



It's hard to believe we are already a quarter of the way through the year. Cape York NRM is in the midst of putting the final touches on the Cape York Atlas. The Atlas is an interactive suite of websites, designed to

make planning for natural resource management and for the challenges of climate change, accessible to the people of Cape York. Our launch is in Cairns on Wednesday 27 April, to coincide with the Cape York NRM board meeting. RSVP's can be made at rsvp@ capeyorknrm.com.au or 1300 132 262. Following the

launch our staff and Directors will be out and about, talking with you about how you can use the sites for planning on your Country and property.

I recently attended the 'Creating a Modern Outback' Forum in Canberra, hosted by Rangelands Alliance and Pew Charitable Trusts. It was a fantastic opportunity to meet with key 'thinkers and doers' for the regional and remote parts of Australia. Some of the key points from the meeting included:

- 'One size does not fit all'. Remote and urban are very different and government departments acknowledged they need to start be available from our website: www. thinking about them differently.
- Without core services and infrastructure the people in remote Australia will not prioritise land management and the environment.
- There needs to be a change in thinking, particularly by government in how service delivery occurs in remote Australia.
- Be opportunistic! We are remote and need to take advantage of that, not see it as a negative but make it an opportunity.

Prior to the forum. I was honoured to be in Brisbane to sign the Reef Alliance MOU which will see agricultural, grazing, conservation and NRM bodies working together to care for the long-term health

of the Great Barrier Reef. This is a massive step forward in protecting the Reef for future generations.

Speaking of which, we are proud to have received funding from the Australian Government to work with land managers to reduce the impacts of gully erosion. And the final draft of Eastern Cape York Water Quality Improvement Plan will soon be released for comment. It will capeyorknrm.com.au.

We've received Queensland Government funding for Thoughtful Travelling Cape York, and Cape Create – two projects aimed at raising awareness of the impacts of rubbish, and changing littering and illegal dumping behaviours. The 2016 Indigenous Fire Workshop will be held on Yalanji Nyungkul Country.

This is just a snapshot of the year to come. We look forward to working with you.

Emma Jackson Chairperson **Primary Industries Sector Director**  Issue 26 Autumn 2016



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Within this newsletter **Cape York Natural Resource Management is** shortened to Cape York NRM

## Port Stewart Water Supply Project

With an uncertain climate future, water is a valuable commodity – so a reliable water supply is more important than ever. And when you live in towns and cities – it's an expectation that clean, reliable water is delivered to your house daily.

But anyone who lives in rural and remote areas knows that the delivery of clean water at the flick of a tap is only as reliable as the creek or bore it comes from, and the system that pumps it.

The Cape community of Port Stewart has had to 'make do' for the past ten years. The area has had problems with water as there are no viable bores, however the Stewart River provides a reliable source. Since Lama Lama people have returned to their country, the river has once again become the main source of fresh water, however, like many rivers in the Cape the Stewart dries out during the winter and spring months.

But the Stewart also hides a secret. Beneath its sands lies a large lagoon, and the riverbed is divided by a rock bar that holds back the salt waters of Princess Charlotte Bay and prevents the fresh waters of the Stewart from becoming saline. It's from this secret lagoon that the families and rangers from Mojeeba (Top Camp) and Theethinji (Bottom Camp) draw their water.

In 2001 a water system was installed near Top Camp under ATSIC's National Aboriginal Health Strategy. It worked well for a few years, but then suffered some problems. Then with the huge flood from severe Tropical Cyclone Monica in 2006, the water intake structure disappeared. Residents and visitors have been 'making do' ever since.

The old system worked by digging up the sand after the river dried out, and placing a large concrete cylinder deep in the middle of the sand. The cylinder kept the sand out and held the water inside. The water was then pumped to a holding tank near Top Camp. The current 'system' involves pumping from a 44 gallon drum (with its ends cut off). The drum is dug into the sands by hand to create a makeshift well. The current system has the potential for serious contamination issues and health risks.

Operations Manager for Yintingga Aboriginal Corporation's Lama Lama Rangers, Gavin Bassani, said that Port Stewart currently relies on a Honda firefighting pump to pump water from the drum.

"We have to physically pump every two days so that we don't run out of water. In addition to our community building and Ranger base, there are three houses at Top Camp and three houses at Bottom Camp. The Oz Tours Safari Camp also runs from Top Camp" he said.

