

INTRODUCTION

Since time immemorial, Indigenous peoples of the Torres Strait have practiced traditional land and sea management in accordance with Ailan Kastom, Aboriginal Lore/ Law and native title rights and interests. Because of this continuing stewardship, the Torres Strait remains one of the richest and most intact ecological and cultural regions on earth.

The TSRA Land and Sea Management Unit (LSMU) is responsible for coordinating the delivery of the Environmental Management Program under the Land and Sea Management Strategy 2016-2036

The key outcomes under the above strategy that our program focuses on are:

- Key natural and cultural resources are sustainably managed in line with community priorities and traditional ecological knowledge.
- Appropriate collaborative governance arrangements and partnerships to support sustainable management of the region's environmental values,
- •Greater regional and community-based capacity for the sustainable management of natural and cultural values,
- •Improved community sustainability, resilience and ability to adapt to climate change.

TSRA Land and Sea Management Unit including Land and Sea Rangers work with Traditional Owner Regional Native Title Bodies Corporate (RNTBC's) and key stakeholders across 14 communities on 13 islands. Our program delivery is underpinned by Traditional Owner partnerships in the development of our core planning documents including our Working on Country Plans, Indigenous Protected Area (IPA) Management Plans and Dugong and Turtle Management Plans. Our Program consistently receives positive feedback from community members across the region for its dedication to Traditional Owner participation and leadership in caring for country.

LSMU actively works to deliver on-ground and strategic outcomes across the following project areas:

- Torres Strait Indigenous Ranger Project
- •Indigenous Protected Areas (IPA)
- Traditional Ecological Knowledge (TEK)
- Dugong and Turtle Management
- Marine Ecosystem Monitoring
- Invasive Species Management
- Biodiversity Planning and Management
- Sustainable Horticulture
- Climate Change Adaptation and Resilience
- Renewable Energy
- Environmental Education
- Future Funding and Investment Prospectus

Our Vision for Torres Strait Land and Sea Management is:

"Empowering Torres Strait Islander & Aboriginal peoples to sustainably manage & benefit from their land, sea & cultural resources into the future, in accordance with Ailan Kastom, Aboriginal Lore/Law & native title rights & interests."

Torres Strait Land and Sea management Strategy 2016-2036

Our program has developed strong partnerships with a range of stakeholders including scientific researchers, universities, NGOs and agencies from all level of government to deliver collaborative and rigorous land and sea management in the region.

The main purpose of this booklet is to celebrate the continuing hard work and high standard of caring for their land and sea country that the Ranger family and its support teams have managed to achieve during 2018. The level of this success would not have been possible without the direction of the RNTBCs and other Traditional Owners who have continued to guide the way forward for future generations of protectors of the unique Torres Strait environment.



BADU4 Mura Badhulgau Rangers



MABUYAG Mabuygiw Rangers



MUA8 Mua Lagalgau Rangers



BOIGU10 Malu Kiai Rangers



DAUAN12 Simakal Rangers



SAIBAI14 Mura Buway Rangers



IAMA16
Iamalgal Rangers



WARRABER18
Warraberalgal Rangers



NORUMA20
Porumalgal Rangers



MASIG2 Masigalgal Rangers



UGAR24 Ugaram Rangers



ERUB26
Erubam Rangers





IPA30
(Indigenous Protected Area)
-Pulu
-Warraberalgal Porumalgal
-Ugul Malu Kawal



BADU

Including the exciting new hydroponics project, Mura Badhulgau Rangers participated and hosted key activities and projects such as dugong and turtle management, sea patrols, land patrols, feral animal management (wild dogs) and the Mekem Garden project. During 2018 the Mura Badhulgau Rangers also hosted work experience students from Tagai College, Badu Campus for one week. The Working on Country Plan for Badu continues to be implemented through the projects and activities that Rangers complete annually.



Newly erected sign at Tulu Wak



Rangers, My Pathway participants and Torres Strait Islands Regional Council (TSIRC) workers participate in feral animal management with pest management consultant Stuart Boyd-Law



Yirrganydji Ranger Gavin Singleton, Ranger Frank Nona, Warren Entsch MP Federal Member for Leichardt, Ranger Terrence Whap, The Hon. Scott Morrison Prime Minister of Australia, Ranger Wuni Wuni Tapau-Bon & Ranger Mahomet Ahmat attend JCU/ CSIRO exchange in Cairns



Senior Ranger Frank Nona teaches work experience student Babetha Nona how to complete Tangoaroa Blue forms



Mekem garden workshop on Badu

MURA BADHULGAU RANGERS



Ranger Dick Williams delivering presentation on local wildlife to students at Tagai College Badu Campus



Cultural heritage site maintenance. Ranger Stephen Foster and Senior Ranger Frank Nona clearing access roads of fallen trees



Ranger Mahomet Ahmat and work experience student Yungarra Stow construct signage for cultural site



Senior Ranger Frank Nona prepares garden bed at Tagai College Badu Campus



TSRA Rangers with Girringun Rangers, Cardwell



H.S.H Prince Albert II, Prince of Monaco being introduced to the aquaponics training project on Badu

MABUYAG

Implementing an awareness education program for community on the importance of reporting traditional catch and abiding by the current rules and regulations of the Turtle and Dugong Management Plan has been one of the key achievements of the Mabuygiw Rangers during the past year.

