

SeaRead

Marine Park news from catchment to coral



Australian Government

Great Barrier Reef
Marine Park Authority

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Councils pledge support for the Great Barrier Reef

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Great Barrier Reef Marine Park Authority Chairman Russell Reichelt welcomes Gladstone Regional Council's Acting Mayor Gail Sellers to the Reef Guardian Program

Two more councils have been stamped as Reef Guardians after their green efforts were recognised by the Great Barrier Reef Marine Park Authority (GBRMPA) recently.

Rockhampton and Gladstone Regional Councils are now collectively working towards the long-term protection of the Great Barrier Reef.

GBRMPA Chairman Russell Reichelt said with the increasing pressures the Great Barrier Reef was facing, the commitment of local governments was well placed to meet the challenges ahead.

"The Great Barrier Reef is at a crossroad and it is the decisions made in the next few years that are likely to determine its long-term future," Russell said.

"The Reef Guardian Council Program provides councils with a fantastic opportunity to broaden current on-ground projects and engage their local community on how we all have a part to play in ensuring the Reef remains healthy for future generations.

"I congratulate the councils and look forward to working closely with them to address pressures from climate change and to build the resilience of the Reef by improving water quality flowing from the catchment to the Marine Park."

Acting Mayor of Gladstone Regional Council Gail Sellers said the council welcomed the opportunity to participate in the Reef Guardian Council Program as its goals and objectives aligned well with the council's environmental objectives.

"The objectives of the program will be embedded in our council's practice, assisting us to improve our capacity to achieve better environmental outcomes for the Great Barrier Reef," Gail said.

Aboriginal and Torres Strait Islander readers are advised that this publication may contain names and images of deceased persons.

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Message from the Chairman



The Great Barrier Reef Outlook Report 2009 identified the Great Barrier Reef as one of the healthiest reef ecosystems in the world and also indicated that the Reef is under pressure from climate change, poor water quality, coastal development and other risks. Building the resilience of the Reef to global scale pressures, by taking the pressure off locally, is the best action we can take.

Fortunately, through various stewardship roles, peak bodies, schools, councils and community groups have risen to the challenge and this is resulting in substantial environmental benefits. This includes initiatives such as the Coral Bleaching Response Plan, Reef Guardian programs, and ongoing monitoring and research projects that provide valuable information to help protect the Great Barrier Reef for the future.

These public efforts are spreading awareness of the Reef's importance to the broader community. I was delighted to launch two more Reef Guardian Councils, Gladstone and Rockhampton, in early October and look forward to working with them in the future. There are now 12 Reef Guardian Councils working toward one goal of building and maintaining a

strong, healthy and resilient Great Barrier Reef.

The Reef Guardian Schools program continues to grow and achieve amazing results ranging from schools learning to manage their local catchment to other schools adopting energy smart practices to reduce their carbon footprint. I am proud to see our future custodians of the Great Barrier Reef take a lead role in its protection.

This year, the Future Leaders Eco Challenges celebrated the International Year of Biodiversity and Education Queensland Year of Sustainability, with more than 800 participants from across Queensland taking part in the Reef Guardian initiative. While each event taught the students about the environment, the Reef and its connecting ecosystems, their activities were also directly beneficial to the school's surrounding environment. For example the 40 Mackay students made an extremely useful discovery in their catchment when they found macro-invertebrates that had not been recorded in their wetland before their survey.

In the face of predictions that almost all the plants and animals of the Great

Barrier Reef will be affected by some aspects of climate change in the coming decades, the GBRMPA continues to work towards building the resilience of the Great Barrier Reef ecosystem. Such initiatives include working with the Cairns Regional Council in their five year climate change action plan, actively monitoring the rate of coral bleaching and disease occurring on the Reef, and supporting research.

Reflecting on the year's events and achievements, everyone who has been involved in protecting the Great Barrier Reef can be proud of what you have accomplished - whether you are a volunteer, part of a Reef Guardian program or simply doing your small part by recycling.

Season's Greetings to you all and best wishes for a great 2011.

Regards

Russell Reichelt
Great Barrier Reef
Marine Park Authority

Continued from page 1

"We are looking forward to identifying future initiatives under the Reef Guardian Program that will help to further protect Australia's national icon."