"Every year when the water dries out we need to hire an excavator to come and dig out a well. The excavator digs a hole of up to two metres deep and 10 metres in diameter. EVERY year. We then have to fence the water supply to keep cattle and wallabies out. A separate well has to be dug for the animals.

"We need a new system" Gavin said.

#### A sustainable solution

Yintingga Aboriginal Corporation has been working with Centre of Appropriate Technology (CAT) and Arup on infrastructure projects since they moved back to Country at Silver Plains and Port Stewart, so form an obvious partnership for the new water intake system for the Stewart River.

"People should have a reliable water source, wherever they live" said Andre Grant, CAT's Queensland Manager. "We were tired of reports being written about the water situation, so decided it was time to do something.





Above: Gavin Bassani and Sam Koci survey the pump site

"In 2014 we brought an excavator to site and finally found the old water intake structure. We tried to salvage the old system but it was damaged beyond repair" Andre said.

Lama Lama and CAT decided to cost a new reliable design that could meet drinking water guidelines – and knowing how the river works, Lama Lama had clear ideas on a better way to do it.

"We tried several different funding options – everyone says it is important, but no-one was able to follow through" Andre said.

"It's a Catch 22: we can't get funding without knowing how much it costs to build. But we need to design it to know how to build it – but can't get funding for design" he said.

So Lama Lama and CAT contacted Engineers Without Borders and before long Arup volunteered its engineers to help for free.

With Gavin's support, Arup Engineer Sam Koci and Andre met with the community and did extensive surveys on-site. They met experts and came up with a detailed design for a new structure. Lama Lama and CAT now have detailed cost estimates, and can seek funding for the project. Between them, CAT and Arup have already committed around \$60 000 of inkind support.

"We need a new water source for a healthy community" Gavin said. "We also need fresh, reliable water so we can develop economic opportunities, like the caravan park and camping grounds we have planned" he said.

The newly designed water system is solar-powered and operates automatically and will kick in as soon as water storage levels drop. And importantly, when the floods come through it won't be affected by the force of the waters, as it will be below the river bed.

#### Reliable relationships

Gavin said that Lama Lama has been working with Arup and CAT for years.



Above: Andre Grant looking for the old intake system

"This project was a natural progression. These partnerships are important because you need the expertise of people who get the specifics of what is required - socially and economically" said Gavin.

"We need the right system in place or it's just a waste of money otherwise. It's really important to be working with someone who knows the area and has experience working on Cape York, and understands both the conditions of Cape York and what the individual community requirements are. Arup and CAT have been there since day dot basically. They understand what is required and they are respectful of our Country and of culture" Gavin said.

Andre said the project needs to be funded quickly, so it can be completed this dry season.

"We need to excavate in the late dry season, when the river is dry, and before the wet season starts. It's a very small window to get the job completed" he said.

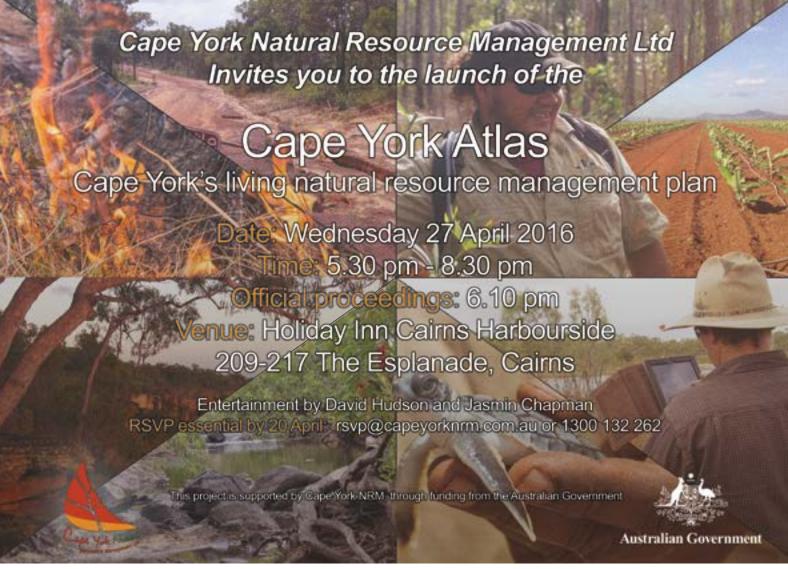
"CAT is all about doing stuff better out bush, and it's great to have opportunities to work with engineering companies on small projects like this. It would not be possible to achieve these outcomes without the support of Arup through Engineers Without Borders" Andre said.