Rangers have also worked with Traditional Owners to implement cultural programs such as the Language Workshop and have developed a website www.puluipa.org to showcase the achievements of Rangers and Traditional Owners on the Pulu Indigenous Protected Area. Other Ranger projects include weed management, feral animal management, sea patrols, marine debris removal and land patrols.



Pulu IPA Management Planning Workshop



Senior Ranger Willie Babia prepares garden beds for the Mekem Garden Project



Mabuygiw and Mura Badhulgau Rangers conduct a sea patrol



Ranger Terrence Whap meets with Prime Minister of Australia, Scott Morrison at the James Cook University (JCU)/ Commonwealth Scientific and Industrial Research Organisation (CSIRO) exchange in Cairns

MABUYGIW RANGERS



who participated in the turtle and dugong information session



Traditional Ecological Knowledge (TEK) consultation at Mabuyag



Rangers participating in the Mabuyag language symposium



Mekem garden workshop



Ranger Terrence Whap undertaking sub-tidal seagrass monitoring



Mabuygiw Ranger Supervisor Gerald Bowie and Senior Ranger Supervisor Troy Stow



Senior Ranger Willie Babia works on the outstation cutting fallen trees

MUA

While actively liaising with RNTBCs and Traditional Owners to ensure ongoing support for Ranger activities on country, over the past year the Mua Lagalgau Rangers have worked to maintain and preserve their Land and Sea Country.

The Mua Lagalgau Rangers have been busy working on many different projects including community consultations to develop a feral animal pest management strategy, Mekem Garden workshops with local schools, dugong & turtle monitoring, weed control, sea patrols and bi-annual seagrass surveys.



Rangers Erimiah Manas and Fred Wapau construct a garden bed for the Tagai campus



Mua Lagalgau Rangers undertake weed eradicatio



Rangers participate in feral animal management training with Stuart Boyd-Law



Senior Ranger John Wigness conducts a sea patrol around Mua



Senior Ranger John Wigness erecting a sign at Bulbul



Ranger Gayai Uiduldam cleans vessel Sager after a day of patrolling the sea

MUA LAGALGAU RANGERS



Ranger Fred Wapau erecting a sign at TM Point



Senior Ranger John Wigness sorts fencing posts and panels for cultural site protection



Rangers undertaking training in cultural site mapping with GPS

BOIGU

Through regular compliance patrols, Malu Kiai Rangers have worked to keep the community safe by monitoring and reporting on issues of non-compliance in relation to Fisheries, Treaty matters and illegal behaviour on Boigu.

All Ranger work on country is guided by the Boigu Working on Country Plan. Key Malu Kiai Ranger achievements for the year include flora and fauna surveys, Turtle and Dugong education and awareness activities for hunters and propagating native plants for revegetation within the school and at sacred site locations on Boigu.

In addition, Rangers have ensured that culture remains strong by delivering workshops and talks in language at Tagai College, Boigu Campus.



Senior Ranger Nelson Gibuma with Tagai campus Boigu teacher displaying new school garden beds



Senior Rangers Nelson Gibuma and Tenny Elisala



Rangers and Torres Strait Islands Regional Council (TSIRC) workers attend compliance 'eyes and ears' training



Senior Ranger Nelson Gibuma undertakes sea patrol



Bird surveys at Warul Kawa, part of the Ugul Malu Kawal Indigenous Protected Area (IPA).

MALU KIAI RANGERS



Malu Kiai rangers erecting signage on Boigu



Senior Ranger Nelson Gibuma erecting a sign at Bulbul



Collection and sorting of Marine Debris for Tangaroa Blue program



Turtle tagging at Warul Kawa (Ugul Malu Kawal IPA)



Ranger Ishmael Gibuma educates students on the language name and cultural uses of native plants

DAUAN

Building positive relationships and educating PNG visitors about the Dauan Turtle and Dugong Management Plan, through informal discussions while carrying out turtle and dugong monitoring activities has been one of the main achievements of the Simakal Rangers. During these discussions, Rangers have explained the conditions, management areas and process of data collection for turtle and dugong traditional catch.

The Rangers have also continued weed removal work on the 12 active weed sites within the community. Rangers have worked to remove Leucaena, snake weed and rubber bush. Rangers have worked to erect signage at traditional sites and information on these sites has been distributed to community members and visitors.

Rangers worked with My Pathway participants, Traditional Owners and Scientist to complete a mountain top flora and fauna survey of Mt Cornwallis. Key findings include a previously unknown species of skink and nine species of rare plants.



