
## 07 December 2013



## IN THIS BULLETIN



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# NEWS

### *Green turtles set to bounce back (QLD, Australia)*

*03 December 2013, PS News*

Surveys conducted during this year's turtle nesting season are expected to show if the population of green turtles is bouncing back nearly three years after cyclone Yasi destroyed much of their food supply. Species conservation manager at the Great Barrier Reef Marine Park Authority, Mark Read said November and December marked the peak period in the Great Barrier Reef when female turtles lay their eggs on a beach in the region where they were born.

Dr Read said data on the number of female green turtles that nest would provide valuable information on the health of the species. “Because green turtles are herbivorous, they were the hardest hit of all the turtle species in the Marine Park when cyclone Yasi and extensive flooding wiped out large swathes of seagrass,” he said. "The number of females able to breed also tends to plummet when there’s a decline in seagrass or algae.”

Dr Read said usually there was a time lag of about two to three years after a severe weather event before the proportion of nesting females bounced back, so this year’s nesting season would be important in showing whether numbers were returning to normal levels. He said a range of Government Agencies, Traditional Owner groups, researchers and volunteers conducted annual surveys during turtle nesting season. Dr Read said turtles converging on the Marine Park were coming from as far away as Indonesia, Papua New Guinea, New Caledonia, Fiji and Vanuatu.

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

*related articles:*
*http://www.psnews.com.au/Page_psn39012.html*

## *Geer fetches Centre's nod for Dugong revival (India)*

*12 November 2013, Times of India*

The central government has accepted a study by Gujarat Ecological Education and Research (Geer) foundation and decided to launch a Dugong revival programme. This paves the way not only for the animal's conservation but also a list of long-term studies to conserve seagrass.

Officials from Geer said that the decision to launch the programme was taken after the government formed a task force with officials of three states and international experts associated with the Convention on the Conservation of Migratory Species of Wild Animals, also known as CMS or the Bonn Convention. The rare dugong, also called the sea cow, is found off the coasts of Gujarat, Tamil Nadu and the Andaman and Nicobar Islands. The study by Geer noted dugong trails in Gulf of Kutch, Pirotan Island, and even near Dwarka. The study estimated that there are about 250 dugongs in India, the most being in the Gulf of Mannar on the southern coast, followed by the Andaman and Nicobar Islands, Palk Bay and the Gulf of Kutch. In Gujarat there have been some 13 direct sightings of dugongs in the Gulf of Kutch. Fishermen claim to have seen many more. Some sightings have also happened near Porbandar which is emerging as a new dugong home.

The study also revealed that the herbivorous mammal is usually found in calm, sheltered, nutrient-rich water less than five metres deep, generally in bays, near shallow islands and reef areas protected from strong winds and heavy seas that contain extensive beds of seagrass. Officials said the revival programme will mean that the department will sponsor more studies on behaviour and life-cycle of dugongs and why they migrate to the Indian coast. It is not that the marine herbivore mammal is seen only in one season -sightings and carcass recoveries are spread through the year-which indicate that the sea cow is a native. However, its life cycle has to studied to know more.

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

## *Cane growers join graziers in Reef Rescue (QLD, Australia)*

*06 December 2013, Queensland Country Life*

The Great Barrier Reef has no firmer friends than Queensland's beef producers and sugarcane growers. This week, representatives from two of the state's largest farm commodity groups confirmed their commitment to improving water quality on the reef, through the launch of Smartcane BMP, a program of best management practices developed by the cane-growing industry and supported by the Newman government.

In concert with cane growers, graziers in the Fitzroy and Burdekin catchments are trialling strategies, content and frameworks for the Grazing BMP components based on independent, consensus-based science. Agriculture Minister John McVeigh said all five grazing BMP modules were being delivered, with uptake exceeding expectations. "More than 300 properties have registered to undertake Grazing BMP modules, with the majority already completing three or more, and I applaud the sector for its commitment," Mr McVeigh said. "The BMP modules and standards set a solid foundation for a successful program, and will help farmers and graziers optimise the use of fertilisers and herbicides, and minimise erosion and sediment run-off. Implementing these best management practices will improve farm profitability and productivity and reduce off-site impacts of agricultural activities."

Launching the Smartcane BMP with Mr McVeigh, Environment Minister Andrew Powell said the cane-grower industry had committed to continuous improvement for nutrient standards by 2017, including a cooperative research program from 2014 to 2016.

