



Seagrass-Watch E-Bulletin

30 June 2016

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Haven Beach breakwater proving inadequate for the job (USA)

29 June 2016, Gloucester Mathews Gazette Journal

Strolling along Haven Beach in Mathews County is a bit of a chore these days. Although the site looks promising from the parking lot, when a beachgoer crosses the dune, he or she is met with a muddy-looking sand bar and mounds of dead seagrass that have to be walked around or through in order to reach a decent stretch of sand. A walk to the south reveals a cleaner beach, but it's narrower than it was in past years, while a walk to the north requires passing through small scrub growth and more mounds of seagrass before reaching a wider, more pristine beach.

In September 2015, the smaller of two breakwaters at the site lost much of its sand during a storm, said Mathews Planner Thomas Jenkins. He said he suspects that the breakwater system is not adequate and that a larger system of breakwaters might be needed to protect the shoreline. The northernmost breakwater is 280 feet long and the southern one is 100 feet long. Thus far, the county hasn't made plans to replace the sand, which was trucked in during a \$540,000 beach preservation project in 2005. That project, located at the end of Haven Beach Road, involved installing the breakwaters, adding beach nourishment, and building a parking area with trash and porta-potty facilities.

Scott Hardaway, marine scientist supervisor and shoreline studies program director at the Virginia Institute of Marine Science, said that the smaller breakwater was installed as a transitional structure to hold sand against the larger one, and that the larger one is "still functioning pretty good."

[more..... http://www.seagrasswatch.org/news_May2016archives.htm](http://www.seagrasswatch.org/news_May2016archives.htm)

Seagrass a crucial weapon against coastal erosion (Australia)

27 June 2016, Science Network Western Australia

A seagrass commonly found along WA's coast could be an important tool in a decades-long battle against erosion in Albany, a preliminary study by UWA has found. Middleton Beach lost most of its seagrass meadows during a storm in 1984, which has caused long-term erosion problems. In April, 65 UWA students descended on Albany as part of their marine science studies. Lecturer Dr Jeff Hansen's group investigated the effect of surviving patches of *Posidonia croiacea* seagrass on wave height at Middleton Beach. *P. croiacea* has long, thick, leathery leaves and is widespread along WA's coast, particularly in areas with strong wave action.

Students calculated the average wave height in areas of dense and patchy seagrass by strapping a series of water pressure sensors to bricks and placing them underwater for 72 hours. They were then able to compare the size of waves in dense and patchy seagrass meadows with areas that had no vegetation. Dr Hansen says the data is still being finalised, but preliminary results found waves were 10-20 per cent smaller in dense seagrass meadows, compared to a bare seafloor. Wave height was reduced by approximately 10 per cent in areas with patchy seagrass.

Dr Hansen says the erosion "buffering" capabilities of seagrass would be much larger if the meadows recovered to their former glory. Dr Hansen says another way seagrass helps prevent erosion is by creating a shoal-like effect. It slows down the movement of ocean currents between the seabed and the tips of the blades of seagrass.

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Great Barrier Reef group to get their day in court (Australia)

24 June 2016, Noosa News

A Whitsundays community group has one day in court to challenge a government decision to grant mining giant Adani's Abbot Point Terminal 0 expansion. Brisbane Supreme Court has set down a hearing on October 7 to hear why Whitsunday Residents Against Dumping, based in Airlie Beach, has taken the Department of Environment and Adani to task over the approval.

Adani has labelled the move "another politically-motivated activist attempt to delay a centrepiece of Adani's plans to build a long-term future with Queensland". WRAD spokeswoman Sandra Williams said the Great Barrier Reef was already in poor health and her community feared Adani's port project would cause further damage. She said reef tourism was the backbone of the area's economy and people were worried about jobs if the reef's health suffered. Ms Williams said an independent party needed to properly scrutinise the Queensland Government's decision to approve the expansion.

Solicitor Jo-Anne Bragg said Environmental Defenders Office Queensland had been engaged to represent WRAD in court and scrutinise the government's compliance with the Environmental Protection Act. She said they believed "there's been a bit of a tick-a-box exercise here, attaching conditions rather than genuine consideration of whether the project should be refused". A statement from Adani said a PwC report the company commissioned this week

found activist-delays would have cost the state \$3.9 billion in a reduction in Gross State Product through 2023-24, and 2665 jobs through 2023-24.

[more..... http://www.seagrasswatch.org/news_June2016archives.htm](http://www.seagrasswatch.org/news_June2016archives.htm)

Turtle Dragged Out Of Sea, thrown Onto Shore, Beaten, And Stepped On By Tourists (Lebanon)

22 June 2016, Inquistir

Tourists severely abused a turtle that ventured a little too close to a crowded beach in Lebanon. The beachgoers dragged the poor creature out of the sea and threw it on the shore for photos. Thereafter, a few people even beat the turtle and put their toddlers on its back, injuring the helpless animal.