Senior Ranger Supervisor Ron Fujii and Ranger Laurie Elisala holding a robust skink



Rangers undertaking weed removal



Melomys capensis, Papua Grassland Melomys found during biodiversity surveys on Dauan Island (Mt Cornwallis)



Ranger Herbert with scrub python while spotlighting during biodiversity survey

SIMAKAL RANGERS



Tenny with PNG melomy during biodiversity survey



Mixing chemicals for weed spraying



Rangers Herbert Warusam and David Garama setting funnel traps during biodiversity survey



Rangers and Traditional Owners setting traps during biodiversity survey



Sea patrol around Dauan Island



Marine debris

12 survey 13

SAIBAI

Partnering with the Department of Foreign Affairs and Trade (DFAT) and other government agencies to deliver a two-day joint compliance operation has been a highlight for the Mura Buway Rangers. This joint patrol included looking at reducing the incidence of illegal netting of Torres Strait turtle and dugong populations.

Rangers have remapped all priority weed sites on Saibai using the Fulcrum program and this mapping has been used to further develop weed management plans in consultation with Traditional Owners. Mura Buway Rangers have also conducted revegetation works in a joint project with Tagai College Saibai Campus, at both the school and Mekem Garden site. Rangers have planted 100 native plants to date and plan to undertake revegetation works in other areas around the community.



Rangers tending to school garden



Mura Buway Rangers participate in underwater drone training



Rangers undertaking Mangrove Monitoring and compliance activities



Rangers measure flatback turtle at Warul Kawa (Ugul Malu Kawal IPA)

MURA BUWAY RANGERS



Rangers Herbert Warusam and Jehemess Waia maintain ranger vessel



Mura Buway Rangers undertake cultural site maintenance



Collecting marine debris from Warul Kawa (Ugul Malu Kawal IPA)



Rangers David Garama, Appie Thaiday and Senior Sea NRM Officer Charles David undertake Ranger exchange to Howick Island groups in the Great Barrier Reef Marine Park for green turtle survey work



Senior Ranger Conwell Tabuai with LSMU Compliance Officer Quinten Hirakawa undertaking compliance patrol off Saibai

IAMA

Facilitating the transfer of knowledge from Elders to young people about the plants and animals on Iama and identifying 3 species of weeds within the community, has been a focus for the Iamalgal Rangers. These three species of invasive weeds (Leucaena, Agave and snake weed) have now been successfully removed and regrowth will continue to be treated by Rangers. Rangers have also provided educational sessions at Tagai College Iama Campus, in addition to regular feedback to community on the progress of Ranger projects.

Rangers have been working on an education project on the life cycle of turtle and dugong and how hunters can sustainably harvest these animals to ensure they remain an important part of our marine environment. A special annual community event has been held to keep the community informed on all Ranger activities.



Senior Ranger David Baragud with Gebaralgal RNTBC Chair Mr Fred Peters



Ranger Richard Kepa servicing ranger vessel Malu Urui



Community members participating in National Tree Day planting day on lama



Senior Ranger David Baragud undertaking beach profile monitoring

IAMALGAL RANGERS



Ranger Richard Kepa setting up motion sensing camera to detect feral animals



Ranger Richard Kepa creating a walking track with My Pathway participants



Weed spraying around community



lamalgal rangers working closely with stakeholders on the feral animals project $% \left(1\right) =\left(1\right) \left(1\right) \left$



Construction of garden bed at Tagai College Iama campus



Trapping and monitoring of feral animals and invasive species on lama

WARRABER

Revegetation work during a project with Traditional Owners and My Pathway on weed sites and the beach track has been one important project for the Warraberalgal Rangers this year. The aim of this project is to remove vehicle access to the beach and stop coastal erosion by revegetating the number of beach access points. This project has been successful in its aims with large areas of the beach revegetated and community supporting this Ranger project.

Working closely with all stakeholders on the island, Rangers have assisted the community in many activities. Rangers have worked extensively on their Indigenous Protected Area (Warraberalgal Porumalgal IPA) to maintain and protect these islands, spray weeds, undertake turtle monitoring, remove marine debris and engage Traditional Owners in IPA management activities. Warraberalgal Rangers also hosted a work experience participant from Tagai College and a community volunteer.



Warraberalgal Rangers work closely with My Pathway participants on the coastal revegetation project



Rangers undertaking Traditional Ecological Knowledge (TEK) and Ranger work planner training on Warraber



Warraberalgal Rangers fencing cultural site Aiwal well

WARRABERALGAL RANGERS



Ranger Supervisor Laura Pearson participating in oil spill training on Thursday Island



Ranger Young Billy and My Pathway participant Mr Boggo Billy



Senior Ranger Mark Peason and Ranger Aken Baragud undertaking feral animal trapping training on Warraber



Senior Ranger Laura Pearson and Ranger Edna Nai attend Strong Women on Country conference in Sydney together with other female Indigenous Rangers from across Australia



Central Cluster Ranger planning day at Warraber



Warraberalgal Rangers and My Pathways participants undertaking revegetation on the beach front to restrict vehicle access

PORUMA

Implementing the Traditional Ecological Knowledge (TEK) System that was shared with Poruma by the Warraber community has been a highlight for the Poruma Rangers. Torres Strait Islands Regional Council (TSIRC) has also provided support by housing the TEK computer in the Poruma Indigenous Knowledge Centre (IKC) where all the of the Poruma community have access.

