

Darwin Harbour Indigenous Marine Ranger Program Biodiversity Impact Mitigation Offsets Strategy (BIMOS)

Annual Report, October 2015 - September 2016

Overview

Commencing in October 2013, the Darwin Harbour Indigenous Marine Ranger Program is an innovative monitoring and research training program involving close collaboration between the Department of Environment and Natural Resources (DENR); formerly Land Resource Management and Larrakia Nation Aboriginal Corporation (LNAC).

Funding was provided to the DENR to establish and implement the Program as an offset for the Darwin Harbour East Arm Wharf expansion.

The Program has developed into a successful collaboration between the Department, Larrakia Nation and other project partners to achieve broader social and environmental benefits through engaging and enhancing indigenous capacity at an individual and organisational level in marine ecosystem monitoring.

Background

The East Arm Wharf expansion works are subject to the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval. In accordance with the requirements of Condition 33 of the EPBC Act Approval Decision 2010/5304 the Darwin Harbour Indigenous Marine Ranger Program was established.

The Darwin Harbour Indigenous Marine Ranger Program was established to:

- Recruit two indigenous marine rangers.
- Train and engage Marine Rangers in water quality, sediment health and marine biodiversity monitoring with DENR.
- Train and engage Marine Rangers in harbour surveillance and reporting (Marine Wildwatch Program).
- Train and engage Marine Rangers in migratory bird monitoring with project partners Charles Darwin University & North Australian Indigenous Land and Sea Management Alliance (NAILSMA).
- Contribute to and promote monitoring to stakeholders through the Darwin Harbour Region Report Cards.
- Participate in the annual Darwin Harbour Clean –up Day.

Project Update

2016 has again proved to be a busy year for the marine rangers who were actively involved in harbour monitoring programs addressing the threats to listed species and listed migratory species. Major achievements for this year included the completion of their Certificate II Coxswain and Fisheries Compliance Courses.

Our two core marine rangers have also moved on in their careers with Aleana Talbot successfully gaining a traineeship with Parks & Wildlife Commission and Stephen Dawson, a traineeship with the Territory Natural Resource Management Board. Nelson Tinoco and Kyle Lew Fatt have stepped into the program for the remainder of 2016.



Photo: Marine Rangers with Ruth Patterson from Water Resources Division

Project facilitation

The offset funding also provided for a part time project coordinator based with DERN. The project coordinator works closely with LNAC and project partners to facilitate participation of the Marine Rangers in monitoring and research activities in Darwin Harbour. The project coordinator is responsible for developing work schedules, training plans, reporting and financial management. LNAC is responsible for ranger recruitment, day to day support, training and supervision. DERN and partner organisations also provide on the job training and supervision.

Training

The Marine Rangers have been provided opportunities to obtain and pursue training and qualifications in the following: Approximately 30% of their time was dedicated to training in 2016.

Training Course	Status
Senior First Aid	Complete
Certificate II in Maritime Operations Coxswain	Complete
Certificate II Fisheries Compliance	Complete
Certificate III Conservation and Land Management	Ongoing
Driver training (Drive Safe NT)	Complete
North Australian Quarantine strategy	Complete
Climate Change Workshop	Complete

In addition to formal training the Marine Rangers have completed a series of induction and on the job training provided by DERN and project partners. The training provided focused on equipping the Marine Rangers with the skills and knowledge to be able to actively participate in monitoring and research activities. They included the following:

- Water monitoring techniques (equipment preparation, use and servicing; field techniques; field protocols for recording data, chain of custody requirements; introduction to laboratory chemical analyses and procedures)
- Seagrass identification, monitoring techniques and data entry
- Dolphin identification and monitoring techniques
- Sediment monitoring
- Migratory bird identification, monitoring and data management
- Aquatic pest identification and monitoring techniques
- Marine turtle identification, survey and monitoring techniques
- Dugong monitoring
- Fisheries compliance.

On Water Field Activities

It was anticipated that the Darwin Harbour indigenous marine ranger would spend up to 80% of their time in the field (181 of 230 working days) working towards the following as stated in the offset agreement.

