



Seagrass-Watch E-Bulletin

31 December 2017

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NEWS

Two decades of sea turtle data in Seychelles helps researchers understand threats (Seychelles)

30 December 2017, Seychelles News Agency

Data analysis of 20 years of turtle monitoring on Aldabra is helping Seychelles Islands Foundation (SIF) officials observe the movement patterns of these sea creatures and be in a better position to understand threats they may face at different stages of their life. The in-water tagging and monitoring of both the hawksbill and green turtles on Aldabra were initiated in 1986 by Jeanne Mortimer. After several years, the project was handed over to the staff of the foundation on Aldabra.

Aldabra -- one of the world's largest atolls -- is a UNESCO World Heritage Site in Seychelles, a group of islands in the western Indian Ocean. Since 1996, over 900 green and 392 hawksbill individuals have been caught and tagged in the lagoon. Staff involved in the research have to dive off moving boats to capture swimming turtles, earning this type of monitoring the name 'turtle rodeo'. Once caught, the turtle is tagged, if it has not been done previously, and details, such as body dimension measurements, body condition or presence of disease, are recorded. The analysis of historical turtle rodeo data also provided the opportunity to revise the monitoring protocol in order to ensure that it is efficient and the results are useful.

The results of the two-decade worth of data also show that each species are distributed differently within the lagoon, highly linked to how their food sources spread out across the area. While found all over the lagoon, turtles are concentrated around mangrove areas and lagoon channels due to the protection offered from sharks. These areas are also abundant in food sources - seagrass beds, macro-algae and corals. Abundant, undisturbed foraging and developmental habitat with few threats allow Aldabra to support a large population of turtles. Apart from the tagging of juvenile turtles on Aldabra, the Save our Seas Foundation team conducts similar monitoring on D'Arros Island and St Joseph Atoll. Aldabra remains an important site for the conservation of these species.

more..... <http://www.seagrasswatch.org/news.html>

Lake Okeechobee discharges stop day early, too late for St. Lucie River oysters, seagrass (FL, USA)

28 December 2017, TCPalm

A day ahead of schedule, Lake Okeechobee discharges to the St. Lucie River stopped about 7 a.m. Thursday when the seven gates of the St. Lucie Lock and Dam were shut. The Army Corps of Engineers had announced two weeks ago the discharges would stop Friday. But for the last few weeks, the Corps has been sending water into the river in "pulses" — heavy flows at the beginning of the week that taper off day by day.

So far, 347 billion gallons of Lake O water has been sent west this year, enough to drop the lake by slightly more than 2 feet 4 inches. The Caloosahatchee estuary typically needs some flow from the lake to hold back saltwater intrusion from the Gulf of Mexico. According to the Corps, about 134 billion gallons of water was discharged east through the Port Mayaca Lock and Dam between Sept. 15 and Thursday morning, making this year's discharges the 12th largest ever sent to the St. Lucie River. It's more than half of the 237 billion gallons discharged in 2016, when toxic algae blooms blanketed much of the St. Lucie River estuary.

But the discharges, along with massive amounts of stormwater runoff flowing into the river from numerous creeks and canals, wiped out the salinity from the usually brackish water. Halting the discharges came too late for most of the oysters and seagrass beds in the St. Lucie River estuary and lagoon around the St. Lucie Inlet. They couldn't survive the lack of salt in the normally brackish water. "Seagrass has been down for quite some time," said Vincent Encomio, research director at the Florida Oceanographic Society.

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Related article

Lake O discharges decimating precious seagrass (wflx)

<http://www.wflx.com/story/37028833/lake-o-discharges-decimating-precious-sea-grass>

Stopping Lake Okeechobee discharges would be good for St. Lucie River, bad for tourism (tcpalm.com)

<http://www.tcpalm.com/story/news/local/indian-river-lagoon/health/2017/12/08/lake-okeechobee-discharges-stopping-would-good-st-lucie-river-bad-tourism/926936001/>

Concerns PNG villagers may be poaching vulnerable dugongs in Australian waters (QLD, Australia)

23 December 2017, ABC Online

The Torres Strait is home to the most stable and robust population of dugong on the planet. Up to 25,000 of these mild-mannered and vulnerable creatures roam beds of shallow seagrass in Australia's north and in the coastal waters off Papua New Guinea's south coast. While limitations have been placed on the hunting of dugongs, a recent report has sparked concern that PNG fisherman may be illegally poaching dugong in Australia's northern waters.