According to Green Area International, which obtained the photos of the abuse, a loggerhead turtle was dragged out of the ocean at Havana Beach in Beirut, Lebanon, by a beachgoer. Thereafter people flocked to the frightened creature that lay there motionless in the sand. The tourists jostled to take photos and selfies with the creature. As if the torture wasn't enough, the turtle was allegedly attacked. Green Area International members, who are part of the local activists, rushed to the rescue of the turtle. Though they weren't on the shore during the incident, the rescuers contacted the Lebanese civil defense's maritime center in Jiyeh. Meanwhile, those who cared for the animal formed a protective barricade and stopped the abuse. They also helped get the turtle to a safe area said Jason Mier, executive director of Animals Lebanon.

According to a preliminary medical examination, the medical team concluded that the creature suffered extensively due to the beating it suffered on the beach. They added that it will need multiple X-rays to assess the internal damage to its bone structure and organs. Animals Lebanon have volunteered to provide the veterinary care the turtle needed. The team will try to return the sea creature to the ocean, added Mier. There have been quite a few incidents wherein sea creatures have been paraded for photos and selfies. According to the rescue group, this is the third turtle that was yanked out of the water by inhumane tourists. While this one survived the ordeal, some of the earlier ones didn't make it.

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Man held with turtle carcass. Faces two years in jail (Trinidad and tobago)

22 June 2016, Trinidad Express

A man arrested after being found with the carcass of a turtle in his car trunk faces a maximum of two years imprisonment and a \$100,000 fine if found guilty. Game Warden II Steve Seepersad said officers of the Moruga Police Station were conducting a "stop and search" exercise on Sunday when the dead green sea turtle was found in the vehicle.

At around 2.30 a.m. the man was stopped in Moruga and the turtle was observed in the trunk of his car. Seepersad said officers contacted him. He said he questioned the man who told him he got the animal from someone at the beach. The turtle weighed approximately 11 pounds.

The man was charged and appeared before a Princes Town magistrate earlier this week who adjourned the matter until November 8, Seepersad said.

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Seagrass down but coming back to Gippsland Lakes (Australia)

22 June 2016, ABC online

A study of the Gippsland Lakes has revealed areas previously devoid of seagrass have come back to life. Scientists from Monash and Melbourne universities have been working with the Arthur Rylah Institute to investigate seagrass in the lakes and compare it to the last comprehensive study that was done in 1997. While overall levels of seagrass have declined over the past 19 years, a comparison of aerial photographs from 2013 and 2016 show some areas are coming back.

The study's lead, Associate Professor Perran Cook from Monash University, said areas around Metung and Raymond Island had seen "quite a remarkable recovery". But he said there was not yet enough evidence to make any conclusions about long-term trends. Associate Professor Cook believes the main driver behind seagrass growth was river flows into the lakes. He hoped to continue monitoring the area over the coming years to confirm the research team's observations.

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What's causing the stench near Laguna Madre? (FL, USA)

20 June 2016, KRIS Corpus Christi News

It's that's time of the year again where your nose is being assaulted with a strong smell from the Laguna Madre. That smell actually means something good is happening. What's happening is seagrass is dying off, and in the summer months bacteria will break down the dead grass releasing gasses that stink up the area. That process leaves us with a black muck which is what marine biologists say is good, because it's now food.

So men like Tim Krebs enjoy the smell, because to him it just means it's a good day to be on the water. While the smell is distracting, marine biologists say it's not harmful. Biologists say the smell should go away once the weather cools down.

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Will Florida Bay survive the summer? (FL, USA)

17 June 2016, Bradenton Herald

Record winter rain on the heels of a severe summer drought that withered acres of seagrass may not be enough to stem the fever ailing Florida Bay. The seagrass die-off, which spread from about 25 square miles to more than 62 square miles through the winter, blanketed the central bay in a plume of yellow sulfide. While scientists say the die-off appears to have stopped for now, they worry that rising water temperatures over the summer could trigger a more lethal blow: algae blooms. Record highs have already been topped three times in the bay in recent months, they say.

Scientists fear higher summer temperatures will essentially cook what has become a soup of dead seagrass, where rotten plants soak up oxygen and produce even more grass-killing sulfide. So far, they have not seen any blooms, in part because the high salinity that lingered during a massive 1987 die-off has not occurred. Salinity is back to near normal, helped by an increase in water flowing through creeks emptying from marshes. But parts of the bay are weak, putting everyone on edge.

Unlike Florida's other troubled waters — the St. Lucie and Caloosahatchee estuaries muddied by water releases from Lake Okeechobee over the winter — the bay and its network of two dozen basins present a far more intractable problem. Once conditions worsen, it can take decades for things to get right again.

