

Seagrass-Watch E-Bulletin



28 February 2015

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Dugong found washed ashore (India)

28 February 2015, *The Hindu*

The carcass of a two-year-old female Dugong was found washed ashore at Thalaithoppu, near Periyapattinam on Friday morning. Forest officials said an area watcher who was on an anti-poaching mission on the shore found the carcass washed ashore with injury on its forehead. On being alerted, Range officer, accompanied by Dr. M. Mohamed Nizamudhin, Veterinary Assistant Surgeon, Valanthuravai, inspected the carcass and burnt and buried it after post mortem.

Dr. Nizamudhin said the marine mammal, weighing 220 kg, could have died due to head injury and internal bleeding. It could have hit against a rock or a propeller, he said. There was also an aberration in the abdomen, suggesting that it could have been attacked by Thirukkai fish with its poisonous sting but that could not have been the cause of death, he added.

Mr Ganesalingam said the Dugong measured 2.5 metres long with a circumference measuring 289 cm. Carcass of Dugong getting washed ashore in the Palk Bay was common and this was the first time in recent years, the carcass was found washed ashore in the Gulf of Mannar region, he said.

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

South West conservation zones "applauded" in call for further action (UK)

24 February 2015, *Western Morning News*

Scientists have praised efforts to protect marine plant life in the South West in their campaign to secure "further urgent action" for ecosystems across the UK. Members of the organisation Project Seagrass "applauded" the Government for including seagrass meadows in two new Marine Conservation Zones (MCZs) in the region. The researchers described the move as a "welcome" step towards preserving "critical" marine habitats for the future. And in their response to the Government's latest round of MCZ proposals, the group has called for similar recognition to be extended to seagrass meadows around the nation's coastline.

The letter to Department for Environment, Food and Rural Affairs (Defra), concerns plans for 23 new off-shore conservation sites, including sites at Mounts Bay, Land's End, Newquay and Hartland Point. Since the Marine and Coastal Access Act 2009 came into force, 28 MCZs have been established in the UK, with the aim of conserving "rare, threatened and representative" habitats and species. The four Project Seagrass researchers commended the creation of an MCZ at Torbay and recommendations for further zones at Mount's Bay in Cornwall and the Needles near the Isle of Wight – all of which cover seagrass habitat. But they have criticised the country's wider "lack of recognition" of important seagrass ecosystems, and its "inadequate commitment" to seagrass conservation.

Dr Richard Unsworth, who heads the project alongside Benjamin Jones, Richard Lilley and Leanne Cullen-Unsworth, warned that the UK had already lost "a large proportion" of its seagrass. "We cannot allow any more to be lost," he added. He explained that the team had identified several key sites around the South coast which they hoped the Government would reconsider for MCZ designation. "These sites all contain extensive seagrass that is under threat and needs protection," he said. Defra is due to begin consultations on the second round of MCZs in April.

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Trapped manatees rescued from Florida storm drain (FLA, USA)

24 February 2014, *SMH*

About 20 Florida manatees were freed by early Tuesday morning from a storm drain near Cape Canaveral, where they were apparently trying to warm themselves, officials and local media said. Video footage showed a rescuer comforting one manatee floating at the opening of the pipe, which was cut open during the hours-long rescue. The footage, posted online by Central Florida News 13 and Florida Today newspaper, also showed a manatee being carried in a sling to a nearby canal, where it was released to cheers from onlookers, and two other manatees being petted after being hoisted out of the water by heavy machinery.

The rescue in Satellite Beach, a town on the Atlantic coast 24 kilometres south of Cape Canaveral, started mid-afternoon on Monday when Florida Fish and Wildlife Conservation Commission biologist, Ann Spellman, sounded the alarm, according to Florida Today. She told the paper that her hunch led city workers to check the 30 to 45 metre-long drain pipe. Manatees, also known as sea cows, often leave the Indian River Lagoon during cold snaps for warmer waters in the canals and had probably followed each other into the pipe, she said.

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Turtles stayed put as Cyclone Marcia raged overhead: Researcher (QLD, Australia)

23 February 2015, Brisbane Times

Turtles being monitored off the Central Queensland coast appeared blissfully unaware of the destructive force of Cyclone Marcia, a researcher says. James Cook University lecturer Mark Hamann said flatback and green turtles had been tagged and monitored for months as part of research in to how they interacted with seagrass beds and their broader habitat. But he said they barely moved as the Category 5 cyclone passed overhead.

Associate Professor Hamann said while it was interesting to see how the turtles reacted to the cyclone, it was "kind of an accidental project" in the context of the broader research. Research so far had found the turtle population had stayed in a small area for several months. "They are living in a really small area really ... ranging from a couple of square kilometres up to 20 or 25 square kilometres.