*full story: http://www.queenslandcountrylife.com.au/news/agriculture/cropping/general-news/cane-growers-join-graziers-in-reef-rescue/2680767.aspx?storypage=0*

## *Where have all the dugongs gone? (India)*

*03 December 2013, Mongabay.com*

One such threatened population dwells in the Andaman and Nicobar Archipelago, a group of islands in the Indian Ocean. The dugong (*Dugong dugon*) distribution here has plummeted by more than fifty percent over the last 50 years, according to a recent study published in PlosOne. In the sites where dugongs persist, the researchers found that they show location fidelity, seeking out the same areas they did 50 years ago instead of populating new ones.

Researchers Elrika D'Souza and Vardhan Patankar began studying dugongs in 2007, their first encounter with one of these gentle giants lasting over a five-hour swim. Currently at the Nature Conservation Foundation at Bangalore, India, D'Souza and Patankar continued to observe the behavior of the few dugongs of the archipelago they could individually spot and identify. But as reports of dugongs in the area declined, they decided to broaden their study to include the local distribution of dugongs in the past as well as the present. To achieve this, D'Souza and her team collected two kinds of data – historical data that would give them a glimpse into the dugong's past distribution, and current data that would tell them how they fare now.

For the former, they looked through newspaper clippings, fishery bycatch records, forest department records and prior publications, as well as interviewed wildlife experts working in the islands to determine where dugongs had been seen in the past. They collated a total of 55 records of 124 individual dugongs extending over the last 50 years (1959-2009). The team then used this data on dugong presence and absence in the different seagrass meadow locations, to predict where dugongs might have occurred in the past across the islands.

Between 2010 and 2012, D'Souza and Patankar surveyed the ocean from a boat and recorded the locations of all the dugongs they could spot. To complement this, the two also snorkeled through the waters to look for indirect signs of dugong presence. The most conspicuous of these indirect signs are the feeding trails that dugongs leave in the seagrass meadows. In addition to collecting information about the dugongs themselves, the team also measured characteristics of each seagrass meadow location, noting signs of any human disturbance. These signs included the use of gillnets for fishing, boat traffic, or hunting. Estimates from their models indicated that dugong distribution has declined drastically over the last 50 years, due more so to entanglement in gillnets and hunting than to declines in seagrass meadows.

*Full story: http://news.mongabay.com/2013/1203-dasgupta-dugong-loss.html*

## *Turtle nesting data used to determine future management of Cable Beach (WA, Australia)*

*02 December 2013, ABC Local*

It's a popular space to walk the dog, enjoy a sunset, and to take visiting relatives or friends. But when the sun sets at this time of year, Cable Beach transforms into a place where turtles crawl up the sand to scout out a suitable area and lay their eggs. It's something Yawuru rangers and Department of Parks and Wildlife are particularly interested in. They've enlisted the help of local volunteers to track how many turtles are using the beach, and to find out where they're nesting.

Luke Puertollano is the Yawuru Ranger Supervisor. He says part of the data will be used to determine how the beach should be managed into the future. Carolyn Pickett is one of the volunteers who is helping with the turtle monitoring project this year. She says she was prompted to get involved so she could learn more about the local environment.

The numbers of turtle nests in Broome contrasts with those being counted further south, at 80 mile beach. Rangers there are noting up to 70 nests per night, compared to a total of 55 for the whole season at Cable Beach last year.

*Full story: http://www.abc.net.au/local/stories/2013/12/02/3903363.htm?site=kimberley*

## *Council hopes to slash seagrass removal costs (SA, Australia)*

*29 November 2013, ABC Online*

The Kingston District Council hopes it can save a substantial amount of money on the removal of seagrass. Last year, nearly 20,000 cubic metres of seagrass was removed from local beaches at a cost of $220,000. Mayor Evan Flint says the council expects to save money with the appointment of a new contractor. "It was getting unsustainable the amount of money we were having to spend, so we had to look at a cheaper way and the Clarke's are saving the ratepayers about $100,000," he said.

He says it is expected there will be less seagrass than last year but that could change and will affect the final cost. "This year we have about $100,000 in the budget, last year we spent about $220,000, so I mean there may be a little more over the $100,000 required but you never know until you start picking it up," he said.

*Full story: http://www.abc.net.au/news/2013-11-29/council-hopes-to-slash-seagrass-removal-costs/5125074*

## *Conservation status for 'jewel in crown' (UK)*

*28 November 2013, Torquay Herald Express*

The 'jewel in the crown' of South Devon's marine wildlife has been officially recognised for conservation status. The designation of Tor Bay as one of 27 new Marine Conservation Zones around England's coastline has been welcomed by environmentalists. The decision, announced in Parliament by the Department for Environment, Food and Rural Affairs has been hailed as the first step towards a network of conservation sites. The sites represent less than one quarter of the number recommended by scientists.

