# Seagrass-Watch e-Bulletin

Le Morne, Mauritius

## 31 October 2021

Seagrass-Watch's electronic news service, providing marine and coastal news of international and national interest. Edited articles are presented with links to their source. Seagrass-Watch HQ recommends that readers exercise their own skill and care with respect to their use of the information in this bulletin and that readers carefully evaluate the accuracy, currency, completeness and relevance of the material in the bulletin for their purposes. You are free to distribute it amongst your own networks.

## IN THIS BULLETIN



*Please note: links to sources were active on date of publication. Some sources remove links periodically.*

# NEWS

## *Life in the underwater meadow - The Globe and Mail (BC, Canada)*

*29 October 2021, The Globe and Mail*

For five years, the SeaChange Marine Conservation Society along with Cowichan Tribes and community volunteers have been working to re-establish historical underwater eelgrass meadows. In Cowichan Bay, seagrass is important for salmon, which use it as shelter during their fry stage after swimming downriver.

It was fascinating to watch the small team of divers dig into the barren, silty seabed and drop a batch of 10 seagrass shoots, each about one-metre long, into a hole and cover it over before moving on to the next batch. They laid out their underwater garden in clean rows of bright green vegetation, which will fill in over time. It didn't take long for schools of fish and crabs to move back into this habitat, which had been missing for decades.

Not all restoration projects work. They can be expensive and time consuming. It's much more efficient to protect what nature we still have, but under the right circumstances, restoration can yield encouraging results. As SeaChange executive director Nikki Wright puts it: "If we did things right on land, there wouldn't be much need for restoration, but projects like this are rejuvenating and energizing when you have such high community engagement like we do [in] Cowichan."

*more…….https://www.theglobeandmail.com/canada/article-life-in-the-underwater-meadow/*

## *Nearly 1,000 of Florida's manatees have died this year (FL, USA)*

*28 October 2021, WPTZ*

The 984 manatee deaths recorded so far this year more than doubles last year's total of 483 deaths, according to mortality statistics provided by the Florida Fish and Wildlife Conservation Commission (FWC). Most mortalities were associated with starvation due to the lack of seagrasses near warm-water refuge sites in the Indian River Lagoon, the FWC said, noting that a comprehensive investigation into the deaths continues.

But when nutrients from wastewater or runoff containing fertilizers, microplastics or toxic chemicals leach into a manatee's marine habitat they can throw off the balance of the water and cause harmful algae blooms to form. The blooms blanket the surface of the water and shade out the seagrasses underwater, killing the grasses. The seagrasses that survive the blooms are overgrazed by manatees whose sources of food have shrunk, so the plants can't regrow quickly enough to continue to feed the manatees, Michael Walsh, a clinical associate professor at the University of Florida College of Veterinary Medicine said. As the seagrasses die, manatees begin to eat less or they eat other plants that don't provide the needed nutrition and they begin to lose weight. Over time, this leads to malnutrition and, eventually, starvation, Walsh said.

The last comparable unusual mortality event occurred in 2010 when temperatures in Florida fell to historic lows in a cold snap that proved extremely dangerous for manatees. More than 760 manatees died that year, according to the FWC. "We are committed to working with partners and our dedicated funding to identify actions necessary to conserve Florida's population of manatees," Carly Jones with FWC said. "We will continue to evaluate next steps based on what we learn from this event."

*more…….https://www.mynbc5.com/article/1-000-florida-manatees-died-toxic-algae-blooms-food-source/38086798#*

## *Sea Otters Help Seagrass Meadows Thrive (CA, USA)*

*27 October 2021, Forbes*

Sea otters are iconic members of Pacific coast habitats. They are frequently associated with kelp forests where they feed on predatory urchins, but are lesser known for living among seagrasses. Now, a new study shows that these otters not only help foster more diverse seagrass beds, but that the duration of their presence does as well.

When otters are in seagrasses, they dig around in the mud for food items like clams, leaving cavities in their wake. These mud pits are attractive spots for new seagrass shoots to grow. Essentially, sea otters are creating prime real estate for seagrass meadows to prosper.