Next month, Margaret "Penny" Hall, a Florida Fish and Wildlife Conservation Commission seagrass expert and her team will return to the bay to expand their survey and take a look at hard-to-reach basins by kayak, where mud banks make it impassable for boats. The U.S. Army Corps of Engineers also plans to send up a drone in late July or early August for aerial mapping, a key tool in studying the vast, 850-square-mile bay, said spokesman John Campbell.

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\$3M lake restoration project backed by advisory panel (USA)

22 June 2016, Sun Sentinel

In a continuing effort to revive the county's Lake Wyman Restoration Project at Lake Wyman and James A. Rutherford parks, environmental activist Steve Alley asked Boca Raton City Council to back the plan and took issue with objections raised by neighbors. The original \$2.9 million plan called for restoring 50 acres of wetland by removing 11 acres of non-native plants and restoring 4 acres each of seagrass and mangrove habitats. It called for constructing a six-slip day dock, 600 feet of boardwalk and an observation tower, and restoring a mile of over-silted canoe trails. The plan would stabilize the shoreline and create a walking path.

Council revived the 2011 plan last December, and the city's coastal manager Jennifer Bistyga presented council with three options at the April 25 meeting. They included proceeding with the original plan, developing a passive park or leaving the property alone and investigating other day dock locations. Alley said he was acting in his role as chairman of the city's Environmental Advisory Board after he presented a detailed report to city council at the workshop meeting June 13. The board advises Planning & Zoning and city council on the environmental impact of proposed development. Alley showed details on why concerns about mosquitoes are unfounded and said a \$50,000 study of tidal flow impact wasn't necessary. He showed other restoration projects by Palm Beach County's Department of Environmental Resources.

The project doesn't go far enough and the area could be turned into an environmental and tourism magnet, said Christine Cherepy, a Golden Harbour neighborhood board member and former president who looked into the project in detail at the time. She cited "some cool ideas such as water taxis, eco tourism and manatee viewing stations with clear materials that would allow people to view manatees eating sea grass."

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Book mapping oceans' benefits out

17 June 2016, *SciDev.Net*

The Atlas of Ocean Wealth is out - the world's first-ever book mapping the benefits of ocean ecosystems to assist governments and businesses make informed decisions and investments for the sustainable growth of coastal and marine resources. Oceans cover 70 percent of the planet, supporting a global seafood economy that accounts for US\$190 billion yearly and provides for protein needs of 17 percent of the population. But research shows that fish catches are declining, ocean temperatures are warming, sea levels are rising, and extreme weather events are threatening coastal habitats.

A project of the environmental non-profit group The Nature Conservancy (TNC), the atlas compiles spatially explicit information on the benefits of coral reefs, marshes, mangroves, seagrass meadows and oyster reefs. The atlas illustrates how coral reefs provide some level of shelter along 150,000 kilometres of the world's tropical coastlines, benefitting 63 million people in over 100 countries. In southern Australia, a single hectare of seagrass can generate 30,000 extra fish every year.

Researchers gathered data using traditional sources and latest technologies, as well as Flickr photos and TripAdvisor reviews, to quantify and map the value of ecotourism and how much this is linked to coral reefs. Robert Brumbaugh, TNC's director of ocean mapping and planning, further stresses the importance of putting social, ecological and economic development information in one place for economists, investment bankers and finance/treasury department decision makers to access easily. Brumbaugh says the World Bank is now incorporating the TNC's Mapping Ocean Wealth data directly into their own database, noting "this will inform billions of dollars of loans and grants focused on supporting smarter economic development in and along the oceans".

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Malaysia gets its largest marine park (Malaysia)

13 June 2016, *Mongabay.com*

Last week, Malaysia formally established its largest marine park - the Tun Mustapha Park - off Sabah Province in Borneo. The park is the result of more than 13 years of negotiations between government authorities, international partners, local communities, and non-governmental organizations, including WWF-Malaysia. At nearly 1 million hectares, the Tun Mustapha Park includes more than 50 islands and islets spread across Kudat, Pitas and Kota Marudu districts.

The park aims to protect coral reefs, mangrove, seagrass and productive fishing grounds in the Coral Triangle bioregion - a rich marine area that is home to more than 3,000 species of fish and three-fourth of the world's coral species. The Tun Mustapha park itself has more than 250 species of corals, according to the WWF. It also harbors dugongs, endangered green turtles, and more than 300 species of fish.

The region is currently threatened by overfishing, blast fishing (a destructive form of fishing that uses explosives to kill hundreds of fish at one go), as well as pollution. The park will not ban fishing, though. Instead, it will allow local communities and commercial fisheries to operate in designated regions in a bid to ensure "sustainable use of resources". This management approach is essential, according to WWF, because the area supports more than 80,000 people in coastal and island communities, "generating around 100 tonnes of fish catch each day".

