



Queensland's NRM *Rumble*

LEVERAGING

Marine Turtle Conservation project

Cape York Natural Resource Management Ltd. was founded in 2010 making it the most recently established regional NRM body in Australia.

The company has recently been working with WWF-Australia and the Northern Gulf Resource Management Group (Ghost Nets Australia Program) on an Ecosystem Based Marine Turtle Conservation Project for Cape York Peninsula. The focus of this project is to establish a holistic approach to marine turtle conservation across Cape York Peninsula with links to the region's marine turtle conservation efforts.

The project aims to build sustainable and resilient populations of marine turtles in Cape York Peninsula through protecting and improving breeding success, reducing feral animal predation and an ongoing involvement of local Indigenous communities in marine conservation.

Cape York Natural Resource Management CEO Bob Frazer said that working with WWF-Australia and the Northern Gulf Resource Management Group will ensure the best possible outcomes for turtle management on Cape York Peninsula.

"This is an important step to be taking in the preservation of the threatened turtle species in Cape York Peninsula," Mr Frazer said.

"The holistic approach to management and the collaborative relationships we are working towards will take the efforts to date and build on these to improve the conservation outcomes being achieved through improved collaboration, a clear strategic and consistent ecosystem based approach and better integration of science," he said.

The project will scope and develop a strategic conservation plan and related investment prospectus for a project that provides a holistic and ecosystem based approach to turtle conservation across Cape York Peninsula that connects with regional conservation activities and improves indigenous engagement, building on efforts undertaken to date.

Cape York provides nesting habitat considered internationally significant for the conservation of Olive Ridley (*Lepidochelys olivacea*), Flatback (*Natator depressus*), and Hawksbill (*Eretmochelys imbricata*) turtles. The area contains the world's largest nesting population of the endemic Flatback turtle, Queensland's entire nesting population of the Olive Ridley and a regionally significant nesting population of Hawksbill turtles. The eastern side of Cape York also provides the world's largest nesting population of Green turtles (*Chelonia mydas*). All species can migrate thousands of kilometres to nest in this area.

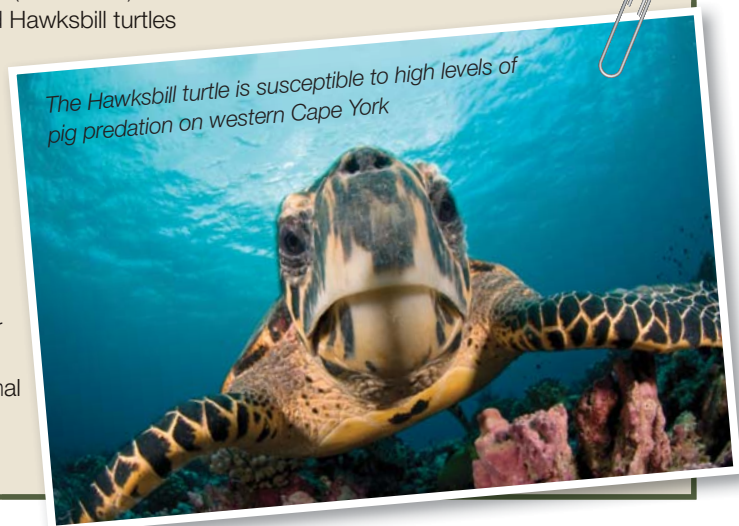
Cape York also supports Australia's largest concentration of feral pigs (*Sus scrofa*). Olive Ridley, Flatback and Hawksbill turtles nesting on western Cape York are susceptible to high levels of pig predation, impacting on the nesting populations. It has been estimated (Limpus et al. 1993) that loss of egg clutches from feral pigs on Cape York south of the Jardine River was approaching 90%. Due to high levels of animal predation on nests, there is real concern amongst

experts and community members that all three species will become locally extinct within 25-30 years.

Turtle conservation on Cape York Peninsula to date has focused on the west coast through the Cape York Turtle Nest Monitoring Program, now in its sixth year. Conservation efforts on the east coast have focused on data collection and monitoring.

The Cape York Turtle Nest Monitoring program recently went through an independent review, from this review it was clear that there is a need for holistic, well coordinated and adequately resourced conservation efforts towards marine turtles across Cape York Peninsula, something that has been lacking to date.

Working in partnership with WWF-Australia and Northern Gulf Resource Management Group will ensure the holistic approach to turtle conservation management will bring about the best possible outcomes for these endangered species, including additional opportunities to leverage further community investment.



Pennies for Pigs, Bucks for Boars



Feral pigs cause millions of dollars worth of damage to crops every year

Terrain's Integrated Feral Pig Programme (IFPP) brings together industry, local government and Landholders to combat feral pigs in Tully and Innisfail. Terrain has facilitated negotiations of financial contributions from each of these partners over the life of the project. The project works by pooling individual contributions from landholders and uses these contributions to leverage matching funding from Local Government, State Agencies and the Federal Government.

Feral Pigs are listed as a Class 2 pest, which means that it is the responsibility of the whole community including local government as well as landholders to take responsibility for the management of these pest animals.

