30 April 2013

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NEWS

Seagrass to be dumped in council cost-cutting move (SA, Australia)

23 April 2013, ABC News

The Kingston District Council says it will save thousands of dollars by taking a different approach to removing seagrass from local beaches. Nearly 20,000 cubic metres of seagrass was removed last year at a cost of $220,000.

Kingston Mayor Evan Flint says the council can save about $90,000 a year by just dumping the seagrass instead of reusing it by turning into liquid fertiliser. "This time though I believe just picking it up and dumping it somewhere and it won't be used, so there's just been a little bit of change in how it's dealt with," he said.
"So the resource that we were trying to find a sustainable way of dealing with ... just became too expensive.

"Last year when we had this large overrun we just deferred some projects, so those projects will be able to be put back and be dealt with as it was going to happen last year."
source: http://www.abc.net.au/news/2013-04-23/seagrass-to-be-dumped-in-council-cost-cutting-move/4646018?&section=news

Green Sea Turtles Use Protected Areas, Study Finds (FL, USA)

30 April 2013, LiveScience.com

If you protect it, they will use it. Green sea turtles do actually make use of protected areas to nest and feed, according to a study that tracked female turtles that came ashore to lay eggs in Florida's Dry Tortugas National Park.

Until now, it wasn't clear where these green sea turtles went after nesting and how much they might use nearby reserves. In this case, the animals spent much of their time in the nearby Florida Keys National Marine Sanctuary eating sea grasses and algae. The turtles, which are endangered in Florida and threatened throughout their range, make shorter migrations than green sea turtles elsewhere in the world. That's perhaps because they don't have to go far to find food, according to a statement by the U.S. Geological Survey, whose scientists were involved in the research.

Researchers tracked green sea turtles by fitting them with GPS tags in the Dry Tortugas National Park. The study, published this week in the journal Biological Conservation, also made use of a large habitat map of the nearby ocean created by combining 195,000 seafloor images. By combining the location of the turtles and the habitat map, researchers found the turtles spent much of their time in shallow sea grass beds and "degraded coral reefs that have been overgrown by a mixed assemblage of other organisms, such as sea fans, sponges and fire coral," according to the statement.
more…….. http://www.seagrasswatch.org/archives_13.html

Dead dugong discovered east of Phuket prompts local resident action (Thailand)

20 April 2013, Phuket Gazette

A dead dugong was found floating just off the coast of Koh Pu in Krabi by a local crab fisherman yesterday morning, prompting villagers to take action. The young marine mammal was discovered with a long gash across its snout in front of the Baan Koh Pu village port and was dragged to shore by villagers before it was reported to the Phuket Marine Biological Center (PMBC).

This is the first report issued to the PMBC by the local residents, who were unaware that it was important and necessary to report such matters, explained the village Kamnan, Samran Raden. “This is at least the third one we have found dead since October last year,” Mr Samran said.

Before being notified of the possible death of at least two more dugong last year, Dr Kongkiat Kittiwattanawong, who heads the PMBC Endangered Species Unit, had already voiced concern over the dramatic rise in the number of dugong deaths in the Andaman region. In 2011, only four of the vegetarian mammals were found washed ashore, while 12 were reported in 2012. Dr Kongkiat believes the deaths were caused by fishing equipment and boats, as a number of the animals were found wrapped in nets or had wounds consistent with those inflicted by the propeller blades of fishing boats.
more…….. http://www.seagrasswatch.org/archives_13.html
http://www.phuketgazette.net/phuket_news/2013/Dead-dugong-discovered-east-of-Phuket-prompts-local-resident-action-20843.html

Reef Plan Second Report Card (Australia)

19 April 2013, The State of Queensland (Department of the Premier and Cabinet)

The Reef Water Quality Protection Plan (Reef Plan) Second Report Card measures progress from the 2009 baseline towards Reef Plan’s goals and targets. It assesses the combined results of all Reef Plan actions up to June 2010. The Second Report Card was produced as part of the Paddock to Reef program.

Overall, progress towards Reef Plan targets has been encouraging; however, it will take time for these achievements to translate into improved marine condition. There was significant discharge from rivers in 2009–2010 particularly in the Burnett Mary and Fitzroy regions and this subsequently affected reef health. The condition of the marine environment remained moderate overall in 2009–2010. This ranking comprises moderate scores for water quality and coral and a poor score for seagrass which has declined over the past four years.

