



TERRITORY NATURAL RESOURCE MANAGEMENT CONFERENCE 2024

PROGRAM



You are encouraged
to take photos and
share stories of your
experience!



Welcome to the **2024 Territory Natural Resource Management Conference**

Acknowledgement of Country

Territory Natural Resource Management acknowledges the Larrakia people, the Traditional Owners and Custodians of the land on which we gather this evening.

We recognise their ongoing connection to culture, country and community, and we pay our respects to their Elders past and present.

WELCOME

We are delighted to present this three-day event, designed to offer inspiring, informative and collaborative presentations, projects, and workshops. We hope you enjoy this opportunity to connect and engage with natural resource managers from across the Territory. We trust you will find valuable insights and learnings throughout the event.

VENUES

The 2024 Territory Natural Resource Management (TNRM) Conference and NT NRM Awards are being held at the Darwin Convention Centre on the Darwin waterfront.

Darwin Convention Centre, Stokes Hill Road, Darwin

The Conference Welcome Meet and Greet networking function is being held at Wharf One Restaurant on the Darwin waterfront.

Wharf One, 19 Kitchener Drive, Darwin

All attendees are to present to the registration desk on arrival for check-in.



☎ 08 8942 8300

@ events@territorynrm.org.au

🌐 www.tnrmconference.org.au



You are encouraged to take photos and share stories of your experience!

#TNRMCONFERENCE2024

7.30AM

REGISTRATIONS OPEN

All conference attendees please make your way to the registration desk on arrival to collect your delegate information and check-in to the event.

We kindly ask you to keep your conference lanyard and name tag visible at all times. You may be asked to show them on entry to a workshop, due to limited registered places.

8.30AM – 12.00PM MORNING WORKSHOP SESSIONS

Managing wild landscapes - What are the herbivores doing?

Herbivores need to eat, and call it what you will – biomass, organic matter or fuel load – it's all important in supporting our herds and wild feral herbivores as well as native animals.

This workshop will focus on herbivores and the critical role they play in our environment. It will cover foundational concepts such as the food requirements of these animals and their preferred plant species. Additionally, we'll explore how herbivores and hoofed animals shape our landscapes and impact the environment in both visible and subtle ways.

Through this workshop, participants will gain a deeper understanding of how these animals influence landscape health and resilience, and be given opportunities to engage in meaningful discussions.



Celebrating Digital Women Ranger & Researcher Activities across Northern Australia

Indigenous women rangers and researchers play a vital role in monitoring and managing Country and have unique social and cultural considerations to become confident and skilled in using data and digital tools in their work.

This workshop will celebrate the efforts of women researchers and Indigenous women rangers who are finding innovative ways to tell stories about Country using data. This will include short presentations to share and reflect on the opportunities and challenges of using digital technologies (drones, camera traps, acoustic recorders etc) that support this data story telling. We will reflect on the technical and cultural skills and support needed to build digital confidence to help monitor and manage priority species and places across the Territory.



Environmental DNA for Monitoring

Environmental DNA (eDNA) is the DNA left in the environment by species present in an area.

Collection and analysis of eDNA can identify species and has potential as a key data collection tool for long term environmental monitoring programs. Through this workshop, participants will get the information and tools they need to determine if eDNA monitoring is the best fit for their needs.

Participants will learn what eDNA can do, what it can't do and discuss the value of integrating eDNA into a monitoring program. The workshop will explore different eDNA collection methods, sampling design, how samples are analysed and how to understand and manage eDNA data.

The workshop will also include demonstrations and opportunities for participants to test different methods and design their own sampling plan for an eDNA program.



12.00PM – 1.00PM WORKSHOP NETWORKING LUNCH

Day 1 attendees are invited to join us for a fully-catered lunch to connect with fellow delegates and conference partners, exchange ideas, and enjoy delicious food during an engaging day of workshop sessions.

1.00PM – 4.30PM AFTERNOON WORKSHOP SESSIONS

Gamba Management – Collective On-ground Action

Collaborate with experts, share insights, and discover strategies that are making a difference in our fight against this invasive species.

Gamba grass is a highly invasive weed creating high fuel loads causing intense wildfires that decrease biodiversity and threaten lives.

This workshop, we will provide an overview of various gamba grass management initiatives and activities across the Northern Territory.

Participants will look at progress in the context of strategic gamba grass management, including direction provided by the 2020-2030 Gamba Grass Plan, and explore management outcomes using a variety of measures, including gamba grass management units, herbicide effectiveness, hectare treatment costs, and valuable learnings from recent initiatives.



