



Australian Government
Great Barrier Reef
Marine Park Authority

SEAREAD

FROM CATCHMENT TO CORAL

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Partnerships Supplement



**Traditional Owners
leading the way in
species conservation**

**Reef HQ to be powered
by solar energy**



Cover: GBRMPA board member Melissa George congratulates Traditional Owner Kerry Blackman on signing the historic Port Curtis Coral Coast TUMRA

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

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Chairman's message



As the year draws to an end, it's timely to take stock and discuss the range of actions and activities that have taken place over the last year to protect the Great Barrier Reef.

Such a review is even more relevant as we head into summer. We all remember this time last year that we saw extreme weather including cyclones and floods that impacted on the Reef.

Almost a year on, the impact of this extreme weather is still evident and a great concern to us. We have, and are still undertaking, a number of activities to address this issue.

This includes building our understanding of these events by working with James Cook University on research projects that investigate the impacts of extreme weather on turtle and dugong populations.

It involves examining the condition of turtle populations outside the impact area of cyclones and floods to see what percent of the population have been affected.

Information about the cumulative impacts of these

events on the Great Barrier Reef has never been recorded in such detail, and this information is vital for us to gain a broader understanding and to respond effectively in future.

I hope that the Great Barrier Reef will escape the extreme weather of last summer but climate models are still leaning toward above average cyclone activity in Queensland over the coming months.

Traditional Owners have a long and close connection with the Great Barrier Reef, and we value these important stakeholders and work very closely with them.

We will be updating our response plans and keeping a close eye on the Reef over summer, in particular looking for any signs of coral stress or bleaching.

It is heartening that our work in managing the Reef is so strongly supported by a range of vital community and industry partnerships.

This edition of *SeaRead* includes a supplement that showcases the myriad of activities undertaken with our partners to protect the Great Barrier Reef.

This includes our work with Traditional Owners through the Sea Country Partnerships Program,

working with Ecotourism Australia to certify high standard operators, and also highlights the community groups that advise us.

Government, industries and communities, in conjunction with the GBRMPA, all have roles to play in reef protection.

These partnerships are crucial for the future of the Reef and the communities and industries that depend on it, particularly in the face of threats like climate change.

Thanks to everyone who has worked with us throughout the year on the protection and management of our Great Barrier Reef.

I wish you and your loved ones a safe and happy Christmas and look forward to continuing our good work in the New Year.

Russell Reichelt
Great Barrier Reef Marine Park Authority



Traditional Owners make significant commitment to sea country management

Port Curtis Coral Coast Traditional Owners at the official launch of their historic Traditional Use of Marine Resources Agreement

Port Curtis Coral Coast Traditional Owners have agreed to the largest Traditional Use of Marine Resources Agreement (TUMRA) to assist turtle and dugong populations.

Traditional Owner groups Gooreng Gooreng, Gurang, Bailai and Tarebilang Bunda signed the historic agreement, covering 26,386km² of sea country, in Bundaberg.

Under the agreement there will be no traditional hunting of turtle and turtle eggs at Mon Repos Conservation Park under a five year sustainable hunting practices program.

The Port Curtis Coral Coast Traditional Owner groups are committed to taking no dugong, loggerhead and flatback turtles, with green

turtle hunting to be limited to a maximum of five per group per year.

Great Barrier Reef Marine Park Authority (GBRMPPA) Chairman Dr Russell Reichelt praised the voluntary commitment of the Traditional Owners and highlighted what could be achieved when Indigenous groups and the Australian and Queensland governments worked together.

"This agreement ensures valuable cultural practices continue to exist while supporting the goal of long-term conservation and management of marine resources," Russell said.

"The Traditional Use of Marine Resources Agreement is also significant due to sheer size, covering a total area

that's almost 10 times the size of Canberra and the Australian Capital Territory."

Port Curtis Coral Coast representative Mr Kerry Blackman said the decision to enter into the agreement was about protecting a place that has played an integral role in the Traditional Owners culture and sea country.

"As Traditional Owners we know that turtles and dugong in our sea country are being badly affected by water quality, seagrass loss, boat strike, poaching and some commercial industries," Kerry said.