Gavin said that the new system will take a lot of pressure off the community.

"Hopefully we'll have it all done before it gets too dry and we run out of water again – and have it ready for the next wet season" said Gavin.

The new design is more appropriate for the river system and is less vulnerable to climate and weather impacts. For more information about the project contact Andre Grant andre.grant@icat.org.au.

The Centre for Appropriate Technology Ltd (CAT) is an Aboriginal and Torres Strait islander owned not-forprofit company. CAT's involvement in this project is made possible with thanks to John Villiers Trust.



### Welcome to a new world of planning: Cape York's Atlas, alive and in your hands

On 27 April in Cairns, Cape York NRM will launch a dynamic natural resource management plan that anticipates, and allows for, change.

The Atlas consists of nine independent websites that work together to collect and share information about land and sea management on Cape York. It provides tools to land managers to plan across scales, improve and target on-ground management, and inform management actions.

Cape York NRM <a href="www.capeyorknrm.com.au">www.capeyorknrm.com.au</a> is the main site for information about the organisation, what it does, its projects, and its partners. Information about government investment can be found here, along with information on the social, cultural and environmental values of Cape York.

Partner programmes <a href="http://www.capeyorknrm.com.au/partners">http://www.capeyorknrm.com.au/partners</a> is a sub-site of the main Cape York

NRM site. Cape York NRM has contributed to the development of partnerships and initiatives that are showcased on this site.

One such initiative is **The Living Knowledge** 

Place <a href="http://www.livingknowledgeplace.com.">http://www.livingknowledgeplace.com.</a>
<a href="mailto:au/">au/</a>, home to a collection of films and educational resources sharing Traditional Knowledge from across Australia. The Living Knowledge Place has its own entry point on the Atlas and has been developed by Mulong.

Land Manager <a href="http://landmanager.capeyorknrm.com.au/">http://landmanager.capeyorknrm.com.au/</a> is a collection of case-studies, stories and tools, providing information about managing Cape York's land and sea country. The site is primarily of interest to graziers, horticulturalists, rangers, Land Trusts, researchers and anyone who works on the land and sea. It is a place where Cape York people are encouraged to tell their stories, and share their

knowledge about land management practices that work (or don't work) on the Cape. It also provides a place where service providers who regularly work on the Cape can promote their services.

Maps & Data <a href="http://maps.capeyorknrm.com.">http://maps.capeyorknrm.com.</a>
<a href="https://maps.capeyorknrm.com.">au/</a> powers most of the repository and spatial data management for the Atlas websites. Items such as maps, documents and data are referenced as resources on this site. NRM groups, agencies, and community members who have an interest in leveraging these data holdings for further public-good, and for planning their on-ground NRM projects, will find this site useful.

Carbon, Ecosystems and Biodiversity <a href="http://maps.capeyorknrm.com.au/carbon">http://maps.capeyorknrm.com.au/carbon</a> is a subsite of Maps & Data. It is a mapping tool for carbon abatement, savanna burning, threatened species distribution and hotspots, and ecosystem service values.

Fire on the Cape <a href="http://fire.capeyorknrm.com.">http://fire.capeyorknrm.com.</a>
<a href="http://fire.capeyorknrm.com.">au/</a> is a collection of knowledge, tools and resources for best-practice fire management for Cape York. It incorporates principles from Traditional Knowledge holders and western fire management practice. The site links with <a href="https://carbon.cosystems">Carbon.cosystems</a> and <a href="https://carbon.cosystems">Biodiversity</a>; to Northern Fire Manager, which hosts <a href="https://www.northern.com.com/NAFI">Northern</a>
<a href="https://www.northern.com.com/NAFI">Australia Fire Information</a> (NAFI); and <a href="https://cape.york.cape.york.com/Cape.york.com/NAFI">Cape.york.cape.

Water Quality <a href="http://waterquality.capeyorknrm.com.au/">http://waterquality.capeyorknrm.com.au/</a> is a site all about water on Cape York. It incorporates the East Coast Water Quality Improvement Plan, and other information about looking after Cape York's precious water resources.