Their actual time in the field was approximately 70% (163 out of 230 working days). Below is a summary of their activities. The remaining days were allocated to training, attending and presenting at conferences, symposiums and conducting community engagement activities.

Field Work Summary Actual	Days/Year
Water quality monitoring and data entry	36
Spring flow monitoring	7
Migratory birds surveys and monitoring	7
Beach water quality monitoring	6
Sediment health monitoring	18
Seagrass monitoring and data entry	40
Dolphin monitoring	4
Unscheduled on water response	0
Marine Wildwatch program	5
Marine pest & aquatic biosecurity monitoring	7
Darwin Harbour Clean-up day	1
Beach marine debris and biosecurity clean up days	27
Unscheduled monitoring or surveillance activities	130
Coastal re-vegetation activities	5
Total days	163



Marine debris & engagement with the public



Darwin Harbour clean up day



Dolphin monitoring with Marine Ecosystems Group



New recruits: Nelson & Kyle



Community engagement

Community Engagement & Awareness

- Marine ranger article in Darwin Harbour Report Card 2016
- Marine ranger article in the Larrakia Nation Annual Report 2015/2016
- Rangers attended Australian Sea Turtle Symposium, Darwin.
- Rangers attended the Australian Mangrove & Saltmarsh Network Conference, Darwin.
- Larrakia Nation information stall @ Garrmalang Festival, Darwin
- Kenbi Land Claim handover
- Attended the 2015 Territory Natural Resource Management Conference, Darwin Convention Centre.
- Darwin Harbour Clean up Event
- Regular Darwin Harbour and Marine Ranger Program reports to the Larrakia Board.
- Engaging the general public whilst at boat ramps and on beach clean ups – Buffalo Creek, Lee Point, Casuarina Beach, Rapid Creek, Nightcliff, East Arm, East Point and Elizabeth River boat Ramp.

Conclusion

2016 has been another busy year for the marine rangers. The continued implementation of the Darwin Harbour indigenous marine ranger program has met the requirements of the biodiversity impact mitigation offsets strategy for the East Arm Wharf expansion project by providing rangers training and field time.

- ❖ Palmerston Family Centre Rangers assisted with initial start up and running men's programs.
- ❖ Kenbi Rangers Larrakia Men's Rangers assisted Kenbi Rangers with preparations for their hand back celebrations by constructing bough shed shades as a joint effort.
- ❖ Darwin Harbour 'Clean Up Day' Rangers committed to cleaning Ludmilla Creek, East Point board walk and deployed Rangers on various government vessels to assist on Darwin Harbour Clean Up day.
- ❖ Developing the North Strategy Rangers submitted applications and was successful in gaining funding to purchase a side by side ATV.
- ❖ Crocodylus Park Rangers assisted with the annual crocodile movements and gained valuable knowledge and experience in crocodile handling.
- ❖ Shoal Bay Shell Midden Cultural Heritage Survey Rangers inspected and maintained and mapped sites around Shoal Bay.
- ❖ CAAPS Rangers assisted with renovation of outdoor areas and bush gardens. We repaired and painted some pergolas.
- ❖ Darwin Harbour Indigenous Marine Traineeship Project

COMMERCIAL ACTIVITIES



CROWN LANDS WEEDS CONTRACTS

Over the wet season rangers have been responsible for spraying and maintenance of 30 drains across Palmerston and the rural area. We are also contracted to spray invasive weeds and coffee bush around the old hospital site at Larrakeyah and completed some earth works in this area to prevent erosion and seed spread into neighbouring blocks.

ECOZ

Rangers have started a partnership with ECOZ Environmental Consultancy. We completed the first job in weed surveying and mapping on an old mine site near Adelaide River. We also assisted with soil sampling around Palmerston and beginning a new three-year partnership providing two rangers for one

week a month to sample run off water from the Shoal Bay Waste facility.

CITY OF DARWIN

Water Sampling, Lakes, Pools and Fountains Our partnership with the City of Darwin continues with various water sampling, monthly, of various lakes, pool and fountains. Over the wet season the rangers sampled the storm water drains for water quality.