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

£500k project will ensure fragile Devon marine environment is protected (UK)

20 February 2015, Western Morning News

A fragile marine environment which is home to seahorses and other creatures is to be the subject of a research project worth £475,000. The National Marine Aquarium, in Plymouth, has appointed two project officers for its Community Seagrass Initiative which focuses on the conservation of seagrass and seahorses.

Jessica Mead and Rachel Cole will be based in Weymouth and Torbay respectively, and will be responsible for recruiting volunteers to educate local communities and water users about seagrass meadows. The project will cover the 191-mile stretch of coastline from Looe to Weymouth. Everyone from school children, sailors, canoeists, divers and kayakers will be encouraged to help collect vital information to aid the mapping and surveying of seagrass meadows along the south coast.

The appointments follow £475,000 funding for the scheme that was received from the Heritage Lottery Fund last year for the three-year 'citizen science project' which will aim to find out more about seagrass and seahorses in the region and help to conserve fragile seagrass eco-systems.

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Dugongs Eating, Swimming, and Serving as Seagrass "Mascots" (Malaysia)

18 February, Youtube

Perhaps best known for inspiring mermaid folklore in the Pacific, the rotund, graceful dugongs—close relatives of manatees and sea cows—are stars of Malaysia's shallow ocean meadows.

Malaysia's coast is undergoing rapid, large-scale development, putting pressure on the region's sensitive seagrass meadows and the many animals that call them home. Seagrass meadows are essential to the survival of a wide variety of species. But no other animals are more directly dependent on these meadows than the dugong, which have developed unique adaptations to seagrass life over the centuries.

This Pacific cousin to the manatee is critically endangered in Malaysia, and it relies solely on seagrass for its food and habitat. Pew marine fellow Louisa Ponnampalam is working off the coast of Johor, Malaysia, to identify habitats that are crucial for one of the country's last remaining populations of dugongs.

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No Help for the Endangered Dugong (USA)

18 February 2015, Courthouse News Service

Threats to the endangered Okinawa dugong, a manatee-like marine mammal, are not enough to stop construction of a military base in Okinawa, a federal judge ruled. "We are disappointed with the outcome and plan to appeal the decision to the Federal Court of Appeals," Peter Galvin, director of programs and co-founder of the Center for Biological Diversity told Courthouse News. "The decision is not good news for the already critically imperiled Okinawa dugong. We plan to redouble our efforts with our partners to help the Okinawa dugong avoid imminent extinction," Galvin said of the Feb. 13 ruling by U.S. District Judge Edwin Chen.

The dugong population off the eastern coast of Okinawa is a very small, isolated group with fewer than 50 members. Their existence is threatened by habitat destruction caused by U.S. military exercises, noise pollution, and marine water pollution, according to the Center for Biological Diversity's dugong web page. Despite these threats, the U.S. Department of Defense and the Japanese government in May 2006 agreed to relocate U.S. Marine Corps Air Station Futenma from Ginowan City, Okinawa, to an offshore location near Camp Schwab next to Henoko and Oura Bays. Construction plans include two 1,600-meter-long runways built on landfill that may destroy sea-grass beds in Henoko Bay, according to the ruling.

The Center for Biological Diversity, three other environmental groups and three Japanese residents challenged the project in September 2003 and filed an amended complaint after the May 2006 agreement. Among other things, they argued that construction of the military base would destroy Okinawa dugong habitat, and that noise, excessive light and pollution from construction activities would harm the animals. They also claimed the Department of Defense violated section 402 of the National Historic Preservation Act by concluding that the project would have no significant impacts upon the Okinawa dugong and its habitat.

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FAU Harbor Branch researchers working on two projects to track, improve quality of lagoon (FLA, USA)

13 February 2015, WPTV.com

Lake Okeechobee water releases started pouring into the St. Lucie Estuary Friday at the fastest rate so far this year. Scientists with Florida Oceanographic say salinity levels in the water decreased considerably during the last month of lower discharges. No marine life is being affected yet. Scientists say the heavier dose of fresh water could start to become risky soon, especially for oyster beds and seagrass.

The rate of discharges is still lower than what the area saw during the summer of 2013. That's when toxic conditions developed, harming marine life and seagrass. Right now, the Lake Okeechobee water level is just below 15 feet. The Army Corps of Engineers says that level is too high going into the rainy season. As fresh water infiltrates the estuary, researchers are working diligently to look for solutions for potential damage.