The significant progress has been driven primarily by the Australian Government's Reef Rescue program along with Queensland Government and industry-led initiatives.
more…….. http://www.seagrasswatch.org/archives_13.html

County rejects proposed 700-foot channel dredge (FL, USA)

20 April 2013, By Kevin Wadlow, KeysNet.com

A controversial proposal to dredge a boating channel through a Florida Keys seagrass flat sank like a stone Thursday. County commissioners unanimously agreed that a re-dredging plan laboriously crafted over several years by Little Conch Key Development Corp. does not mesh with current environmental protections and awareness. Opponents of the dredging contend approval would have set a precedent to allow dredging anywhere in the Keys.

Developer Thomas Cirrito and land-use consultant Sandra Walters said mitigation measures and new protections would safeguard the surrounding 26-acre flat, while allowing owners of eight oceanfront units access to bring larger boats to the dock. The channel has silted in over the decades, creating spots less than a foot deep. Seagrass has taken root. The applicants contend the project would be "re-dredging," not new dredging. Marine contractors John Coffin and Rudy Krause supported the project, saying that restoring the channel would cause minimal damage to the marine ecosystem and prevent new groundings on the flat.

But environmental and Upper Keys homeowners groups weighed in against the concept of allowing dredging of channels created a half-century ago. The proposal to create a special comprehensive land-use amendment would "allow deeper-draft boats than [the channel] ever accommodated," said Nova Southeastern University law professor Richard Grosso, who brought a contingent of legal interns to speak at the hearing at the Marathon Government Center. "Fishing is our most important asset. People don't come here to play golf," environmental activist Charlie Causey said. "Absolutely every chance we get to protect seagrass and water quality, we should do it."
full story: http://www.keysnet.com/2013/04/20/486520/county-rejects-proposed-700-foot.html

Story also covered by:
http://www.keysnet.com/2013/04/13/486399/opposition-to-allowing-dredging.html

Chesapeake Bay Underwater Grasses Decline: Massive Storms to Blame (USA)

18 April 2013, by Catherine Griffin, ScienceWorld Report

Pollution is a major issue for Cheasapeake Bay. Yet a program developed in 1987, called the Chesapeake Bay Agreement, set in motion a new initiative to help restore the water and ecosystem. Now, a new report reveals exactly how well efforts are proceeding to reduce the pollution flowing into the bay.

Underwater grasses in the Chesapeake Bay provide critical habitat and nursery grounds for fish and blue crabs. Yet scientists have recently announced that the grasses continued to decline last year, dropping by as much as 21 percent in 2011. Massive storms in 2011, including Hurricane Irene and Tropical Storm Lee, dumped a torrent of mud and debris into the bay. This sediment stirred through the water and covered grasses, keeping them from the light that they needed to grow. The grasses were also stressed by excessively warm waters in 2010, and poor water quality since then has limited their exposure to sunlight.

In order to actually survey the grasses, a team conducted an aerial survey flown from late spring to early fall. The scientists charted the grasses by three "zones"--upper, middle and lower Bay--and into subsections by tributaries called "segments." In this way, they were able to get a birds-eye view of the sea grass while mathematically calculating the decline. In the end, the researchers found overall declines evident last year in all of the zones.
http://www.scienceworldreport.com/articles/6326/20130418/chesapeake-bay-underwater-grasses-decline-massive-storms-blame.htm

Story also covered by:
http://www.itechpost.com/articles/8072/20130419/chesapeake-bay-grass-global-warming-climate-change-algeae-lake-erie-florida-vims-virginia-institute-of-marine-science.htm

Seagrass light stress bioindicators established (Australia)

17 April 2013, Science Network Western Australia

Scientists researching light stress indicators in seagrass have gathered and analysed international research in the field to narrow-down 119 variables to 19 robust bioindicators of light stress that can be incorporated into monitoring programs. The collaborative research between Edith Cowan University's Centre for Marine Ecosystems Research and James Cook University's School of Marine and Tropical Biology was published in Ecological Indictors.

Researchers searched ISI Web of Science and retrieved peer-reviewed publications that documented the responses of sea grasses to light reduction. The research proposed a set of 19 consistent and robust bioindicators that respond to the pressure of light reduction and can indicate different timescales and levels of pressure.

These include: those that respond early and reflect sub-lethal changes at the scale of the plant, such as rhizome sugars, shoot carbon to nitrogen ratio, leaf growth and the number of leaves per shoot; and those that respond later, reflecting changes at the meadow-scale, such as shoot density or above-ground biomass.