Rockhampton Regional Council Mayor Cr Brad Carter said the council would adopt best practice management processes in its activities in an effort to maintain the Reef's beautiful and unique characteristics.

"If we all do our part to protect this natural wonder, it will ensure the continuation of its abundant and varied marine life, reef systems, and coral," he said.

Since the first Reef Guardian Council was recognised in 2007, the number of councils participating in the program has grown to 12.



Students at the Rockhampton Reef Guardian Council Launch

Preparing for summer

The season of fun in the sun is usually not as carefree for coral reefs and the Great Barrier Reef Marine Park Authority (GBRMPA) is working with its partners to prepare for the potential impacts from the upcoming summer.

The GBRMPA recently held its pre-summer workshop with scientists and managers from the Bureau of Meteorology (BoM), Australian Institute of Marine Science (AIMS), James Cook University and Queensland Parks and Wildlife Service (QPWS).

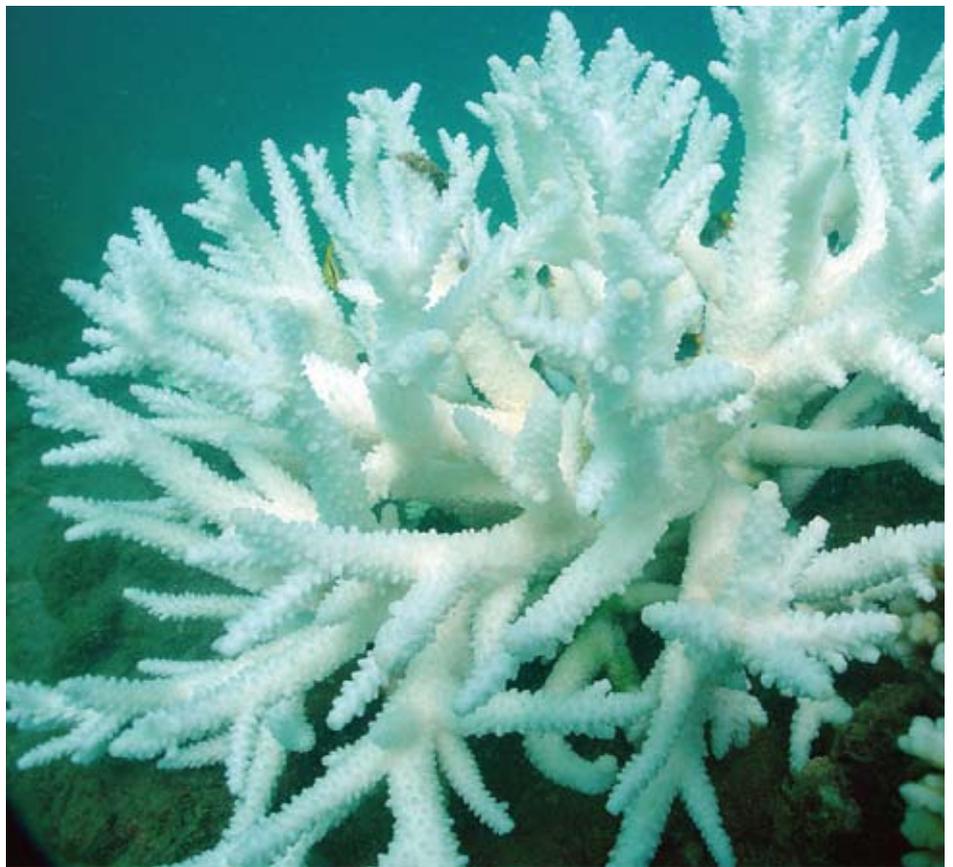
The purpose of the workshop was to update the Coral Bleaching Response Plan to reflect the predicted conditions of the 2010-11 summer.

Representatives from BoM presented the group with predictions for a La Niña weather pattern which could mean more cloud cover, rain and storm activity.

"According to these predictions from BoM, this is good in terms of lower level sea surface temperature, which decreases the chance of coral bleaching, however it also means there could be more risk with cyclones and floods damaging coral," GBRMPA's Chief Scientist David Wachenfeld said.