Over the past 12 months Porumalgal Rangers have been busy ensuring that they have completed all projects and activities outlined in their Working on Country Plan. Some of the projects undertaken include Traditional Ecological Knowledge (TEK) recordings, seagrass monitoring, dugong and turtle catch monitoring and the development and maintenance of the community garden to name a few.



Porumalgal and Warraberalgal rangers conduct revegetation work on nearby uninhabited islands which form part of the Warraberalgal Porumalgal Indigenous Protected Area (IPA)



Ranger Supervisor Kevin Levi collecting marine debris off the beaches



My Pathways participant Belford Mosby and Ranger Joseph David undertaking seagrass monitoring

PORUMALGAL RANGERS



Poruma Elders explain different plants and their traditional cultural uses during a Traditional Ecological Knowledge (TEK) recording workshop



Traditional Owners attend IPA Management Planning and expansion meeting



Poruma Elder Mary Mosby participates in the TEK recording project



Community garden at Poruma



Senior Ranger Freddy David and community member



IPA expansion consultation with Traditional Owners at Poruma

MASIG

By working with the community to understand and improve soil quality, Masigalgal Rangers have continued their support role in the development and maintenance of food gardens on Masig. Rangers, together with Traditional Owners have continued their work monitoring Hawskbill Turtle turtle nesting sites within the Masgialgal Islands. Rangers work to gain more information on the population of Hawksbill stock within the central islands which will lead to future collaborative management actions for this endangered species.

In addition to work on-ground, Masigalgal Rangers have been collaborating with Elders and Traditional Owners to finalise the Masig Seasonal Calendar and Seasonal Calendar booklet as a component of their Traditional Ecological Knowledge (TEK) work. The Seasonal Calendar was successfully launched in October 2018 and the book will be launched in early 2019.



Ranger Loice Naawi measuring Hawksbill on Au Kein





Rangers participate in dugong and turtle monitoring projects



Ranger Edna Nai assisting Masig school students with planting in their school garden

MASIGALGAL RANGERS



Senior Ranger Aaron Bon harvesting community garden



Ranger Edna Nai and Senior Ranger Francis Nai plant seedlings at the community garden



Senior Ranger Francis Nai with students from Tagai College Masig Campus

UGAR

Working closely with the school on Ugar with activities including the school garden and traditional practices, this past year has been busy and successful for the Ugaram Ranger. With the assistance of Rangers from the Eastern Cluster, Senior Ranger Noel Baker has worked on many different projects and activities. Some of the projects involved new signs being created for cultural sites around the community and weed spraying to restrict the chance of regrowth.



Maintenance of Ranger equipment



Tagai school visits



Senior Ranger Noel Baker undertaking cultural site maintenance



Weed spraying at Ugar

UGARAM RANGERS



Rangers constructing signage for cultural sites



Senior Ranger Noel Baker undertaking weed spraying



Rangers undertaking joint projects with My Pathway Participants, Torres Strait Islands Regional Council (TSIRC) and Traditional Owners



Community celebrate installation of signage

ERUB

Erubam Rangers have been working collaboratively with Torres Strait Islands Regional Council (TSIRC) and My Pathway participants to provide support and assistance to Ranger joint venture projects within the community. Some of the projects completed include community engagement and traditional knowledge recording through the development of a Seasonal Calendar for the Erub Community. In addition, Rangers undertook cultural site signage, tree marcotting and weed eradication. Erubam Rangers also undertook their annual survey of turtle nesting and hatchlings on Maizab Kaur. During the year the Rangers hosted their annual feedback presentation to the community outlining all the projects and activities that were undertaken throughout the year and future planning.



Erub Rangers build and install signage around community



Eastern Cluster Rangers attend blessing of cultural site signage at Kupei Seriam



Rangers installing signage on Edgor (Nepean Island)



Rangers undertaking weed removal



Rangers removing and spraying weeds at Teror



Drilling holes for signage installation, Edgor (Nepean Island)

ERUBAM RANGERS



Construction of the multi-purpose Ranger facility





Backyard garden







MER

During the past year the Meriam Gesep a Gur Keparem Le Rangers have been busy working on many different projects and activities. Some of these include, weed management, dugong and turtle management, invasive species control and Traditional Ecological Knowledge (TEK) recording to name a few. Rangers have planted a total of 23 coconut palms and planted out an approximate 20 square metres of native coastal ground cover in order to help stabilise the beach and prevent further erosion. 16 cuttings from 5 different native coastal plant types have been collected and potted and will be used to revegetate disturbed and eroded coastal areas. Rangers have been working with My Pathway participants and Elders to complete the Mer Seasonal Calendar which is nearing completion.