SEA FORCE

One of our big projects for the year was monitoring each day for crocodiles and assisting the dive teams to meet safety requirements. It required two rangers per six days a week on our own boat. This project has required a lot of preparation and including upgrading of the boat and our policies and procedures to meet oil and gas industry standards.

Unfortunately, Sea Force didn't meet its contract payments due to LNAC and thus, LNAC didn't recover the costs of delivering the services.

CHARLES DARWIN UNIVERSITY

We partnered with Charles Darwin University to collect traditional foods and bush tucker such as longbum, mud mussel's periwinkles and oysters. In the Ludmilla and Rapid Creek catchment areas and a control site at Fright Point in a study looking to see if PFAS (chemicals used in firefighting foam) had made their way into the food chain leaching from the Darwin Airforce/RAAF Base.

MARINE RANGERS

Marine Rangers has continued to run this year and has just been extended to run for another 12 months until October 2017. It is a good opportunity for Larrakia Rangers to experience training and working alongside scientists and ecologists from a variety of academic institutions and government departments, primarily in marine bio-science.



It has presented the Rangers with a variety of opportunities in terms of working in partnership with teams from the Department of Environment and Natural Resources, CSIRO, the Aquatic Health Unit and PHD students from CDU. Projects have included water sampling, fish surveys, using underwater cameras, seagrass surveys, animal surveys, marine sediment sampling, migratory shorebird counts and recently dolphin monitoring.

TRAINING

The Rangers completed various training goals in the 2015/16 which fall in line with our funding agreements with the Marine Ranger program and the Real Jobs program. The training was filled with a combination of formal and informal training, short courses and on-going study.

The majority of Rangers completed Certificate II in Conservation and Land Management at CDU and graduated from Bachelor Institute. All Rangers are now enrolled in Certificate III of Conservation and Land Management which we are presently half way through completing.

All Rangers now have current NT driver's licenses. The men's team have completed an Elevated Work Platform and Working at Heights tickets. This combined with our Chainsaw tickets means we can now fell large trees.

A further six Rangers obtained Grade I Inshore Coxswains with the rest of Rangers enrolled at CDU, still to complete. Three Rangers completed a Certificate II in Fishers Compliance with the hope that a further three would be processed later this year.

All Rangers completed Senior First Aid Certificates and three Rangers have been trained as Safety Officer / OHS Committee representatives.

TRAINEESHIPS

It was bittersweet to lose two valuable team members from our Marine Rangers team to traineeships this year with Aleana Talbot gaining a traineeship with NT Territory National Parks and Wildlife based at Howard Springs park and on completion of the 12 months' traineeship she will be taken on as a full-time employee.



Aleana (2nd from left) & the Women Rangers

Steven Dawson (*below*) also gained a 12-month traineeship with Territory Natural Resource Management. He is working under TNRM but still working day to day with Larrakia Rangers. We are proud of Aleana and Steven with their achievements this year and wish them all the best with these great opportunities.



CONFERENCES AND FORUMS

Rangers attended various of conferences and forums over the last year. These were invaluable opportunities to network and meet other people from relevant industries. Conference included:

- ❖ Aboriginal Women's National conference;
- ❖ TNRM Annual Conference and Awards (presentation by the men's team);
- ❖ Women's Health and Wellbeing conference, Cairns;
- ❖ Suicide Prevention, Alice Springs;
- ❖ TNRM Policy Launch;
- ❖ National Mangrove and Shorebird Conference;
- ❖ Garrmalang Festival;
- ❖ Unions NT;
- ❖ Northern Australian Strategy;
- ❖ Indigenous Women's Conference;
- ❖ Native Title Conference, Darwin (Female Rangers presented);
- ❖ NAIDOC Week, Darwin/NAIDOC Ball;
- ❖ PFAS/PFOS firefighting foams forum;
- ❖ Myrtle Rust forum;
- ❖ Invasive Barnacles and Bivalves workshop;
- ❖ Mangrove and Saltmarsh network.