First, researchers are looking to install water quality sensors called LOBOS at several locations in the St. Lucie Estuary. The sensors would detect salinity levels, temperatures, nutrient levels and light in the water.

Also, FAU's Harbor Branch is hoping to create a new seagrass nursery. Researchers would collect seagrass floating on the water, plant it in the nursery and grow more seagrass. It would all eventually be replanted in the estuary. It's an effort to help replace seagrass that has been damaged from fresh water releases over the years.

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Camera-carrying turtles reveal seagrass decline (WA, Australia)

13 February 2015, Science Network Western Australia

Sea turtles fitted with video cameras have revealed a decline in seagrass health in Shark Bay following a catastrophic marine heat wave in 2011. Florida International University post-doctoral researcher Jordan Thomson says the footage, combined with traditional standardised seagrass surveys, reveals that the heat wave caused more than 90 per cent dieback of the dominant seagrass, *Amphibolis antarctica*, in several regions of Shark Bay.

Dr Thomson's team compared the video footage, captured in 2011–12, with similar footage taken in the early 2000s. "In the older footage, from 2000 to 2003, turtles spent 97 per cent of their time swimming over lush, dense seagrass. "In comparison, after the heat wave, turtles almost exclusively encountered sparse, defoliated or dead seagrass that was overgrown by algae." Dr Thomson says the findings are alarming because of the important role of seagrass in the ecosystem.

Dr Thomson's study has also revealed the seagrass die-off has negatively affected the health of green turtles (*Chelonia mydas*), which rely on seagrasses for food and feeding habitat. The researchers assessed the health of 424 green turtles in Shark Bay between 2000 and 2013, finding the turtles were more likely to fall in a lower health status category after the heat wave than before. What's more, turtle health status declined consistently from 2011, the year of the heat wave, to 2013.

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Dugong poachers face fines of up to \$1 million (QLD, Australia)

12 February 2015, ABC Online

Illegal poachers of dugongs and turtles in far north Queensland are about to face tougher penalties, as the Federal Government announces new measures to protect threatened species. New laws passed in the Senate have increased the hunting fines to up to \$1 million in Commonwealth marine areas. Environment Minister is Greg Hunt said it was important legislation.

Traditional owners welcomed the move. Gavin Singleton, a project officer at the Dawul Wuru Indigenous Corporation in the Cairns region, said poaching was an insidious practice in far north Queensland. Mr Singleton said he hoped the tougher fines would deter poachers while native title holders should still be able to hunt dugongs. Under the Native Title Act of 1993, Indigenous people with native title rights can hunt marine turtles and dugong for personal, domestic or non-commercial communal needs.

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Seagrass helps protect natural 'carbon sinks', study finds (WA, Australia)

12 February 2015, ABC Online

The disappearance of seagrass meadows could be contributing to greenhouse gas emissions, an international study has found. Research conducted at Oyster Harbour in Albany found centuries-old carbon dioxide deposits have been created by seagrass meadows. Scientists at the University of Western Australia's Oceans Institute, in conjunction with overseas researchers, discovered the meadows act as carbon "sinks", preventing the erosion of carbon deposits and the subsequent release of carbon dioxide into the atmosphere. When the seagrass is removed, usually by dredging or mooring but sometimes by severe storms, the old carbon is eroded and freed.

Scientists discovered that revegetation of sea meadows like at Oyster Harbour prevented the erosion of carbon deposits and restored the ability for the meadows to act as carbon sinks. A long-term restoration of seagrass in the Albany meadow, which was lost between the 1960s and 1980s, has been highly successful. "Replanting seagrass meadows like they did in Oyster Harbour actually gets the system back to what it used to be," co-author of the study Professor Pere Masqué said.

Lead study author Professor Núria Marbà said this could have a positive impact on a global scale. Professor Masqué said many areas across the world could benefit from seagrass revegetation projects. The research has been published in the *Journal of Ecology*.

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Also reported as:

11 February 2015, *University World News*,

09 February 2015, *Phys.Org*

09 February 2015, *The Hindu*

for links, visit <http://www.seagrasswatch.org/news.html>

Sunlight to the Seagrasses: US Forest Service Research Shines Light on Threatened Coastal Plant (FLA, USA)

11 February 2015, *USDA.gov* (press release)

Just off Florida's 8,000 miles of coastline and tidal areas, in shallow sunlit waters, over two million acres of seagrass meadows waft in the ocean currents. Besides providing food and habitat for manatees, sea turtles, shellfish, and other animals, seagrasses protect coasts from erosion and store vast quantities of carbon dioxide. "Seagrasses grow off the coast of many other U.S. states, including North Carolina and Virginia, as well as around the world," said U.S. Forest Service Southern Research Station scientist Zanethia Choice. "Globally, their economic value is nearly \$4 trillion."

