31 August 2017

Seagrass-Watch's electronic news service, providing marine and coastal news of international and national interest. Abbreviated/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

Can local eelgrass help fight global ocean acidification? (CA, USA)

30 August 2017,Los Angeles Times

Eelgrass growing in Newport Beach waters may help prove its importance in maintaining healthy water chemistry by keeping acidity down and making the water more hospitable to ecologically and economically valuable organisms. On the idea that eelgrass removes carbon from the seawater, absorbing it through photosynthesis, university researchers are studying how the local long-bladed marine grass can mitigate widespread ocean acidification — caused by the sea taking in carbon dioxide from the atmosphere — and counter the effects of climate change. Researchers from UC Davis and UC Santa Cruz, with help from the Orange County Coastkeeper environmentalist organization, are looking for some of the answers in Newport Bay.

Melissa Ward, a doctoral student in ecology at Davis, was with colleagues Tuesday on the dock at the Back Bay Science Center, making final adjustments to the sensors they will deploy in a natural eelgrass bed in the Upper Newport Bay. Over three weeks, the sensors will gather pH and oxygen levels, plus temperature and salinity levels

inside and outside the grass bed. Sensors are also along the northern California coast, including the Santa Cruz and Bodega Harbor areas.

The outcome of such research can be of high interest to the oyster industry, for example, because oysters and seagrasses are often in the same areas, Ward said. Oyster farmers could improve their strategy if they put their racks downstream of the water-enhancing grass. In other words, seagrasses make good neighbors. The research can help explain why, how good and when.
more…….. http://www.seagrasswatch.org/news.html

Dugong carcass sent for autopsy to know cause of death (Thailand)
30 August 2017, The Nation

The carcass of a female dugong that weighed 200 kilograms has been sent for autopsy to determine the cause of its death, Eastern Gulf Fisheries Research and Development Centre (Rayong) veterinarian Weerapong Laowetprasit said on Wednesday. The carcass was found floating in the sea near Koh Samet, about five nautical miles off the Muang Rayong coast, on Tuesday afternoon. The three-metre-long dugong had a wound in the abdomen area and was suspected to have died less than seven days before the discovery of the carcass.
more…….. http://www.seagrasswatch.org/news.html

US federal appeals court reinstates Okinawa dugong lawsuit, plaintiffs' argument partly supported (Japan)
23 August 2017, Ryukyushimpo

On August 21, the 9th Circuit U.S. Court of Appeals dismissed the lower court's decision in the Okinawa dugong lawsuit in which environmental protection groups of Japan and the United States filed a lawsuit against the U.S. Department of Defense. The groups have been seeking to block construction of a new U.S. military base in Henoko, Nago, on the grounds that it will damage the habitat of the Okinawa dugong, an endangered marine mammal designated by the Japanese government as a natural monument.

The U.S. District Court in San Francisco dismissed the suit in 2015 because it was not authorized to order the suspension of construction work. The U.S. Federal Appeals Court's ruling partly affirmed the plaintiff's argument that seeking suspension of the construction of the new base in Henoko is not a political issue. The lawsuit will enter into substantive examination, including whether to cancel the construction of the new base. Local citizens who are opposed to the new base's construction welcomed the ruling, saying, "the road has opened."

Following the federal appeals court ruling, the Department of Defense has to negotiate with stakeholders including the Okinawa Prefectural Government, local residents, and environmental protection groups. The ruling asks the government to provide effective conservation measures for dugongs. As of now, the Department of Defense has not given a view on the ruling.
more…….. http://www.seagrasswatch.org/news.html

Seagrass build-up prompts beach closure at Jurien (WA, Australia)
23 August 2017, The West Australian

Authorities have temporarily closed the beach at Jurien Boat Harbour because of health concerns. The Department of Transport issued a statement today saying seagrass accumulation in the harbour had caused deterioration in water quality. The department, which manages the harbour, recommends people not swim in the water or consume fish caught in the marina. It warns pet owners not to allow contact with dead or decomposing fish in the water or onshore. The department's general manager of coastal infrastructure, Steve Jenkins, said contractors would remove the seagrass from the beach.
more…….. http://www.seagrasswatch.org/news.html