Ranger Leadership – Future Directions

Bringing together current and future ranger leaders to share ideas and strategies to manage the ever-increasing complexity of leading ranger teams.

This workshop will explore future directions and challenges for ranger programs and leadership, and develop pathways to support local rangers into coordinator roles. It will build on previous TNRM conference workshops with coordinators and senior rangers exploring roles and challenges of the job and sharing strategies they use to meet these needs.

Participants will collaborate to develop strategies that support and strengthen ranger programs, ensuring their long-term resilience.

In this workshop, we will leverage the collective experience of participants, building on proven successes and practical insights from those in the room.



Using Artificial Intelligence (AI) to care for Country

Artificial Intelligence (AI) is an exciting new technology that can be used as a valuable tool for natural resource management programs.

This workshop will give a clear understanding of how to use AI effectively in Caring for Country programs through easy-to-follow demonstrations and activities using no code, intuitive tools. It will include an overview of AI applications and present easy to use programs for (1) image recognition, (2) AI assistants for video production and graphic design, and (3) Voice to Text tools associated with Large Language Models (LLMs: Chat GPT, Gemini, etc.). Participants will learn about these tools and how these tools can help with everyday tasks such as: creating videos, posters, writing reports and applying for grants.

We will also talk about the problems with AI, such as hallucinations, giving answers that are not applied to our region, being biased, and concerns about data privacy.

Participants are strongly encouraged to bring their own laptop. Participants without a laptop are still welcome, some spare laptops will be available.



4.30 PM

CLOSE OF THE DAY'S PROGRAM

5.00PM – 6.30PM

CONFERENCE WELCOME MEET & GREET

Wharf One Restaurant, Darwin Waterfront

Kick-off the conference with our Conference Welcome Meet and Greet networking function at Wharf One Restaurant! Enjoy a relaxed atmosphere featuring delicious canapés and a complimentary drink on arrival.

This is the perfect opportunity to connect with fellow delegates, share insights, and forge valuable relationships. Don't miss this opportunity to expand your network and collaborate with fellow natural resource managers!

Registration required.



Conference Exhibition Booths

Throughout the day, you'll find a range of informative and interactive displays. Be sure to take the opportunity to explore, gather valuable insights, and connect with new contacts. Most importantly, engage with our conference partners at their booths—it's a great chance to network, share ideas, and build meaningful relationships. Don't miss out—stop by, say hello, and start a conversation with our partners!

- Australian Institute of Marine Science
- Australian Marine Parks
- Batchelor Institute
- Careflight
- Larrakia Nation Aboriginal Corporation
- Northern Territory Government
- Professional Trapping Supplies
- Research Institute of the Environment and Livelihoods, Charles Darwin University
- Territory Natural Resource Management

ABC Country Hour – Broadcasting live from the conference

Matt Brann will be joining us to broadcast live from the conference, keeping everyone up to date with the interesting presentations and stories from around the Territory.

Matt will be chatting with presenters, conference partners and delegates. ABC Country Hour broadcasts rural news and events from the Northern Territory and the nation every weekday from 12:30pm.



Presentation Showcase

Experience the dynamic Presentation Showcase at the conference!

Join us for a day filled with inspiring and informative plenary presentations, innovative poster sessions, and engaging partner exhibition booths.

Don't miss the opportunity to connect with natural resource managers from across the NT and discover the latest activities, innovations and research in natural resource management. Plus, catch live coverage from ABC Country Hour as they broadcast directly from the conference, bringing the excitement to a wider audience.

Attendees will be treated to fully-catered networking breaks at morning tea, lunch and afternoon on Day 2 of the conference! Enjoy delicious food while engaging with partners at the exhibition booths, presenters, and fellow delegates. This is a fantastic opportunity to share insights, explore collaborations, and deepen connections in the field of natural resource management.

It is sure to be an exciting day of learning, networking, and collaboration!

Poster Presentations

Please join the authors by the poster displays inside the auditorium during the scheduled Poster Session at 2.00PM