Choice, a natural resource specialist at the research center's Center for Bottomland Hardwoods Research, and her colleagues from the University of Florida recently studied light requirements for four common seagrass species along the Florida Gulf Coast. The study was published in the *Marine Pollution Bulletin*. In 90 percent of sites where 13 years of historic data showed that adequate sunlight had been reaching the ocean floor, researchers found thriving seagrass meadows. However, areas with suitable light but no seagrass were most likely due to unsuitable substrate, temperature, and the amounts of dissolved salts and oxygen.

Seagrasses are adapted to nutrient-poor waters. When nutrients – whether from fertilizer runoff, wastewater disposal, or other human activities – wash into the ocean, they float suspended in the ocean waters. Seagrasses cannot use these suspended nutrients very efficiently, but tiny algae called phytoplankton can. Phytoplankton thrive in nutrient-rich waters, and as they grow, they intercept light and shade the ocean floor. Seagrasses were notably absent from areas with high nutrient levels. Some seagrasses such as star grass could survive with as little as 8 percent of sunlight reaching the ocean floor, while other species required 25 percent sunlight or more. Understanding the light requirements of different seagrass species is essential for coastal managers who want to maintain seagrass habitats, and managing for seagrass health also provides water quality targets that can benefit other marine life.

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The Ecosystem Services of Seagrass Beds in a CO₂-Enriched World

11 February 2015, *CO₂ Science Magazine*

Introducing their work, Garrard and Beaumont (2014) state that seagrass beds provide numerous important ecosystem services, such as "protection of the coastline, bioremediation of waste, food provision and maintenance of marine biodiversity," citing the works of Jackson et al. (2012) and Cullen-Unsworth and Unsworth (2013). And in light of these facts, they review how the several mentioned services are likely to be impacted by the ongoing rise in the atmosphere's CO₂ concentration.

Based on projections of future anthropogenic CO₂ emissions and their impacts on the above- and below-ground growth of seagrass, the two UK researchers estimate that over the remainder of this century, the global standing

stock of seagrass "is expected to increase by 94%, whilst the standing stock in the UK is expected to increase by 82%." And they calculate that the associated value of this increase in both above- and below-ground carbon sequestration capacity is - when summed over the entire world - approximately 500 and 600 billion pounds sterling (\$765-918 billion USD), respectively, between 2010 and 2100.

And so it is that they conclude that "sustainable management of seagrasses is critical to avoid their continued degradation and loss of carbon sequestration capacity," and, it might be added, to maintain - or even enhance - their many important ecosystem services.

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Digging for dugongs (Australia)

03 February 2015, Australian Museum

We know why these gentlemen are digging in their three-piece suits, but their identity has been a moot point among archivists. This famous photograph from the Museum Archives dates from 1896 and was taken at Shea's Creek, Alexandria, during the construction of Alexandra Canal. Workers had uncovered numerous large bones, but further excavation of the site, near the Ricketty Street bridge, was delayed until the Museum's Curator, Robert Etheridge Jnr (second from left), and Government Palaeontologist William Dun (far left), could inspect it.

The bones, later identified as *Dugong*, were (and are) of great scientific interest. The Dugong is a warm-water tropical marine mammal, and this deposit was hundreds of kilometres south of its range. Further the fossilised bones were 'confusedly heaped together' and revealed cut marks which the authors attributed to an Aboriginal stone tool.

The scientists concluded that the occurrence of Dugong bones so far south indicated recent changes (in geological terms) in sea level and water temperature. It wasn't until 2004 that Dr Robert Haworth and colleagues at the University of New England carbon-dated the fossils to around 5500 years BP. The human markings on the fossils also provided the first archaeological evidence of long-standing Aboriginal occupation of the area, which was reinforced by the recovery of a number of stone hatchets from the excavation. The fossil bones and one of the hatchet heads are still held in the Australian Museum collection.

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

Seagrass isn't sexy, but 'nurseries of the Gulf' are a key part of oil spill restoration (USA)

06 February 2015, AL.com

Ask the average person how important submerged aquatic vegetation (SAV) is in their daily life, and the likely response is among 50 shades of "meh." The grouper that person ate for dinner, however, would likely have a very different response. Often out of sight and out of mind for the general public, seagrasses are vital to the health of the overall ecosystem and serve as a nursery ground for juvenile fish and invertebrates. Those who study coastal ecology, or make their living pulling fish, shrimp and crabs from the water, know the vital role of SAVs in the complex Gulf ecosystem.