Adapt: Climate Stories <a href="http://climate.capeyorknrm.com.au/">http://climate.capeyorknrm.com.au/</a> is a collection of films, stories and resources about Climate Change on Cape York, throughout Australia, and across the World. Cape York NRM is proud to have produced a series of films from across Cape York that share the climate change concerns of Traditional Owners. The site is also home to resources from CSIRO, James Cook University and the Bureau of Meteorology, and the products from Wet Tropics Cluster Planning for Climate Change Stream 2 research project. Stream 2 is a National Science Initiative that developed information and tools to support NRM planning for

Climate Change.

NRM Plan <a href="http://plan.capeyorknrm.com.au/">http://plan.capeyorknrm.com.au/</a> pulls the Atlas together into a plan and provides a framework for natural resource management planning on Cape York. The site documents Cape York's planning history, and shows the process and principles Cape York NRM uses to plan. It lays out options for future land management, especially in the face of climate change impacts. It is informed by local monitoring and land management practices, the best and most-current regional and national science, and by Traditional Knowledge. Within this site, eight adaptation pathways identify ways to work towards achieving eight NRM targets. The pathways and targets were identified through years of extensive engagement with land and sea managers from across Cape York. The site also hosts Cape York NRM's current Regional Investment Strategy. Cape York NRM and the Cape York community are already working on projects that assist in reaching the NRM plan targets. This site highlights these projects.

Who.Plans.Here. <a href="http://whoplanshere.capeyorknrm.com.au/">http://whoplanshere.capeyorknrm.com.au/</a> is a tool to locate plans that are in place for Cape York localities. Cape York NRM has over 50 plans available on the site (with many more to come). Plans can be located by searching a selected area on a Cape York map. Plans that Cape York NRM have permission to share will be displayed, and will include either the option to download or details to enable you to contact the Plan owner. This site gives voice to the past and current planning on Cape York across multiple scales.

Cape York NRM has used a new approach to planning called *Planning By Doing*. This approach incorporates the multiple cycles of planning, implementing, monitoring, adapting and evaluating that occur with on-ground works as they happen. It acknowledges that sometimes things happen that are not expected (eg. multiple natural disasters, accelerated impacts of a changing climate), and that planning systems need to be responsive to adapt to those unforeseen circumstances. This new approach to planning is how Cape York NRM will respond and adapt, and take on new information as planning happens.

Using the *Planning By Doing* methodology and the ATLAS framework, Cape York NRM will continue to update, renew and evolve the Atlas and Cape York NRM plan into the future.

To get involved, or add your voice to the Cape York Atlas, contact admin@capeyorknrm.com.au or call 1300 132 262.

## What's new at NAFJ?

Submitted by Cape York Sustainable Futures



A new hotspot data feed from Landgate WA is now available on Northern Australia Fire Information (NAFI). These data are from the new Visible Infrared Imagaing Radiometer Suite sensor on the National Polar-orbiting Partnership satellite.

Landgate has applied a new algorithm to the imagery so that 375 m resolution hot-spots can be produced - this is a big improvement given the normal hot-spots on NAFI are around 1 km resolution. With this improved spatial resolution, these new hot-spots are tuned to pick up smaller fires. There may be a slightly higher occurrence of false positives than with the other hotspots from the MODIS sensor, but Landgate have spent some time tuning the algorithm, so hopefully there won't be too many.

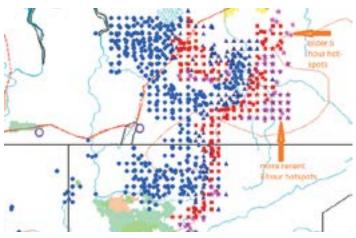
Feedback on this new data feed would be appreciated - if you notice that smaller fires are being picked up and there are many more false positives than usual, please get in touch via: NAFI@cdu.edu.au

#### **Three-hourly Hotspot Display**

NAFI2 (138.80.128.151/nafi2) is the backup site. It now displays the most recent hotspots in dark purple - those detected within the last three hours. The next most recent hotspots are displayed in pink - those detected within the past three to six hours.

This should allow hot-spots detected by the most recent satellite passes (eg. those detected in the afternoon) to be quickly distinguished from those detected by earlier/older passes (eg. in the morning).

Feedback on this new display is welcome. If users like this new feature, it will be transferred to the primary NAFI site.



#### **Measuring Tool on NAFI**

A measuring tool has been added to NAFI. Available under 'More Tools', you can measure both distance and area between points on the map interface. This is useful when planning flight paths for early season burning work.

### Northern Australia Environmental Resources Hub: New Website

Knowledge gleaned from over a decade of environmental research in northern Australia has been brought together in a new website.