"By developing and implementing this agreement we are doing our bit to ensure the longevity of these species for future generations while

continuing to maintain and pass on important cultural knowledge and practices.

"Securing this agreement with both the Great Barrier Reef Marine Park Authority and Department of Environment and Resource Management provides us with greater opportunities to take a role in coming up with broader management strategies that will positively impact our sea country."

This Traditional Use of Marine Resources Agreement was developed and will continue to be implemented with support from the Australian Government's Reef Rescue Land and Sea Country Indigenous Partnership Program, administered by the GBRMPA with funding from Caring for our Country.

Traditional Owners leading the way in species conservation

Nywaigi and Girramay Traditional Owners are continuing to protect green turtles and dugong through their temporary suspension on hunting.

These species are struggling after their main food source, seagrass, was devastated by severe weather off the coast of Cardwell in north Queensland, the sea country of these Traditional Owners.

Nywaigi Traditional Owner and CEO of Girringun Aboriginal Corporation Mr Phil Rist said the groups were intent on securing the long-term sustainability of these species.

"We share the community's concern about these species," Phil said.

"Our decision to temporarily suspend hunting in our sea country is our own way of directly supporting the Great Barrier Reef that has been important to our people for over 60,000 years.

"As Traditional Owners we are actively involved in sea country management, and are looking forward to working with the Great Barrier Reef Marine Park Authority on monitoring and research.

"We are not calling for a

broad-scale moratorium on the hunting of green turtle and dugong, but encourage others to get involved in sea country management."

Girringun rangers will work with Elders and youth to tag turtles and dugong with satellite transmitters to track animals' movements to determine how they are using seagrass beds in the Girringun sea country area.

Great Barrier Reef Marine Park Authority species expert Dr Mark Read said it was valuable to have Nywaigi and Girramay Traditional Owners leading species conservation activities in their sea country.

"Monitoring helps build our understanding of how animals are being affected by extreme weather and seagrass die-off," Mark said.

"Working collaboratively with Traditional Owners and management agencies allows us to implement management responses to protect species long-term.

"By working with the Girringun rangers, we hope to also gather traditional ecological knowledge that we can combine with the scientific information collected through the monitoring project."



Nywaigi Traditional Owner and CEO of Girringun Aboriginal Corporation Mr Phil Rist said the groups were working to secure the long-term sustainability of turtle and dugong



White whale spotted in Marine Park

Mr Wayne Fewings captured this photo of the rare white humpback calf in the Whitsundays

A new white humpback whale calf was recently spotted in the Great Barrier Reef Marine Park.

Mr Wayne Fewings was the lucky cameraman to snap the rare calf and its mother in the Whitsundays.

"We were just drifting when I noticed the smaller whale in the pod was white," Wayne said.

"I couldn't believe my eyes, and I just grabbed my camera, then the white calf approached my boat, seeming to want to check us out.

"I was just so amazed at seeing this animal, it was a once in a lifetime experience on the Great Barrier Reef."

Great Barrier Reef Marine Park Authority (GBRMPA) species expert Dr Mark Read said the white calf was born to two parents carrying the white (amelanistic) gene.

"The calf was likely to have been born in northern Great Barrier Reef waters and is probably at least a couple of weeks old," Mark said.

"Nearly all humpback whales are dark on their upper body and this colouration is caused by the skin pigments called melanins.

"A purely white humpback whale does not have melanin pigments in its skin.

"To speculate on the animals parents is difficult, but what we can say is that this calf is the offspring from two animals that were carrying the white (amelanistic) gene, resulting in this unique white calf."

Dr Read reinforced the conditions for whale watching saying vessels could not approach closer than 300m to a whale calf while outboards on boats must be kept out of gear if a whale approaches the vessel.

To assist the GBRMPA in gaining a better understanding of the Reef the public is urged to report animal sightings on the Great Barrier Reef by emailing eyeonthereef@gbmpa.gov.au or calling (07) 4750 0788.



Australian Government
Great Barrier Reef
Marine Park Authority

Great Barrier Reef Marine Park Authority

Partnerships

S U P P L E M E N T

Working together today for a healthier Reef tomorrow

The Great Barrier Reef Marine Park is a natural wonder, and a multiple-use area that supports a range of communities and industries.