While this may mean relief for coral from a coral bleaching event, the La Niña weather patterns often result in increased frequency and severity of cyclones and above normal rainfall.

"Coral reefs are particularly vulnerable to physical damage from cyclones and huge quantities of rainfall



Bleached Acropora coral on Keppel Island reefs

can result in salinity bleaching from flood runoffs," David said.

"We will continue to work with QPWS and tourism operators to run the BleachWatch program and will implement the Early Warning System of the Coral Bleaching Response Plan."

The GBRMPA has also conducted its annual Reef Health Impact Survey training with staff from QPWS and some tourism operators.

The training program demonstrated to participants how to distinguish

between types of seabed, such as algae, sand and coral rubble and the different coral life forms present.

Particular focus was placed on identifying evidence of coral bleaching, disease, predation and physical damage to corals from anchors and storms.

The information gathered from the surveys will be provided to the GBRMPA and QPWS for input into their monitoring programs to help identify areas of priority or that require resource allocation.

Working together to adapt to climate change

Climate change has been identified as the greatest long-term threat to the Great Barrier Reef, meaning Reef-reliant industries are vulnerable to its impacts also.

The commercial fishing industry has recognised the need to adapt its business practices to adjust to increased severity and frequency of cyclones, coral damage from storms and dispersed fish stocks as a result of climate change.

Bureau of Meteorology predictions indicate the upcoming summer will see above average rainfall and abundant cyclone activity, due to the La Niña weather pattern.

"The increase in cyclones and the associated impacts is a strong example of how climate change is affecting the fishing industry and the Great Barrier Reef," GBRMPA Chief Scientist David Wachenfeld said.

"The GBRMPA is working with the industry to help it reduce its carbon footprint and adapt to the impact of a changing climate."

The GBRMPA has established a partnership with the Queensland Seafood Industry Association (QSIA) and have introduced a Climate Change Liaison Officer whose duties include helping businesses recognise their environmental impact and adjust their business practices to minimise this.

One of the initiatives from this partnership is the Carbon Emissions Calculator, an online tool to allow fishers to measure their carbon emissions. This tool can also help fishers to reduce their business costs by identifying areas for fuel and travel reduction.

The recently established Reef Guardian Fishers program is another partnership which works to recognise the positive actions within the industry and to help them adapt to climate change and mitigate its impact on the environment.

Turtles at risk under climate change

The turtle gender balance is predicted to tip to more females in the Great Barrier Reef as climate change progresses.

Australian Research Centre of Excellence for Coral Reef Studies Dr Mariana Fuentes said with climate change and increased temperatures in the Reef, more female hatchlings would be produced.

"The temperature of the beach sand determines the gender of the

hatchlings – warmer sand produces more females while cooler sand produces more males," she said.

"With increasing temperatures under current conditions, the nesting grounds are already producing more females and these turtles are at risk of stretching out the sex ratio.

"We still do not know whether turtles can adapt to these modern rates of climate change."

Mariana said the turtles would also be vulnerable to the effects of climate change through a decrease in hatching success and loss of nesting areas.

Mariana's research into the green, hawksbill and flatback turtles, in the northern Reef and Torres Strait, seeks to

establish priorities for the management of marine wildlife to increase their resilience to climate change.

Mariana said managers face the challenge of addressing the direct effects of climate change, as well as considering other ongoing threats that sea turtles face such as human actions.

"For a number of reasons, managers cannot address all threats simultaneously, and so need to prioritise their actions," she said.

The loss of turtles would have a huge impact on the northern Australian marine environment, Marina says, therefore both short and long-term actions are important.



The sex ratio of hatchlings could tip to more females

Reef Guardian Council tackles climate change

With climate change recognised as the greatest long-term threat to the Great Barrier Reef, Cairns Regional Council is tackling the effects of climate change.

The Reef Guardian Council has developed an action plan to reduce emissions by 50 per cent and for Council to be carbon neutral by 2020.

Great Barrier Reef Marine Park Authority (GBRMPA) Chairman Russell Reichelt said the five year action plan was another big step towards ensuring the long-term future of the Reef.

"While the Great Barrier Reef is recognised as one of the best-managed

coral reef ecosystems in the world, climate-related events have already caused significant impacts," he said.