The state of Alabama hasn't forgotten the importance of seagrass beds. One of five projects the state submitted for consideration to the federal Gulf Coast Ecosystem Restoration Council, the Alabama Submerged Aquatic Vegetation Restoration and Monitoring Project seeks to use RESTORE Act funding to study, map and restore SAVs in Alabama's coastal waters. At an estimated cost of only \$875,000 the project is one of the least expensive proposals, but proponents say it can have a significant impact for its relatively light investment.

The project is one of 50 proposals submitted to the federal council for funding through the Council-Selected Restoration Component, sometimes called "Bucket Two," of the RESTORE Act, a law passed to send the most of the Clean Water Act fine money to be paid by BP and other companies involved in the 2010 Deepwater Horizon oil spill to the coastal states that were impacted by the spill. Funds from this bucket are designated for ecosystem restoration only. No strictly economic projects will be considered for funding through this component.

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Obama seeks \$30M for ocean acidification studies (USA)

04 February 2015, Monterey County Herald

Marine researchers found a gift hidden among the loophole closures and tax changes in the President Barack Obama's new budget. Released Monday, the budget proposal for fiscal year 2016 included \$30 million for the National Oceanic and Atmospheric Administration to study ocean acidification, the ongoing change in ocean chemistry caused by higher levels of carbon dioxide in the air.

It's twice as much as the president requested last year, and more than three times greater than the amount Congress approved. The money would be used, in part, for grants to scientists like Francisco Chavez, a biologist at the Monterey Bay Aquarium Research Institute in Moss Landing, who study the effects of acidification on local marine plants and animals. Kroeker works on a project studying if seagrass can help alleviate the effects of higher acidity, at

least in small areas. Because it's a plant, seagrass gobbles up carbon dioxide during photosynthesis, creating pockets of less acidic water in its neighborhood.

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

UCF researchers say Fla. manatees are in hot water (FLA, USA)

04 February 2015, Central Florida Future

There's a less than 50 percent chance manatees will exist in the next 1,000 years. UCF researchers say the springs may be the only refuge for the future for these gentle giants, unless we can change our ways.

"Loss of warm water habitat is threatening them in the future, but there are several other major threats to the manatee," said Madison Hall, a Ph.D. candidate in UCF's Physiology Ecology and Bioenergetics Lab. "Some of the warm water habitats that they rely on can be changed by humans in the future. There are power plants that can be out of use in years from now. The manatees will not have anywhere to go during the winter, and without anywhere to go, they are so sensitive to cold water and cold snaps that they can die from cold stress." Hall says that with human development of coastal systems, we are destroying their habitat and main source of food — seagrass.

"One thing I'm anticipating might be important is the distance from shore or seagrass coverage; those are two variables I'm looking at for a seascape genetics model," she said. "If those things wind up being significant, it would mean we would have to conserve seagrasses and restore areas that are close to shore." With limiting locations to move to for winter and finding food, Hall said their population is expected to decline from 10 to 20 percent over the next 40 years with a loss of warm water habitats, increase in harmful algal blooms, loss of seagrasses and from direct and indirect human-related mortality.

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

Marine wildlife at risk as Hampshire sites lose protection (UK)

04 February 2015, Daily Echo

Hampshire marine experts fear the region's seas have been left open to an "environmental disaster" after some of the most "important" sites for marine wildlife have been axed from a Government list of protection. The Hampshire and Isle of Wight Wildlife Trust have been left "bitterly disappointed" at the Government's decision to cut back on its ambitious plans to protect more marine sites across the UK. The trust had hoped that six sites in Hampshire and the Isle of Wight would be part of the consultation to designate new Marine Conservation Zones, but only half have made the cut.

The decision to recommend only three of the region's six proposed sites means that around only five per cent of the area's seagrass meadows will be protected if these sites are designated. Seagrass is an important breeding ground and nursery for commercially important fish and crustaceans and are a vital food source for migrating wildfowl such as teal, widgeon and Brent geese.

Dr Amy Marsden, marine officer at the trust, added: "Seagrass habitats are a vital yet often overlooked feature of our functioning environment. "They are easily damaged yet slow to recover and protection from activities such as dredging is critical to prevent further degradation and allow regeneration. "By postponing action to protect these areas yet again, the Government is leaving our seas open to an environmental disaster."

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Brevard considers new manatee protection plan (USA)

04 February 2015, MyFoxOrlando.com

A 2006 manatee protection plan might be re-evaluated in Brevard County. The Indian River Lagoon lost 50,000 acres of underwater sea grass in 2011, damaging it and reducing the food supply for its marine life. The cause of this loss is not known, however Citizens for Florida Waterways believes that manatees might be a factor, since they eat seagrass. They want manatees to be managed by the county so that the lagoon can survive.