Seagrass: Rainforests of the sea (FL, USA)
22 August 2017, The Anna Maria Island Sun Newspaper

The seagrass meadows that surround Anna Maria Island are mostly hidden from view and are only exposed on extreme low tides during the full and new moons. Magical and mysterious like a tropical rainforest, they harbor and support a tremendous array of life. While there are 52 *[sic]* species of seagrasses worldwide, only seven are found in Florida. Locally they include turtle (*Thalassia testudinum*), shoal (*Halodule wrightii*) and manatee grasses (*Syringodium filiforme*). The loss of these species has been extensive throughout Florida. At one time Tampa Bay had lost 81 percent of its historical cover, Sarasota Bay 35 percent and Charlotte Harbor 29 percent. Poor watershed management (storm water run-off and sewage disposal) dredge and fill operations and scaring from boats have taken a heavy toll on Florida's seagrasses.

Fortunately, the influence of citizens through organizations like Sarasota Bay Watch, Tampa Bay Watch, the Tampa Bay National Estuary Program and the Sarasota Bay Estuary Program have instituted programs that are beginning to turn the tide on water quality. The increase in water quality has led to a resurgence in local seagrass coverage. In Tampa Bay, seagrass coverage has reached 41,655 acres, surpassing a goal of 38,000 acres set in 2014.

Government scientists (NOAA) consider seagrasses to be of such importance, that they have adopted a no net loss policy to manage them. Despite this noble pronouncement, seagrasses remain under assault. Fortunately watershed management, replanting, avoidance of direct impacts to existing grasses and mitigation are helping to approach those lofty and critical goals. Cost considerations often eclipse concerns for seagrasses, but research reveals the true value of these resources. A study (Virnstein and Morris 1996) conducted in the Indian River Lagoon estimated the value of seagrass to be $12,500 per acre, per year, based solely on economic values derived from recreational and commercial fisheries. Having established the importance both ecologically and economically of seagrasses, it is crucial that we develop rules and procedures that assure we maintain (no net loss) the current standing stock. A wiser decision would be to enact management policies mandating an increase in these rainforests of the sea.
more…….. http://www.seagrasswatch.org/news.html

Tagged pinfish released into Indian River Lagoon to enhance seagrass (USA)
17 August 2017, TCPalm

1,800 small pinfish with tiny tags were released behind the Florida Oceanographic Society Coastal Center on Hutchinson Island in Stuart as part of study that could benefit seagrasses, game fish and, of course, pinfish throughout the lagoon. The study is based on a mutually beneficial relationship between pinfish and seagrass: The fish eat epiphytes, keeping the blades clean and green, allowing the plants to turn sunlight into food and stay healthy.

Nicole Kirchhoff, CEO and founder of Live Advantage Bait in Jupiter, wants to see if the pinfish stocked in the lagoon will stay on their new seagrass bed home and help it grow. If they do, it would make sense for seagrass restoration projects along the 156-mile-long lagoon to stock pinfish to help make sure their work succeeds.

Of the fish stocked, 900 were raised at the Florida Oceanographic Society and given black tags; 900 were caught near the Sebastian Inlet and given white tags. Part of the experiment is to see which type sticks around and contributes to seagrass growth by seining the seagrass bed every two weeks or so for the next three months.
more…….. http://www.seagrasswatch.org/news.html

Marine ecologist takes helm of national federation (USA)
15 August 2017, FIU News

FIU marine ecologist James Fourqurean has been elected president of the Coastal and Estuarine Research Federation. Fourqurean will lead the organization, which is comprised of people who study and manage estuaries, with a plan to educate public officials about coastal science and resilience in a changing climate.

Fourqurean's agenda has a three-pronged approach. He plans to promote research in estuarine and coastal ecosystems. He plans to support education of scientists, decision-makers and the public. And he hopes to facilitate communication among all of these groups.