An internal Australian Crime Intelligence Commission (ACIC) document — obtained under freedom of information — has revealed investigators thought the activities of PNG fishermen may be contributing to a decline in dugong numbers. ACIC's Environmental Crime Team spent two years, at a cost of \$2 million, investigating the illegal trade in turtle and dugong meat. While the results of their probe were handed to Australia's Department of Environment, they have never been publicly released. The hunting of dugongs in Australia's waters for commercial trade could be in breach of a treaty designed to protect marine life in the region.

The Torres Strait Treaty allows for locals to move freely between PNG and Australia and also encompasses the right to hunt dugong, sea turtle and other protected or endangered species for personal, domestic or non-commercial communal needs. Torres Strait Mayor Fred Gela said because there is a lack of enforcement of that treaty in PNG to protect the dugong population, villagers from the Western Province may be putting them at risk. The Australian Fishing and Management Authority denies there is a serious problem with over-hunting in the Torres Strait. General manager of operations Peter Venslovas told the ABC that extensive monitoring has not unveiled any widespread poaching on either side, and praised PNG authorities who he said work closely with AFMA to protect marine wildlife. In a statement, Australia's Ministry for the Environment said it has no evidence to dispute the findings of the ACIC investigation, and has no reason to pursue a diplomatic resolution to concerns over dugong poaching.

more..... <http://www.seagrasswatch.org/news.html>

Manatees endure another deadly year (FL, USA)

20 December 2017, Florida Today

Thirteen manatees died in unlucky collisions with boats in Brevard County this year, the most to perish that way in the county since 2010. Statewide, 101 manatees died from boat strikes, 20 percent of this year's 513 manatee deaths. That was a typical percentage of the overall deaths but also the second highest boat-strike manatee death toll on record. Last year, a record 106 manatees died from boat strikes, according to statistics compiled by the Florida Fish and Wildlife Conservation Commission.

But boats tend to kill only about 1 percent of the manatee population, which some estimates put in the range of 8,000 or more manatees, statewide, boating advocates say. So slowing down their boats with go-slow zones shouldn't be the focus of manatee protections, some boaters assert. State biologists counter that they recover an unknown percentage of the overall manatee carcasses in any given year. Also unknown, they say, is how many of the manatees they find too rotted to tell what killed them had died from boat strikes.

Bob Atkins, president of Citizens for Florida's Waterways, a boating advocacy group with a few hundred members, sees loss of density of seagrass beds as a much greater threat to manatees than boats. Last year, nine manatees died by boat strikes in Brevard, and a record 106 manatees died by boat strikes statewide. The 513 manatee deaths from all causes in 2017 compares with 472 manatee deaths last year and a 5-year average is 482 deaths. A record 830 manatees died in 2013, including 158 of 244 manatee deaths in Brevard from undetermined causes. Biologists suspect many of those manatees may have fallen victim to a seagrass die-off that disrupted the makeup of healthy bacteria in their digestive tract, leading to the disease.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

Chesapeake Bay water quality reaches near-record high (MD, USA)

20 December 2017, So Md News

Water quality in the Chesapeake Bay reportedly reached a near-record high with almost 40 percent of bay water meeting clean water standards between 2014 and 2016, according to the Chesapeake Bay Program. This year's assessment was at 39.2 percentage, just 0.3 lower than the record of 39.5 percent between 2008 and 2010. The results reported by the bay program showed a 2 percent increase from the previous assessment period of 2013 and 2015. The regional partnership attributed the improvements largely to a rise in dissolved oxygen in the deep channel of the bay.

The new finding is consistent with a wide range of metrics that have indicated improvements in the bay, said Jeremy Testa, assistant professor at the University of Maryland Center for Environmental Science's Chesapeake Biological Laboratory in Solomons. Earlier this year, bay grasses were discovered returning to the shores of Solomons for the first time after basically disappearing in the 1970s.