The Northern Australia Environmental Research Portal (<a href="www.nespnorthern.edu.au">www.nespnorthern.edu.au</a>) combines environmental knowledge from the Tropical Rivers and Coastal Knowledge (TRaCK) consortium, the Northern Australia Hub and the newly-established Northern Australia Environmental Resources Hub.

Research undertaken through these various programs has led to a dramatic increase in the knowledge and evidence available to underpin improved planning, management and policy in northern Australia.

Website users can keep up to date on the latest publications, events and news related to individual projects or navigate through topics and regions of interest, such as Cape York.

### Bonny Glen Mud Springs Integrated Pest Management

by Barb Rosendale-Collie

### Bonny Glen Station is a pastoral lease operated by Traditional Owners, Gummi Junga Aboriginal Corporation.

The Bonny Glen Mud Springs Integrated Pest Management Project was initiated by Gummi Junga with funding from the Queensland Indigenous Land and Sea Grant Program, through the Department of Environment and Heritage Protection. Of great strength to the project were the supporting networks including the Cape York NRM staff and the Regional Landcare Facilitator, and the training provided through Cape York Weeds and Feral Animals Inc.

With a history of extensive mining activities and periods of drought and overgrazing, land management on Bonny Glen presents a challenge. The project involved an integrated approach to land management by using a range of methods including feral animal management, fire management and weed control. The project also included the fencing of Mud Springs, a cultural site, to ease the impacts from wild stock, horses and feral pigs.

Cultural heritage preservation and land management of Traditional Country is valued by Gummi Junga, and the training and partnerships formed during the project will have lasting benefits. By combining traditional knowledge with contemporary methods, the aim is to work towards the betterment of the environmental and cultural health of Bonny Glen, while fulfilling legislative requirements for Looking After Country.





Above: David Collie entering data into Fulcrum Below: Barb Rosendale-Collie and Robert Rosendale (left) and Eric Rosendale (right) undertaking weed control. Photos supplied.



### Upgrades to campgrounds at Cullen Point

by Lyndal Scobell

The Mapoon Rangers are upgrading the Cullen Point Campground with designated camping sites in an effort to better care for the environment.

Ranger Nathan Newley said that the dune systems around Cullen Point have been damaged in the past because people were not staying on tracks and were continually making new campsites, which is damaging vegetation and important cultural sites.

"We hope that by allocating sites, visitors to Cullen Point will help us to take better care of this special place" Nathan said.

Cullen Point will have 12 clearly identified sites, and areas will be sectioned off using bollards (posts) made from recycled plastic.

When the site reopens for the 2016 dry season, a maximum of 70 people will be allowed to camp at Cullen Point at any one time, with five people allowed per site.

Camping permits are available from Mapoon General Store and cost \$5 per person per night plus \$30 per vehicle per week.

#### A unique solution to a persistent problem

Every year over six tonnes of rubbish are removed from Mapoon's Back Beach. 95% of the rubbish collected is marine debris, most of which originates overseas.

Tangaroa Blue holds an annual clean-up in conjunction with Mapoon Aboriginal Shire Council, Mapoon Land and Sea Rangers, the Mapoon school, and volunteers. Much of the plastic collected is diverted from land fill by sending it south for recycling.

The bollards - used at Mapoon for protecting vegetation, cultural sites and dunes - are sourced from the same company that takes the plastic for recycling.

The tips below will help visitors to the area reduce the impacts of rubbish in Mapoon.

- 1. Use reusable containers for food and drinks.
- 2. Minimise (or exclude) use of single use plastics.
- 3. Take rubbish out on departure.
- 4. Use the Mapoon Waste Transfer station located just south of Mapoon.
- 5. Collect plastics from the beach in a recycling bag available from the Mapoon Land and Sea Ranger base.

Back Beach Clean-up will be held 23-27 July. To get involved or to find out more contact Tangaroa Blue info@tangaroablue.org





### WHAT AM I?

by Clare Blackman

Lining the boundaries, standing strong yet wary

Will the enemy try to push past?

We line up one by one, all strength is gained by our numbers

We hold ourselves strong and proud although only three foot tall

As the people come we firm up our frames and give the clear impression that we are impenetrable.

We hold our positions never moving, our presence defining.

Should the enemy push and smash away at us we will stand firm with our legs firmly planted in the ground.

We are sunburnt, rained on and cold in winter but our role remains vigilant.