What is especially important about the indirect benefits of sea otters is that their presence changes the way that seagrasses are reproducing. Seagrasses can effectively produce runners that result in clones of themselves that grow up close to the parent plant. Alternatively, they can release reproductive cells and produce offspring with the help of other seagrasses. Sexual reproduction results in seagrasses occupying the pockmarked mud left behind by the otters and ultimately leads to more genetically diverse seagrass beds. Lead author Erin Foster describes these findings as a "rediscovery", as it seems that Indigenous Seri people have long known to harvest seagrass from beds that otters had disturbed.

*more…….https://www.forbes.com/sites/priyashukla/2021/10/27/sea-otters-help-seagrass-meadows-thrive/?sh=3314f8603583*

## *How much do marine heatwaves cost? The economic losses amount to billions and billions of dollars (United Kingdom)*

*26 October 2021, The Conversation*

During marine heatwaves, ocean temperatures can become so high that many species become stressed, or die. Critical coastal habitats, such as seagrass meadows, corals and kelp forests, can die out, limiting their natural capacity to store carbon dioxide and disrupting fisheries and tourism. Until now, we've not understood how much society loses during marine heatwaves. This is what our new research, published in Science, sought to find out.

We looked at 34 marine heatwaves worldwide, and found one event in 2016 in southern Chile cost more than $800 million in direct losses to aquaculture (cultivating aquatic plants and animals for food). Another heatwave in Shark Bay, Western Australia, resulted in $3.1 billion per year in indirect losses, as a result of lost carbon storage when seagrass beds were impacted.

As with every climate-related threat, reducing greenhouse gases and a commitment to the Paris Agreement is the best, long-term solution. However, given we've already seen a 50 percent increase in marine heatwave days since 1925, we will undoubtedly see heatwaves intensify further, even if the world succeeds in holding average global warming to between 1.5 and 2 degrees C.

*more……https://theconversation.com/how-much-do-marine-heatwaves-cost-the-economic-losses-amount-to-billions-and-billions-of-dollars-170008*

*Related article*

*How Much do Marine Heatwaves Cost the Economy? (31 October 2021, The Maritime Executive)*
*https://www.maritime-executive.com/editorials/how-much-do-marine-heatwaves-cost-the-economy*

## *Florida man saves drowning manatee after it ate 'toxic red tide seagrass' (FL, USA)*

*26 October 2021, NEWS10 ABC*

A quick-thinking worker at a Southwest Florida boat club helped rescue a manatee believed to be poisoned by toxic red tide. Mikko Claxton, of Bradenton, said he was taking photos when he found out about the manatee in distress and went over to see what was happening. Claxton said he found Don Swartz, an employee at members-only Freedom Boat Club, holding the animal with its nostrils above water under the direction of the Florida Fish and Wildlife Conservation Commission (FWC). "I asked him what was wrong with the manatee and he said they believe it's due to red tide, that it's having trouble breathing," Claxton said.

After 40 minutes, rescuers arrived and took over. A marine mammal rescue team then stretchered the approximately 9-foot manatee onto a capture boat and transported it to a nearby boat ramp. The manatee was then loaded onto a transport truck and transported to SeaWorld. Swartz added the manatee "appeared to have eaten toxic red tide seagrass," but was told the manatee had a 95% chance of recovery. According to the FWC, if you see a marine mammal in distress, you should immediately contact wildlife officials.

*more……https://www.news10.com/news/national/florida-man-saves-drowning-manatee-after-it-ate-toxic-red-tide-seagrass/*

## *Seagrass restoration study shows rapid recovery of ecosystem functions (CA, USA)*

*25 October 2021, UCSC News - UC Santa Cruz*

As the dominant seagrass species on the U.S. West Coast, eelgrass supports a wide range of ecosystem services and functions, making its preservation and restoration a top priority for the region. Eelgrass restoration has a spotty record of success, however, and studies of restoration sites have rarely assessed the full range of ecosystem functions.