Fourqurean has dedicated his career to studying seagrasses, conducting research in Florida Bay, Australia, Bahamas, Indonesia, Mexico, the Mediterranean and the United Arab Emirates. Seagrasses form extensive meadows that purify water, protect against coastal erosion, and are home to commercially and recreationally important fish. They also act as carbon sinks capable of storing as much carbon dioxide as forests. The biological sciences professor has made presentations worldwide and testified before the European Union championing Blue Carbon, a global initiative that allows regulated sources to buy credits for greenhouse emissions, helping restore and preserve seagrasses for mitigation. He has published more than 120 papers in peer-reviewed journals. The Marine Education and Research Initiative, housed in FIU's Institute of Water and Environment, is dedicated to research, higher education, K-12 educational outreach, and community engagement in the Florida Keys. It features the Medina Aquarius Program which houses Aquarius, the world's only underwater research laboratory.
more…….. http://www.seagrasswatch.org/news.html

Dugong attracted to Sim Sim water village for food (Malaysia)
14 August 2017, The Star Online

A dugong stranded in shallow waters off Sandakan appears to be healthy and is attracted to the Sim Sim water village for food. The adult animal was seen nibbling moss growing on the posts of the houses in the village. Sabah Wildlife Department ranger Awang Basah who has been monitoring the dugong said the animal had been elusive and was occasionally spotted around the village over the past three days.

Awang said that although dugongs have been spotted in the Sulu Sea off Sandakan, it is unusual for one to come so close to shore. Villagers first spotted the dugong at about 8.30am on Friday. Since then, the Wildlife Department had

dispatched its rangers to monitor the animal while awaiting the arrival of Universiti Malaysia Sabah (UMS) Borneo Marine Research Institute experts. The dugong is protected under the Conservation of Wildlife Enactment 1997.
more…….. http://www.seagrasswatch.org/news.html

"Dead zone" in the Gulf of Mexico is biggest ever (USA)

11 August 2017, CBS News

Each summer, a large part of the Gulf of Mexico "dies". This year, the Gulf's "dead zone" is the largest on record, stretching from the mouth of the Mississippi, along the coast of Louisiana to waters off Texas, hundreds of miles away. Around 8,776 square miles of ocean, an area the size of New Jersey or Wales, is almost lifeless.

The ultimate cause of the Gulf of Mexico's dead zone can be found many miles inland. Fertilizers used by farmers then wash into the Mississippi River and eventually into the sea, where nutrients such as nitrogen and phosphorus stimulate an explosion in microscopic algae, creating huge "algal blooms." The algae then die and sink to the bottom, where they decompose. The bacteria which decompose the algae also use the sea's oxygen during the process, leaving an "anoxic" ocean. Fish and other mobile sea creatures are able to escape, but less lucky are the animals who live fixed on the sea bed. Such losses ripple up the food web, creating a negative chain reaction of increasing mortality rates in larger and larger animals.

The "dead zone" has grown this year due to increased rainfall in America's Midwest washing ever greater amounts of nutrients into the Mississippi, which ultimately end up in the Gulf. Steps are under way to slow down the ecological disaster. Some farmers in the Mississippi basin are using large grassy zones along waterways in order to soak up the agricultural fertilizers and filter out many of the nutrients before they make their way down the Mississippi to pollute the Gulf. However, it remains to be seen whether such measures are effective – and U.S. farmers certainly need to greatly reduce the nitrogen and phosphates they use.
more…….. http://www.seagrasswatch.org/news.html

Adani avoids multi-million-dollar fine over Abbot Point sediment water discharge (QLD, Australia)

11 August 2017, ABC Online

The Indian mining giant Adani's Abbot Point coal terminal in Northern Queensland has avoided a multi-million-dollar fine, but has been slugged $12,000 over an environmental breach. Queensland's Environment Department has fined the operators of the facility just over $12,000 for releasing sediment stormwater during Tropical Cyclone Debbie at a level many times higher than allowed. The unauthorised release took place in March, at the same coal loading facility Adani plans to significantly expand as part of its multi-billion-dollar proposed development of Australia's largest coal mine in the nearby Galilee Basin.