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Oil spill hits Moalboal shores (Philippines)

11 June 2016, *Sun.Star*

Local residents, the Moalboal town government, neighboring towns and the Cebu Provincial Disaster and Risk Reduction Office (PDRRMO) joined hands in cleaning up the shores after an oil spill that started off Pescador Island in Barangay Basdiot, Moalboal last Friday. Basdiot Barangay Captain Cirilo Tapales said the Philippine Coast Guard (PCG) is investigating and checking on the ships that were scheduled to pass by Tañon Strait last Friday for the possible filing of a complaint. As of yesterday, the clean-up was almost done, said Tapales.

PDRRMO head Baltazar Tribunalo Jr. said they were able to collect 80 to 90 sacks of oil-laden seagrass. A fence of used cloth was already installed around the affected areas to stop the spread of the oil. Personnel from the Barili and Dumanjug municipal disaster offices came to help contain the spill. Personnel of beach resorts, led by incoming Vice Mayor Lingling Rozgoni, also helped in the cleanup. Basdiot, one of the town's 15 barangays, is famous for its white sand beach, a favorite destination of local and foreign tourists here in Cebu.

Tapales said the fishermen first saw the oil sticking on seagrass at 9 to 10 a.m. last Friday in Pescador, a small island in the southwest of the beach. They believed it came from a ship passing between Negros and Cebu islands. Later that day, the residue started moving toward the shores, prompting local residents and resort owners to launch the cleanup.

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Another Life: Refuge and nursery in our undersea meadows (Ireland)

11 June 2016, Irish Times

As June envelops the few last green fields, other meadows are reaching the peak of summer in sheltered bays and inlets with shores of sandy mud or muddy sand. The tallest, *Zostera marina*, takes the plunge at the lower shore and marches on, its thin leaves floating in the water like a mermaid's emerald tresses, perhaps a metre long or more. In clear water with strong light, it can form dense beds to about five metres deep, well below the tides. A second species of seagrass, *Zostera noltii* lives between the tides and draws migrant flocks of brent geese to feed at Strangford Lough, in Co Down, in early autumn, and later at Merrion strand, on Dublin Bay.

Ireland has seagrass beds in more than 20 bays and estuaries, almost all of them protected under EU nature directives. Ireland may not have given "eelgrass" – as all our agencies call all *Zostera* – such handsome treatment, but we know where most of it is (142 hectares of beds, for example, in Clew Bay, where so much of our aquaculture is based). Recent discoveries, in at least three bays, have been made by volunteers for Coastwatch, the NGO led by the marine ecologist Karin Dubsy, of Trinity College Dublin. They drew local knowledge from fishermen and divers – and often from their memories of where eelgrass used to be. One discovery is in Lough Foyle, where *Z marina* grows in wide beds and patches along 8km of the Donegal shore, ending just short of Greencastle.

Declining water quality, shellfish farming, fishery trawling and coastal development such as new marinas are threats to Ireland's *Zostera*. These are a familiar litany of risks to our coastal marine life. New ones have arisen in the arrival of smothering aliens, such as the Japanese seaweed *Sargassum muticum*, now widely present around our shores. Its floating mats shut out the sunlight that *Z marina* needs. Climate change threatens more and worse storms to tear up the shallow-rooted seagrass, and sea-level rise could dim out the sun faster than the plants could travel back uphill.

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Local leads most successful seagrass restoration in the world (Australia)

11 June 2016, Science Network Western Australia

When Geoff Bastyan noticed seagrass disappearing from harbours in Albany nearly 50 years ago, he would never have predicted his observation would lead to the most successful seagrass restoration in the world. Mr Bastyan noticed a decline in the distribution and health of *Posidonia australis* and *P. sinuosa* seagrass, commonly known as ribbon weed, in Oyster and Princess Royal harbours in the late 1970s. Mr Bastyan was determined to document its disappearance, so he started self-funded monitoring programs of both harbours in 1981.

By 1988, Mr Bastyan's monitoring showed substantial seagrass losses of 80 per cent from Oyster Harbour and 90 per cent from Princess Royal Harbour. Oyster Harbour was overloaded with agricultural nutrients from surrounding farmland, while Princess Royal Harbour had high levels of industrial waste and sewage. Mr Bastyan's research prompted the Albany Harbours Environmental Study, a report to the Environmental Protection Authority, in 1988 and 1989. The study found if agricultural and industrial pollutant loads continued, most of the remaining seagrass would be lost from Princess Royal Harbour within five years and Oyster Harbour within 10 years.