The Great Barrier Reef Marine Park Authority (GBRMPA) is responsible for the overall management of this large and complex ecosystem.

Government, industries and communities, in conjunction with the GBRMPA, all have roles to play in reef protection.

These partnerships are crucial for the future of the Reef and the communities and industries that depend on it.

Partnerships range from formal arrangements, like that with the Queensland Government for day to day management of the marine area, to voluntary measures with stakeholders and the community.

These partnerships are beneficial on a number of

levels – it supports the on-ground protection of the Reef, contributes to appreciation of the Reef, and improves our understanding of the marine environment.

While the Reef is one of the best managed in the world, the first Outlook Report identified several risk areas and decisions made in the next few years are likely to determine its long-term outlook.

Climate change, declining water quality, loss of coastal habitats, and remaining impacts from fishing are the main threats to the ecosystem.

In the face of these threats, we'd like to highlight some key partnerships that are working towards ensuring the Great Barrier Reef Marine Park is protected for future generations.

Spotlight on some of our partners

- **Traditional Owners** – Aboriginal and Torres Strait Islander peoples are the Traditional Owners of the Great Barrier Reef Region and their connection dates back over 60,000 years.
- **Reef Guardians** – Reef Guardian schools, councils, farmers, graziers and fishers are undertaking some great environmental work to protect the Great Barrier Reef.
- **Tourism partners** – the marine tourism industry is a key partner in protecting and managing the Great Barrier Reef.
- **Local Marine Advisory Committees** – we're advised on Marine Park management issues at a local level by voluntary community-based committees.
- **Australian Government agencies** – many agencies, organisations and individuals contribute to protecting and managing the Great Barrier Reef ecosystem.
- **Queensland Government agencies** – the Marine Park is jointly managed by the Australian and Queensland Governments to ensure the Reef is protected for the future.
- **Reef Advisory Committees** – these advisory committees provide advice on particular issues in Marine Park locations and operational programs.
- **Queensland Seafood Industry Association** – a partnership with the Queensland Seafood Industry Association to work with fisheries managers to ensure a sustainable future for the Reef.
- **Aquarium collection industry** – in partnership with the Great Barrier Reef Marine Park Authority and Fisheries Queensland, they have developed a range of novel stewardship initiatives.
- **Scientists and researchers** – we work closely with a number of external scientists and research providers to deliver information that helps with the management of the Marine Park.



Sea country partnerships

Traditional Owners play an important role in protecting the Reef

Our partnerships with Traditional Owners seeks to conserve biodiversity, protect heritage and cultural values and contribute to the resilience of the Great Barrier Reef.

There are more than 70 Traditional Owner groups situated along the Queensland coast from the Torres Strait through to Bundaberg.

Their historical connections date back 60,000 years and today their connection to sea country continues to be practiced and maintained according to traditional customs and spiritual lore.

As part of this, many Aboriginal and Torres Strait Islander peoples undertake traditional use of marine resources activities including hunting, collecting and fishing.

These activities have been carried out sustainably for thousands of years and these Traditional Owner rights are recognised in the *Native Title Act 1993*.

Traditional Owners maintain their connection to the Great Barrier Reef by continuing to work to protect it for future generations.

Through the Great Barrier Reef Marine Park Authority's (GBRMPA) Caring for our Country Reef Rescue Land and Sea Country Indigenous Partnerships Program, Aboriginal and Torres Strait Islander communities are managing and protecting the Reef's marine resources.

The program also sees Traditional Owners working with the GBRMPA to combine their cultural knowledge with scientific knowledge to better protect the Great Barrier Reef for the future.

Traditional Owners are also involved in Reef management through representation on the Marine Park Authority Board, Indigenous Reef Advisory Committee, and Indigenous Community Compliance Officers working on country.

Proud to be guardians of the Reef

The Great Barrier Reef Marine Park Authority's Reef Guardian program recognises the good environmental work being undertaken by communities and industries to protect the marine environment.

It currently involves 13 Councils, over 270 schools, eight cane farmers, five banana farmers, four grazing businesses, and six fishers taking part in on-ground environmental projects that benefit the Reef.