Ranger Tapau Bon assists Tagai College Mer Campus students to plant banana trees in the school garden



Rangers and Torres Strait Islands Regional Council (TSIRC) staff work together in animal control on Mer



Ranger Tapau Bon records mangroves growing on Mer



Ranger Appie Thaiday tagging a turtle

MERIAM GESEP A GUR KEPAREM LE RANGERS



Senior Ranger Aaron Bon meets with the Governor-General of Australia, Sir Peter Cosgrove



Senior Ranger Aaron Bon prepares herbicide for Leucaena control



Ranger run school activities- traditional games



Ranger Tapau Bon educates young community members about the importance of native plants for erosion control



Community information session on Ranger work on Mer



Senior Ranger Aaron Bon removing ghost net from shoreline

INDIGENOUS PROTECTED AREA (IPA)

Indigenous Protected Areas within the Torres Strait are areas of Indigenous-owned country where Traditional Owners have entered into an agreement with the Australian Government to promote biodiversity and cultural resource conservation. The Torres Strait has three IPAs (Pulu, Ugul Malu Kawal and Warraberalgal/ Porumalgal), which make up a part of Australia's National Reserve System. These IPAs are managed by Traditional Owners with support by the Indigenous Land and Sea Rangers employed by the Torres Strait Regional Authority.

The TSRA Land and Sea Rangers visit their respective IPAs on regular ranger patrols or via survey trips. Land and Sea Rangers also raise awareness of their respective IPA, including its management successes and challenges through regular reports and presentations to local communities, Regional Native Title Body Corporates (RNTBCs), stakeholders and local schools.

The focus on the Torres Strait IPAs over the past year has been the updating of the current management plans for two of our IPAs (Ugul Malu Kawal and Warraberalgal Porumalgal) to incorporate any new management concerns that Traditional Owners may have when managing these areas and also to include newly listed islands within the area of the IPA.

Ugul Malu Kawal IPA Consultation and Management Planning:

The Ugul Malu Kawal Indigenous Protected area (formerly known as Warul Kawa IPA) is a group of islands including Warul Kawa (Deliverance Island), Awaial Kawa (Kerr Island) and Norwes Sanbank (Turu Cay). The IPA is governed by Maluilgal RNTBC which represents traditional owners from the Maluilgal communities of Badu and Mabuyag and the Guda Maluilgal communities of Boigu, Saibai and Dauan. Traditional Owners (TOs) from the communities of Boigu, Mabuiag, Badu, Dauan and Saibai have been working in partnership with Maluilgal RNTBC, Malu Lamar RNTBC and TSRA Land and Sea Management Unit to update the Management Plan for the Warul Kawa Indigenous Protected Area (IPA). The new Management Plan sees a Partnership arrangement whereby TOs will have a greater say as to how the IPA is managed strategically into the future.

Warraberalgal Porumalgal IPA Consultations:

TSRA have been consulting with Warraber and Poruma communities to update the Management Plan for the Warraberalgal Porumalgal IPA to include the island of Uttu (Dove Is) and Yarpar (Roberts Is) and to ensure the IPA management activities address current community concerns. This Management plan was launched by Traditional Owners at a celebration event on Poruma in November 2018.



Warraberalgal and Porumalgal Elders launch their new IPA Management Plan at Poruma, November 2018



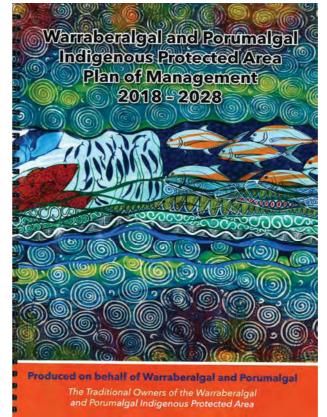
Aunty Viti (Florence Pearson) with her story, in the Warraberalgal Porumalgal IPA Management Plan



Front page of the new Ugul Malu Kawal IPA (Formerly Warul Kawa IPA) Community Management Plan

Kibu Dagamu Kaywaw

Danan Pathay Thusi



Warraberalgal Porumalgal IPA Plan of Management front cover



2018 Ugul Malu Kawal Advisory Committee Meeting



Warraber and Poruma RNTBC representatives, Rangers, TSRA staff and partner agencies at the launch of the Warraberalgal Porumalgal IPA Management Plan



Poruma and Warraber Rangers deliver a tribute to the late Uncle Alfred Sailor at the launch of the Warraberalgal Porumalgal IPA Management Plan

DUGONG & TURTLE MANAGEMENT

Dugong and Turtle Management Plans review project:

The review of the 14 community-based Dugong and Turtle Management Plans currently in place in Torres Strait will be completed in early 2019. The review shifts the focus to a traditional structure for governance and decision making processes in communities relating to dugong and turtle. This is being achieved as follows:

- •Working closely with Traditional Owners / Elders, Registered Native Title Bodies Corporate (RNTBCs), GBK, Malu Lamar, TSRA staff (including Rangers), local government and Torres Strait Traditional Inhabitants to establish a traditional structure to support the community-based dugong and turtle management plans.
- Working with Traditional Owners, RNTBCs Elders and all other relevant stakeholders to document the traditional cultural protocols of dugong and turtle hunting within each individual community.
- •Investigating all management arrangements of shared management areas through traditional, cultural protocols.
- Incorporating all findings from the consultations into the revised community based Dugong and Turtle Management Plans.
- •Where achievable, updating the community-based management arrangements in the plans and how they will be implemented.