Co-author and Edith Cowan University's Dr Kathryn McMahon says seagrasses provide significant ecosystem services like food and habitat for other organisms, nutrient filtering and carbon storage. She says effective monitoring and detection of change and management is increasingly important as Australia faces some of its biggest dredging programs ever in combination with the affects of global climate changes.
more…….. http://www.seagrasswatch.org/archives_13.html

Story also covered by:
http://www.sciencewa.net.au/topics/fisheries-a-water/item/2077-seagrass-light-stress-bioindicators-established.html

Solent bylaw to protect seagrass (United Kingdom)

17 Apr 2013, World Fishing

The UK's Marine Management Organisation (MMO) has announced an emergency bylaw prohibiting the use of bottom towed fishing gear within the Solent European Marine Site (EMS).

The bylaw, which comes into force on Friday 19 April, is to protect certain areas of seagrass in six specified areas in Langstone, Portsmouth and Southampton.

The MMO emergency bylaw follows breaches of a voluntary code of conduct initiated by the Southern IFCA which stipulated that bottom towed fishing gear should not be used in certain seagrass beds within the Solent EMS. The MMO and Southern IFCA can both enforce the emergency bylaw and will take action if breaches are detected.
source: http://www.worldfishing.net/news101/industry-news/solent-byelaw-to-protect-seagrass

Land reclamation – Muscat's next frontier (Malta)

16 April 2013, by James Debono, Malta Today

Among the ideas Joseph Muscat floated in his post budget speech is a yacht marina and cruise terminal in Gozo and a land reclamation project in a yet to be identified spot on the Maltese coastline. In the past 25 years, governments have relied on the construction industry to kick-start the economy by expanding development zones and relaxing building heights. The new government seems to have its sights fixed straight towards the sea.

Aware that further development in the countryside is bound to create widespread popular opposition, Muscat's idea of kick-starting the economy hinges on seaward expansion, something which could endanger fragile marine ecosystems but which is less likely to stir public resentment, due to the fact that only divers and marine biologists are familiar with the marine environment.

Muscat's mention of a cruise liner terminal and a marina in Gozo indicates that one such project could take place at Mgarr: a crammed port which would surely not be able to support the 500-berth marina he proposed during the electoral campaign. Yet such a project would inevitably clash with environmental considerations, given that the Malta Environment and Planning Authority's Environment Protection Directorate has already shot down the idea of a cruise terminal at Mgarr due to the risk posed to the EU-protected *Posidonia* meadows, which pose an obstacle to land reclamation projects on the most attractive coastal areas in Malta, for example, Qalet Marku and Bahar ic-Caghaq.
full story: http://www.maltatoday.com.mt/en/newsdetails/news/national/Land-reclamation-Muscat-s-next-frontier-20130415

Are Australian dugongs catching a cold? (Australia)

15 April 2013, ABC Science Online

Dugongs in one of Australia's largest populations appear to be getting sick and dying as a result of exposure to cold water, say researchers. If confirmed, the findings may have implications for dugong conservation strategies. The findings are reported in a recent issue of the journal Diseases of Aquatic Organisms.

Dugongs (*Dugong dugon*) are a member of a small group of aquatic mammals called sirenia - or sea cows - that don't like cold water, says marine epidemiologist, Dr Mark Flint, of the University of Queensland. In the US, the closely related endangered manatees *Trichechus manatus* is known to gather around warm water that comes out of power plants when it gets cold. In the past decade, manatees in Florida have been dying from a condition known as cold stress syndrome (CSS), which occurs when the animal is exposed to water temperatures lower than 17 or 18°C. The animals' skin becomes cracked and susceptible to opportunistic infections and they can die within a few days, says Flint, who has worked on manatees suffering CSS in Florida. Animals with chronic CSS can die after several weeks, during which time they lose weight and their body fat atrophies.

Now, Flint and colleagues have documented signs of what could be CSS in dugongs, recovered from Moreton Bay in southeast Queensland, which is home to one of the largest populations of the animals in Australia. Research shows water temperatures at the level of seagrass, is lower than surface temperatures which means dugongs would be

exposing themselves to colder water to feed. The researchers say habitat disruption could force dugongs to feed on seagrass in deeper and colder water and increase their risk of CSS. They say maintenance of seagrass pastures in the warmer areas of Moreton Bay during winter may aid in the conservation of this vulnerable species.
more…….. http://www.seagrasswatch.org/archives_13.html

Grasses in our seas (Fiji)

12 April 2013, by Monifa Fiu, Fiji Times

My first real recognition of seagrasses began about 15 years ago when a couple of us took a group of children to wade in the shallows of Maka Bay (Rotuma) purposefully, to examine the life therein. Lasting impressions were that of heads bent over or submerged in water while standing figures cradling a folder and a pencil in hand ready to write down what the others along the laid measuring tape could identify. Such experiential learning made a difference then, for our comprehension of the vital link of seagrasses to our lagoon fishing and surrounding seas that we continue annual monitoring to advocate for this remote seagrass meadow on Rotuma. This seagrass solution story describes how community groups from across the four corners of the archipelago, share similar experiential learning about coastal changes manifested that put to risk our way of life.