Poster	Presenter
Illegal Foreign Fishing in Australia's Northern Waters	<i>Brendan Rayner, Australian Fisheries Management Authority</i>
Indigenous Ranger Biosecurity Program	<i>Mitchell Beagley</i>
Marra Land and Sea County – Federation Funding Agreement between Namultja Aboriginal Corporation, Australian Marine Parks and Parks and Wildlife NT	<i>David Barrett, Chairperson & Liam Golding, CEO, Namultja & Laura Boren, Parks and Wildlife Marine Partnerships</i>
Searching for the Arnhem rock skink	<i>Jordan Mulder & Harrison Talarico, Territory Natural Resource Management</i>
Territory Water Plan – Priority Areas	<i>Stephanie Hawkins, Department of Lands, Planning and Environment, Northern Territory Government</i>
Threatened species as anchor for nature-based solutions and ecosystem restoration: The philippine eagle conservation program experience	<i>Jayson Ibanez, Jimbea Lucino, Ron Taraya, Harold Manla & Dennis Salvador</i>
Yitaki Maninjaku: What you need to know to track an Animal	<i>Madeleine Dixon & Christine Michaels, South Tanami IPA – Central Land Council, Helen Wilson, Myra Herbert, Dione Kelly & Nelson Tex, North Tanami IPA – Central Land Council, & Kim Webeck – Central Land Council</i>



7.30AM

REGISTRATION, WELCOME TEA AND COFFEE

If you have not already registered on Day 1, please make your way to the registration desk to collect your delegate information.

We kindly ask you to keep your conference lanyard and name tag visible at all times.

8.45AM – 9.15AM

COMMENCEMENT AND WELCOME

Welcome to Country, Dr Bilawara Lee OAM

Address by Alastair Shields, Chair of Territory Natural Resource Management

9.15AM – 10.20AM

SESSION 1 – PLENARY PRESENTATIONS

Creating the future we want for the NT: Key ideas for natural resource management

Dr Ingrid Coninx, Social Scientist in Nature-Based Development, Wageningen University & Research, Netherlands (Keynote Speaker)



Presentation Summary

The Northern Territory is a place of unique biodiversity, rich cultures, and stunning landscapes that hold special value for the world. With this comes a shared duty among those managing these resources to care for and protect them. Inspired by the latest trends in natural resource management from around the globe, this presentation shows how moving towards a “nature-based” society could help reduce the strain on our environment while also meeting social and economic needs. We’ll discuss building a long-term vision for the NT and about ways to enhance collaboration among governments, scientists, communities, and businesses to bring this vision to life. This approach aims to create a resilient economy and a thriving society that works in harmony with nature, equipping the NT to meet future challenges.

For fresh inspirations and some practical insights, join us in this presentation.

Presenter Summary

Dr. Ingrid Coninx, a social scientist with Wageningen University & Research, has worked from Darwin since 2020. Her expertise focuses on fostering regional economic development in harmony with natural ecosystems, with emphasis on climate resilience, nature-based solutions, and governance for regional innovation. Drawing on her experience from projects in Europe and East Africa, she brings insights that can help to seize new opportunities for NT natural resources management.



Traditional Owner-led planning for Marra and Yanyuwa Sea Country

Shaun Evans, li-Anthawirriyarra Sea Ranger Unit

David Barrett, li-Anthawirriyarra Sea Ranger Unit

Jackie Gould, Northern Institute - Charles Darwin University



Presentation Summary

The li-Anthawirriyarra Rangers and Charles Darwin University have been collaborating on two projects to document the values of Yanyuwa and Marra Sea Country. We talk about how and why we undertook this work. Consulting with families about cultural places and how Sea Country should be cared for has to be done in the right way. We talk about what culturally appropriate consultation looks like, what we spoke to families about, and what they told us. We also discuss how we are looking to the future in terms of Sea Country management. We are working towards the creation of 'zones' to ensure marine users access our Sea Country in a way which protects our cultural and ecologically significant resources into the future. Whilst challenging, we think this is an exciting new approach to Sea Country management which we would like to share with other groups in the NT.

Presenters' Summary

Shaun Evans is the Cultural Liaison for li-Anthawirriyarra Rangers. David Barrett is the Regional Remote Manager for li-Anthawirriyarra Rangers, and Chairperson for Namultja Aboriginal Corporation. David and Shaun have cultural ties to both Yanyuwa and Marra Country. Jackie Gould is a Senior Research Fellow at the Northern Institute (Charles Darwin University).

Managing Country - Collaborating across disciplines and jurisdictions

Fiona Keighran, Corrine Coombes & Shaun Evans, Mabunji Aboriginal Resource Indigenous Corporation

Frances Verrier and Cherrie Frail, Parks Australia

Presentation Summary

In the South-west Gulf of Carpentaria, the Yanyuwa and Marra Traditional Owners have been sustainably using, enjoying and managing Sea Country for tens of thousands of years. Indigenous Protected Areas (IPA) are managed by First Nations groups in accordance with these Traditional Owner objectives. However, IPAs are often adjacent, or in addition, to other land and sea management practices, such as national and marine parks. They also include culturally important mobile species, like turtles and dugongs, that don't respect legal boundaries! For example, the Yanyuwa IPA is adjacent to Limmen National Park, Limmen Bight Marine Park and Limmen Marine Park - all of which are in neighbouring Marra Country. How does a First Nations group, like Mabunji Aboriginal Resource Indigenous Corporation, navigate multi-Country clan relationships and complex management arrangements to achieve the best outcomes for their Country? It's all in the collaboration.