Saibai Turtle and Dugong (T&D) Management Plan review



Malu Kiai Traditional Owners (Cairns representatives) meet to outline a new structure for T&D Management Plan on Boigu



Saibai T&D consultations



Turtle and Dugong Management Plan review meeting at Kubin community, Moa Island

Nest to Ocean Project- Hawksbill (Unuwa) turtle nesting effort, success and disturbance

Progressing on the good work done by former Sea NRM staff, rangers and Traditional Owners, this project involved surveying uninhabited islands in parts of Torres Strait (mainly central islands) during the 2016/17 and 2017/18 turtle breeding seasons. Recent monitoring indicates the Torres Strait has one of the world's largest remaining unuwa (Hawksbill turtle) nesting populations at the regional scale. Data collected by track and nest count survey methods provided a basis for conversations with central island communities around traditional use of marine turtle eggs, particularly unuwa eggs.

This has led to the start of consultations on how communities can better manage the harvest of eggs to improve the productivity of the nesting stock. Traditional Owners of Kulkalgal sea country are embracing this opportunity and to date, three of four draft plans are in place for endorsement by the Registered Native Title Bodies Corporate for the respective island communities. Once finalised, this work will review the turtle egg harvest management arrangements within the current Dugong and Turtle Management Plans for Kulkalgal sea country communities for inclusion in their reviewed plans.



Satellite tracking of Hawksbill turtles in Torres Strait. Three animals had satellite trackers attached to them during nesting surveys at Au Kein in January 2018 and are providing useful information about how they use the area



Senior Sea NRM Officer Charles David and Sea NRM Officer Alice Manas marking Hawksbill turtle nests



Rangers and volunteer Traditional Owners taking a tissue sample from a Hawksbill turtle on Au Kein for genetic stock analysis



Ranger Edna Nai, Ranger Appie Thaiday and Senior NRM Officer Charles David recording turtle nesting efforts on Masigalgal islands

TRADITIONAL ECOLOGICAL KNOWLEDGE (TEK)

The TEK program was set up by TSRA's Land and Sea Management Unit (LSMU) in 2009 in response to concerns from many Traditional Owners across the region that Indigenous cultural knowledge about their local environment, was being lost to future generations. The TEK project now operates traditional knowledge database systems across 11 communities (over 10 islands) in the Torres Strait. This represents an expansion to an additional two islands in 2018 when new TEK systems were successfully rolled out on Saibai and Poruma to help maintain & revitalise traditional knowledge for these communities.

The TEK team have also been working with the communities of Masig, Mer, Erub and Saibai to develop Seasonal Calendar posters that tell the story of the common traditional knowledge of these communities and to promote Indigenous languages of Kala Kawa Ya (Saibai) and Meriam Mir (Erub and Mer).

The Masig Seasonal Calendar was launched at Masig School in October 2018 with school students, elders and RNTBC in attendance. The Masig Seasonal Calendar poster and booklet were collaborations between local Traditional Owners, the TSRA TEK team, Masigalgal Rangers and Masigalgal RNTBC (PBC) to promote traditional knowledge for their land and sea country and to help with the community's aspirations to preserve the Kulkulgau Ya language of Masig and the Torres Strait Central Islands.

The Masig Seasonal Calendar tells the story of how people from Masig islands survived and thrived off the land and sea resources before time & how this knowledge continues to the present time. The timing and patterns of seasonal winds, weather, constellations, animal migrations and plant flowering and fruiting times determine the ways that Masig people navigated, hunted, gardened and lived from nature in the unique island environment.



Poruma traditional owners undertaking training in the TEK system



TEK System training with Porumalgal Traditional Owners, Rangers and Elders



Mura Buway (Saibai) Rangers learn how to use recording equipment in their Traditional Ecological Knowledge (TEK) recording kit



Ranger Arthur Gibuma records TEK with Boigu Elder



TSRA TEK team, Masig RNTBC, Masig Rangers, TSRA Environment Portfolio Chair, Tagai College Masig staff and students celebrate the launch of the Masig Seasonal Calendar



Tagai College, Masig campus students dance to celebrate the launch of the Masigalgal Seasonal Calendar



Erub Elders, TEK team and consultants in Seasonal Calendar workshop and TEK training at Erub



Erub Ranger holding Eneu fruit (Wongai)



Masig RNTBC Deputy Chair, Mr Ned Mosby and Masig Rangers discuss the importance of the Masig Seasonal Calendar



oll out of the TEK System at Saibai

INVASIVE SPECIES MANAGEMENT

A feral animal eradication program was conducted on the five communities of Badu, Mer, Warraber, Poruma and Iama. The TSRA's Land and Sea Management Unit (LSMU) coordinated this work, supported by each RNTBC and the Torres Strait Island Regional Council's (TSIRC) Environmental Health Workers (EHW). The LSMU engaged a pest management consultant Stuart Boyd-Law to facilitate training and hold community meetings to develop specific pest management strategies for each of the five communities and to participate in pest animal control activities.