The Reef Guardian program's recent expansion to work with land managers is an important collaboration – what happens on the land can have an impact on the Great Barrier Reef.

Marc and Michelle Darveniza are among the first Reef Guardian banana farmers and are passionate about ensuring a healthy environment for their five children.

"We are aiming to build the health and resilience of the soil on the farm as part of developing our own sustainable farming system," Marc said.

"Our approach is more labour intensive but the pay-off in savings from working with nature to provide natural pest control makes it worthwhile."

Jeff and Karen Mills, graziers from Morinish near Rockhampton, are among the first to be Reef Guardian graziers.

Jeff and Karen have a number of sustainable practices taking place on their property.

This includes locking up erosion areas to stabilise soil, improving water management, maintaining a good balance of trees and natural regeneration, and fencing riparian areas to protect these natural areas.



Reef Guardian Banana Farmer Marc Darveniza

Community advisory committees



Community members assist the GBRMPA with marine management

The impacts of industry and coastal development on habitats and species along the Great Barrier Reef Coast was highlighted as an issue of concern at the Local Marine Advisory Committee Chairs conference held recently in Townsville.

Committee Chairs and delegates from as far afield as Bundaberg and Cape York came together to hear from Great Barrier Reef Marine Park Authority (GBRMPA) staff about management activities and issues affecting the Great Barrier Reef.

GBRMPA Chairman Dr Russell Reichelt said the Chairs meeting was a valuable opportunity to collect community feedback on a range of topics.

"We were able to hear first-hand accounts of the impacts of this year's extreme weather events on

communities and industries along the Queensland coast," Russell said.

"A lot of the discussion centred around how the Reef was recovering following cyclone Yasi while our representatives also raised concerns about coastal development and industry.

"The weekend was a success with members contributing to some robust discussions about key projects including the World Heritage Strategic Assessment, the impacts of extreme weather and feedback about regional issues."

This year's Chairs meeting involved representatives from: Cape York, Douglas, Cairns, Cassowary Coast, Hinchinbrook, Townsville, Whitsunday, Mackay, Capricorn Coast, Gladstone and Burnett.

Fish for the future

The commercial fishing industry relies on the Great Barrier Reef for their catch, and the health of the Reef is important to their future.

Recognising shared goals, the Great Barrier Reef Marine Park Authority (GBRMPA) and Queensland Seafood Industry Association (QSIA) formed a partnership to ensure a sustainable future for the Reef.

This partnership has been highly successful, and a number of important activities have taken place to assist the industry to adapt to a changing climate.

This includes QSIA appointing a liaison officer to drive fisheries and climate change related projects established under the partnership.

A Fisheries Emissions Calculator has been developed to allow for more energy efficient and cheaper operations for fishers.

By measuring levels of energy use over the last few years, fishers can identify areas that require attention.

Workshops for commercial fishers have been held to provide advice, guidance and information regarding climate change related adaptation opportunities and carbon emission reduction methods.

In addition to this work, the GBRMPA is working with commercial fishers through the Reef Guardian Fishers Program.

Launched in 2011, it involves the Reef Line fishery and the Marine Aquarium Fish and Coral Collection fishery operating in the Marine Park and already using practices that go above and beyond what is required by law.

These Reef Guardian Fishers care about the Great Barrier Reef and realise that the success of their business relies on the Reef being healthy.

Reef tourism operators recognised for going the extra mile

A commitment to best practice tourism in the Great Barrier Reef is stronger than ever as the Great Barrier Reef Marine Park Authority (GBRMPA) and Ecotourism Australia announce their renewed partnership.

The announcement was made at the Global Eco Asia-Pacific Tourism Conference in Sydney recently.

The agreement sees Ecotourism Australia continue to independently assess and certify Great Barrier Reef tourism operators that operate to a high standard in the Marine Park.

There are now 52 Eco Certified operators in the High Standard Tourism Program, with over 60 per cent of the visitors to the

Great Barrier Reef Marine Park using eco-certified operators.

The partnership between GBRMPA and Ecotourism Australia began in 2004 to encourage best practice marine tourism on the Great Barrier Reef.

Tourism operators can apply to become certified by contacting Ecotourism Australia. Certified operators are recognised by GBRMPA through an extended permit term of 15 years.