Mr Bastyan began seagrass transplant trials in 1994, in spite of the prevailing view that degraded seagrass meadows could not be rehabilitated. His efforts to painstakingly relocate hundreds of plants across 2.6 hectares throughout the 1990s disproved this theory, with a 97 per cent survival rate making his work the most successful seagrass restoration project in the world. Mr Bastyan has received international recognition as a seagrass restoration pioneer and accolades for his contribution to the understanding of seagrass ecology. Last month, he was awarded the Great Southern Development Commission medal, which celebrates natural resource management best practice and includes a \$12,000 grant. The humble 58-year-old says he felt honoured and doesn't expect awards for doing what he loves. Mr Bastyan plans to use the grant to finish documenting the seagrass' natural regrowth and restorative effects on the harbours.

more..... http://www.seagrasswatch.org/news_June2016archives.htm

Scientists: No quick fix for removing algae (USA)

09 June 2016, TCPalm

As blue-green algae blooms keep popping up in the St. Lucie River, so do calls to get rid of the sometimes-toxic slime ... and proposals for how to do it. The blooms threaten the river's ecology by shading and killing seagrass and oyster beds. The algae can be toxic to humans and their pets, harming not only those who touch it but water-related businesses as well. There's no "quick fix," said Ed Philips, fisheries and aquatics professor at the University of Florida. The problem is scale, said Philips, who studied blooms in the Indian River Lagoon and the St. Lucie River for five years, including 2005 when blue-green algae blanketed the river. A number of proposals to rid the algae have been suggested.

A number of chemicals, including copper sulfate and hydrogen peroxide, have been used for many years to control algae and parasites in freshwater farm ponds and aquaculture operations. However, Algicides are made for killing

algae in freshwater, not salty or brackish water. Even if all it kills is algae, algicide has problems, Philips said. First, the dying algae cells will release their toxins into the water, causing a threat to people and small marine animals. Second, the sudden death of all the algae cells will cause a feeding frenzy by bacteria in the water. The bacteria remove oxygen from the water; and a lot of bacteria can suck it all out. That's what caused the massive fish kill in the Banana River section of the Indian River Lagoon in March.

Another proposal is to add salt. Raising salinity enough to kill algae in the 6-square-mile area of the estuary where discharges have more or less removed saltiness would require about 548 million pounds of salt. More salt would be needed as more fresh lake water is discharged into the estuary. Also, as with algicides, the dying algae cells would release their toxins in the water; and all the suddenly dead algae cells would provide a feast for bacteria that suck oxygen out of the water, causing fish kills. Other proposals include Algae-eating fish, Skimmers (e.g., Weedoo Boats) and Stopping the discharges.

more..... http://www.seagrasswatch.org/news_June2016archives.htm

Seagrass recovery project in place for bay (USA)

09 June 2016, Port St. Joe Star

A buoy system aimed at protecting seagrass in St. Joseph Bay has been completed in time for the busy summer season, the Florida Department of Environmental Protection announced last week. The buoy system is the major component of a region-wide seagrass recovery effort funded with over \$2 million of National Resource Damage Assessment fine monies stemming from the 2010 Deepwater Horizon oil spill.

Seagrass is the lifeblood of St. Joseph Bay, which is itself the wheel around which so much of local tourism and economy, from boating to kayaking to fishing and shrimping, rolls ahead, in the case of tourism, at a record-breaking pace. With approximately 10,000 acres of seagrass, the bay is also home to one of the few remaining scallop populations in the state. Scallops require healthy seagrass for spawning and survival to adulthood.

While the Florida Fish and Wildlife Conservation Commission has cited a red tide event last fall as the primary culprit in the lack of juvenile scallop recruitment in advance of the 2016 scallop season, some locals have questioned whether one significant issue would be the health of seagrasses. FWC researcher Stephan Geiger said during a recent public workshop that scallops must have clean seagrass leaves to cling to as they mature from larvae to adulthood. Charter captain Mark Howze said during the same workshop he had seen evidence of water quality issues impacting the pristine nature of seagrass. And resident Dusty May, an avid boater, has been pushing local governments for more than two years to act on concerns of propeller scarring of seagrass in the bay, adding that elected officials must do all they can to protect "the goose that continues to lay the golden eggs."

The first phase of the seagrass recovery project was to map the scarring in Alligator Harbor, St. Joseph Bay and St. Andrew's Bay. The mapping showed significant stretches of scarring in St. Joseph Bay, though FWC researchers emphasized during the recent workshop that seagrass beds, primarily turtle grass, remain extensive and, generally, healthy in St. Joseph Bay. The next step in the recovery project was the installation of sediment tubes across two acres of scarred seagrass and the placement of bird stakes in the project area to protect and aid restoration. Just completed was the third phase, which installed new "Caution Shallow Seagrass Area" buoys around the bay, in more than 30 stations, to aid in steering boaters away from shallow water and into the deeper-water channels. The goal is to reduce the potential for boats to run aground and damage seagrass beds.