In the past three decades, there has been evidence showing the amount of nitrogen going down, Testa said. In the past few years, the size of low oxygen area is getting smaller and seagrass is coming back in the lower-salinity parts of the bay. Nick DiPasquale, CBP's director, said in a release that there has been an increase in the diversity of grass species and the density of grass beds. Several fisheries, including blue crabs, oysters and rockfish, have also shown improvements, he said.

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US military should end its war on the Okinawa dugong (Japan)

15 December 2017, The Hill

Waves rocked our boat as we glided across Henoko Bay in Okinawa, Japan. Below us, fish and sea turtles danced through an underwater wonderland of colorful corals and swaying seagrass. But as we peered down into these beautiful blue waters, we spotted something else: Massive concrete blocks have been dumped in the bay, crushing delicate coral formations. Not far away, we saw a huge seawall being built. The U.S. military is behind this construction of a new Marine air base in the waters around Henoko Point. Ultimately, the project will fill in and pave over an area of the bay the size of about 80 football fields.

Base construction will devastate this whole beautiful ecosystem and it will likely be a death sentence for the critically endangered Okinawa dugong that counts the seagrass in these sheltered waters as one of its last good feeding grounds. But the Trump administration may soon be forced to reevaluate this destructive and unnecessary project. A federal judge in San Francisco will soon decide the outcome of a lawsuit against the base by Okinawan plaintiffs and U.S. environmental groups. The lawsuit challenges the military's failure to consider how the base will harm the dugong and its sensitive seagrass habitat. It's the first challenge to an overseas project under the National Historic Preservation Act, which protects cultural resources and landmarks. The law applies because Okinawa dugongs are cultural icons for the Okinawan people and afforded national monument status under Japanese law.

The Trump administration may believe growing concern over North Korea's missile program can excuse anything, including paving over coral reefs to build this base. But there are security alternatives that won't desecrate the dugong and Henoko Bay. Sen. John McCain (R-Ariz.) and other U.S. senators, for example, have proposed simply relocating Marine aircraft to Kadena Air Base, an existing Air Force facility. To many Okinawans, the U.S. military's decision to ignore such alternatives and crush this crucial sanctuary for the dugong feels like an assault on their culture.

more..... <http://www.seagrasswatch.org/news.html>

Sea wrack removal 'one-off' (WA, Australia)

15 December 2017, The West Australian

The Department of Transport has shut down suggestions to change the management plan for Port Geographe's sea wrack build-up, despite residents calling for "trigger levels" to be lowered and provisions allowing the City of Busselton to intervene sooner.

About 150 residents descended on the council last week, asking the City to step in. Despite the City conceding its hands were tied because the department was the managing authority, the following day Busselton Mayor Grant Henley confirmed the department would permit the City to proceed with "limited remediation on the beach on the basis of public safety concerns". However, City chief executive Mike Archer said any future work remained "incumbent on the managing authority" and the remediation works were very much a "one-off". The department was "satisfied" with current thresholds and undertaking work outside of the EMMP guidelines and below the trigger levels "would involve expense that is not within DoT's approved decision making framework".

Resident representative Peter Maccora said the trigger levels dictating when the department would step in were too high and the suggestions made during the community consultation period should have been considered. Trigger levels are currently set at 60,000cum and the department estimates seagrass levels on the western beach at 16,000cum. However, Vasse MLA Libby Mettam last week said an independent earthmover's estimate was more than double the department's.

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Pennsylvania scientists help 10 stranded manatees in unprecedented rescue operation (PA, USA)

12 December 2017, PennLive.com

Two Pittsburgh scientists helped rescue 10 manatees stranded in Charleston, South Carolina, as the waters around them grew cold and prevented safe migration south. The slow-moving herbivores regularly migrate up the coast during summer, eating away at seagrass outside of their native Florida habitat. Manatees have a small range of temperatures in which they can survive: if the water is warmer than the low-80s, they will overheat; if it is colder than about 68 degrees, vital functions like heart rate and breathing become strained. So when cold weather arrived at the end of November, some of those migratory manatees found refuge near the KapStone Paper Mill, as its equipment produced artificially warm waters in a tributary off the Cooper River in Charleston. The mill was scheduled to go offline for routine maintenance, so rescuers had to act promptly.