Tourists explore Norman Reef snorkelling and feeding fish

Research partners unlock vital information



A research scientist takes note of coral growth on Wheeler Reef

Research plays a vital role in delivering effective environmental outcomes for the Great Barrier Reef.

Major research projects are constantly revealing new information about the Great Barrier Reef which is ensuring management decisions are based on the best available science.

The Great Barrier Reef Marine Park Authority is a participant in the National Environmental Research Program to ensure these important partnerships continue to improve our capacity to understand, manage and conserve the Great Barrier Reef.

In 2011 the Minister for Sustainability, Environment, Water, Population and Communities announced that five research hubs would be funded under the Program.

Up to \$68.5 million in funding is available over four years to provide first-class science that is essential for sustainably managing Australia's environment.

Of the five research hubs, the Tropical Ecosystems hub receives \$25.8 million in Program funds and has 38 projects, 21 of which are

directed to Great Barrier Reef issues.

The projects are arranged under three themes: Assessing Ecosystem Condition and Trend, Understanding Ecosystem Function and Cumulative Pressures and Managing for Resilient Tropical Systems.

Reef-related projects include historical and current condition of the Great Barrier Reef, water quality, and decision support systems for Great Barrier Reef managers respectively.

There are projects in other hubs that are also of relevance to the management of the Great Barrier Reef.

As a management body and an end user of this scientific research, the GBRMPA is engaged with all projects relevant to the Great Barrier Reef under the Program and is assisting participating researchers with their projects.

Establishing these working partnerships ensures we have a greater understanding of how the Great Barrier Reef ecosystem functions, are able to better monitor reef health, and maintain and build its resilience.

Getting the right advice

Technical experts on Reef Advisory Committees play an important role in advising the Great Barrier Reef Marine Park Authority (GBRMPA).

Each committee provides the GBRMPA with information, advice and direction from senior, experienced stakeholders on key strategic activities.

These competency-based committees are made up of

a cross-section of stakeholders with expertise and experience in areas such as industry, recreation, government, or Traditional Owner groups.

The Reef Advisory Committees cover catchment, coastal, ecosystem, Indigenous and tourism issues. The current three-year term of membership expires on 31 December 2012.

Out on the water

The Great Barrier Reef Marine Park and Great Barrier Reef World Heritage Area is a vast area, jointly managed by the Australian and Queensland Governments to ensure this natural wonder is protected for the future.

As set out in the Great Barrier Reef Intergovernmental Agreement, the responsibility rests with the Great Barrier Reef Marine Park Authority and the Queensland Department of

Environment and Resource Management.

This Intergovernmental Agreement outlines the obligations of both Governments to protect and manage the Reef ecosystem through a joint Field Management Program.

The Field Management Program undertakes operations and routine day-to-day activities in the Great Barrier Reef Marine Park, the adjacent Great Barrier Reef Coast Marine Park and island national parks.



Marine Parks officer on board a tender, with Marine Parks boat Woppaburra in the background

Cyclone Yasi report released

The Great Barrier Reef Marine Park Authority (GBRMPA) has released a report on its rapid assessment of the Great Barrier Reef following tropical cyclone Yasi.

About 13 per cent of the Great Barrier Reef, from Cairns to Townsville, was exposed to Yasi's destructive winds.

GBRMPA and Queensland Parks and Wildlife Services marine specialists conducted over 880 rapid assessments of 36 reefs in this region to ascertain the extent of the damage.

The affected area represents a 300km stretch of the 2400km-long Reef, with serious damage in patches and minor or nil damage in other parts.

The report states approximately 15 per cent of the 344,000km² Marine Park sustained some coral damage and six per cent was severely damaged.

The assessment team found that while the damage from cyclone Yasi spans a

wide area, it was patchy.

Most of the damage occurred between Townsville and Cairns.

Fortunately, reefs in the key tourism areas such as Port Douglas, Cairns and the Whitsunday Islands were in the 94 per cent of reef area that escaped major impacts from cyclone Yasi.

Reefs to the north of Cairns appear to have escaped severe damage, while reefs surveyed between Townsville and the Whitsundays recorded low levels of damage.