Meanwhile, another NRDA Phase III project could also provide dollars to assist in restoration of the scallop population in St. Joseph Bay. A scallop enhancement project earmarked \$2.8 million for scallop restoration efforts in Bay, Escambia and Santa Rosa counties. The goal would be to "farm" adult scallops in off-site locations to spawn, with the juvenile scallops returned to the bay with a protective cage to ward off predators.

more..... http://www.seagrasswatch.org/news_June2016archives.htm

Researchers release 'ultimate guide' to coastal habitat rejuvenation (Australia)

09 June 2016, UQ News

Researchers have distilled 40 years of coastal marine restoration studies into a set of powerful guidelines for anyone hoping to rejuvenate coastal habitats. University of Queensland Global Change Institute postdoctoral research fellow Dr Elisa Bayraktarov said the new review was backed by 40 years of research, and could help stakeholders and decision-makers improve their conservation planning in all things marine coastal restoration. The review addressed uncertainties about restoration, cost and feasibility, which can hinder decision-making, she said.

Dr Bayraktarov said although it was clear the world desperately needed to better manage its coastal regions, this was the first time scientists had assessed the cost and feasibility of coastal restoration programs on a global scale. The researchers found that restoration success often did not depend on the amount of money spent but rather on ecosystem type, site selection and technique used.

more..... http://www.seagrasswatch.org/news_June2016archives.htm

Remember Gracie the Dugong? (Singapore)

08 June 2016, *The New Paper*

Gracie the dugong is dead. She died two years ago but it was only yesterday that The New Paper got the confirmation from the Underwater World Singapore (UWS). In an e-mail reply to TNP, a UWS spokesman said: "The dugong named Gracie at UWS died from complications arising from an acute digestive disorder in January 2014." There was no additional information.

Gracie was only a baby when it first made headlines in 1998. It was rescued off Pulau Ubin, where its mother had drowned from being entangled in a fishing net. A post-mortem revealed that the adult female dugong was lactating and the authorities decided that the suckling calf should be cared for by UWS - the orphaned calf would not have survived in the wild without its mother to care for it. Gracie became a local celebrity in 2001. It had its own cove in the display tunnel of UWS and visitors could interact with it at \$70 per dive.

Gracie celebrated its 12th year at the aquarium in 2009 with a cake made of seagrass. But in 2014, it disappeared from the public eye. No one seemed to know where it was. It was last year that British computing science professor Paul Harrald tweeted "What has happened to Gracie the dugong? #wheresgracie?" Yesterday, we got the answer: Gracie had died. It was only 19.

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Longest stay sea turtle returns to Great Barrier Reef (Australia)

08 June 2016, *The Cairns Post*

The longest-term patient at the Far North's sea turtle hospital has finally been delivered back home. Volunteers from the Cairns Turtle Rehabilitation Centre farewelled Ella, a 25-year-old green sea turtle, who was released back onto the Great Barrier Reef on Sunday.

The marine reptile was struck by a boat three years ago off Yorkeys Knob and left with severe cuts to her shell. Centre co-ordinator Jennie Gilbert said it was touch and go at times. "You could see right down into her lungs," she said. "I didn't think she was going to survive.

Ella has made a miraculous recovery, with her shell slowly regrowing. It now sports a satellite tracking beacon, which has started transmitting data about her movements, after she was released at Flynn Reef, courtesy Silverswift Cairns Reef Dive Tours.

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Video: Manatee found in woman's yard during storm, munching seagrass (USA)

07 June 2016, *WWSB ABC 7*

A manatee was caught on film eating seagrass in a woman's yard. A storm surge had pushed the water from a canal above the sea wall and into the woman's yard. The hungry manatee later swam by the property, stopping in Nancy Smith's yard for a quick snack. While Manatees are a common sight in her neighborhood, Smith says this is the first time one has taken a swim and snack in her yard.

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CNMI: Let us harvest green sea turtles (Northern Marianas)

08 June 2016, *Pacific Daily News*

In a clash of federal law and cultural practice, the Northern Marianas government is reviving its more than decade-long quest to be allowed to harvest a limited number of green sea turtles. Northern Marianas acting Gov. Victor Hocog brought up the issue at a Western Pacific Regional Fishery Management Council meeting Monday in Saipan.

Hocog told the council the Carolinian people in the CNMI have rituals attached to turtles. Twelve years ago, the CNMI government asked federal authorities to be allowed to catch turtles for certain cultural activities, such as teaching seafaring traditions and hosting fiestas. Hocog also raised concerns that the military's air and sea bombing exercises at the CNMI island of Farallon de Medinilla have become more frequent, and local fishermen have fewer chances to catch fish.