There has been not much careful attention given to seagrasses however, contributions from field observations with community groups to map local seagrass areas as part of own resource planning, should be applauded. For instance, a 2008 study at Ono-i-Lau described the remote islands' clean clear lagoon sustaining lush meadows with high seagrass diversity and average 40-80 per cent growth. Similar growth patterns were found on Kabara, the mangrove fringed shores of Macuata, Naviti in Yasawa and to a lesser extent of seagrass distribution along the coral coast on mainland Viti Levu where there is coastal development.

Such initiatives of keeping watch over local seagrass areas also contributes to global insight on how seagrasses could be a major local influence on seawater that could alleviate the problems of ocean acidification. It has been discovered that varieties of seagrass could help reduce the acidity of water surrounding coral reefs. This is a potential solution to endangered coral reefs vital to providing natural fishing and sea defenses for most of us living on small islands in the South Pacific. So unless we as individuals or community living along a coast where seagrass thrives take local action towards a global phenomenon to protect and manage risks posed with changing seas.
http://www.fijitimes.com/story.aspx?id=230801

Seagrass Blue Carbon Blues

10 April 2013, IAN

As one of the outputs of the recent Australian Centre for Ecological Analysis and Synthesis workshop on “Australian seagrass habitats: Condition and threats”, Prof. Bill Dennison composed a song which Kieryn Kilminster from Western Australia Department of Water was able to convince her husband, Gary Cox, to set to music and then record. The scientific background to the song is the concept of ‘Blue Carbon‘.

Blue carbon is the term given to the ability of oceanic plants to absorb some of the excess carbon dioxide in the atmosphere from fossil fuel burning. Coastal vegetation like seagrasses, mangroves and salt marshes can form productive ecosystems and the carbon that is sequestered from the atmosphere can be trapped and buried as peat (Fourqurean et al., 2012). The reason that we may have the blues is the global loss of seagrass meadows (Waycott et al., 2009), just when we need their blue carbon sequestration the most.

Seagrasses have a high light requirement (in excess of ten percent surface light). The depth maxima of seagrasses often approximates the depth that a white circular disc (Secchi) can be seen when lowered over the side of a boat (Dennison et al., 1993). Seagrass are often known as the coastal canary, due to their high light thresholds, and we have made the case that we should take decisive action when seagrasses are lost (Orth et al., 2006).
more…….. http://www.seagrasswatch.org/archives_13.html

Research into removal of Lake razor clams (NSW, Australia)

04 April 2013, by Dan Cox, ABC News

An anecdotal boom in razor clams in Lake Macquarie has sparked a research project into the potential environmental impacts of removing them. The fan-shaped clams grow up to 50 centimetres long, and bury themselves in seagrass sediments and sand, leaving a thin sharp edge protruding. Marine ecologist Peter Macreadie says while they are native, they are also now considered a pest.

He says it is crucial to determine what impact the species, also known as razor fish, has on habitat and biodiversity in the lake. "Lake Macquarie Council has considered removing these from the lake and that's because it's effectively like having a bunch of knives sitting upwards in the sediment," he said. "It's a question of what science can we generate to understand the consequences if we remove the species. "One thing that we're concerned about is co-extinction, and that's when you remove a species and you see extinction of another species."

Marine biologists say the clams play an important role in providing a history of pollution of the lake and they are concerned removing them could spark an 'ecosystem meltdown'. Dr Macreadie has just finished a major assessment of the biodiversity of the species and says more research is needed into the potential impact of their removal from the lake. "We believe these razor clams could be quite important for understanding pollution history in the lake," he said. "They act a little bit like a time machine in that they pick up pollutants from the water column and they include those pollutants in their shell. "It's all about controlled removal - we're trying to figure out if we remove these species locally, will we experience some sort of ecosystem meltdown or would life, more or less, go on as usual?"
source: http://www.abc.net.au/news/2013-04-04/research-into-removal-of-lake-razor-clams/4609526

Tiny grazers play key role in marine ecosystem health (VA, USA)
02 April 2013, Phys.Org

Tiny sea creatures no bigger than a thumbtack are being credited for playing a key role in helping provide healthy habitats for many kinds of seafood, according to a new study by the Virginia Institute of Marine Science and U.S. Geological Survey.