Damaged corals were recorded on most of the surveyed reefs, however



Coral species such as this tabletop acropora were overturned in rough seas generated by cyclone Yasi

some reefs also had areas with relatively minor damage.

The report says that often, undamaged patches of reef could be found within 50 to 100 metres of severely damaged patches.

Sites closer to the eye of the storm suffered the most damage, with reefs to the south of the eye more severely damaged than reefs to the north.

The full report, Impacts of tropical cyclone Yasi on the Great Barrier Reef: A report on the findings of a rapid ecological impact assessment can be found at www.gbrmpa.gov.au.

Reef HQ to be powered by solar energy

The Great Barrier Reef Marine Park Authority's Reef HQ Aquarium is set to undertake one of the country's biggest business solar power projects.

Reef HQ Director Fred Nucifora said the new solar system to be installed on Reef HQ Aquarium's roof would be the second largest system of its type in Queensland.

"The solar system being installed will power all of Reef HQs electricity needs," Fred said.

"All appliances such as lights and air conditioning to the critical life support systems for the tanks will be powered by the system.

"Reef HQ Aquarium is the national education centre for the Great Barrier Reef so it is important for us to practice what we preach and by reducing our carbon footprint we are helping the Reef.

With more than 130,000 visitors to Reef HQ Aquarium each year it is a perfect opportunity to educate the public how alternative energies are viable and important to protecting our environment.

"The public will be able to see the solar panel real time monitoring system while a key

component of the project will include showcasing to the public renewable energy education displays," he said.

Under the project, a 153kw peak photovoltaic (solar) system will be installed on the 1511m² roof of Reef HQ Aquarium.

The system will produce an average of 706 kWh/day, and an estimated total of 258 MWh/yr.

This equates to 260 tonnes of carbon dioxide Reef HQ Aquarium will avoid putting into the atmosphere.

The output from the solar power system will be used to directly supply the power needs of Reef HQ Aquarium or can be fed back to the Ergon Energy electricity grid.

This project is expected to be completed by May 2012.

BRIEFS

Get your free Zoning Map for Christmas

Fishers are reminded to grab a free Zoning Map before heading out to catch a festive feast these Christmas holidays.

Marine National Park (Green) Zones are home to spectacular habitats and provide shelter for many different types of marine life and must be protected for future generations.

Get your free Zoning Map by calling the Great Barrier Reef Marine Park Authority 1800 990 177.

Special visitor for Reef HQ

Celebrity vet Dr Harry Cooper visited Townsville's Reef HQ Aquarium to film segments for Channel Seven's Better Homes and Gardens.

The famous vet spent a day filming in Reef HQ learning about the good work done to rehabilitate sick and injured turtles at the Turtle Hospital. Dr Harry and his film crew also headed down to the beach to release one of the Turtle Hospital's patients, Phil the green turtle.

Dr Harry and his team were clearly impressed with the facilities at Reef HQ and the commitment of staff to educate the public about the Great Barrier Reef.

LMAC support for Reef Guardians

A \$600 donation from the Mackay Local Marine Advisory Committee has allowed Reef Guardian school participants to become mini-scientists.

Students will now be able to calculate the amount of nutrients in fruit and vegetables and confirm the identity and purity of liquid samples (using the refractometre) while the kits (including nets, hand lenses, trays and pipettes) will allow the collection of samples.

Tourism tool to reduce carbon footprint

A new and improved tool that will allow tourism operators to take the first step in reducing their carbon footprint was recently launched on the Great Barrier Reef Marine Park Authority's (GBRMPA) website.

The Tourism Emissions Calculator allows operators to measure and monitor carbon emissions and helps operators focus their efforts on building a sustainable business.

GBRMPA Director Tourism and Recreation Mr Chris Briggs said with climate change posing one of the greatest threats to the Great Barrier Reef, the Tourism Emissions Calculator was a vital resource for tourism operators.

"The emissions calculator takes operators through a step-by-step process of calculating carbon emissions on all aspects of their operation, from their front office through to their vessel use on the water," Chris said.

"Once emissions have been calculated it becomes very clear where efforts can be focussed to reduce carbon emissions."

The Tourism Emissions Calculator uses National Greenhouse Accounts data to calculate the carbon dioxide equivalency for a range of activities.