It is one of 15 new zones in the south west which will help protect the Bay's most special marine habitats, including large areas of seagrass 'meadows' which offer a vital nursery ground and feeding place for marine animals including the native long-snouted seahorse. Dominic Acland, director of the Torbay Coast and Countryside Trust, said: "The seagrass beds were first mapped in 1997 and the trust has been working since then to build our knowledge about them and how important they are for nature conservation and as nursery grounds for commercial fish species.

However, inshore fishermen are 'deeply troubled' by the extent of the zones that fall inside the six-mile limits. South West Inshore Fishermen's Association secretary Jim Portus said: "Access to the new zones will be regulated under byelaws and the fear is mobile fishing gear, trawlers and scallop dredgers will be the first to be prohibited." Chairman Nick Prust added: "I will redouble efforts to get Defra and the IFCAs to introduce the technology which will allow members to access traditional trawling grounds close to conservation features, but without damaging those features when using towed fishing gear."

*Full story: http://www.torquayheraldexpress.co.uk/Conservation-status-jewel-crown/story-20234387-detail/story.html*

## *Lone South African "paddling for the Love of Dugongs" (Africa)*

*25 November 2013, AllAfrica.com*

South African wildlife enthusiast Des Pollock has embarked on the journey of a lifetime - paddling in a kayak along the entire length of the Mozambican coast looking for dugongs, and trying to raise awareness of the plight of these highly endangered marine mammals. Pollock, who describes himself as an eco-warrior, is seeking to document dugong habitats, and migration routes all along the Mozambican coast. Only one breeding population of dugongs is known in Mozambican waters. This is a population of two or three hundred individuals in the Bazaruto archipelago, off the coast of Inhambane province. Dugongs once lived off Inhaca island, in the bay of Maputo. But the last Inhaca dugong was shot by a spear fisherman about three years ago.

The Linga-Linga peninsula, just north of Inhambane city is now thought to be the southernmost tip of the dugong's range. Pollock started his trip in June, at Ponta de Ouro, on Mozambique's border with the South African province of Kwazulu-Natal. Within a fortnight, he intends to be back in Beira, despite the risk of ambush by gunmen of the former rebel movement Renamo, on the stretch of the main north-south highway between the Save river and the small town of Muxungue. From Beira, he will complete his journey to the border with Tanzania.

So far, he has only spotted dugongs once, at Bartolomeu Dias, in Inhambane. But the point of the venture is not just to look for dugongs, but to investigate where there is an abundance of seagrass meadows on which the animals can feed, and where they might find safe havens. He hopes to make a rapid assessment of all the locations he passes through. Although Bazaruto is the only known breeding site, most of the Mozambican coast is a dugong migration route. As Pollock travels up the coast, he could well find dugongs at the Primeiras and Segundas Islands in Nampula province, where the animals are known to feed.

*Full story: http://allafrica.com/stories/201311260525.html?viewall=1*

## *Man who hugged dugong fined $6000 after Great Barrier Reef (QLD, Australia)*

*19 November 2013, Herald Sun*

A commercial fisherman who used facebook to post photos of himself hugging and sitting on a dugong has been fined $6000 just months after facing court for wrestling a crocodile. Beau Greaves, 23, was working on a crayfish trawler in Princess Charlotte Bay, 350km northwest of Cairns, in August 2011 when he jumped in the water and posed for photos with the animal. The images, which he published on facebook and other social media sites, showed him hugging the dugong, swimming with it and sitting on its tail.

The Great Barrier Reef Marine Park Authority launched an investigation after being tipped off about the photos. Mr Greaves received a $6000 fine and a conviction was recorded when he faced the Cairns Magistrates' Court last Friday. A GBRMPA spokeswoman said Mr Greaves was charged and convicted under the Great Barrier Reef Marine Park Act 1975 for engaging in prohibited conduct with a protected species. The offence happened in Magpie Reef, a habitat protection zone in Great Barrier Reef marine park.

*full story: http://www.heraldsun.com.au/news/national/man-who-hugged-dugong-fined-6000-after-great-barrier-reef-marine-park-authority-investigation/story-fnii5v70-1226762973163*

### *Second turtle washes up on Bay beaches in two weeks (QLD, Australia)*

*19 November 2013, Caboolture News*

A second turtle washed up on Hervey Bay shores in the past two weeks is believed to have died from floater syndrome. A Department of Environment and Heritage Protection representative said the turtle's shell was covered in barnacles, indicating it had been floating near the surface for several months. Fewer turtles have washed up on Queensland beaches this year than in past years.