Each community identified distinct pest animal issues and there was a recurring request/ need for the management of wild dogs, feral cats and stray horses where these occurred. On some communities, residents and their pets had been attacked or threatened by wild dogs and people did not feel safe walking within or outside their community. Other concerns were raised about horses destroying gardens, defecating in yards/ roads, stallions fighting, or animals running threateningly towards people with food/ shopping bags. The LSMU also had concerns regarding the environmental impacts associated with wild dogs, feral cats and wild horses outside of the communities, such as on nesting turtles.



Dog cage trap set up on Mua (St Pauls)



Rangers, My Pathway participants and TSIRC Environmental Health Workers workers carry out pest control management on Badu



Rangers Erimiah Manas, Dick Williams and Willie Babia checking 1080 baits on the beach at Radu



Rangers participate in pest animal training on Mua (St Pauls)



Rangers Young, Aken and Mark with Darren Marshall and Stuart Boyd-Law radio collaring a feral pig on Gebar Island



Stephen Foster instructing My Pathways participant on leg hold trap installation



Rangers install leg hold trap



Ranger Erimiah Manas cleaning up equipment after pest management activities on Badu



Ranger Richard Kepa carrying soft- jawed leg hold traps to trapping sites on lama



Rangers Richard Kepa and David Baragud setting up a remote camera for pest animal monitoring on lama

BIODIVERSITY PLANNING & MANAGEMENT

There have been a number of biodiversity surveys throughout late 2017 and 2018. They include Mua Peak, Gebar, Kodal, uninhabited Central Islands and Dauan. Vegetation surveys were conducted on these islands which involved identifying and recording native plants and invasive weeds. A number of techniques were used for the animal surveys. Elliot traps and drift fences were set up to catch small mammals and funnel traps to catch reptiles and amphibians.

On Mua Peak, the survey team found many interesting plants. One of the tree species recorded was the Papua New Guinea (PNG) "Tulip" tree, a species that is very rare in Australia. Mua Island and Badu Island are the only places this species is found, outside of Asia and PNG. Another rare tree recorded was the Mountain Wongai. Mua Peak is the only place this species occurs outside of PNG and tropical Asia. Because the lowland tropical forests of PNG are threatened by logging, the Mountain Wongai is considered critically endangered by the International Union for the Conservation of Nature (IUCN).



Senior Ranger John Wigness setting funnel traps for reptiles on Mua Peak



Senior Ranger Supervisor Laura Pearson with a spotted tree monitor on





Mark Geyle and Ranger Loice Naawi checking a Shearwater's nest on





Rangers Erimiah Manas, Stephen Foster and Fred Wapau with researcher Terry Reis inspecting Blossom Bats caught in harp trap on Mua Peak



Mark Geyle and Ranger Young Billy flying drones for surveys on Aureed



Vegetation survey on Mua Peak



Senior Ranger Mark Pearson and Ranger Young Billy with a Major Skink on

SUSTAINABLE HORTICULTURE- MEKEM GARDEN

Within the Sustainable Horticulture program, Rangers have been trained in tree air-layering to produce multiple crops while the Horticulture in Schools Program supported the students in growing fruit, vegetables and herbs for everyday use. Rangers built on this program to conduct activities within the school to focus on food sustainability through gardening. Mekem Garden Project builds on Sustainable Horticulture in communities by encouraging community members to grow and share fruit, vegetables and herbs with each other.



Regional Landcare Facilitator George Saveka and TSRA Member for Mer, M



Hammond Island residents attend the Mekem Garden Workshop



Ranger Supervisor Dimas Toby working on tree rehabilitation



Mekem Garden Workshop on Me



Regional Landcare Facilitator George Saveka presenting to Saibai school students on island kai kai



Gardening with school students on Boigu



William Akee with George Saveka- Mer backyard garden participant



Cassava planted in backyard garden on Boigu



Backyard garden on Hammond Islan



Land Team- Ilana Foster and George Saveka



Ranger Aaron Bon air layering tre



Mer residents attend the Mekem Garden Workshop

COMMUNITY CLIMATE CHANGE ADAPTION & RESILIENCE

Trained in the use of sampling equipment, Rangers on Boigu, Saibai, Warraber, Iama, Poruma, Masig and Erub have been collecting salinity samples to help scientific researchers measure the saltiness of the sea water. The results have been very valuable in helping assess how far fresh water from the Fly River travels into the Torres Strait.