This includes: grid electricity, diesel and petrol generators, fuel for vehicles and vessels, and LPG for cooking and heating.

Carbon dioxide is one of many greenhouse gases released into the atmosphere through natural and human activity.

Calculating the carbon dioxide equivalency allows an easy and accurate way of assessing environmental impact from emissions.

The calculator helps tourism operators focus on their carbon emissions and, through its handy comparison ability,



Tourism operators can now use the Tourism Emissions Calculator to monitor their carbon emissions

allows operators to see vessels or vehicles that may not be operating as efficiently as others.

A thriving Great Barrier Reef marine tourism industry depends on the health of the Reef. A healthy and resilient reef system has the best chance of coping with climate change stresses and pressures and is more likely to bounce back and adapt to change.

Equally, a thriving tourism industry must also be resilient and adaptable in the face of climate change impacts.

Chris said tourism operators

already using the calculator found it a very handy tool.

"The web based calculator takes operators through the process step-by-step and also has a number of useful tips and resources for operators."

The Tourism Emissions Calculator is an action arising from the Great Barrier Reef Tourism Climate Change Action Strategy 2009-2012 which provides a roadmap for a way forward and frameworks for action for the tourism industry to respond to climate change.

The calculator is available at www.emissionscalculator.gbrmpa.gov.au/tourism/

Enforcing compliance for protected areas

A commercial fishing vessel and three dories were seized for allegedly fishing in a Marine National Park (Green) Zone.

The fishing operator was detected in the Swains Reef area in early September by a surveillance aircraft from the Border Protection Command.

Great Barrier Reef Marine Park Authority (GBRMPA) Chairman Dr Russell Reichelt said most commercial operators followed the rules but the GBRMPA had a responsibility to ensure a sustainable fishing industry and the future of marine resources.

"We take seriously any illegal fishing in the Great Barrier Reef Marine Park," Russell said.

"This is a precious resource that needs to be used sustainably so future generations can use it just like we do.

"The majority of commercial fishers follow the rules and illegal behaviour is frowned upon by the broader industry.

"Illegal fishing in the Great Barrier Reef Marine Park undermines the measures to protect plants and animals and undermines the efforts of commercial fishers who do the right thing."

Russell said the operation was the result of a number of agencies working together to protect the Great Barrier Reef Marine Park.

Border Protection Command passed the surveillance information to a Queensland Police Service (QPS) vessel.

The QPS, the GBRMPA and the Queensland Parks and Wildlife Service were able to respond and intercept the vessel.

"An increase in aerial surveillance activities has resulted in detecting this and three further fishing operations reported to be

conducting illegal activities in Marine National Park Zones," Russell said.

"All matters are being fully investigated and will be referred to the Commonwealth Director of Public Prosecutions."

Penalties range from a fine to, in certain circumstances, a custodial penalty of up to three years.

Vessels involved in committing offences can also be forfeited to the Crown.

Illegal fishing can be reported to GBRMPA on (07) 4726 0510 (business hours) and (07) 3830 8246 (after hours).

Dedication to Reef rewarded

The Great Barrier Reef Marine Park Authority's Melissa Cowlshaw has won the Tor Hundloe Young Environmental Professional Award from the Environment Institute of Australia and New Zealand.

The award recognises Mel's commitment to improving management arrangements that protect the Great Barrier Reef and her impressive research and community achievements.

The marine biology PhD student developed environmental impact assessment procedures for activities in the Great Barrier Reef Marine Park.

Information released

The Great Barrier Reef Marine Park Authority (GBRMPA) will make new information available on its website as part of new Australian Government requirements promoting a pro-disclosure, open and transparent culture across agencies.

The *Freedom of Information Act* requires government agencies to develop an Information Publication Scheme and proactively publish the information to detail processes for decisions and recommendations affecting the public.

To meet Australian Government requirements the GBRMPA has:

- Published an agency plan on the external website outlining how the Information Publication Scheme will be implemented and administered
- Published specific categories of information on the website
- Given consideration to proactively publishing other government information.