*source: http://www.caboolturenews.com.au/news/second-turtle-washes-hervey-bay-beaches-two-weeks/2088549/*

### *Marine Mammals In Brunei Bay Threatened By Human Activities (Brunei)*

*19 November 2013, Bernama*

The Brunei Bay covering a 250,000-hectare area is among the most important habitats for marine mammals in the Southeast Asian region. The area borders along the mangroves and tropical rainforests of Brunei, Sabah, Sarawak and Labuan. The Brunei Bay used to be a rich source of food for a variety of marine life, particularly marine mammals. It is also home to many endangered species such as the dugong, turtle and dolphins. However, of late, unrestrained human activities have threatened the ecosystem and destroyed many of the food sources.

The Institute of Oceanography Sciences (INOS), a research institute under Universiti Malaysia Terengganu (UMT), is conducting a detailed study into the effects of such activities on the marine life in the South China Sea, including the Brunei Bay. Associate Prof Dr Saifullah Arifin Jaaman of INOS said the institute has been collecting samples and conducting research in the waters near Lawas since early this year. He said previous studies showed that the Brunei Bay was believed to be one of the main sources of food for many marine species. The Brunei Bay provides a rich source of food for marine mammals, especially with the presence of the seagrasses like the *Halophila* and *Halodule* that is the favourite diet of the dugong species. A UMT study showed that the number of marine mammals in the Brunei Bay is in direct correlation with the amount of food that sustain marine species found in the area.

However, many activities such as shipping, fishing and dredging at the Brunei Bay have disturbed habitats that support marine life. The dredging for an oil refinery nearby is said to have destroyed seagrass beds, threatening the existence of the Dugong. "The fishermen in Lawas said that they have noticed a marked decline in the number of Dugong they came across some 20 years ago. It is believed that this is linked to the diminishing seagrass beds which once could be found in abundance in Brunei Bay," he said. The research in Brunei Bay will serve as the baseline study to measure the effects of pollution due to human activity onto the flora and fauna.

*full story: http://www.bernama.com.my/bernama/v7/fe/newsfeatures.php?id=994148*

### *VIMS brings expertise in seagrass restoration down under (VA, USA)*

*18 November 2013, William and Mary News*

When it comes to restoring plants to areas disturbed by human activity, terrestrial researchers are far ahead of their marine counterparts. Professor Robert “JJ” Orth of the Virginia Institute of Marine Science is now collaborating with colleagues in Australia to narrow that gap, mounting a three-year project to adapt terrestrial models of seed-based restoration to seagrasses.

Orth—head of the Seagrass Monitoring and Restoration Program at VIMS—will spend the next month down under, initiating the first in a series of long-term field experiments with colleagues at the University of Western Australia (UWA) in Perth and other partners. Accompanying Orth are his three graduate students—Andrew Johnson, Steve Manley, and Erika Schmitt. Their goal is to identify and then rectify “bottlenecks” in the growth of seagrass from seed to adult plant.

The project’s chief investigator is Dr. Gary Kendrick, a professor in the School of Plant Biology and director of the Oceans Institute at UWA. The Australian team aims to build on Orth’s success by combining lessons learned in Virginia’s waters with advances in restoration theory and practice gained through decades of research by terrestrial biologists—in particular the use of population models that allow researchers to identify which steps in a plant’s life cycle are most vulnerable to physical stresses or biological threats such as predation.

The team will conduct their fieldwork by monitoring the survival of seeds from two different species planted in two locations with a history of seagrass loss. One site (in Cockburn Sound near Perth) is influenced by ongoing coastal development; the other is in the relatively pristine environment of Shark Bay further north. They will carefully situate the plantings to allow comparisons of seed survival under differing water conditions—clear or cloudy, deep or shallow, calm or agitated—and likewise cage some planting sites but not others to test the effects of seed predation by fish and other marine life. ”Ultimately, says Orth, the knowledge gained during the project will “help us move closer to our ultimate goal, which is not just getting seeds from a single species of seagrass to grow into adult plants, but rather to restore a community of plants and animals that persists through time and provides some of the important ecological functions of a diverse and healthy seagrass system.”