There have been low levels of green turtle nesting in Guam, American Samoa, the Northern Mariana Islands and other U.S. island territories, but the green sea turtle population has been increasing in Hawaii over the past two decades because of efforts to protect them in the Aloha State, according to the National Oceanic and Atmospheric Administration.

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Our unknown marine heritage (Tehran)

06 June 2016, Tehran Times

The dugong (*Dugong dugon*) was known to frequent the southern shores of the Persian Gulf, and had long been suspected of occurring in Iranian waters, with unconfirmed sightings in the bay of Gwater. However, only recently its presence has been confirmed in Iran, with several sightings in the Hara Protected Area in the Strait of Khuran and a single sighting of two individuals in the Mond estuary.

The Persian Gulf is home to about 5,300 dugongs, of which almost 75 per cent live off the Abu Dhabi coast. It is the second-largest population in the world after Australia (including Papua New Guinea), which has up to 95,000. Dr. Dona Kwam and Himansu Sekhar Das are two experts who work on conservation of dugongs in south of Persian Gulf. Dr. Kwan operates out of the CMS-Abu Dhabi office, which has been hosted by the Environment Agency — Abu Dhabi (EAD) for the past five years. The office represents a major collaboration between CMS and the UAE to conserve vulnerable migratory species such as dugongs. Unfortunately Iran till now has not any similar plan for dugongs in its coastlines.

Traditionally, dugongs were hunted for food by local people and even appeared in the south of Persian Gulf fish markets in the 1970s. Dugong tusks have been used as sword handles and, in 2009, an archaeological dig on a small island off the coast of Umm Al Quwain unearthed dugong bones, believed to have been used for ceremonial purposes. The future for dugongs in Persian Gulf region is uncertain but appears bleak. Populations appear extremely small and fragmented. Pressures from gill netting, shark netting, and habitat destruction may lead to the extirpation of dugongs. There is an urgent need to convert current fishing methods to sustainable practices. It is highly unlikely that the dugong population in the region can survive (let alone recover) unless immediate and effective actions are taken towards their conservation, and these actions are adopted by the local authorities and communities. Protecting the dugong's seagrass meadows in sheltered shallow water is essential because if there is not enough to eat, the dugong does not breed normally. The seagrass beds are also nurseries of fish, turtles and other marine life.

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Wildlife Institute of India to conserve marine herbivore dugongs (India)

04 June 2016, Times of India

The National Board for Wildlife under the chairmanship of prime minister has constituted a committee to develop guidelines for threatened Species Recovery Plans. The committee has chosen Dugong as one of the species in the first phase. The population of dugongs in India is expected to be less than 250 individuals in highly fragmented conditions. Wildlife Institute of India (WII) has been the implementation of dugong recovery program for which the Centre has also allocated fund of Rs 23.58 crore for a period of five years.

According to WII, Scientist Shiv Kumar said, that in order to conserve and manage the dugongs at global level, the 7th meeting of the CMS (Convention on Migratory Species) had passed a resolution and urged all dugong range countries to cooperate among themselves to develop an action plan for the conservation of the species throughout the species range. Government of India had signed this memorandum of understanding in 2008 to strengthen the ongoing conservation program of dugongs and their habitats in Indian water with the support of international community. The environment ministry has also constituted a task force which will facilitate for a leading role in the South-Asia sub -region in this regard. This project aims at implementing the national action plan for dugong conservation in India jointly with various stakeholders such as state forest departments, other agencies and local communities to recover the population and habitat of dugong in India in two decades.

Shiv Kumar said, "Dugong is protected under schedule-1 of Wildlife Protection Act 1972. They have also been declared vulnerable by International Union of Conservation of Nature. However still it is declining. Several reasons have been attributed to dugong population decline some of which include seagrass habitat and degradation, netting, disease, chemical pollutants, consumptive use and hunting." He said, WII in collaboration with the state forest department of Gujrat, Tamil Nadu and Andaman& Nicobar, Indian Coast Guard, Indian Navy, NGOs' and local communities would carry out detailed population and habitat surveys. Intensive aerial surveys using aircrafts and drones would be conducted with these agencies. The information collected will be used for successful restoration of dugongs and their habitat. Further advanced monitoring methods like drones will be used in monitoring. Ten dugongs will be tagged and monitored. The habitat requirement of dugongs and its associated fauna would be studied to better their habitat management. Besides this, extensive campaigns for spreading awareness on dugong conservation will be conducted to seek help of local communities in their conservation.

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Moreton Bay's mud problem threatening sea life, could drive away dugongs, turtles (Australia)

02 Jun 2016, ABC Online

Moreton's Bay's iconic sea life is being threatened by an increasing amount of mud settling in the water, Brisbane researchers say. A survey conducted by a team of researchers from the University of Queensland has found the area of mud in the bay has more than doubled in the past 45 years. It now covers 800 square kilometres or more than 50 per cent of the bay's floor - a significant jump from the 400 square kilometres observed during the last major survey in 1970.