Presenters' Summary

Fiona, Corrine, Shaun and the Mabunji team collaborate with families, across a wide-range of disciplines and jurisdictions, to manage Country. Their work includes clans, industry, government (including Frances and Cherrie) and researchers to maximise outcomes in Marra and Yanyuwa Sea Country across the IPA, Limmen Bight and Limmen Marine Parks.



Application of the Nature Repair Market Framework for the Indigenous Estate in Northern Australia: Challenges and Opportunities

Kamaljit K Sangha, Charles Darwin University



Presentation Summary

This talk will provide an overview of various existing nature-based solutions and economies in Australia, followed by the future Nature Repair Markets framework proposed by the Australian Government. The framework offers both opportunities and key challenges for land managers in the north. Opportunities include financial incentives to protect and enhance biodiversity, implying evidence-based gains in biodiversity. Among the challenges is assessing gains in biodiversity, particularly in the northern context where a vast area of the landscape is managed by Indigenous stakeholders under their stewardship. How does stewardship fit into this framework? What should be the baseline to assess biodiversity gains, or do we need a baseline at all? This talk will offer insights into these issues and solutions based on global studies. No doubt, this Nature Repair Market approach is important for many Indigenous peoples across the north. However, designing a culturally appropriate, reliable, and sound framework, along with methods that deliver cost-effective biodiversity outcomes for land managers, is critical to achieving success for this initiative.

Presenter Summary

Kamaljit K Sangha works as an Assoc Prof. of Ecological Economics at Charles Darwin University, NT, where her work is primarily focused on the Science-Policy interface. She leads an Ecosystem Services group. She has collaborated and worked with several Indigenous groups across northern Australia. Her recent work is focused on developing nature-based economic opportunities (Nature-based Solutions), suiting the northern context. She has participated in several UN-led initiatives (MEA, IPBES, and TEEB). She is a member of several international organisations, including a Lead Author of the upcoming IPBES Nexus Assessment (2022 to date) and Global Environmental Outlook 7 Report (UNEP) assessment, Co-Chair of the IUCN-led CEESP - Local Economies and Communities Nature specialist group (2022 to date). She has published over 130 articles in various reputed national and international journals and conference proceedings. Profile: <https://researchers.cdu.edu.au/en/persons/kamaljit-sangha>

10.20AM – 10.45AM

MORNING TEA



10.45AM – 12.00PM

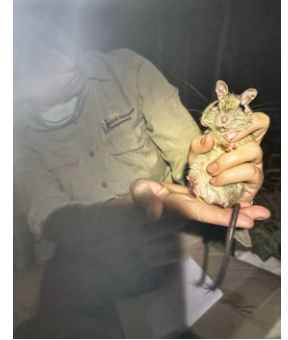
SESSION 2 – PLENARY PRESENTATIONS

Conservation efforts for the brush-tailed rabbit-rat: A translocation journey

Dr Kelly Dixon, Territory Natural Resource Management

Presentation Summary

The brush-tailed rabbit-rat (*Conilurus penicillatus*) has experienced significant decline across northern Australia. Remaining populations in the Northern Territory now persist mostly on islands, with the Cobourg Peninsula the only mainland location the species has been recorded in recent times. Led by ecologists from Territory Natural Resource Management, collaborating with Traditional Custodians, and assisted by a small army of other personnel, an enormous endeavour has been carried out over the past few years undertaking a translocation program with the aim of establishing a self-sustaining brush-tailed rabbit-rat population on an island safe haven free of threats such as cats, feral herbivores, and frequent fire.



In August 2023, 46 individuals were captured from Garig Gunak Barlu mainland and transported via helicopter to the island. Intensive monitoring through radio tracking, camera, and live trapping indicated high survivorship and successful reproduction. A second translocation of 20 animals took place in August 2024 to maintain the genetic diversity established in the first effort. This presentation will detail the project's progress and the substantial commitment involved in this conservation initiative.

Presenter Summary

Dr Kelly Dixon is the Ecological Programs Manager with Territory Natural Resource Management and leads the brush-tailed rabbit-rat translocation program. She manages TNRM's ecological team and oversees the threatened species and places projects that TNRM facilitates across the NT in collaboration with First Nations ranger groups, Traditional Owners, community groups, Government, and other organisations.