In a new study published October 6 in Ecological Applications, researchers demonstrated that eelgrass restoration efforts can lead to rapid expansion of restored plots and recovery of ecosystem functions. The study involved small-scale experimental seagrass restoration efforts in Elkhorn Slough on the Central Coast of California. Researchers transplanted 2,340 shoots of eelgrass from healthy meadows into 117 small plots, and evaluated their success relative to areas without vegetation and natural eelgrass meadows. The restored plots expanded dramatically, resulting in eelgrass beds covering an area 85 times larger than the initial plots. The restored beds began to resemble the natural meadows in structural features such as canopy height and shoot density, in the richness and abundance of species using the restored habitat, and in water quality. The study assessed a suite of seven ecosystem functions, and the researchers also developed a multifunctionality index to assess the overall functional performance of the restored beds.

"Within a few years, most of the ecosystem functions were near or at the level seen in natural eelgrass meadows, suggesting that these habitats can recover pretty quickly if the conditions are right," said first author Kathryn Beheshti. She noted that the California Ocean Protection Council's Strategic Plan to Protect California's Coast and Ocean includes a target to preserve the existing, known 15,000 acres of seagrass beds and create an additional 1,000 acres by 2025. In addition, she said, NOAA's National Marine Fisheries Service is updating its California

Eelgrass Mitigation Policy, which currently calls for “no net loss of eelgrass habitat function” but does not require mitigation projects to assess habitat function.
*more…….https://news.ucsc.edu/2021/10/eelgrass-restoration.html*

### *Plant rediscovered in Marlborough lagoon decades after last sighting (New Zealand)*
*22 October 2021, RNZ*

Seagrass has been spotted in a Marlborough lagoon for the first time in almost four decades. Hundreds of hectares of *Ruppia* - also known as horse's mane weed - have been rediscovered in the Wairau Lagoon, south-east of Blenheim. The find came as a "huge surprise" to the team of scientists tasked with checking the lagoon's health in April. However, the presence of dense algae and abundant seaweed in other parts of the lagoon was worrying.

*Ruppia* beds once dominated the lagoon but mud, current changes or competition from other plants were likely causes of the population crashing. The last recorded sighting was in 1983. But during the Marlborough District Council's latest inspection of the lagoon, scientists found 44.2 per cent of the lagoon had some *Ruppia* cover. About 16.2 per cent, or 199 hectares, had moderate to dense coverage.

"From a science perspective, this is really amazing ... This shows that the lagoon's system is pretty healthy," one of those scientists, Dr Keryn Roberts, told councillors last week. Roberts suspected the *Ruppia* had never left the lagoon but that the number of plants had decreased, causing it to be missed during previous check-ups, which might not have even looked for it. Its rediscovery was "regionally ... and nationally significant".
*more…….https://www.rnz.co.nz/news/ldr/454097/plant-rediscovered-in-marlborough-lagoon-decades-after-last-sighting*

### *Restoring seagrass in Romania by Van Oord (Romania)*
*21 October 20212, Dredging Today*

Van Oord was contracted by Administratia Bazinala de Apa Dobrogea-Litoral (ABA-DL) in 2019 to design and build new groynes and beaches to protect the popular seaside resort of Eforie on the Black Sea from erosion. Part of the project is the construction of three hectares of seagrass. Van Oord is currently conducting research to determine how to restore the seagrass at this location in the best way, taking into account the local conditions.

Van Oord started the operations in Romania a couple of months ago. Under the plan, the old pier and dams will be replaced by new breakwaters. A trailing suction hopper dredger (TSHD) will be deployed next year to restore the beaches.
The coastal reinforcement project is expected to be completed in 2023.
*more…….https://www.dredgingtoday.com/2021/10/21/restoring-seagrass-in-romania-by-van-oord/*

### *Juvenile dugong found dead in S'pore waters (Singapore)*
*10 October 2021, Mothership.sg*

On Oct. 9, a juvenile dugong was found dead and floating belly up in the waters near Pulau Hantu, an island south of mainland Singapore. According to Samantha Lam, one of the divers on the boat, they were headed back to the Republic Of Singapore Yacht Club on mainland Singapore from Pulau Hantu after their morning dive. Lam said that the boat captain had spotted something white floating in the water, and some on the boat initially thought that it was a dolphin. But as they approached the animal and realised that they were looking at a dugong, Lam said she "couldn't believe it". Everyone at the scene was also "really excited", as it is extremely rare to spot a dugong in Singapore waters.