"The Great Barrier Reef Outlook Report 2009 identified climate change as one of the greatest challenges facing the Reef.

"Therefore the action plan from this Reef Guardian Council is a positive step, and the actions of the council and community will go a long way to improving the Reef's resilience to the impacts of climate change."

It will also increase community awareness through engagement and partnerships and increase resilience to climate change.

Mayor Val Schier said climate change had the potential to impact on every aspect of Council operations and affect the quality of life for residents of the region.

"It is now well documented through scientific evidence that climate change is affecting our region," she said.

"The strategy we have come up with has a clearly defined vision, scope and objectives.

"It draws together and builds on the council's existing policies and projects in relation to climate change to achieve a unified and broad approach to leading the community's response."

Trawling in the Great Barrier Reef

With more than half the total of Queensland's trawl fishery occurring in the Great Barrier Reef Marine Park, a project is underway to ensure there is a shared understanding of all the ecological information available on the fishery.

The joint project has the Great Barrier Reef Marine Park Authority (GBRMPA), Fisheries Queensland and the Queensland Seafood Industry Association (QSIA) working together to combine all the significant information and projects from the last decade.

Fishing is an important source of income for both coastal communities and the seafood industry. The GBRMPA aims to ensure all fishing activities are consistent with the long-term protection of the Reef.

The Great Barrier Reef Outlook Report 2009 recognised current responses over the last decade that have substantially addressed the impacts of trawling on marine plants and animals.

Once completed the information will be used in a number of ways ranging from planning to help ensure the industry remains viable in the face of impacts from climate change to assessing any issues arising from the project.

It will also allow a common understanding about the sustainability of the trawl fishery and easier communication between managers, scientists and industry and seafood consumers.



Large brown polyps of a juvenile tube coral

Coral's dangerous childhood

Scientists have added another piece to the puzzle after a recent study found infant corals are more likely to die in their first few years of life.

The discovery has shed new light on corals' ability to re-build at a time when they are facing multiplying threats.

Although it has made the full complexity and wonder of the mature coral reefs all the more remarkable, it is hoped the findings will help manage future growth of coral reefs.

Australian Research Centre of Excellence for Coral Reef Studies Professor Lucie Penin said the study was conducted by a group of Australian and French researchers whose study counted the survival in minute and juvenile corals.

"The first thing we found is that the type and amount of coral larvae in the water very rarely bears any resemblance to the mature reef," Lucie said.

"What happens to the baby corals in the early stages of their life, up to the age of four or five years when they begin to reproduce, is clearly of great importance to the kinds of corals that dominate the reef."

The study suggests the coral losses during the entire growing up phase may total in the high 90 per cent range.

"Of the newly settled corals, tiny creatures only a millimetre or so in size, we found nearly half were eaten up by predators or died in the first seven days," she said.

"Of the juvenile corals, aged one to four years, we found 20 per cent died over a four month period."

The team found that juvenile corals were attacked by coral-eating fishes such as butterfly fish, which do not harm mature corals.

Lucie said with coral reefs under a number of threats understanding what happens at all stages of the corals life cycle was important in managing reefs for the future.

"We now understand that the early stages of the coral's life are critical to the kind of reef that emerges later – and that local conditions in turn have a strong influence over which corals survive," she said.

"This underlines the importance of managing those conditions in ways that will help young corals to become established, especially where reefs have been badly damaged."



Future Leaders Eco Challenge wraps up

More than 600 Reef Guardian school students from Port Douglas to Bundaberg pulled on their gloves this year to become wetland ecologists – all in the name of sustaining biodiversity.

The Future Leaders Eco Challenges, run throughout 2010 with more than 100 Reef Guardian Schools, was designed to empower students to be involved in the bigger picture of protecting the Great Barrier Reef.

Great Barrier Reef Marine Park Authority Reef Guardian Schools Program Manager Megan Sperring said the challenge aimed to show students they could make a positive difference to the environment through understanding the Reef and its connected ecosystems.

"Our future custodians of the Great Barrier Reef are now more educated and prepared to take a leading role in protecting the Reef for the future, thanks to this program and the supporting organisations," she said.