Integrating systematic and targeted scat collection approaches to estimate the abundance of a culturally significant threatened species on Indigenous lands

Hayley Geyle, Territory Natural Resource Management
Helen Wilson, North Tanami IPA - Central Land Council

Presentation Summary

Estimating the abundance of threatened species can be difficult. This is particularly true in remote regions, where surveys are often expensive and subject to logistical challenges. Where threatened species occur on Indigenous lands, collaborative work between Indigenous people and ecologists who share interest in the conservation and management of such species may resolve some of these challenges, while also meeting additional local objectives. Here, we show the value of integrating two on-ground methods for non-invasive genetic sampling of scat to estimate the abundance of the greater bilby (*Macrotis lagotis*), a species of high cultural significance to Indigenous people in central Australia that is threatened with extinction.

We compared two on-ground methods: (1) systematic surveys, designed to be repeatable, stratified and standardised, and (2) targeted surveys, which focused on areas where bilby sign was present, and involved a more flexible and intuitive search technique undertaken collaboratively with local Indigenous people and informed by their knowledge and skills. We compared different combinations of the two methods and different sampling intensities to explore how they affected modelled estimates of bilby abundance, derived by combining information on individual bilby identities (from DNA extracted from scat) with spatially-explicit capture-recapture modelling. We found combining targeted methods for scat collection with systematic sampling provided the best modelled estimates of bilby abundance and improved modelled estimates for lower overall effort. This approach also allowed for the inclusion of diverse knowledge systems and approaches to detecting species (scat) presence. By weaving multiple approaches to find and identify bilby scats, we show how collaborative knowledge-sharing practices can deliver multiple benefits to Indigenous and science partners.

Presenters' Summary

Hayley is an Ecologist at Territory Natural Resource Management and Helen is a Senior Ranger with the Central Land Council's North Tanami Rangers. They are working together to protect the greater bilby and to improve our understanding of its ecology and conservation needs.



Rescuing the Largetooth Sawfish

Malak Malak Land Management Rangers

Presentation Summary

When Traditional Owners found Largetooth Sawfish (traditional name Tyemirerriny) in billabongs on the Malak Malak Land Trust, they reached out to Charles Darwin University (CDU) scientists to help understand and save the trapped sawfish. 12 years later, this project is still having positive impacts for both species and people involved. Traditional Owners wanted to rescue trapped sawfish (particularly pups) and release them back into the Daly River before the billabongs dry up, scientists saw this as a significant find as there had been no known information of sawfish breeding on the floodplains. Scientists have been able to build their data knowledge on the species by recording DNA, size and sex of trapped Largetooth Sawfish. To date, 115 Sawfish have been rescued from billabongs and relocated into the Daly River, giving Rangers essential skills in capturing and recording scientific data for the protection of the species.



Presenter Summary

Malak Malak Rangers are proud of this ongoing project and collaboration with CDU. They are happy to share their story to raise awareness for the Tyemirerriny and the project design and delivery.



Genomic banking and applied genomics for land management

Dan Edwards, Museum and Art Gallery of the Northern Territory

Presentation Summary

Resilient, healthy wildlife populations are central to Indigenous cultural values, conservation, and natural resource management. Approaches to monitoring wildlife populations and their responses to change include camera trapping, audio loggers and eDNA, however these approaches are personnel heavy and don't necessarily allow an understanding of population size, dispersal, and population health through time. Genomic approaches can do this; however they rely on comprehensive biobanking for use as an applied approach as opposed to an academic study, which limits its use. This is especially pertinent in the Northern Territory, which has high levels of economic focus around natural resource management, high levels of data deficient species and low resources for the number of intensive studies needed. I have been building the biobanking potential of the biological collections at the Museum and Art Gallery of the Northern Territory in collaboration with ranger groups, to expand genomic monitoring capacity in the Northern Territory.



Presenter Summary

Dan Edwards is the Curator of Terrestrial Vertebrates at the Museum and Art Gallery of the Northern Territory. Her scientific research has focused on taxonomy, evolution and conservation of mostly amphibians and reptiles. She is new in the role and interested in growing her network among ranger groups.