The Great Barrier Reef Marine Park Authority's Information Publication Scheme is available online at www.gbrmpa.gov.au/home/ips



Students lead the way in protecting our environment

Palm Island students learn about seagrass monitoring as part of the 2011 Palm Island Future Leaders Eco Challenge

Around 1000 participants from over 100 schools took part in this year's Reef Guardian Schools Future Leaders Eco Challenge.

Great Barrier Reef Marine Park Authority (GBRMPA) Director Reef Guardians and Regional Engagement Karen Vohland said the theme for 2011's Future Leaders Eco Challenges was *'working together today, for a healthier Reef tomorrow'*.

"The Future Leaders Eco Challenge encouraged students to step up as community leaders in

sustainable living and protecting our environment," Karen said.

"The program is also aimed at promoting partnerships and building relationships between schools and regional environmental groups."

Students, with the help of program partners and their teachers, were able to complete a range of work to improve the state of their local environments.

Activities included tree planting, catchment health activities, water quality testing and biodiversity sampling were

part of the Challenges held in schools throughout Queensland from Gympie to the Torres Strait.

Each Eco Challenge day included facilitated workshops to explore the chosen environment, observe current environment health, learn current scientific processes, and skills and techniques to improve schools and local ecosystems health.

This year's Future Leaders Eco Challenges were run in conjunction with over 84 partner organisations.

Calendar of events 2011

November

1 Nov – 1 Feb 2012
Barramundi closed season begins

8 – 14
National Recycling Week

December

5 – 11
Coast Care Week

25
Reef HQ Aquarium
Townsville closed

24 Dec – 02 January 2012
Great Barrier Reef
Marine Park Authority
office closed

What can I do?

Reef fish spawning

Marine National Park (Green) Zones are key management tools of the Great Barrier Reef Marine Park Authority to protect the diversity of animals and habitat in the Marine Park.

Over summer many Reef fish varieties are spawning and this increases the importance of fishermen respecting the designated Marine National Park (Green) Zones.

Marine National Park (Green) Zones are no take areas with fishing and collecting prohibited.

Not fishing or collecting in these designated no-take areas allows these species to spawn and further bolster

stocks on the Reef for future generations.

Turtles nesting

It is a busy time for the Reef over the summer months with turtles nesting on a number of beaches.

If you find a turtle nesting remember to:

- Limit the use of light by turning torches off
- Do not disturb, touch or dig up nests or eggs

With female marine turtles taking between 13 and 50 years to reach sexual maturity it is critical they are given the best chance of survival.



A tagged flatback turtle nesting at Bare Sand digs a nest

Creature feature

Prawns

Ever wondered on Christmas Day where your delicious, fresh feast of prawns came from?

Well there is a good chance that they were sustainably caught by trawler fishermen in the Great Barrier Reef Marine Park.

Efforts by the Queensland and Australian governments and the fishing industry have substantially lowered the impact of trawling on the Great Barrier Reef:

- The overall environmental footprint is smaller through the substantial reduction in fishing effort and fleet size
- Trawling is allowed in 34 per cent of the Great Barrier Reef Marine Park and in 2005 occurred more than once a year in only six per cent
- Investment in research has significantly improved the information base for the fishery and understanding of risks
- Implementation of satellite-based vessel monitoring system enables close monitoring of the fleet's activities, resulting in major benefits for compliance and

fishery assessments

- Mandatory use of turtle excluder devices and other by-catch reduction devices has reduced the impacts on by-catch, including species of conservation concern such as loggerhead turtles and large sharks.

There are many types of prawns caught by trawl operators.

Two of the most sought after species during the festive season are brown (*penaeus*

esculentus) and grooved (*penaeus semiculcatus*) tiger prawns.

Tiger prawns can inhabit deeper waters but are mostly trawled in waters down to 20 metres from the Torres Strait to Mackay.

Brown tiger prawns reach sexual maturity at five to seven months of age at 26 mm carapace length with females producing over 300,000 eggs during spawning from July to March.

After spawning, larvae are planktonic for three weeks before settling on inshore nursery areas such as seagrass beds.

When choosing prawns this Christmas be sure to choose Australian seafood to support our fishermen who take measures to operate sustainably and protect the sustainability and biodiversity of the Great Barrier Reef.



Prawn fishermen are working hard to implement sustainable practices for the tiger prawn fishery
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