The boat then stopped near the dugong, and some divers and members of the crew helped to pull the carcass onboard. They called the Lee Kong Chian Natural History Museum (LCKNHM) to check if they would take in the carcass, and placed the dugong in a big trash bag after taking some photos. One of the divers estimated that the animal weighed 30kg. Lam said that it was likely a calf, as the dugong was only about 1.5m long, and adults can reach 2.6m in length. "There were no visible signs to indicate that the death of the young dugong was caused by physical trauma," said Karenne Tun, Director of Coastal and Marine at the National Biodiversity Centre in NParks. Tun said that NParks is working with LCKNHM and the Department of Biological Sciences from the National University of Singapore to investigate the cause of the death.

Dugongs are listed as Critically Endangered in Singapore. While they used to be common in the Johor Straits, sightings in the wild are extremely rare now. Earlier this year, another dead dugong was found floating near Big Sister's Island. The biggest threat faced by the dugong is seagrass habitat loss and degradation, which is the herbivore's main source of food. The dugong's feeding trails are commonly seen in seagrass meadows at Chek Jawa and Pulau Semakau. Singapore's seagrasses are all at risk due to water pollution, marine litter, fishing nets and coastal development.
*more…….https://mothership.sg/2021/10/dead-dugong-pulau-hantu/*

## *Ban seabed trawling and protect peatlands to store carbon, Wildlife Trusts urge (England, UK)*

*08 October 2021, ChronicleLive*

Conservationists are calling for a ban on trawling the English seabed and an end to farming on deep peat as part of efforts to protect precious carbon stores. Ahead of international Cop26 climate talks in Glasgow, the Wildlife Trusts are warning that action to restore nature at an ambitious scale is needed if the world is to address the climate crisis.

In a report published in the run up to the Cop26 talks, where countries will be under pressure to drive action on curbing dangerous warming, the Wildlife Trusts called for action on both climate and curbing declines in nature. The trusts want to see greater protection of carbon-storing habitats, including a new call to ban bottom-trawling the seabed in England, which conservationists warn releases carbon stored in the sediment and habitat. Seagrass is also an important store of carbon and a key place for wildlife so all seagrass habitats should be given highly protected status, and the Government should renew its pledge to protect coastal habitats such as saltmarshes which absorb carbon.

“In addition to the urgent task of cutting emissions at source, we need to see an enormous rise in the amount of land and sea that’s protected for nature – and increase it to at least 30% by 2030,” Wildlife Trusts chief executive Craig Bennett said. He also called on the Government to embed climate action – both efforts to cut emissions and cope with increasing temperatures and extreme weather – and stop polluting activities such as new road building, burning peat and trawling the seabed.

*more…….https://www.chroniclelive.co.uk/news/uk-news/ban-seabed-trawling-protect-peatlands-21798647*

## *Coastal areas scoped as potential new 'blue carbon' credit sites (New Zealand)*

*09 October 2021, Stuff.co.nz*

Coastal wetlands are emerging as a key battleground in the fight against climate change. It is hoped some along New Zealand’s shores could become “blue carbon” credit sites. In New Zealand, a handful of salt marshes and inter-tidal zones are now being assessed for their potential to help set up a market for blue carbon credit.

American-based non-governmental organisation, The Nature Conservancy (TNC) has initiated the assessment of six sites in Aotearoa, as part of various pilot projects around the world. Three of the sites are in the top of the South Island; Waimea Inlet north-west of Nelson, Wairau Lagoon near Blenheim, and Farewell Spit, at the tip of Golden Bay. The others are at the top of the North Island; the Firth of Thames and in the Bay of Plenty.

Research was underway to establish how much carbon was stored by plants growing in New Zealand tidal marshes, Erik Van Eyndhoven, Associate director of conservation at The Nature Conservancy in New Zealand, said. “If we can demonstrate there’s sufficient carbon being sequestered in those sites and if the economics stack up, then we would set about creating restoration at scale – looking to find investors to help pay for restoration of those sites, and then creating a market set up to be able to sell those credits.