We all breathe a sigh by years end, our shoulders slump and our facade faded.
We wait for our friends...The Rangers...
They will make us new and proud to stand guard for another year.

Bringing fire back to Yalanji Nyungkul country
Baya wundi baja Yalanjinga Nyungkul
warra nga bubungu

Register Now at www.careyorkfire.com au
22/08/16 - 25/08/16

2016

Indigenous Fire Workshop

Hosted by Yalanji Nyungkul Warra

Answer...A bollard

# Countryman caring for Country

There's a lot of work to do in the Napranum Ranger program this year, and new Coordinator, Phillip Mango is raring to go.

Following several changes in leadership in recent years, Phillip is now taking the role of Ranger Coordinator, and brings over 10 years of experience as a ranger to the job.

Phillip, 28, grew up in Kowanyama.

"I've been a ranger in Napranum and Kowanyama, and have been with Napranum now for about three and a half years" Phillip said.

"What drew me to be a ranger was Country, working with and listening to Old People, and learning and understanding culture. I believe it's our job as traditional people to look after our country" Phillip said.

The rangers have a busy year ahead.

"We have already done a lot of weed spraying this year – for leucaena, sicklepod, Singapore daisy and snakeweed. And we've got a lots of things to get back on track with" Phillip said.

"We'll be doing shorebird monitoring, weed control, visitor management, recording of cultural knowledge, mapping, monitoring of the northern quoll, beach clean-ups, seagrass monitoring, getting the junior rangers program up and running, feral animal control and our turtle program – there's a lot to be done."

Visitor management is an area where Phillip believes more work is needed. Pennefather Beach and Billy's Lagoon are areas of high visitation, both by Weipa locals and by tourists.

"There seems to be a lack of respect for Country and for people of Napranum. At Penne, people have been driving all over the sand dunes, and not knowing the significance of them. We've once found remains that are over 4000 years old in the dunes near Duyfken Point. There are burial grounds and cultural sites all through the dunes" Phillip said.

"We as rangers want to educate people – by putting up signs making posters and handing out fliers talking to the public. And with the Traditional Owners we would like to meet with Rio Tinto, Goodline, Carpentaria Contracting and other Weipa businesses.

"I know tourists drive straight past Napranum and seem to get misinformation in Weipa about camping – 'you don't have to pay for permits - the rangers will meet you out there' for example.

"There's a lot of loose ends to tie up with tourism. It



Above: New Napranum Ranger Coordinator, Phillip Mango could be part of this role to bring people together and have those conversations" Phillip said.

"I want this ranger program be around for a very long time, and to go forward. I just want it to be successful, really. It will take time of course, but we will get there." he said.

Robbie Morris, Chairperson of the Western Cape Turtle Threat Abatement Alliance said it was great to see Phillip step into the coordinator role in Napranum.

"Phillip has been involved with WCTTAA since the Alliance was formed. We look forward to continuing our work together to improve outcomes for nesting marine turtles on the beaches of western Cape York" Robbie said.

Phillip said that while a career as a ranger was the right choice for him, it wasn't for everyone.

"You've got to have heart; you've got to believe in yourself. You have to believe in your culture and you've got to be strong and passionate about what you do. You can't just rock up here without heart – it's not as easy as it seems; there are lots things that you don't want to do but that has to be done if you want to look after your country for future generations. You've got to have heart, you've got to have spirit" Phillip said.

"I feel proud to be working on Country, I feel proud of who I am and where I come from. It's good to be home and have that connection" he said.

For permits to camp, contact Napranum Aboriginal Shire Council (07) 4090 5600 or email: reception@napranum.qld.gov.au or call into the Council office at 412 Moun-Ding Street Napranum.

### Lama Lama Junior Rangers visit Grubb Reef

by Mikayla Down



On the 24 September 2015 the Lama Lama Junior Rangers were all excited to board the Reef Connection charter boat, The Boss, on a day out on the waters to Grubb Reef as part of the Lama Lama TUMRA Cultural Heritage program.

This was the first time to Grubb Reef for everyone, including some Elders like Uncle Keith and Uncle Jimmy. Also on board was Professor Bruce Rigsby, his wife Barbara and grandson Jesse.

On the way out to the reef the Junior Rangers did some activities on mangroves, looking at both low and high tide, and at what marine animals you might find amongst the mangroves. It was the first time using the new Lama Lama educational resources, developed in a partnership between the Lama Lama Rangers and Jabiru Environmental, and supported by the Queensland Governments Everyday Environment program, the Great Barrier Reef Marine Park Authority

and the Australian Governments Working on Country program.