The Future Leaders Eco Challenges celebrated International Year of Biodiversity and Education Queensland Year of Sustainability.

In Cairns students explored the biodiversity of wetlands through various activities including an insect safari, electro fishing, bird survey and investigations of the growth and diversity of tree species.

Cairns



Townsville

Students and teachers explored the biodiversity of Loam Island's wetland ecosystem and looked at what was there and why it was important.

Hamilton Island students investigated water quality through testing and comparing the quality of their local water with another sample brought over from the mainland.

Hamilton Island



Mackay

The Future Leaders Eco Challenge in Mackay proved to be valuable after the students discovered macro-invertebrates that had not yet been recorded in the wetland they were monitoring.



Yeppoon

Students developed skills of observation at the Yeppoon Future Leaders Eco Challenge when they searched for insects under logs and rocks, in tree bark and leaf litter and throughout the forest.

Bundaberg



More than six schools braved the rain to explore Baldwin Swamp. The students were amazed at the diversity of birds found at this site, an urban wetland centred in the heart of Bundaberg.

Students at Gladstone studied the fish communities of Police Creek, looking at both abundance and diversity. This activity inspired Chanel College to borrow nets from Central Queensland University to carry out regular assessments of both water quality and fish communities at their local creek.



Gladstone

Burdekin Christian College's Toby Piva takes a closer look into the Burdekin's wetland during the event.



Burdekin



Proserpine

More than 20 students throughout the Proserpine region gathered to plant about 80 trees, which was also a part of a council initiative.



Port Douglas

Students spent their day at the beautiful Four Mile Beach where they assisted Cairns Regional Council staff in planting 150 trees as part of their ongoing coastal vegetation rehabilitation program. The students also investigated water quality.

Reef Guardians take the lead in sustainability of the environment

Roles were reversed at the Burdekin Christian College recently when Reef Guardian students taught the community about sustainability of the environment.

The annual Sustainability Night, held at the Burdekin Christian College, showcased what the students had learnt about protecting the environment in 2010.

Burdekin Christian College School Principal Allan Mullaly said it was a privilege each year to share the students' understanding of environmental concerns with the Burdekin community.

"This year we wanted students to become more aware of what makes up weather and what changes are occurring because of climate change," he said.

"With our focus on water, the students conducted experiments such as condensation and cloud making.

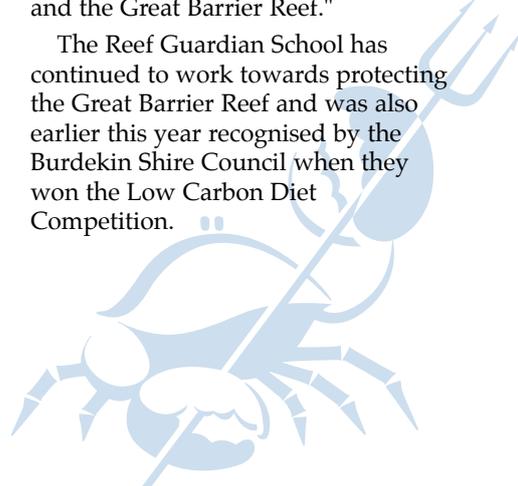
"We also discussed the effects of climate change and our role to reduce greenhouse gases."

Great Barrier Reef Marine Park Authority Reef Guardian Schools Education Officer Carolyn Luder said the school's annual Sustainability Night was in true Reef Guardian spirit.

"As future custodians of the Great Barrier Reef it is critical that students get involved in educating the community to take the lead in protecting our environment," she said.

"Burdekin Christian College this year went to great lengths to actively get the students involved in understanding the environment and what their role is to protect its wonders and the Great Barrier Reef."

The Reef Guardian School has continued to work towards protecting the Great Barrier Reef and was also earlier this year recognised by the Burdekin Shire Council when they won the Low Carbon Diet Competition.



Kids talk turtles with Traditional Owners



Turtles play a significant role in Indigenous culture

Townsville Reef Guardian Schools have been bitten by the turtle bug after Traditional Owners ran a series of school presentations recently.

The Safeguarding the Gungu (sea turtles) program delved into the unique cultural connections between Traditional Owners, the Great Barrier Reef and sea turtles.