In the past two years, rescuers transported five manatees from South Carolina for re-release in warmer waters, but fewer than one rescue per year was standard in decades past. The number of mammals rescued from the Cooper River is even more impressive considering its success rate. One of the 10 rescued manatees was kept for observation. All others were released in Florida just hours after they were caught in nets. Crews worked for three days using nets to capture the large marine mammals, hoisting them onto boats and then transporting them in trucks to be released in Brevard, Florida.

Once the Fish and Wildlife Service was notified about the problem in Charleston, a rescue team came together. That included regional experts from SeaWorld Orlando, Florida Fish and Wildlife, National Oceanic and Atmospheric Administration the Sea to Shore Alliance and South Carolina Department of Natural Resources, as well as two men from Pittsburgh. The operation included boat teams, dock teams, transport teams and relay teams in Jacksonville, where marine biologists performed full health assessments on the manatees before they continued 2 more hours on the road to a release point halfway down the eastern coast of Florida. The biggest rescued manatee weighed about 1,500 pounds. And though the group prioritized safety, it was impossible to avoid bruises and wounds in the process of moving such large creatures.

more..... <http://www.seagrasswatch.org/news.html>

Habitat protection scores 'fish friendly' award for marina (VIC, Australia)

11 December 2017, Mornington Peninsula News

The Blairgowrie marina is now able to add "fish friendly" to its description; a title bestowed on the Blairgowrie Yacht Squadron-owned marina for "protection and enhancement of marine habitat". Blairgowrie is the first Victorian marina

to get the Marina Industries Association accreditation and the 33rd in the Asia Pacific region. This latest recognition follows Blairgowrie being recognised as an international clean marina in late 2016.

At Blairgowrie attention has been given to the monitoring and recording of marine species. "Melbourne University marine biology students regularly visit the marina to check field plates deployed on the marina arm. Divers also regularly check for any signs of marina pest in the waters around the marina," general manager Ross Kilborn said. "The recent replacement of some nearby moorings with seagrass-friendly installations has also resulted in better seagrass coverage around and in the marina."

The Marina Industry Association says it "developed" the Fish Friendly Marinas award "to inform marina managers on how to maximise the benefits for fish and recognise those operators actively working to improve fish habitat".

more..... <http://www.seagrasswatch.org/news.html>

Water warming causes seagrass bed bloom of *Posidonia oceanica* (Spain)

08 December 2017, FIS

An international team of scientists, of which the Spanish Institute of Oceanography (IEO) is part, has obtained the first experimental evidence on how the increase in water temperature causes *Posidonia oceanica* meadows bloom in the Mediterranean. This fact that offers certain optimism to the decline situation of this species, which could have a greater capacity to respond to global warming than previously thought.

This new study, based on an experiment with *Posidonia oceanica* plants grown in the laboratory, was recently published in the Marine Pollution Bulletin. To carry out the experiment, the scientists collected *Posidonia oceanica* plants from the Catalan coast at a depth of six metres, which were immediately transferred to the experimental system developed in the laboratories of the Oceanographic Centre of Murcia of the IEO. To date, the maintenance of these plants under laboratory conditions was extremely complicated, but the development of this system has made it possible to perform experiments in conditions that are very close to the natural ones and at appropriate time scales to observe this type of responses. Once adapted, the plants were exposed for six weeks to a thermal stress similar to that experienced in the sea as a result of heat waves, an increasingly frequent phenomenon in the Mediterranean coast as a result of global climate change. At the end of the experiment, it was found that a considerable proportion of the plants exposed to experimental heating had bloomed, unlike the plants maintained at a normal temperature, in which no inflorescence developed.

This unprecedented result shows that temperature is a primary factor capable of inducing this marine plant bloom, which also confirms the relation between bloom observations of this species and the occurrence of heat waves shown in previous studies, but only correlationally. In addition, it was also proved that both experimental populations (the heated and the unheated ones) had the same genetic characteristics, so that there is no possibility for a factor of genetic type to influence the observed result, evidencing that the temperature is directly involved in the activation of the blooming process in these marine plants.

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CONFERENCES

The 13th International Seagrass Biology Workshop (ISBW13) and World Seagrass Conference (11-17 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, visit: <https://www.isbw13.org/>

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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 47,216 views to date)

Seagrass & other matters

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](https://twitter.com/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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Seagrass-Watch E- Bulletin is compiled by Len McKenzie & Rudi Yoshida.