The Department of Environment and Heritage Protection said the company was granted a temporary emissions licence (TEL) during the rain event, which permitted an elevated suspended solid limit on stormwater releases. But the company advised the department on April 6 it had breached the conditions, advising they had released sediment amounts more than eight times the level it was licenced for. The department said the stormwater release did not enter the adjacent Caley Valley wetlands and investigations were continuing.

Mackay Conservation Group coordinator Peter McCallum said the fine was inadequate and would encourage future environmental harm at Abbot Point rather than preventative action by the company. Mr McCallum visited Abbot Point with department officials in April to inspect the pollution.
more…….. http://www.seagrasswatch.org/news.html

Mystery of the underwater seagrass 'fairy circles' is solved.

10 August 2017, Daily Mail

The mystery of the seagrass 'fairy circles' that have been cropping up under the surface of the sea has finally been solved. The rings appear as glowing ovals in the Mediterranean and Baltic sea and are the result of large 'bald patches' devoid of vegetation in seagrass meadows. Research has now revealed that the bare circles are caused by contamination by foreign species. Scientists claim that the bizarre patches are a sign that entire ecosystems are at risk of extinction.

The circles have been found around the Danish coast as well as the Balearic islands, including Mallorca. Invading species are being driven into these areas by polluted waters and climate change, the researchers, from the University of the Balearic Islands in Palma, Mallorca said. The fairy circles indicate that seagrass, known scientifically as *Posidonia oceanica*, in the affected regions is at risk.
more…….. http://www.seagrasswatch.org/news.html

Dead dolphin found in vicinity of dugong search (NSW, Australia)

08 August 2017, Port Macquarie News

The search for a dugong located in the Macleay River at Stuarts Point is being scaled down. Authorities are still hoping to capture then relocate the animal to Sea World on the Gold Coast but as the days wear on hopes fade as they need warmer water to survive (the most southerly population in Australia is at Moreton Bay, Queensland).

The dugong has been spotted, and filmed, but catching these shy creatures is another matter entirely. A second dugong, believed to be the mother, was found dead over a week ago and there are reports the pair had been in the Macleay estuary for up to six weeks. In what local residents would be hoping is a tragic coincidence, a dead dolphin was found dead washed up in the same area. Mary Taylor from Stuarts Point has her fingers crossed for the remaining dugong but is concerned at the recent deaths.

Vice president of ORRCA (Organisation for the Rescue and Research of Cetaceans in Australia) Shona Lorigan says it may be a coincidence or there may be potential contamination. She stresses that an autopsy of the dead dolphin has been completed and the relevant authorities including the EPA (Environmental Protection Authority) and National Parks and Wildlife Service (NPWS) have been notified. As the search is scaled down slightly ORRCA volunteers are looking south of the Stuarts Point footbridge in the hope perhaps the dugong is making its own way out to sea and on to warmer waters.

more…….. http://www.seagrasswatch.org/news.html

Biodiversity negates carbon storage in seagrasses, new study finds (FL, USA)

07 August 2017, FIU News

Scientists are zeroing in on the seagrass meadows that could help slow down climate change. Seagrass meadows are great absorbers of carbon dioxide from the air. But the algae, animals, and plants that live among them release large amounts of carbon dioxide, according to newly released research. The scientists are now identifying seagrass locations with fewer emitters to target for conservation.

Scientists at Florida International University examined seagrass meadows in Florida Bay, some of the largest on Earth, where waters are warm and plant and animal abundance is high. They compared these ecosystems to those in southeastern Brazil where meadows are smaller, waters are cooler, and plant and animal abundance is lower. They found that although Florida Bay's seagrasses act as carbon sinks, the organisms living among them offset the benefits of seagrass carbon storage by releasing carbon dioxide. When the inorganic carbon is considered in carbon storage inventories and mitigation plans, the seagrass ecosystems of Brazil store more carbon dioxide than those in Florida Bay.