Great Barrier Reef Marine Park Authority Reef Guardian Schools

Education Officer Carolyn Luder said Traditional Owner groups along the Great Barrier Reef held a range of past, present and future cultural and heritage values for land and sea country.

"It is important for younger generations to hear and experience these values," she said.

"The students really enjoyed learning about Traditional Owners' long

standing relationship with the sea turtles and their cultural values and beliefs for the species."

The Safe Guarding the Gungu education program also involved a short film about Traditional Owner groups in the Townsville region.

The program was run in partnership with NQ Dry Tropics and local Traditional Owners to selected Reef Guardian Schools.

Reef Guardians step up for the Great Northern Catchment Clean Up Day

St Patricks College was one of seven Reef Guardian schools to swap the classroom for the outdoors recently when they took part in the Great Northern Catchment Clean Up Day.

In partnership with Townsville City Council, more than 50 St Patricks College students joined about 1500 other Reef Guardian students to clean areas surrounding rivers, beaches or parks close to their school.

Great Barrier Reef Marine Park Authority (GBRMPA) Reef Guardian Program Director Karen Vohland said the clean up was another successful day in educating Reef Guardian schools to actively look after the environment.

"With the Great Barrier Reef on our doorstep it is important the younger generation is educated in looking after our environment, which includes waste management," she said.

"The St Patricks College students took a lot away from the clean up and

are now going on to painting drains around their school next term to educate others about reducing litter.

"It was also an opportunity for the Reef Guardian schools to explore their catchment and work with the broader community to keep our region and the Reef clean."

The Reef Guardian Schools program is an initiative of the GBRMPA and is also run in the Burdekin region in partnership with the natural resource management group NQ Dry Tropics.

NQ Dry Tropics Acting CEO Scott Crawford said the event was a great reminder of the role everyone has to play in keeping our land and waterways clean.

"Rubbish can pose a risk to animals on land, in our rivers, and on the Great Barrier Reef," he said.

"Not littering and picking up rubbish are simple things we can all do to help protect our native wildlife."

During the clean up cigarette butts were found to be the most common rubbish followed by plastic and netting.



Reef Guardian students Toni-anne, Shai, Lauri, Bernie and Meaghan

Lama Lama Traditional Owners plan for sea country management



Traditional Owners test new methods to manage their sea country

The Lama Lama are one of several Traditional Owner groups along the Cape York coast to participate in visits to their native sea country on board the Pelican 1 vessel.

The journey provided an opportunity for the Lama Lama people to progress a plan for the sustainable management of their sea country and its resources for the future.

As part of their planning, the group tested a hand held computer for field work loaded with electronic Great Barrier Reef Marine Park Authority (GBRMPA) zoning maps and *Cyber-Tracker* software.

The Lama Lama rangers were able to pinpoint their exact location and record information during patrols such as sightings of marine creatures, drift nets, or illegal fishing activities.

Development, support and training for this method of on-country survey has been provided by the NAILSMA Saltwater People Network I-Tracker project through Balkanu Cape York Development Corporation and represents a good example of how different agencies can work in partnership with Traditional Owners for the benefit of all.

Lama Lama Traditional Owner and ranger Karen Liddy said the hand held computer used in the I-Tracker project was easy to use because it combined all the tools the group needed in a single, compact unit.

"Instead of using maps, GPS, cameras, and writing in books, all you need is the I-Tracker. So when we came across some dead seabirds that we

thought was unusual, we were able to record this information straight away," she said.

I-Tracker will be one of the tools used by this group to assist in monitoring their sea country and eventually they hope to use it as part of a Traditional Use of Marine Resource Agreement (TUMRA) with the GBRMPA and Queensland Department of Environment and Resource Management.

In future, the Lama Lama rangers hope to have a greater presence in their sea country, through *Working on Country* funded rangers to support their sea country management aspirations.

Karen said the ocean played a big part in their lives.

"We'd like to be able to patrol the islands. Marpa National Park (Cliff Island) is a very significant place for us. It is sacred for the wind story. We want to help keep it like it is and not see it destroyed. It's also important for sea birds, turtles and dugong," she said.