Newly elected county commissioner Kurt Smith proposed the re-evaluation of the manatee protection plan which, among other things, regulates boating speeds and allows for artificial warm-water habitats. The proposal was pulled from Tuesday's agenda, as the issue is still under heated debate.

The Save the Manatee Club says that Brevard does not have a manatee overpopulation problem, and that the mammal was not responsible for the lagoon's loss of seagrass. The commissioner says that he will talk with county staff to determine whether there is a way to proceed in re-evaluating the manatee protection plan.

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

Over 300 dugongs seen off Qatar (Qatar)

01 February 2015, MENAFN.COM

Around 300 to 500 dugongs were sighted off the west coast of Qatar during a field mission by ExxonMobil Research Qatar (EMRQ) and the General Directorate of Natural Reserves-Private Engineering Office. The one-day visit was part of ongoing data collection efforts to better understand the distribution, abundance and behaviour of Qatar's dugong population. The efforts are part of a tripartite agreement signed in 2014 by ExxonMobil Research Qatar, Qatar University (QU) and Texas A&M University Galveston, with in-kind support from the general directorate and the Ministry of Environment.

The mission resulted in video and photographic documentation of dugongs as they travelled and fed in the area. It was the first time that live animals were documented as part of research efforts.

About 6,000 dugongs are estimated in the Gulf, making it the second largest population in the world, apart from Australia. Qatar is home to two of at least three habitats for dugongs in the Gulf, and is strategically positioned within the species' range and critical to its survival. To date, over 14 stranded (dead) animals have been reported under the project, indicating that the population is experiencing threats in Qatari waters. Future work will focus on collecting data to inform management efforts centred on the protection of the species.

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

Metals might be linked to turtle deaths (Australia)

03 February 2015, The Australian (blog)

Heavy metals might have played a role in the mystery mass deaths of green turtles near a remote North Queensland beach in 2012. Experts have begun to investigate whether unusually high levels of cobalt, a common by-product of nickel, silver, lead, copper and iron mining, is linked to the stranding and eventual deaths of more than 100 turtles during a three-month period at Upstart Bay in 2012. It is a significant spike from the five strandings in 2009.

James Cook University research fellow Colette Thomas, who will take part in the four-year investigation, said their team was searching for traces of metals. It is a case which has baffled experts, with the mystery ailment only affecting mature turtles aged between 50 and 70-years-old. James Cook University virology lecturer Ellen Ariel said none of the usual signs which usually presented in stranding deaths was evident, and for the most part the turtles appeared to be healthy. The investigation will try to discover whether humans are responsible. "But if contaminants of concern are detected we will attempt to trace them to their source for proper management," Dr Thomas said. She said there were both legacy mines and natural metal sources upstream and around the catchments which filter into where the epidemic took place.

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

Paradise Discovered: Seagrass (Cayman Islands)

01 February 2015, The Cayman Reporter

February 2nd is designated World Wetlands Day and as we think about preserving national assets such as mangroves and other wetland areas, let us remember that seagrass communities are also wetlands with many important functions. Let us try to protect and preserve these systems also! While most of us know something about the ocean and coral reefs, we know little about seagrass beds. Moving seaward from the mangroves we typically find seagrass beds.

There are six species of seagrasses in the Caribbean. Species recorded in Cayman include turtle grass (*Thalassia testudinum*), shoal grass (*Halodule wrightii* and *Halodule bermudensis*) and manatee grass (*Syringodium filiforme*). The most common species in the Cayman Islands is turtle grass (*Thalassia testudinum*). The North Sound has broad areas of mud-rich sediments with shoal grass, but predominantly turtle grass.

Celebrate World Wetland Day and explore the seagrass areas close to our coasts and discover the amazing life in these marine meadows!

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

Forest City developer to restart work in February, pledges to preserve environment (Malaysia)

01 February 2015, The Malaysian Insider

Developer Country Garden Pacific View (CGPV) is targeting to restart land reclamation works at its Forest City project in Johor this month after a seven-month halt by the Department of Environment (DOE) following environmental concerns, and has pledged to spend millions to preserve the surrounding seabed, including the sensitive 48.5ha seagrass area.