“Culture-based conservation” approach to supporting governance of Indigenous territories: the case with Indigenous communities in Southern Philippines

Jayson Ibanez, Philippine Eagle Foundation

Presentation Summary

With Indigenous Peoples’ (IP) lands covering over one-quarter of Earth’s surface, Indigenous Peoples and their lands are crucial for the long-term persistence of Earth’s biodiversity and ecosystem services. In the Philippines, the Indigenous Peoples Rights Act of 1998 protects the rights of Indigenous Peoples to own and manage territories. But the law also prescribes that the IPs should maintain ecological integrity and restore degraded areas within ancestral domains. However, in the absence of formal titles over many territories, the lack of government subsidies to governance, and with many IP communities still politically and economically marginalized, the state of biological resources and the Indigenous way of life that it supports remains precarious.



The Philippine Eagle *Pithecophaga jefferyi* is an IUCN “critically endangered” forest eagle which is endemic to the Philippines where it is a national bird. As the country’s apex predator that lives as monogamous breeding pairs requiring large forest territories to survive, the Philippine Eagle is an effective flagship, umbrella and trigger species for forest biodiversity conservation and watershed and carbon sink protection in the country. Nearly 80 % of the 2.8 million hectares of suitable Philippine eagle habitats overlap with ancestral domains. Beginning 2016, the Philippine Eagle Foundation worked with seven Indigenous groups in Bukidnon, Mindanao who have ownership over nearly 120,000 hectares of ancestral domains that overlap with at least nine “unprotected” territories of the Philippine eagle. Using the PEF’s Culture-based Conservation approach, four key elements of Indigenous governance were supported namely the (i) Indigenous leaders and decision makers who have intimate knowledge of custom rules and traditions, (ii) the codification and popularization of their customary rules and plans, (iii) rule enforcement and plan implementation, and the (iv) brokering of incentives (material and non-material) to rule compliance and customary disincentives or penalties for non-compliance. We combined Indigenous knowledge and scientific tools and techniques in community-based conservation and development and helped build community social and human capitals. Through the fair engagement of culture-bearers, women and the youth in project implementation, research and conservation, we also generated psycho-social and financial empowerment. All of these resulted in clear bio-cultural conservation, political empowerment and economic wellbeing outputs with our Indigenous partners.

Presenter Summary

Jayson Ibanez is currently the Director for Operations at the Philippine Eagle Foundation. He is also a Professorial Lecturer at the College of Science and Mathematics of the University of the Philippines in Mindanao, and an Adjunct Professor at the School of Environmental Science and Management of the University of the Philippines Los Banos. Jayson received his PhD degree in Natural Resource Management from Charles Darwin University through an Australian Leadership Award (ALA) scholarship. He has BS and MS Biology degrees from UP Los Banos (1995) and Ateneo de Davao University (2007), respectively. Jayson pioneered research on Philippine eagle home range, survival and habitat use through radio, satellite and GPS/GSM telemetry. His team studied 31 eagles with trackers, which improved the scientific knowledge on the country’s “critically endangered” national bird. Also, his PhD dissertation on Knowledge Integration and Indigenous Planning in the Philippines helped set-up his NGO’s “culture-based conservation” approach to species and nature conservation in 2010. He received the Biodiversity Recognition Award from the Biodiversity Management Bureau – DENR in 2015, and also the Whitley Fund for Nature (UK) conservation awards in 2015, and a continuing grant award in 2017 for his culture-based conservation work. He also received the International Alumni Award from Charles Darwin University in 2023 and the Australia Alumni Excellence Award for the Environment this year for his work with Indigenous Peoples and Nature Conservation.

12.00PM – 1.00PM

LUNCH



1.00PM – 2.00PM

SESSION 3 – PLENARY PRESENTATIONS

Reading the Country: An animal tracking training framework developed by Warlpiri

Madeleine Dixon, South Tanami IPA – Central Land Council
Christine Michaels, South Tanami IPA – Central Land Council
Helen Wilson, North Tanami IPA – Central Land Council
Dione Kelly, North Tanami IPA – Central Land Council
Nelson Tex, North Tanami IPA – Central Land Council
Myra Herbert, North Tanami IPA – Central Land Council
Kim Webeck – Central Land Council



Presentation Summary

Yitaki Maninjaku Ngurungka (YMN), or “Reading the Country,” is a culturally-based animal tracking training framework developed for integration into Indigenous Protected Areas (IPAs) and ranger programs. Established over three years as a pilot, this project was a collaborative effort between expert Warlpiri trackers, educators, and rangers from the Northern and Southern Tanami IPAs, alongside a Central Land Council (CLC) project team. The framework addresses challenges identified by the Warlpiri, including the loss of knowledgeable elders, limited time for comprehensive learning, and limited opportunities for peer-based learning. YMN includes 16 activities designed to support Warlpiri people (Yapa) in both teaching and learning advanced animal tracking skills. It privileges Warlpiri perspectives while adapting to contemporary needs and methods. Through discussion, experimentation, observation, and reflection, the YMN team developed resources and methodologies to support intensive learning. Presenters will share insights from the pilot and introduce the teaching methods and resources that make up the YMN framework.