The visit to Cape York on the *Pelican 1* was provided as part of the Great Barrier Reef Marine Park Authority's implementation of the *Caring for our Country Reef Rescue Indigenous Land and Sea Country Partnerships Program* funded by the Australian Government.

The Great Barrier Reef Marine Park Authority would like to thank the Lama Lama Traditional Owners and Working on Country rangers, Pelican Expeditions, NAILSMA Saltwater People Network through Balkanu Cape York Development Corporation, and the Department of Environment and Resource Management for their support in this shared learning experience.

Girudala Day Trip to Dingo Beach

More than 30 Bowen students got their hands dirty at Dingo Beach recently while investigating their local environment in the Great Barrier Reef Marine Park.

The students, from Girudala Community Co-operative Society's vacation care program, explored the area and learnt about biodiversity and how to contribute to the health of the Reef and its adjoining ecosystems.

Led by the Great Barrier Reef Marine Park Authority (GBRMPA), students inspected local plants and animals, such as seaweed, soldier crabs, hermit crabs, seastars and pippies.

Girudala leaders also had the opportunity to share traditional knowledge about collecting and hunting marine resources and explain the importance of the balance of life in the ocean, and their cultural connection to the sea.

The day trip was part of the GBRMPA's implementation of the *Caring for our Country Reef Rescue Indigenous Land and Sea Country Partnerships Program* funded by the Australian Government.

NEWS CLIP

The Queensland Seafood Industry Association (QSIA) continued to show its commitment to the protection of the Great Barrier Reef recently at the QSIA Annual General Meeting (AGM).

Chairman, Russell Reichelt, and other representatives from the Great Barrier Reef Marine Park Authority attended the AGM where the commercial fishing industry's involvement in the sustainable use of the Reef was discussed.

Reef HQ Aquarium scoops up three from three

Reef HQ Aquarium has been crowned Townsville's major tourist attraction after it took out three awards at the Townsville Airport North Queensland Tourism Awards.

The awards saw Reef HQ take home the Major Tourist Attraction, Ecotourism and New Tourism Development awards.

Reef HQ Aquarium Director Fred Nucifora said the awards reflected the great work the staff and volunteers of

the Aquarium had continued to do over the last year.

"For the third consecutive year we won the Major Tourist Attraction award which has put us in the Hall of Fame," he said.

"We won each category we were nominated in, so it just shows all the hard work we put into promoting the Great Barrier Reef has paid off."

The Ecotourism award recognised Reef HQ's premier reef education experiences and operational innovations such as the Aquarium's Energy Reduction Strategies.

The Aquarium has reduced its energy consumption by 260,772

kilowatt hours over the last 12 months.

The New Tourism Development award commended the work done through the Turtle Hospital, which, along with rehabilitating sick or injured turtles, raises awareness about threatened species.

"The Turtle Hospital is now considered an attraction in its own right, with over 25,000 people visiting it in the last 12 months," Fred said.

Reef HQ Aquarium was also nominated at the Queensland Tourism Awards recently, and was named a finalist in both the Best Tourist Attraction and New Tourism Development categories.



Reef HQ Aquarium staff celebrate their three wins

Community representatives converge on Townsville

Local Marine Advisory Committee (LMAC) chairs descended on Townsville recently to discuss their projects and regional issues with Great Barrier Reef Marine Park Authority (GBRMPA) staff.

The two-day meeting is an important way for chairs and one other member of each committee to meet in the one location to discuss Reef-related matters.

GBRMPA Regional Engagement and Planning Acting Director Belinda Jago said a number of key issues and good ideas were shared over the course of the weekend.

"The meeting was a useful forum for representatives of local marine user and interest groups to discuss key issues for their region," she said.

"Each LMAC chair provided an update on the projects and activities the

group are involved in – there's some excellent on-ground environmental work being undertaken.

"During the meeting, attending delegates discussed a broad range of issues associated with coastal and inshore areas of the Marine Park, including water quality, coastal development, fishing and port development.

"There were also opportunities for the GBRMPA to seek feedback from LMACs on some of our key programs and activities in the next six to 12 months.

"This community engagement is important and often critical to the success of our programs.

"The meeting was mutually beneficial – it helps us understand local issues and engage with the community

and provides the community with an opportunity to convey their views."