The little crustacean "grazers," some resembling tiny shrimp, are critical in protecting seagrasses from overgrowth by algae, helping keep these aquatic havens healthy for native and economically important species. The researchers found that these plant-eating animals feast on the nuisance algae that grow on seagrass, ultimately helping maintain the seagrass that provides nurseries for seafood. The grazers also serve as food themselves for animals higher on the food chain. Drifting seaweed, usually thought of as a nuisance, also plays a part in this process, providing an important habitat for the grazing animals that keep the seagrass clean. "Inconspicuous creatures often play big roles in supporting productive ecosystems," said Matt Whalen, the study's lead author who conducted this work while at VIMS and is now at the University of California, Davis. "Think of how vital honeybees are for pollinating tree crops or what our soils would look like if we did not have earthworms.

In seagrass systems, tiny grazers promote healthy seagrasses by ensuring algae is quickly consumed rather than overgrowing the seagrass. And by providing additional refuge from predators, fleshy seaweeds that drift in and out of seagrass beds can maintain larger grazer populations and enhance their positive impact on seagrass."
more…….. http://www.seagrasswatch.org/archives_13.html

Story also covered by:
http://earthsky.org/earth/tiny-crustaceans-play-a-big-role-in-protecting-seagrass-beds

Kaipara is 'last harbour standing' (New Zealand)
02 April 2013, Auckland stuff.co.nz

Young west coast snapper "hot spots" in the Kaipara Harbour are being investigated as concerns about their feeding grounds continue. "The Kaipara is the major harbour for west coast juvenile snapper habitats, so it is a really key place," NIWA Auckland marine ecologist Mark Morrison says. "We know it's under stress from sedimentation and other land-based impacts that degrade key habitats." These habitats include seagrass meadows and horse mussel beds, which have now largely disappeared from most harbours in northwest New Zealand, Auckland Council marine scientist Jarrod Walker says. They are thought to have been smothered by silt from roading and building sites, and from farming and forestry. The effects of plankton blooms caused by nutrients washed off the land may also have contributed, he says.

Manukau and other west coast harbours were also once important nurseries for species like the west coast snapper. But their seagrass meadows have virtually gone. Kaipara is the "last harbour standing" as a snapper nursery on the west coast, Dr Walker says. The harbour still has broad expanses of seagrass meadows which can support high numbers of juvenile snapper, trevally, parore, spotties, piper, pipefish, and other species. These are feeding grounds and also give them protection from predators.

Measures are under way to reduce runoff sediment with some farms around the harbour planting and using other land management practises as part of work by the Integrated Kaipara Harbour Management Group. This group includes the Auckland Council, Kaipara and Whangarei District Councils, Northland Regional Council, conservation groups, the Department of Conservation, the Ministry of Primary Industries, NIWA and Land Care Research, iwi, and Fonterra.
more…….. http://www.seagrasswatch.org/archives_13.html

GALLERY

Noosa, Qld (Australia): 24-26 April 2013 http://www.seagrasswatch.org/gallery.html

Cape York, Qld (Australia): 23-27 April 2013 http://www.seagrasswatch.org/gallery.html

Townsville, Qld (Australia): 23-27 April 2013 *http://www.seagrasswatch.org/gallery.html*

CONFERENCES

CERF 2013 Conference (San Diego, California, 3-7 November 2013)

22nd Biennial Conference of the Coastal and Estuarine Research Federation
Toward Resilient Coasts and Estuaries, Science for Sustainable Solutions.

CERF advances understanding and wise stewardship of estuarine and coastal ecosystems worldwide. Its mission is to: Promote research in estuarine and coastal ecosystems, Support education of scientists, decision-makers and the public, and Facilitate communication among these groups. The 2013 scientific program offers four days of timely, exciting and diverse information on a vast array of estuarine and coastal subjects. Presentations will include discoveries and synthesis on the adaptive dynamics of coastal and estuarine ecosystems and human ocieties. Participants will explore how these dynamics and adaptations can be understood and managed at regional and global scales. CERF will convene about 1,600 Scientists, Managers and professionals in government, business, nonprofit and related organizations, and Graduate students. From North America's coastal states and provinces, as well as from more than 20 countries around the world, CERF conference attendees are scientists and managers who conduct research and observe/manage change within a variety of global coastal and estuarine habitats. They rely on the information, expertise, methods, products, technology and innovative equipment your organization provides.
Please visit the conference & workshop web site for further details: http://www.erf.org/cerf2013

SEAGRASS-WATCH Workshops 2013

Australia *http://www.seagrasswatch.org/training.html#workshop13*

Moreton Bay, Qld: 17-18 August 2013r

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 29,000 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 Giuseppe Di Carlo and *notes from the field* by Siti Yaakub.

FROM HQ

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