Presenters’ Summary

The collective knowledge of the Reading the Country team is immense. Expert trackers, educators and rangers from across the Warlpiri region have brought their skills and experiences to the development of this training framework. All members of the team have experience and interest in many areas such as hunting, inter-generational teaching, working with schools and in two-way land management. Many have also contributed to research papers, presentations and represented their community on boards and various initiatives.



Developing Future Environmental Stewardship: A Successful Science Education Program in Greater Darwin

Emily Raso and Donella Walker, Landcare NT
Ally Szyc and Nalani Swayer, Darwin Wildlife Sanctuary,
Donna Lewis, Territory Native Plants

Presentation Summary

Semester 1 saw the highly successful implementation of a new environmental science education program in the greater Darwin area, reaching 420 Year 3-6 students across 14 schools. The vision behind this program was a response to the growing demand for environmental science education from local Top End community experts.

Our initiative inspired young people to understand the importance of preserving and protecting the natural environment and promoting a sustainable and greener future. Through interactive classroom activities and exploring habitats in their own school grounds, students learned about native flora, fauna, and biodiversity, exploring their roles in creating habitat, enhancing biodiversity, and addressing climate change. The program supports the City of Darwin's Strategic Plan and vision for a connected, healthy, and environmentally responsible city, and its extension aims to encourage environmental stewardship in future generations. Funded by City of Darwin and Inspired NT, the program was delivered in partnership with Landcare NT, Territory Native Plants and the Darwin Wildlife Sanctuary.

Presenters' Summary

Emily Raso is the Chief Executive Officer of Landcare NT and Ally Szyc is the Chief Executive Officer of Territory Wildlife Sanctuary, Nalani Swayer is a Wildlife Ecologist and Donna Lewis is a Vegetation Scientist.



Understanding late dry season movements, space use and diet of Magpie Geese in a changing landscape

Amélie Corriveau, Northern Land Council / Charles Darwin University

Presentation Summary

The Magpie Goose is a unique waterbird protected by law but is considered a pest species by mango growers in northern Australia. Geese are reported to damage fruits, trees, and irrigation equipment, which is often exacerbated when fruit development coincides with the late dry season as natural resources for Magpie Geese are scarce. In this study, we examined the movements, habitat use and diet of the Magpie Goose in the Greater Darwin Region. Using GPS tracking and DNA metabarcoding, we investigated individual movements between agricultural fields and other habitats over an annual cycle, quantified home range and space use during the late dry season, and assessed Magpie Goose diet at different locations during mango season. Our results provide a better understanding on the extent of, and mechanisms behind, Magpie Goose use of mango orchards, the resources they use and the spatial and temporal scales at which they need to be managed.



Presenter Summary

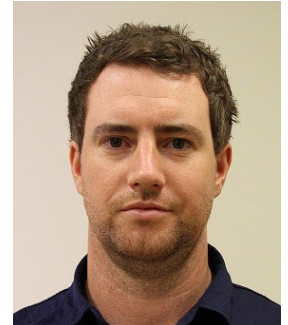
Amélie is a spatial ecologist with a special interest in addressing challenges occurring at the human-wildlife interface. Through engaging with multiple end-users, she hopes to significantly contribute to the field of applied ecology, inspire public engagement in science and conservation, and engage in projects and collaborations that ultimately lead to applied outcomes and benefits for stakeholders.

Illegal Foreign Fishing in Australia's Northern Waters

Brendan Rayner, Australian Fisheries Management Authority

Presentation Summary

Illegal Foreign Fishing in Australia's Northern waters has reached historical highs, with large numbers of Indonesian fishers continuing to make illegal ventures into Western Australian and Northern Territory coastal waters. These foreign fishing vessels (FFVs) are observed hiding in creeks and dense mangroves systems, targeting highly prized sea cucumber, shark fin and other marine species, returning to Indonesia to sell in Southeast Asian markets.



Whilst these illegal operators cause significant damage to Australia's fisheries resources, they also impact mangroves systems causing damage and leaving rubbish on remote, traditional lands. Further, these ventures present other significant risks including the potential for biosecurity threats such as Foot and Mouth, and Lumpy Skin Disease, which could have innumerable damage. This presentation outlines the Australian Government's efforts to address this issue, the need for support from local Ranger Groups and Community members, and the best ways to report sightings of illegal foreign fishing vessels.