UQ researcher James Lockington said the extra mud was suffocating the abundant seagrass in the bay, which is responsible for attracting some of the region's larger marine life, such as turtles and dugongs. Mr Lockington said the seagrass beds located close to the Port of Brisbane were most affected. The significant floods in 1974 and 2011, as well as land clearing, likely contributed to the increased amount of silt in the water, Mr Lockington said.

A map developed as a result of the team's survey of 220 sites across the bay, shows the mud spreads from just south of Bribie Island right down to the Gold Coast. Mr Lockington said removing the mud would be challenging, as the water in the bay was complex.

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Green turtles found laying eggs at midday (Malaysia)

02 Jun 2016, The Star Online

The unusual event of green turtles coming ashore to lay their eggs in broad daylight was likely due to environmental disturbances. Universiti Malaysia Sabah's Borneo Marine Research Institute senior lecturer Dr Pushpa Palaniappan said green turtles usually came ashore to lay their eggs from dusk to dawn. For these creatures to land during the day was definitely unusual.

She said there were various possible reasons why two green turtles were spotted laying their eggs just before noon at Pulau Libaran off Sandakan for two days from May 24. As it needs to release its eggs, a female turtle may be forced to go ashore during the daytime to lay them, Dr Pushpa told The Star. During the extremely dry weather between March and May, the turtles faced difficulty nesting at Pulau Selingan, Gulisan and Bakungan Kecil, which make up the Turtle Islands Park off Sandakan, Dr Pushpa said. Turtles tend to go ashore with the high tide to avoid having to make a long crawl to the beach during low tide, Dr Pushpa said. If the high tide occurs during the early morning, and a turtle is unable to complete nesting by dawn, then she may still be found on the beach during daylight hours.

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Scientists Plead With Australia To Get Off Coal To Save The Great Barrier Reef (Hawai'i, USA)

27 June 2016, ThinkProgress

Coral reefs around the world are in a dire predicament, as warmer-than-usual waters are causing widespread bleaching and death among these crucial marine organisms. Now, more than 2,500 marine scientists and policy experts are urging the Australian government to protect the world's largest and most well-known coral ecosystem: the Great Barrier Reef.

"Coral reefs ... are threatened with complete collapse under rapid climate change," the scientists, who last week attended the International Coral Reef Symposium in Hawaii, write in their letter to Australian Prime Minister Malcolm Turnbull. "Fifty percent of coral reefs have already been destroyed by a combination of local and global factors. Additional serious degradation will occur over the next two decades as temperatures continue to rise." The scientists also offer up a way to protect the Great Barrier Reef from future climate change: Get off coal.

One of the most controversial coal decisions Australia has made in recent years was October's approval of the Carmichael coal mine. The mine, which will be located in central Queensland, has drawn the ire of environmentalists, who note that the emissions the mined coal will produce will worsen the climate change that's causing coral bleaching. Another concern is the shipping of coal from the mine through the Great Barrier Reef, which will require large channels to be dredged through the sea floor.

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CONFERENCES

The 12th International Seagrass Biology Workshop (ISBW12) (Wales, 17-23 October 2016)

Theme: Declining seagrasses in a changing world.

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 ISBW12 will be held from 17-23 October 2016 at Nant Gwytheyrn, Gwynedd, Wales, organized by Project Seagrass and the Seagrass Ecosystems Research Group. The conference email address is ISBW2016@projectseagrass.org.

We as scientists know the devastating effects that humanity is having on our worlds seagrass meadows. Although much work is needed to keep documenting, understanding and highlighting the problems facing seagrass we as a research community need to also provide a voice of optimism about how we can make changes to ensure survival of these precious ecosystems. We must go beyond science, and use it to inform policy and management, and ultimately to catalyze change. We know that there are many examples of this, from stakeholder led management and successful restoration to improvements in water quality and the management of boating activities. We encourage participants to contribute stories of seagrass conservation success in order to strengthen this theme. We also encourage submission of research stories that aim to provide evidence to make future successes.

Let's make ISBW12 a conference that celebrates seagrasses and has a spirit of #oceanoptimism

The workshop therefore has 4 key themes that will form the structure of the sessions held throughout the week. These are:

- Resilience and a changing environment
- Ecosystem services
- Restoration and management
- Raising the profile of seagrass meadows

for more information, visit <http://isbw12.org/>

SEAGRASS-WATCH on YouTube

Seagrass: Pastures of the sea <http://www.youtube.com/watch?v=66Y5vqswj20> or <http://www.seagrasswatch.org/seagrass.html>

Presentation on what seagrasses are and why they are important (over 41,959 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 Dr Siti Yaakub.

FROM HQ

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