*more…….https://www.stuff.co.nz/environment/climate-news/126525091/coastal-areas-scoped-as-potential-new-blue-carbon-credit-sites*

## *Does the world need more sharks?*

*08 OCtober 2021, BBC News*

Worldwide, shark populations are on the decline. Boosting their numbers could have a cascade effect to help sink carbon and make the oceans more resilient to climate change. On the westernmost tip of Australia in Shark Bay, tiger sharks are common frequenters are crucial to the health of the marine ecosystem. It all comes back to the seagrass in the shallows of Shark Bay which is food for the dugongs. Dugongs are a rich source of food for tiger sharks and by keeping the dugong population in check, tiger sharks in Shark Bay help the seagrass meadows thrive. A flourishing seagrass meadow stores twice as much CO2 per square mile as forests typically do on land.

But globally, tiger shark numbers are declining, including some populations in Australia. A reduction in tiger sharks means more seagrass grazing by herbivores, which means less carbon is sequestered in sea vegetation. In the Caribbean and Indonesia where shark populations have dwindled, overgrazing by herbivores like sea turtles is already a profound threat to seagrass habitats, and has led to a 90 to 100% loss of seagrass. As well as meaning less carbon is absorbed, the loss of seagrass also makes the habitat less able to recover from extreme, climate change-driven weather events, such as heatwaves.

As well as keeping dugong numbers down and making seagrass ecosystems more resilient, tiger sharks also play another crucial role in maintaining the health of the habitat. They act as potent fertilisers when they poo, and when they perish in the meadows. Long-lived vertebrates can act as carbon sinks when carbon consumed at the ocean surface is transferred to the deep ocean by faeces and/or dead carcasses falling to the ocean floor. This phenomenon is known as carbon sinking. Since the tiger sharks in Shark Bay spend ample time hunting in and moving through the seagrass beds, it’s likely they provide similar fertilising benefits to those plants. Therefore, sharks'

abundance has an undeniable ripple effect on the many marine ecosystems that rely on healthy, plentiful seagrass in one way or another. By leveling the ecological playing field, sharks are fortifying these ecosystems against the threat of climate change, so they can live to sink carbon another day.
*more…….https://www.bbc.com/future/article/20211007-why-sharks-help-fight-climate-change-in-the-oceans*

## *Volusia County will explore seagrass restoration in Indian River Lagoon (FL, USA)*

*07 October 2021, Daytona Beach News-Journal*

The Volusia County Council voted Tuesday to explore a possible partnership with a pair of scientists who want to put a potentially innovative method of restoring seagrasses to the test in the Indian River Lagoon. Researchers Tom Goreau and Brian Lapointe spent two hours explaining the science behind BioRock technology. The BioRock method involves running a low voltage trickle of electricity through a steel structure, which Goreau said helps stimulate growth in all types of marine life, from seagrasses to coral reefs to oyster communities.

Seagrasses in the Indian River Lagoon are in bad shape, with the St. Johns River Management District documenting a 58% loss over the past decade. "Cleaning it up has got to be done at the source and that's going to take some time," Goreau said. "This may be a short-term solution to growing back seagrass." "The long game doesn't change, even with some of these innovative restoration techniques. We have to get water quality and clarity back," said Duane De Freese, executive director of the Indian River Lagoon Council.

Goreau, president of the Global Coral Reef Alliance, has employed BioRock technology in underwater habitats around the world and showed council members images of seagrass growing in structures in the Bahamas, Indonesia, and at an EPA-designated Superfund toxic waste site in New York. "What I've noticed, typically, is the seagrass grows about twice as tall surrounding these structures for some distance around them," Goreau said. "What we think is happening is the electrical field is stimulating the production of adenosine triphosphate, ATP," he explained. De Freese said this promising observational data must be reinforced by scientific data.
*more…….https://www.news-journalonline.com/story/news/environment/2021/10/07/volusia-county-biorock-seagrass-restoration-indian-river-lagoon/5998417001/*

## *Sea & Shoreline restores seagrass in the Caloosahatchee River (FL, USA)*

*06 October 2021, ABC 12 News*

Sea & Shoreline, a leader in rehabilitating threatened aquatic ecosystems, announced today that it has completed phase two of a large-scale, multi-phase submerged aquatic vegetation (SAV) restoration project in the Caloosahatchee River and Estuary to address harmful algae blooms, rebuild essential fish habitat, and provide seasonal thermal refuge and food for manatees. To date, 20-acres have been directly planted at three upstream sites.