These activities proved to be very good for all the kids involved - even one of the crew members' little girl by the name of Skye joined in.

After doing the mangrove activity the kids all ventured out on to the deck where Micky, Byron & Lhere spotted a pod of dolphins coming towards the boat, which the kids got very excited about.

After lunch everyone went over to the sandbar at Grubb Reef where the kids swam in the nice clear water, some of the boys went diving for crayfish and spearing in the shallow water of the reef, while the rest of us sat on the sand bar and enjoyed the beautiful outer reef scenery of Princess Charlotte Bay.

As can be seen from the photos, the Junior Rangers had a really good time. *Photos supplied.* 





### **Innovation blooms at Kureen Farming**

by Lyndal Scobell



## There is something about being a farmer in the Lakeland district which inspires innovation. Perhaps there's something in the soil...

Paul Inderbitzin co-manages Kureen Farming at Lakeland with his brother Martin and dad Tom. The farm, which the family has been running for eight years, is owned by Tom and his wife Trish. The family has been farming bananas independently at Lakeland for six years, with 60 hectares of bananas currently under production.

But Kureen Farming is not your average banana farm.

The Inderbitzin's have invested heavily in sustainable farming practices using bio-fertiliser (bio-fert) and compost to improve the soil, closely monitoring water inputs with technology, and using solar power to reduce the farm's packing shed power bill.

"At the core of our business, we want to grow good, healthy food" co-manager, Paul said.

"We are focused on the health of the soil. We believe that building soil health results in healthy crops for us to harvest nutritious, quality produce" he said.

"We attended a Máshumus course on bio-fertiliser production and decided to begin making bio-fert using the principles learnt at this course.

"Initially, we travelled to Mexico to learn from the ground up" Paul said. "But we have since found consistency an issue and now use a more consistent base biology from Townsville that we can multiply."

Bio-fertilisers are fermented fertilisers that use a

fermentation process to multiply microbes. When applied, the microbes will digest fertiliser to make it more available for plant uptake. This in turn reduces fertiliser leaching. Bio-fertilisers nourish the plant and the soil, allowing the soil to regenerate.

Kureen farming produces the bio-fert in large tanks in the shed (this process takes about a month) and then applies it on the bananas through the irrigation system.

"Our aim is to increase the use of biological preparations and bio-fertilisers with the aim of increasing biological diversity and soil carbon. Increased biological activity in our soil will result in healthier crops and better utilisation of resources - including fertiliser and water" Paul said.

To upscale this process Kureen Farming has built a shed and installed the additional equipment required for manufacturing and applying bio-fert on a large scale.

"We are applying bio-fert to 50ha of Bananas on a fortnightly basis. Our goal is to improve soil carbon in the long run but it will take 3-5 years before we are confident that a permanent lift in soil carbon has been achieved and maintained.

"We are still reliant on some chemical fertiliser bananas love potassium, so we can't move away from that just yet.

"But bio-fert gives us the tools to use less fertiliser, and gives us more control of how we farm. We hope to increase our farming in this way" Paul said.

#### **Moisture probes**

An automated irrigation system is installed at Kureen farming which controls the water application to the crop through the use of a computer system.

"We monitor water application with moisture probes, and we have eight probes in place in the paddock. It runs with a radio-powered system – the probes send data to the office computer via a radio tower.

"The data is displayed in graphs and we can see how dry the block is or how wet it is. Water is then applied appropriately" Paul said.

"Water is absolutely the most significant resource for any farming that occurs in Lakeland. Through the rainfall simulation tests run by Cape York NRM last year, we showed zero cases of nutrient run-off at Kureen Farming" he said.

#### Solar power

Kureen Farming also runs a 30 kW solar system on the banana packing shed, which will result in a significant cost-saving in production with a pay-back expected in just six years.

"It suits our business because we pack bananas when the sun is out, between 7 am and 5pm - so it works well" Paul said.



"Lakeland is just a great area to grow bananas. We're producing high quality, nutritious crops, using sustainable farming techniques, and with a real focus on soil health and nutrient recycling" Paul said.

"Using bio-fert means we use less fertiliser. We are growing our own biology to top up the soil, using the good guys (soil microbes) to outcompete the bad guys. We are now more in control of our soil health."