The RM600 billion mixed-development 1,386ha project involving the building of four man-made islands ran into controversy last year when nearby residents, environmentalists and Singapore raised concerns over the massive works. The DOE ordered work at the site to be halted last June and the Malaysian-Chinese company was instructed to submit a detailed environmental impact assessment (DEIA). Following the green light from the DOE last month, CGPV executive director Datuk Md Othman Yusof said the southern peak of one of the islands had been scaled down by a third. This was after more than 20 simulation models were run to come up with the best reclamation shape and sizes to ensure minimal impact on the surroundings. He said the company was unaware of the presence of seagrass when it was first awarded the land by the Johor government and immediately took steps to stop reclamation works once it realised the impact on the sensitive seabed. "We are committed to preserving the seagrass, hence our work will be synergised with the existing ecosystem." This was done by installing a 2km double-silt curtain to contain plume and minimise any pollution, which cost the company more than RM10 million. It has also set up a RM300,000 online monitoring system to monitor water quality in real time and water samples are obtained daily as long as the reclamation works are ongoing with the data transmitted to the DOE offices in Johor Baru and Putrajaya.

To date, the company has spent more than RM3.5 million on mitigation measures to preserve the surrounding environment, including placing a single silt curtain around the seagrass. In the works are replanting of mangroves ringing the four islands and installation of underwater cameras on the seagrass for the public to enjoy the sea animals, including seahorses.

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

Dewberry Mapping Initiatives Document Seagrass Habitat Levels (VA, USA)

09 February 2015, Dewberry, The American Surveyer

Two environmental mapping projects recently completed in Florida and California are helping to document the decline of seagrass. Dewberry, a privately held professional services firm based in Fairfax, Virginia, has updated maps of the 156-mile Indian River Lagoon and adjacent estuaries for the St. Johns River Water Management District in Florida, an effort that enables the district to quantify gains and losses of seagrass habitat. Dewberry has also prepared new maps of wetlands and seagrass within a 991-mile area of San Francisco Bay for the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center.

Dewberry mapped the Indian River Lagoon and adjacent estuaries in 2011 using aerial photography and field work involving GPS, snorkeling, and underwater video. The 2011 data showed a decline in seagrass of approximately 60 percent over 2009 findings. The new maps depict 2013 conditions and enable the district and other stakeholders to track seagrass presence, study the impacts of algae superbloom, and devise strategies to restore the lagoon's ecosystem. The digital aerial photography of the lagoon was captured according to several time-sensitive requirements, including the absence of turbidity in the water, a sun angle between 15 and 30 degrees, and no wind or clouds. Dewberry monitored lagoon conditions before authorizing imagery collection. Field work documentation and the mapping were delivered within an ArcGIS geodatabase.

The project for NOAA's Coastal Service Center mapped San Francisco Bay, the largest estuary in California. Baseline mapping, which required similar technology and equipment as the work in Florida, will assist the Coastal Services Center and regional, state, and local partners with long-term seagrass and wetland monitoring, trend analysis, and conservation efforts. Along the West Coast, the Pacific Fishery Management Council has identified seagrass as one of the region's Habitat Areas of Particular Concern (HAPC).

Full story: <http://www.amerisurv.com/content/view/13479/>

Gunungkidul develops turtle conservation beaches (Indonesia)

08 February 2015, Jakarta Post

The Gunungkidul Maritime Affairs and Fisheries Agency says it will designate several beaches in the regency as turtle-conservation areas in its effort to save various species of turtles nesting in coastal areas in Gunungkidul, Yogyakarta. "Several beaches will serve as both turtle-landing locations and special tourist areas," Gunungkidul Maritime Affairs and Fisheries Agency head Agus Priyanto said on Sunday. He said that as a first step, the agency, together with conservation consultants were surveying beaches that could serve as turtle-landing areas during egg-laying periods. Of the 25 beaches surveyed, between six and 10 would be designated as conservation areas.

The five turtle species found on Gunungkidul beaches are green turtles, Hawksbill sea turtles, Olive ridley sea turtles, Loggerhead sea turtles and Flatback sea turtles. Agus said conserving turtles would lead to the sustainability of the fish ecosystem because turtles had the habit of digesting sea grass and then purging. "The turtles' vomit is a source of nutrition for baby fish," said Agus, adding that sea turtles also consumed poisonous red algae deathly to baby fish. The development of the Gunungkidul turtle conservation areas was set to be completed at the end of 2015, said Agus.

Full story: <http://www.thejakartapost.com/news/2015/02/08/gunungkidul-develops-turtle-conservation-beaches.html>

Marine life released to preserve Phuket's coastal ecology (Thailand)

06 February 2015, the Phuket News

Marine life including 10,000 wing shells, 3,000 barramundi and 150 kilograms of black crab were released into the sea at Pa Khlok Bay Wednesday (February 4) as part of an activity aimed at preserving the coastal ecology of the area. Phuket Governor, Nisit Jansomwong chaired the activity at what is Phuket's largest seagrass area which is home to a variety of marine life including five rare dugongs.