Sea & Shoreline won the contract from Angler Action Foundation and has installed 10,250 seagrass plants and 50 herbivory exclusion devices, which will temporarily protect the plants from being grazed upon by turtles, manatees, waterfowl, and apple snails until they can take root and expand. The project will be monitored by Sea & Shoreline biologists for a three-year period.

Earlier this year, the company celebrated a milestone by planting its one-millionth seagrass plant and launching its newest crusade, "Seagrass Saves Sea Life", in an effort to raise awareness and educate consumers and legislators on the critical environmental and ecological benefits of seagrass. With the tragic increase in manatee deaths in Florida this year, the company is working closely with state agencies, water management districts, and other stakeholders to reverse this crisis, and to help marine life survive by reducing nutrient overloads, removing muck, planting seagrass, restoring wetlands, and converting septic to sewer.
*more…….https://www.abc12.com/2021/10/06/sea-amp-shoreline-restores-seagrass-caloosahatchee-river/*

## *Ballistic launches new beer in aid of Great Barrier Reef (QLD, Australia)*

*06 October 2021, Bundaberg Now*

Ballistic Beer Co has launched a new range of Reef beers, available exclusively in regional Queensland, which will help support restoration and research efforts along the length of Australia's iconic Great Barrier Reef. Ballistic Beer Co-commander-in-Chief David Kitchen said ten cents from every can of Reef beer sold in the greater Bundaberg Region would be donated to CQUniversity's Coastal Marine Ecosystems Research Centre (CMERC) to help restore ecologically important seagrass meadows in Bundaberg, Gladstone and the Discovery Coast.

CMERC Director, Associate Professor Emma Jackson thanked Ballistic Beer Co for their support of important regional research, which has global impact. "Seagrass meadows are the kidneys of the Great Barrier Reef, as they offset our carbon footprint and are vital for the survival of several species, including dugongs," Emma said. "This partnership will help fund work to restore and research sub-tropical seagrass meadows as CMERC runs Queensland's only dedicated seagrass nursery, where we are teaching the next generation of environmental

scientists. “We work with recreational fishers and Traditional Owners to collect seagrass flowers and harvest millions of seeds for dispersal.”
*more……https://www.bundabergnow.com/2021/10/06/ballistic-launches-new-beer-in-aid-of-great-barrier-reef/*

### *Conserve marine ecosystem, students told (India)*
*05 November 2021, The Hindu*

As Wildlife Week is being celebrated by the Tamil Nadu Forest Department, an underwater marine life awareness campaign was conducted at Vaan Island in Gulf of Mannar in association with Suganthi Devadason Marine Research Institute (SDMRI), Thoothukudi. Sixty participants including 32 students with zoology and marine science background from Kamaraj College, Thoothukudi, St. Xavier’s College, Tirunelveli, and SDMRI participated in this campaign.

Demonstrations on Scuba diving techniques by professionals led by K. Diraviya Raj from SDMRI were held and the participants were trained in snorkelling. The participants could witness the underwater marine life in particular seagrass beds and associated biodiversity like sea cucumber, star fish, sea anemone, clown fishes using snorkelling and were thrilled to see them live in the natural environment. The participants collected plastics washed ashore as part of the programme. The forest department issued certificates to the participants.
*more……https://www.thehindu.com/news/cities/Madurai/wildlife/article36843797.ece*

### *NASA report considers how it can help Indian River Lagoon (FL, USA)*
*03 October 2021, News 13 Orlando*

Problems with the Indian River Lagoon have caused a race to save the unique estuary, and now Kennedy Space Center is considering its part in the lagoon's health as well. With 140,000 acres of federal property that runs adjacent to the space center in Brevard County, NASA says its environmental services divisions at KSC are making lagoon health high priority.

The KSC Indian River Lagoon Health Initiative Plan calls for monitoring several aspects of lagoon health, from runoff caused by prescribed burns to wildlife and shoreline resiliency. The report says about 95% of seagrass coverage has been lost in KSC waters because of phytoplankton blooms since 2010. The agency wants to figure out any sources of pollution inputs into the IRL, Mosquito Lagoon and Banana River from the space center, and how to reduce them. It also wants to work to restore and expand the dying seagrass beds by mapping areas of substantial seagrass and finding places to transplant grass.