For more information about Kureen Farming, visit their website <a href="http://kureenfarming.com/">http://kureenfarming.com/</a>





### | Rangers release rehabilitated turtles

Archer Point's Yuku-Baja-Muliku Landowners & Reserves Ltd released five fully recovered marine turtles into the sea in December 2015, the result of two years of intensive rehabilitation.

A movie showcasing the release of the turtles and the outstanding work of the Yuku-Baja-Maliku ranger program can be seen on <a href="https://www.youtube.com/watch?v=Wh6LVarL058&feature=youtu.be">https://www.youtube.com/watch?v=Wh6LVarL058&feature=youtu.be</a>

To report marine animal strandings call the RSPCA Qld on 1300 ANIMAL (1300 264 625).

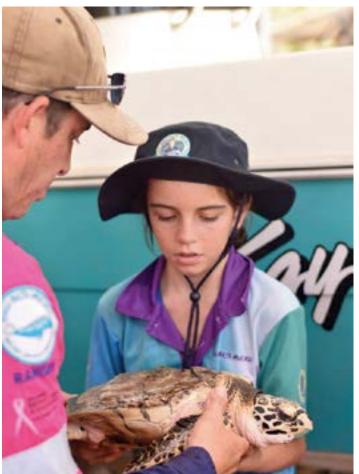
Photos supplied by Yuku-Baja-Muliku Landowners & Reserves Ltd











# Rubbish reduced and trash transformed with Cape Create Crew

by Andrea Gower

The Cape Create Crew was in Wujal Wujal over the Easter break with its LitterEd Transforming Trash Environmental Arts program. This was a collaborative venture with partnering organisation UMI Arts that was also in Wujal Wujal for a Music and Songwriting Workshop facilitated by NPA's SK Boiiz.

Around 30 to 40 children of all ages, and community members from Wujal Wujal, participated over two days. The children in attendance were from Wujal Wujal Kindergarten, Bloomfield State School and Mount St Bernard College.

Highlights of the LitterEd Transforming Trash workshop included participation and engagement of local children as they embraced the concept of reusing rubbish in a creative way to produce art pieces. To celebrate the workshops, Umi Arts presented a free community concert on the Friday night featuring the SK Boiiz and Wujal Wujal artists.

The Cape Create Crew will next head to Mapoon



Above left and right: Artworks created at the Wujal Wujal workshop



and Weipa in June to visit Mapoon School and Western Cape College. The crew will be at the Weipa Fishing Classic with the Transforming Trash Litter Ed program, continuing to spread the word of the effects that litter and illegal dumping is having on our environment and waterways.

The recycled art works and sculptures created by Cape York communities through the Transforming Trash program will go to exhibition at Umi Arts' Small Brother Small Sister event in August this year and during the Cairns Indigenous Arts Fair in 2017.

This project is supported by the Queensland Government's Litter and Illegal Dumping Community and Industry Partnerships Program.



Cape York NRMs Chairperson, Emma Jackson, recently attended the *Creating a Modern Outback* forum in Canberra.

Pictured here in deep discussion with Fred Chaney AO, Emma said that there was a huge representation from across Australia, with some intriguing minds and experience in many fields.

"One statistic that was especially pertinent - 60% of Australia's primary industry income comes from the 96% of land known as remote Australia" Emma said.

Photo: John Brisbin

### Cape York Natural Resource Management Ltd

### **Board of Directors**



**Emma Jackson** Chairperson Primary Industries Sector

Pauline Smith Indigenous Sector, Zone 2





**Shane Gibson** Indigenous Sector, Zone 4

The following positions are currently vacant:
Local Government Sector
Indigenous Sector Zone 1
Community Sector

## Cape York Calendar

AgForce Multi-Topic Field Day- Weipa
AgForce Multi-Topic Field Day- Coen
AgForce Multi-Topic Field Day- Laura
AgForce Multi-Topic Field Day- Cooktown
South Cape York Catchments meeting
Cape York Atlas and NRM Plan Launch

### May

17 Western Cape College Careers Day18 Wenlock Catchment Management Group meeting

#### June

10-12 Weipa Fishing Classic10-13 Cooktown Discovery Festival

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### To contribute or subscribe:

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**Barry Lyon**Conservation Sector

Marilyn Kepple Indigenous Sector, Zone 3





Sandra Woosup Indigenous Sector, Zone 1

John Charlton Tourism, Small Business, Mining and Other Industry Sector













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