Governor Nisit explained that the activity will help enrich coastal nature. He went on to say how Pa Khlok Bay covers 1,900 rai and has eight species of seagrass. There is around 26,000 rai of seagrass in the area from Phuket to Phang Nga Bay, and this area is essential for allowing aquatic animals to grow properly.

For Phuket, Pa Khlok Bay is the most plentiful and biggest seagrass area where dugongs and other marine life can still live peacefully. "It is not only the marine life, but also the local people who benefit from this activity," said the Governor. "We preserve the area so that only local fishermen can fish in this area and not industrial trawlers that can harm aquatic animals and nature. It is to sustain their careers and those that live relying on the sea," he concluded.

Full story: <http://www.thephuketnews.com/marine-life-released-to-preserve-phuket%CC%95s-coastal-ecology-50915.php>

CONFERENCES

4th Mediterranean Seagrass Workshop (MSW '15) (Sardinia, Italy, 18–22 May 2015)

The 4th Mediterranean Seagrass Workshop is hosted by the International Marine Centre of Oristano.

Important dates:

16 March Registrations close

30 March 2015 Applications for Grants and awards to assist participation due

RAC/SPA Grants to cover travel, registration and accommodation for selected participants from MedKeyHabitats countries.

SIBM Awards to facilitate youth participation of young SIBM members.

for more information, visit <http://mediterranean.seagrassonline.org/sardinia/> or follow on Twitter @SardiniaMeet

Coastal & Estuarine Research Federation 23rd Biennial Conference (CERF2015) (Portland, Oregon, USA, 8-12 November 2015)

Theme: Grand Challenges in Estuarine and Coastal Science: Securing our Future

The CERF 2015 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 scientific, 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 of the Grand Challenges in Coastal and Estuarine Science:

Managing and mitigating the risks of climate change – *shifts in precipitation and hydrologic patterns; wetland and species migrations; sea level rise; drought and water scarcity; severe storms, etc.*

Synergistic effects of ocean acidification with hypoxia, eutrophication or other conditions – *synthesis of information (e.g., from 2013 CERF) with new research results and methods for mitigating effects*

Polar estuaries and coasts – *physical oceanography, ice cover, biogeochemical interactions and impacts to coastal ecosystems*

Making data work – *advancement, management and integration of modern datasets (observing, genomics, bioinformatics) and capabilities to yield predictive models and tools*

Cities by the sea – *scientific exploration of dense and growing populations, economies and the built environment on coastal ecosystems; success stories from green infrastructure*

Estuaries under threat – *environmental change and variability associated with population growth, resource acquisition and scarcity, war/conflict, biodiversity loss and interactions in the next 50 years*

Multiple uses – *managing multiple, conflicting uses of coastal resources across the natural and sociological continuum; integration, quantification and valuation of ecosystem goods and services*

The Scientific Program Committee for CERF's 23rd Biennial Conference is now accepting proposals for scientific sessions and workshops. Ideas for topics and speakers will be accepted through 12 September 2014. Proposals will only be accepted online. A formal Call for Scientific Sessions and Workshop Proposals is now posted on the CERF website. Some examples include:

managing and mitigating the risks of climate change;

synergistic effects of ocean acidification with hypoxia, eutrophication or other conditions;

polar estuaries and coasts;

making data work;

cities by the sea;

estuaries under threat; and

multiple uses of coastal resources.

CERF 2015 sessions will include oral, poster and combined oral/poster formats. Those making submissions should be prepared to either act as a convener or chair of the session/workshop they are proposing, or identify an appropriate chair.

for more information, visit <http://www.erf.org/cerf2015>

GALLERY

Tinnanbar, Great Sandy Strait (Aust): 11 Jan 2015 <http://www.seagrasswatch.org/gallery.html>

Noosa (Aust): 06-27 Nov 2014 http://www.seagrasswatch.org/gallery_Nov_14.html

Great Sandy Strait (Aust): 05-06 Dec 2014 http://www.seagrasswatch.org/gallery_Dec_14.html

Noosa, Qld (Aust): 04 Dec 2014 http://www.seagrasswatch.org/gallery_Dec_14.html

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 36,348 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 with regular updates from WSA President Dr Richard Unsworth and *notes from the field* by Siti Yaakub.

FROM HQ

Past E-bulletins <http://www.seagrasswatch.org/publications.html#bulletin>

Frequently Asked Questions <http://www.seagrasswatch.org/faq.html>

Seagrass-Watch 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>

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