*full story: http://www.wm.edu/news/stories/2013/vims-brings-expertise-in-seagrass-restoration-down-under.php*

*Full story: http://www.dailypress.com/news/science/dp-nws-seagrass-restore-australia-20131130,0,5644310.story*

## *Research shows denser seagrass beds hold more baby blue crabs (VA, USA)*

*18 November 2013, Toronto NewsFIX*

When it comes to nursery habitat, scientists have long known that blue crabs prefer seagrass beds compared to open areas in the same neighborhood. A new study by researchers at William & Mary's Virginia Institute of Marine Science refines that knowledge, showing that it's not just the presence of a seagrass bed that matters to young crabs, but also its quality—with denser beds holding exponentially more crabs per square meter than more open beds where plants are separated by small patches of mud or sand.

The study, led by VIMS graduate student Gina Ralph, appeared recently in Marine Ecology Progress Series. It is co-authored by VIMS Marine Scientist Kathleen Knick along with faculty members Rochelle Seitz, Robert "JJ" Orth, and Rom Lipcius. "Vegetated habitats, particularly marsh and seagrass, have long been known as nurseries for blue crabs," says Ralph, "with many previous field and lab studies showing higher density, survival, or growth of juveniles in seagrass habitats compared to un-vegetated areas nearby." "Our study," she adds, "is one of the few to address the role of habitat complexity within seagrass beds, and the first to show on a broad scale that—all else held equal—denser, higher-quality grass beds hold more juvenile crabs."

Ralph says that on average, "there were 30% more crabs for every 10% increase in the percentage of seagrass cover within a bed during 2007, and 14% more crabs for each 10% increase in seagrass coverage in 2008." Ralph says the team's findings are important because they "suggest that the quality of seagrass habitat can influence the population dynamics of blue crabs on a baywide basis." That raises concern given the historical decline in eelgrass—the Bay's main seagrass species—and projections of the continued decline of this cool-water species as water temperatures rise during the coming decades due to climate change.

*full story: http://www.newsfix.ca/2013/11/15/research-shows-denser-seagrass-beds-hold-baby-blue-crabs/*

## *Fines tripled for dugong and turtle killers (Australia)*

*14 November 2013, Bundaberg News Mail*

The Federal Government has tripled the fine for people convicted of killing protected dugongs and turtles under Commonwealth environment laws.

Environment Minister Greg Hunt on Thursday introduced the bill in the House, which will up penalties for killing, trading or interfering with the protected species. The changes will raise penalties from $1700 to more than $3000 for those convicted of "aggravated offence of killing or injuring" such species.

Species included for the extra penalties include nationally listed turtles, including the green and leatherback turtle, and dugongs. In the same bill, Mr Hunt also changes laws surrounding the process on taking official advice before approving major projects. The changes will help address issues raised in a recent court case over a mine proposal in Tasmanian's World Heritage-list Tarkine forest.

*full story: http://www.news-mail.com.au/news/fines-tripled-dugong-and-turtle-killers/2084465/*

## *Dredging concerns Whitsundays businesses (QLD, Australia)*

*13 November 2013, The Australian*

Port expansions and the dumping of dredged spoils on the Great Barrier Reef could ruin the Whitsunday Islands' tourism industry, north Queensland businesses warn. Whitsundays tourism operators are voicing their concerns about a proposal to expand Abbot Point coal port near Bowen at a forum of government, reef, port and industry representatives in Airlie Beach on Wednesday.

The project involves dredging three million tonnes of soil and would transform the port into one of the largest in the world. Sailing tour operator and the spokesman for lobby group Business United for Reef Protection, Al Grundy, says there are major concerns about the long-term effects dredging will have on water quality. "We need to have good water quality for visibility for the customers for snorkelling, swimming and diving," Mr Grundy told AAP. He says that during the past seven years, sediment levels have built up significantly and visibility has declined. Mr Grundy insists the group isn't anti-development but instead wants the project stalled until studies have been carried out on the long-term effects of dredging.

North Queensland Bulk Ports, the corporation that has proposed the dredging project, has said dredging could possibly make the water cloudy during a short period and may damage seagrass, but was unlikely to affect other flora and fauna. Whitsundays Regional Council Mayor Jennifer Whitney says the Abbot Point project will add to the "future prosperity of the region". Federal Environment Minister Greg Hunt is expected to decide in December whether to allow the expansion of Abbot Point.