Efforts to save the Indian River Lagoon have been stepped up in the past year because of a manatee die-off. As of Sept. 24, 957 manatees around the state have died. Of those, 320 have died in Brevard County. The mass loss of seagrass is believed to be a big reason, as the seagrass is a source of food for the sea cows. The federal government has labeled the manatee deaths this year an unusual mortality event.
*more……https://www.mynews13.com/fl/orlando/news/2021/10/03/nasa-report-considers-how-it-can-help-indian-river-lagoon*

### *UK public's knowledge of nature's planet-saving power proves cloudy, according to new research (United Kingdom)*
*01 October 2021, Yahoo News*

New research reveals that while 93 per cent of UK adults say they understand what causes climate change, well under half (42 per cent) are aware that nature itself is one of the most powerful tools in combating it. Despite the UK being home to its own ‘green-technology’ seagrass, 55 per cent of those polled say they’re not familiar with what the marine flowering plant actually is. Of those who are aware of seagrass, one third do not know about its powerful carbon-capturing potential.

Sky Zero and WWF are launching the Force for Nature campaign to highlight the power of the UK’s natural habitats in the battle against climate change, asking the public to sign up to become a Force for Nature and add their names calling on Government to keep their climate promises. In return, Sky Zero and WWF will plant up to one million seagrass seeds around the UK.

Sky Zero and WWF are asking the public to join the Force for Nature campaign and Tanya Steele, Chief Executive at WWF, added: “From wildflower meadows to peat bogs and kelp forests to seagrass, we must protect these vital assets and secure their future – for our own sake. “All UK governments must keep their climate promises while we still have a chance to turn things around. We all have a role to play and becoming a Force for Nature and helping us plant more carbon-capturing seagrass seeds is one of the ways people can show their support.”
*more……https://news.yahoo.com/uk-publics-knowledge-of-natures-planet-saving-power-proves-cloudy-according-to-new-research-122658440.html*

# CONFERENCES

## *14th International Seagrass Biology Workshop (ISBW14) (Annapolis, 07-12 August 2022)*

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

The ISBW14 Chesapeake Bay will be held in Summer 2022 at the Graduate Annapolis Hotel, Annapolis, Maryland. This will be the first time ISBW has been hosted in the U.S.A. and the iconic Chesapeake Bay is the logical setting. Chesapeake Bay is an iconic estuary with a strong scientific and management history. The resurgence of seagrasses (including brackish water submersed aquatic vegetation) in the bay is the largest documented in the world, and clearly a "sign of success" to inspire seagrass scientists globally.

**More information:**
To get important updates, visit: https://isbw14.org/
Follow on Facebook @ISBW14, twitter @ISBW14 , Instagram @isbw14 #isbw14

## *58th Australian Marine Science Association conference (AMSA 2022) (Cairns, Australia, 07-11 August 2022)*

**Theme: " Change and Connections "**
The annual Australian Marine Science Association conference (AMSA 2022) will enable you to share new experiences and advancements in knowledge and practice. The theme for the conference is to emphasize important linkages among environmental, ecological and social systems at a time characterised by rapid change across all these areas.

**More information:**
To get important updates, visit: https://www.amsa2022.amsa.asn.au/

## *15th International Coral Reef Symposium (ICRS 2022) (Bremen, Germany, 03-08 July 2022).*

**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). ICRS 2022 follows the success of the 14th ICRS Virtual event that was held in July 2021, and 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.icrs2022.de/

# SEAGRASS-WATCH PUBLICATIONS:

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

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

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

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

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

https://www.seagrasswatch.org/mckenzie-et-al_2021a-2/

## SEAGRASS-WATCH on YouTube

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

https://www.seagrasswatch.org/podsnmore/

Presentation on what seagrasses are and why they are important (over 52,832 views to date)

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

Presentation on 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/*

***Educational Videos*** *https://www.seagrasswatch.org/education/*

***Magazine*** *https://www.seagrasswatch.org/magazine/*

***Virtual Herbarium*** *https://www.seagrasswatch.org/herbarium/*

***Future sampling dates*** *https://www.seagrasswatch.org/upcomingevents/*

**********



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