Feral pigs do not respect property boundaries and in many cases effective management is beyond the capacity of individual landholders. The IFPP is a service, which Terrain provides to help the community administer their responsibility. The financial contributions from project partners promote ownership and sharing of responsibility of feral pig management across the project area. In fact, without these funding contributions the programme would not be able to operate at all and the task of feral pig control would fall on the individual alone.

The extent of the contribution differs between industry groups and landholders and these differences are often based on property size within the programme area and also reflect the scale of feral pig damage to that property. For instance, according to the Pest Data Management Survey conducted by BSES, it costs an estimated \$35 per tonne of sugar cane lost due to damage from feral pigs and there are approximately 75 tonnes of sugar cane grown per hectare. In 2010 it was estimated that 600 hectares were lost in the South Johnstone Mill area, which adds up to over \$1million in damage. Similarly in the banana industry, it costs an estimated \$2.50 in establishment costs per banana tree that is destroyed due to pigs, with up to 1400 banana trees planted per hectare and 50% of many banana plantations being destroyed due to feral pigs.

The end result is that the costs of pig damage are far greater than the cost of contributing to the IFPP and with all parts of the community contributing to the programme the responsibility of feral pig management is owned and results are expected.

Specialist advice helps farmer tackle erosion disaster

When floodwaters in the Condamine catchment broke a creek bank in early 2011, one Darling Downs farmer lost an estimated 34,000 tonnes of soil as it washed away from his 35 hectare cropping paddock. With water 1 metre deep in some areas, up to 75 centimetres of soil was lost in the worst affected areas.

Insufficient groundcover in the affected paddock was a significant contributing factor to the erosion event and while the extent of the erosion was severe, it could have been worse if it had not been for sorghum stubble in a nearby paddock, which protected the farmer's land from the full force of the water.

To assist the farmer to improve ground cover and soil management, to mitigate future erosion events, Condamine Alliance engaged farming system specialist, Precision Agriculture, to help the farmer tackle the impacts of the erosion. Precision Agriculture used global positioning system survey data to calculate the soil loss and identify the worst affected areas.

It was recommended that the farmer stop cultivation in the impacted paddock and plant only deep-rooted, high-cover crops such as sorghum, corn and wheat to reduce the impacts of water-logging and prevent further erosion. Where soil could not be adequately recovered, manures and composts would help recover the soil structure and increase soil carbon.



It is estimated that 34 000 tonnes of soil was washed away from this 35 hectare cropping paddock when floodwaters broke through a creek bank in early 2011

The specialist advice was crucial in helping the farmer recover from the disaster and put in place measures to prevent it happening again.

Assistance for the impacted farmer forms part of a project focused on addressing strategic management practices on priority cropping and grazing lands in the Condamine Catchment. Project achievements to date have been significant and include:

- 40 grazing and 30 cropping farmers across 7830 hectares of cropping land with improved practices for management of ground cover and soil carbon – supported by on-farm/site assessments and advice by technical and farming system specialists.
- An additional 100 farmers prepared for practice change through improved knowledge and skills for managing ground cover and soil carbon.
- 120 maps cropping and grazing farmers provided with maps generated from post-flood event satellite imagery to support land management planning.
- Delivery partnerships developed with 8 specialist agricultural and agri-business service providers to deliver on-ground and skills and knowledge outcomes.

Through the implementation of this project, the impacted Darling Downs farmer and other land managers across the catchment now have the tools and knowledge to prevent major erosion episodes on their properties and the ability to adapt their practices to address sustainability and productivity concerns in the face of changing climatic conditions.

\$450,000 – Q2 Coasts and Country

Additional funds leveraged

\$6,700 – Precision Agriculture technical advice and support

\$202,703 – landholder contributions (implementation and practice change)

The Ghost Nets Legacy

Since 2004, under the umbrella of Northern Gulf Resource Management Group, GhostNets Australia has been working hand in hand with Indigenous rangers from the Torres Strait and Gulf of Carpentaria through to the Kimberley, to remove discarded fishing nets – known as ghost nets – from Australia's otherwise pristine northern shores. Ghost nets are extremely destructive, taking a heavy toll on marine animals, particularly turtles. Over the years many tonnes of net have been pulled off the beaches and hence many turtles saved.

The programme has been so successful that the problem of what to do with the

A basket woven from ghost nets



collected nets is a mounting one. In 2006 the GhostNets Australia team organized a competition, "Design for a Sea Change", seeking uses for the recovered nets. The range of entries was inspiring with the winning entry being a guitar strap made by Chantal Cordey of Sydney. Chantal then workshopped her design technique in the Torres Straits and it wasn't long before entrepreneurial artists from Hammond Island were producing and selling bags made from ghost nets.