There are 11 LMACs along the Great Barrier Reef coast from Cape York to Bundaberg.

Members may be independent, or represent a community or industry group from which they coordinate feedback.

The aim is to have a balanced representation of local people who are involved in the management or use of the Marine Park.

Composition of each LMAC varies depending on local interests and industries but can cover everything from commercial fishing to agricultural and conservation interests.

More information on LMACs is available at www.gbrmpa.gov.au.

Scientists **explore** beach scrub



Coastal sea cave on the Curtis Coast

Armed with four wheel drives and quad bikes, a group of scientists and managers got their hands dirty in a mission to collect data within some of the Curtis Coast's most secluded areas of endangered beach scrub.

After six cold days of exploring on Curtis Island, Boyne Island, Wild Cattle Island and Tannum Sands, the scientists and managers returned with vital data about the health and unique characteristics of beach scrubs on the Curtis Coast.

Fitzroy Basin Association Inc (FBA) Coastal Coordinator Shane Westley said the project was expected to significantly enhance the way beach scrubs were managed in the Fitzroy Basin.

"We collected really detailed and useful data about the current condition of the scrub, what species are present, and what threats exist," Shane said.

"Some people would focus on canopy species, others would be walking along the marked section to identify scrub layers and others would be recording ground cover species."

Beach scrub, which is typically found within two kilometres of the sea, represents some of the last remnants of native forest vegetation on the coast.

It plays a major role in stabilising coastal areas and providing habitat for many threatened plants and animals, and valuable ecosystem services such as acting as a buffer to coastal winds and erosion.



Members research on the Curtis Coast

Shane said the project would help the FBA assess the current condition of beach scrubs to then work with a number of local groups in managing the important regional habitat.

"It will ultimately reduce the impact of threats, like weeds, over an area of at least 500 hectare of beach scrubs across the region," he said.

The managers and scientists involved in the field trip included representatives from FBA, Department of Environment and Resource Management, Queensland Parks and Wildlife Service and Dr Bill McDonald from the Queensland Herbarium.

The project is funded by the Australian Government's Caring for our Country.



A flatback turtle nests

It's that time again

Beaches along the Great Barrier Reef will soon welcome an age old ritual with turtle nesting season upon us.

With six of the seven marine turtle species calling the Great Barrier Reef home, it is important people are cautious around the turtles' nesting habitat.

All species of turtles generally have the same life cycle and mating takes place offshore from nesting beaches a month or two prior to the turtle's first nesting attempt.



A turtle hatchling makes its way to the sea

If you happen to be lucky enough to see a turtle nesting remember to limit the use of light by turning torches off whenever possible, as turtles can get confused by artificial light and may not finish nesting.

It is also important not to disturb, touch or dig up any nests or eggs. With it taking between 13 and 50 years for a female marine turtle to reach sexual maturity, this prehistoric reptile needs all of our help in protecting its future and its home of the Great Barrier Reef.

Creature Feature

Leatherback turtles

- Leatherbacks are the largest turtles on Earth, growing up to three metres long and exceeding 900 kilograms.
- The leatherback turtle has a flexible and rubbery texture to its shell, while all other sea turtles' shells are bony hard plates.
- Leatherback turtles are 13 to 14 years old before they start to breed and return back to the region of their hatching site to lay eggs.
- A female can mate with several males and store sperm for successive batches of eggs, going on shore at night at about nine day intervals to lay up to nine clutches.
- It is estimated that only about one in a thousand leatherback hatchlings survive to adulthood.
- Leatherbacks can dive to depths of 1280 meters - deeper than any other turtle - and can stay down for up to 85 minutes.
- The temperature inside the nest determines the sex of the hatchlings, higher temperatures produce females and cooler temperatures produce males.
- These reptilian relics are the only remaining representatives of a family of turtles that traces its evolutionary roots back more than 110 million years.

Calendar of events

2010

International Year of Biodiversity

08 – 14 November

National Recycling Week

06 – 12 December

Coastcare Week

25 December

Reef HQ Aquarium
Townsville closed

25 December – 03 January

Great Barrier Reef
Marine Park Authority
Christmas office closure

GBRMPA contacts



Australian Government

Great Barrier Reef
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