"The results of this study were totally unexpected," said James Fourqurean, director of FIU's Marine Education Research Initiative and co-author of the study. "They could influence the way seagrass carbon stores are inventoried at the national level as required by international climate change mitigation treaties." Since the ability of seagrasses to store carbon varies from place to place, the researchers call for more thorough studies on the relationship between seagrasses, the local environment and the carbon cycle.

more…….. http://www.seagrasswatch.org/news.html

Counting 'cows of the sea' in The Kimberley (WA, Australia)

07 July 2017, CSIRO

Counting cows is relatively easy when they're quietly grazing in a paddock. Keeping stock of sea cows, on the other hand, is a challenge. The coastal waters of northwest Western Australia, encompassing the Kimberley and Pilbara regions down to Shark Bay, is home to one of the largest remaining dugong populations in the world. To gather vital information on the status of these populations, researchers are teaming up with Indigenous Rangers to add a wealth of local and historical knowledge to the best available scientific methods.

As both a Bardi Jawi woman and a research technician with CSIRO's Coastal Ecosystems team in Perth, Marlee Hutton knows how important it is for Indigenous communities to have access to good scientific information that's relevant for the decisions they're being confronted with. Hutton brings more than just passion and scientific knowledge to her work on marine ecosystems; she is keenly aware of the importance for the scientific community and Indigenous culture to share each other's knowledge. Dugong remain culturally important and an important food source for many traditional owners around the top half of the country, which not only gives them experience most don't have, it also demands a responsibility for applying sound scientific knowledge to make hunting sustainable.

Dugongs are a powerful indicator of the health of shallow coastal ecosystems and sensitive to the loss of the seagrasses they graze upon. Preserving numbers is hard to do when you don't know exactly how many dugong there are or how they move around. But waters aren't always crystal clear and surveyors also find it hard to get out to the more remote sections of the northern coastline, especially around the Kimberley area. That's where a bit of local

knowledge can go a long way, saving researchers precious time by pointing out where the seagrass beds are. For the cultural groups of the Kimberley this sort of work forms part of their plans to keep Country and culture strong.
more…….. http://www.seagrasswatch.org/news.html

CONFERENCES

Coastal & Estuarine Research Federation 24th Biennial Conference (CERF2017) (Providence, Rhode Island, USA, 5-9 November 2017)

Theme: Coastal Science at the Inflection Point: Celebrating Successes & Learning from Challenges
The CERF 2017 scientific program offers four days of, timely, exciting and diverse information on a vast array of estuarine and coastal subjects. Presentations will examine new findings within CERF's traditional science, education and management disciplines and encourage interaction among coastal and estuarine scientists and managers. Additionally, the Scientific Program Committee plans to convene special sessions and workshops that promote intellectually stimulating discussions. Join us and over a thousand of your colleagues to network, celebrate our work, learn from each other and grow within our amazing profession.
Important Dates:
Advance Registration Deadline: 6 October 2017
for more information, visit http://www.erf.org/cerf-2017-biennial-conference

The 13th International Seagrass Biology Workshop (ISBW13) and World Seagrass Conference (June 2018, Singapore)

Theme: Under pressure – Seagrass science and conservation in stressful environments

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 a good opportunity for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest findings. The ISBW13 will be held in June 2018 at the National University of Singapore, Singapore, organized by National University of Singapore, National Parks Board, and DHI Water & Environment, Singapore.

More information:
To get important updates on ISBW13, register your interest here: *https://goo.gl/forms/TIIhDGhEx71m0tcj1*
Follow on Facebook @ISBW13 and Twitter #ISBW13

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 46,118 views to date)

…seagrass matters blog

World Seagrass Association blog http://wsa.seagrassonline.org/blog/
Keep up to date on what's happening around the world from the WSA.

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*
Handy Seagrass Links *http://www.seagrasswatch.org/links.html*
****

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