We have also been working with Climate and Coast, TSIRC, RNTBCs, My Pathway and communities to identify the need to plant shade trees as part of regional heat risk adaptation project. Rangers help identify suitable locations and suitable tree species, and with planting and maintenance of trees on the communities of Masig, Warraber, Badu, Mabuiag and Dauan.



Warraber Ranger Aken Baragud collects water to test salinity



Saibai Ranger David Garama collects marine water quality samples on Saibai



Ranger Aken Baragud tests water salinity at Warraber Island



Iama Rangers David Baragud and Richard Kepa undertaking beach profile monitoring with John Rainbird, Project Manager Coast and Climate



Ranger Terrence Whap undertaking tree rehabilitation for the shade tree project on Mabuiag

COMPLIANCE MANAGEMENT TEAM

The Compliance team is a new addition to the Land and Sea Management Unit having been introduced in 2017. During 2018, the Compliance Team worked with all TSRA Land and Sea Rangers to assist them in obtaining their Certificate IV in Government Regulatory Compliance, relevant legislation training and five days of refresher training. This training is the first formal compliance qualification for Torres Strait Rangers.

Further to this the rangers have been undertaking "eyes and ears" training, which allows Rangers, working with Compliance Management Unit (CMU) staff, to further develop their skills to detect, report, evaluate and gather evidence on non-compliant behaviour on outer islands including fisheries offences, Torres Strait Treaty breaches and suspected illegal activity.

Rangers and CMU staff undertake patrols on land and sea country to conduct surveillance activities in a safe and lawful manner. All patrols that are conducted include a pre patrol briefing and plan, and conclude with a post patrol briefing and report. Any matters of non-compliance detected during these patrols are reported on the templates developed by the CMT and sent to the appropriate agencies for further investigation.

Four patrols have been undertaken since the unit was developed in January 2018. These patrols allowed Rangers to develop confidence and competence in patrol execution and to put into practice the requirements expected to meet CMU procedures. A highlight of these Ranger patrols is the involvement of external agencies including Department of Foreign Affairs and Trade (DFAT), Australian Border Force (ABF), Australian Fisheries Management Authority (AFMA), Australian Federal Police (AFP) and Royal PNG Constabulary.

Within this short period the Compliance Management Unit has managed to upskill Rangers to competently execute compliance patrols, surveillance and reporting. The four patrols undertaken to date have involved rangers both in the planning and execution phases and have ranged from single vessel maritime patrols to multi-jurisdictional, multi-agency coordinated patrols.



Senior Compliance Officer Quinten Hirakawa shows Iama rangers how to measure net for correct size during visit to Iama



Compliance Team Senior Officer Alicia Sabatino with Malu Kiai Ranger Ishmael Gibuma



Multi agency patrol at Saibai with Rangers, CMU staff, DFAT and AFP



Eyes and ears training at Warraber



TSRA Officers with consultant Gabriel Bani at Mua Island



RNTBC meeting on Mabuiag Island

TRAINING

Training and Capacity Building of our Indigenous Rangers:

Our Indigenous Ranger Program, during 2018, has provided Rangers with formal training in First Aid, Oil Spill and Marine Pollution Response training, Shipboard Safety, Marine Radio and Coxswain training, Underwater Drone use training, Health and Safety training, Pest Animal training and Aquaponics training.

Attendance at the Qld Indigenous Ranger Conference, the Sydney launch of Strong Women on Country and the CSIRO/JCU Workplace Experience has provided Rangers with additional all-round experiences, presentation and public speaking skills and confidence in their own abilities.

The Oil Spill response training was a joint-agency venture by Land and Sea Rangers, Local, State and Federal Government Agencies and Torres Strait community organisations. Exercise Torres was developed due to the International Maritime Organisation declaring that the Torres Strait is a Particularly Sensitive Sea Area and recognising that the marine ecosystem in the Torres Strait are vulnerable to damage by shipping incidents.

Exercise Torres was a two-day event that tested government and maritime agencies and Torres Strait community leaders readiness to respond to an oil pollution incident should one occur in the Torres Strait. Participants used equipment that would be deployed in an oil spill scenario at three separate locations, Thursday Island (Bach Beach), Warraber Island and Poruma Island. Central Island Rangers were critical to the successful implementation and delivery of this exercise.



Senior Ranger Frank Nona, Federal Member for Leichardt Warren Entsch, Ranger Terrence Whap, Prime Minister of Australia Scott Morrison, Ranger Wuni Wuni Tapau-Bon and Ranger Mohamut Ahmat at the CSIRO/ JCU Ranger Exchange



Rangers attend oil spill training on Thursday Island



Tim Hillier conducts first aid training with Ranger



Near-western cluster Ranger Training at Badu



Central Island Rangers and partner agencies undertake oil spill response exercise on Thursday Island



ydroponics training at Badu Ranger and community nursery



Ranger Gayai Uiduldam presents to the Queensland Indigenous Ranger Conference at Palm Cove in March 2018

