although clarity was only "fair" at several sites, including the lagoon between Stuart and the St. Lucie County line.

The lagoon has lost about 80% of the seagrass it had just 10 years ago, by Indian Riverkeeper Mike Conner's estimation. "In some places, there's no seagrass at all," he said. "The bottom looks like a moonscape." That's despite reports last fall that seagrass was starting to return, especially in the southern lagoon in Martin County, because there were no Lake Okeechobee discharges — and thus no blue-green algae blooms — in 2019. Part of the reason for the seagrass loss over the winter is natural, said Paul Fafeita, a Vero Beach fishing guide and head of the Clean Water Coalition of Indian River County. "It dies back in the winter and comes back in the spring. Let's just hope it really comes back this spring." Fafeita said.
more…….https://www.tcpalm.com/story/news/local/2020/04/02/water-quality-good-indian-river-lagoon-st-lucie-river-but-seagrass-not/5102213002/

Tourists willing to pay to save a metre of beach (Majorca, Spain)
01 April 2020, Majorca Daily Bulletin

The University of the Balearic Islands undertook a study to analyse visitors' willingness to pay for a series of measures to minimise the impact of climate change on Majorca's coasts and beaches. The study and its results have been published in the journal Climatic Change. They reveal that tourists would be prepared to spend 1.23 euros per day of their stay in Majorca in order save a metre of beach from the effects of climate change (rising sea level); 0.9

euros per day to prevent masses of jellyfish; and 0.31 euros a day to recover one per cent of *Posidonia* seagrass meadows.

The research by Alejandra Enríquez and Àngel Bujosa involved questionnaires that were part of a wider investigation into evaluating the effects of climate change on the well-being of tourists visiting the Balearics. These questionnaires were divided into three parts: the importance of environmental problems that can affect tourist experience in the destination; a detailed description of the impacts of climate change that can be expected in the destination; the socioeconomic characteristics of the interviewees.
more……https://www.majorcadailybulletin.com/news/local/2020/04/01/64953/tourists-mallorca-willing-pay-save-metre-beach.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 51,236 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

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Future sampling dates *http://www.seagrasswatch.org/sampling.html*

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