*full story: http://www.theaustralian.com.au/news/latest-news/dredging-concerns-whitsundays-businesses/story-fn3dxiwe-1226758892422*

### *A turtle has washed up after the Superboat Championships (QLD, Australia)*

*12 November 2013, Fraser Coast Chronicle*

A dead turtle has washed up on a Hervey Bay beach the day after the Superboat Championships were held off the foreshore. The turtle had no obvious signs of having been the victim of a boat strike, but Queensland Wildlife Fraser Coast branch president Audrey Sorensen said it may not be a coincidence that the event was held on Sunday and the turtle had been found dead near the Pialba sewage treatment plant on Monday.

But race director Russell Embleton said a comprehensive survey of the course had taken place before racing started. A turtle had been spotted and had remained near the course for 20 minutes before leaving the area. Once the course was clear, the race was able to go ahead, Mr Embleton said. Mr Embleton said as there was no sign of a boat strike, the turtle could easily have died from other causes.

The Department of Environment and Heritage Protection was contacted about the turtle and a spokesman said it was likely the turtle died of floater syndrome, which prevented the animals from diving and feeding adequately.
*full story: http://www.frasercoastchronicle.com.au/news/ehp-say-washed-turtle-probably-died-floater-syndro/2080809/#comments*

### *Great Barrier Reef draft strategic assessment released (QLD, Australia)*

*01 November 2013, ABC Online*

Federal Environment Minister Greg Hunt has released the draft strategic assessment for the Great Barrier Reef World Heritage Area for public comment. Mr Hunt was joined by Queensland Deputy Premier Jeff Seeney and Environment Minister Andrew Powell in Townsville, North Queensland. The Great Barrier Reef Marine Park Authority (GBRMPA) undertook the marine component of the assessment to consider the impact of activities on the water of the park. The Queensland Government carried out an assessment of the coastal zone component.

Mr Hunt says the most significant challenge facing the reef is reducing sediment, nitrogen and nutrient flows. He says the strategic assessment proposes a 'halt and reverse' approach to turn around the health of the reef. This will include examining the cumulative effects of industry and natural forces; implementing a reef-wide integrated monitoring and reporting program; implementing a reef recovery program that will include communities, local industries, Traditional Owners and government agencies. The Great Barrier Reef is a world heritage listed area, and the draft strategic assessment will address concerns raised by UNESCO which had been considering listing it as 'in danger'.

The Great Barrier Reef World Heritage Area Strategic Assessment and the program reports can be downloaded at: www.reefhaveyoursay.com.au
*full story: http://www.abc.net.au/news/2013-11-01/barrier-reef-assesment-released/5063718*

## GALLERY

### *Kavieng (Papua New Guinea): 29 November - 1 December 2013* http://www.seagrasswatch.org/gallery.html

## CONFERENCES

### *The 11th International Seagrass Biology Workshop (ISBW11) (China, 7-10 November 2014)*

Declining seagrasses in a changing world.

The International Seagrass Biology Workshop (ISBW) gives a good chance for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest achievements. The ISBW11 will be held from 7-10 November 2014 at Sanya city, Hainan Province, China, organized by South China Sea Institute of Oceanology, Chinese Academy of Sciences. ISBW11 convenor is Dr Xiaoping Haung.

The following symposia themes were chosen for ISBW11:

1) Key Ecological Processes;
2) Ecosystem Vulnerability and Resilience;
3) Biodiversity and Ecosystem Services;
4) Management and Restoration.

Important dates:

22 March 2014 - Opening of registration on the web site
30 May 2014 - Opening of online payment
30 May 2014 - Beginning of hotel reservation

10 August 2014 - The last day of abstract submission
01 September 2014 - End of early bird payment
25 September 2014 - Notification of abstract acceptance
15 October 2014 - End of online payment
25 October 2014 - Notification of final list of participants to the ISBW11
07 November 2014 - ISBW11 begins

*for more information, visit http://isbw11.csp.escience.cn/dct/page/1*

# 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 31,503 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

***Past E-bulletins*** *http://www.seagrasswatch.org/publications.html#ebulletin*
***Frequently Asked Questions*** *http://www.seagrasswatch.org/faq.html*
***Seagrass-Watch Magazine*** *http://www.seagrasswatch.org/magazine.html*
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***Giveaways*** *http://www.seagrasswatch.org/shop.html#GIVE1*
***Future sampling dates*** *http://www.seagrasswatch.org/sampling.html*
***Handy Seagrass Links*** *http://www.seagrasswatch.org/links.html*
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Seagrass-Watch HQ is supported by the Great Barrier Reef Marine Park Authority (GBRMPA), TropWATER (James Cook University) and by private donations.

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