Inspired by the artistic merits of the bags through the support from Arts Queensland, GhostNets Australia explored the possibility of making exhibition quality art works from ghost nets. Coordinator of GhostNets Australia, Riki Gunn said that 'the opportunity to leverage support from outside of the typical NRM audience is very exciting'. The first exhibition at the inaugural Cairns Indigenous Art Fair in 2009 launched ghost net art works into the art world with the purchase of Mavis Ngallametta's (from Aurukun) basket by prominent British art dealer Rebecca Hossack. Since then, ghost net art works have been purchased by leading institutions such as the National Gallery of Australia and the British Museum.



Zoe De Jersey from Mapoon holding the 'bush turkey' sculpture which was sold by a prominent Melbourne art gallery

The GhostNets Australia team are planning further exhibitions creating increased awareness and knowledge raising as well as a potential income stream for the programme and the artists. The importance of recycling and re-using something which is very difficult to dispose of should not be overlooked either, creating value from something regarded as rubbish is very rewarding. These and future art works are creating a ghost nets legacy, for as long as these beautiful pieces are showcased throughout the world, we will be reminded of the how important it is that our seas and coasts remain healthy for future generations.

Making less water run further

Two of the most important aspects of any successful grazing enterprise, are managing water and groundcover. Producers in south west Queensland are working in partnership with South West NRM to conserve surface and ground water resources, establish engineered distribution methods for quality water, implement rotational grazing and use new technology to streamline their operations.

Landholders at Durella, Holly Downs and Biddenham are some of the producers taking steps to improve the way they farm. They are some of the progressive producers changing the way they graze to ensure holistic management of their enterprises and good outcomes for sustainable natural resource management.

At Biddenham, a Property Management Plan has been developed which aims to increase ground cover, biodiversity and pasture quality and quantity through increased pasture utilisation and rotational grazing. The plan has identified several large paddocks, which are inefficiently grazed by stock. Re-fencing to land type, and reducing acreage to smaller paddocks has

helped to more easily manage stock and produce a greater total amount of ground cover. This results in less runoff and more efficient use of pasture.

At Holly Downs, telemetric watering points have been expanded across the property, allowing managers to check water levels and turn pumps on and off without leaving the property office. This saves thousands of dollars in labour, fuel and plant hire and increases water efficiency. Durella's cattle don't graze the entire property due to long distances between waters. Spreading watering points every 3 kilometres has encouraged cattle to more evenly graze pastures. Now, with 8 watering points across five paddocks, rotational grazing has been improved.

Monitoring regrowth at Biddenham



\$15,430 – Q2 Coasts and Country

Additional funds leveraged

\$15,430 – Australian Government funds

\$86,082 – landholder contributions (labour, machinery hire and lease, electronic field equipment, fencing, poly pip, troughs and pipe fittings)



QMDC delivers on-ground results

Landholders across the Queensland Murray-Darling Basin have contributed more than \$350,000 to on-ground works as part of the Queensland Murray-Darling Committee's sub-catchment planning process in recent years.

QMDC Chief Executive Officer Geoff Penton said sub-catchment planning encouraged landholders to address land, water, vegetation and other natural resource management (NRM) issues at a landscape scale.

"Sub-catchment planning is a local community process whereby we can leverage funding, for example from the Queensland Government's Q2 Coasts and Country program, into significant on-ground outcomes," he said.

"Between June 2009 and June 2011, \$95,000 from Q2 was directed to riverine outcomes as part of sub-catchment planning.

"During that same period, the total value of sub-catchment planning expenditure was close to \$890,000."

Mr Penton said along with funding from the Queensland Government and the Australian Government's Caring for our Country program, landholders contributed more than \$350,000 worth of in-kind support.

"These funds were used to protect the riverine environment, improve biodiversity, boost water quality, protect habitat and improve native vegetation cover across a number of properties, not just on one site.

"QMDC has supported sub-catchment planning for more than a decade now because it has a demonstrated impact on the adoption and implementation of improved natural resource management and production practices."

Mr Penton said plans were developed by groups of landholders to allow them to address concerns or challenges at a landscape scale for maximum benefit. Landholders are then supported by QMDC technical staff and Landcare Coordinators during implementation.

"The NRM activities in the plans consider environmental, social and production

Landholders contribute 60% of project costs when establishing deep-rooted permanent pastures



Landholders attend a sub-catchment planning field day held at Samari Plains in the QMDC region

elements and landholders contribute to the project funding," he said.

"For example, when it comes to protecting the riverine environment of the Queensland Murray-Darling Basin, we encourage landholders to both fence off riparian zones and install off-stream watering points. Done as part of sub-catchment planning, landholders contribute 30% of project costs.

"When it comes to establishing deep-rooted permanent pastures to mitigate salinity risk as part of sub-catchment planning, landholders contribute 60% of the project costs or for controlling feral animals or weeds, they contribute 70% of the costs."

QMDC is a natural resource management organisation supported through funding from the Queensland Government's Q2 Coasts and Country and the Australian Governments Caring for our Country programs. QMDC supports communities within the Queensland Murray-Darling Basin to sustainably manage their natural resources. Visit www.qmdc.org.au for more information.



To find out more about natural resource management projects or contact details for your regional natural resource management group, visit

the Queensland Regional NRM Groups Collective website - www.rgc.org.au or ph 07 4699 5000.

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