Presenter Summary

Brendan Rayner, Senior Manager, International Compliance Operations at the Australian Fisheries Management Authority (AFMA), manages foreign investigations and international compliance program delivery based in Darwin. Brendan has worked in international fisheries for over 15 years, in fisheries management and compliance, undertaking and coordinating international operations to interdict illegal, unreported, and unregulated fishing vessels.

2.00PM – 2.10PM

POSTER SESSION

2.10PM – 2.30PM

AFTERNOON TEA

2.30PM – 4.00PM

SESSION 4 – PLENARY PRESENTATIONS

Ranger coordinators - Roles, challenges and future directions

Rachael Thurlow, Territory Natural Resource Management

Jaemie Page, Batchelor Institute

Presentation Summary

Ranger programs across the NT have grown exponentially over the past few decades. As the roles of rangers grow, so does the workload and responsibilities of ranger coordinators trying to manage it all, getting people to work every day, keeping vehicles and machinery going, managing budgets, reporting on projects and managing expectations of multiple stakeholders. It is a big job. Since 2022, Rachael Thurlow and Jaemie Page have been facilitating workshops at each TNRM conference to bring coordinators and senior rangers together to share experiences, challenges and strategies they use to manage the role and share the load. In 2024, the workshop will focus on developing pathways for local rangers to take on leadership roles. This presentation will highlight the key findings of these workshops, the challenges, roles and strategies identified by participants to manage the job and build ranger leadership for the future.



Presenters' Summary

Rachael and Jaemie are lucky to work with many different ranger groups across the NT through their roles in training and project support, all the amazing people and places. They also see the challenges facing senior rangers, coordinators and managers and the different strategies they employ to manage the roles.

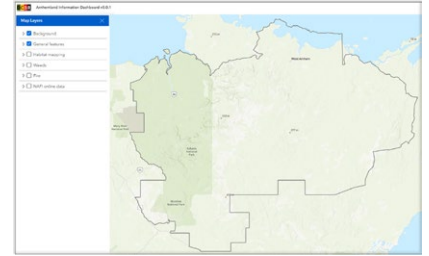


Arnhem Plateau Region Information System

Andrew Edwards

Presentation Summary

Building on many years of collaboration the project “Transforming Cultural and Natural Resource Management intercultural workforce capabilities in Arnhem Land” brings together many Indigenous groups from the Arnhem Plateau area, to further develop Cultural and Natural Resource Management (CNRM) skills and capacity in an innovative and collaborative set of training and research programs, bringing together Indigenous and non-Indigenous Research Advisors and local young researchers to tackle local CNRM issues.



Presenter Summary

Andrew Edwards is a spatial scientist at CDU. He is here representing a large team of NRM professionals, from CDU, TNRM, CSIRO, ERISS, TERN, and Indigenous Researchers from the Arnhem Plateau Region.

Seeing Siam

Joshua Maer, Weed Management Branch, Northern Territory Government

Presentation Summary

This presentation focuses on the invasive *Chromolaena odorata*, commonly known as Siam weed. Originally from Central and South America, this fast-spreading weed has adapted to a wide range of tropical habitats, posing a significant threat to native ecosystems in Australia. Siam weed can produce over 80,000 seeds per plant, spreads rapidly through agricultural, military, and recreational activities, and is highly resilient, tolerating both fire and prolonged dry seasons. I'll provide an update of the distribution of Siam, the containment project to date, how to identify Siam and what to do if you find Siam weed.



Presenter Summary

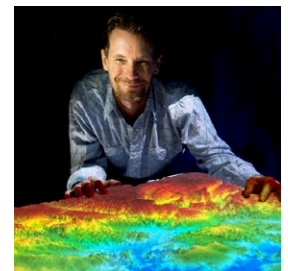
Joshua Maer is a Project Officer in the Weed Management Branch of the Northern Territory Government working on the federally funded project 'Containment of Siam Weed in the Northern Territory'.

NAFI - New fire information products for land managers

Rohan Fisher, NAFI - Charles Darwin University

Presentation Summary

NAFI is the go-to resource for land and fire managers across much of Australia. However many people don't realise that, in addition to the broadscale products, NAFI hosts a huge amount of fine-scale burnt area mapping that is regularly updated for operational fire risk mitigation activities. These new maps provide exceptional detail allowing for the ongoing assessment of fire management risks throughout the year. The presentation will give a brief overview of this and other recent fire data updates from NAFI and how they can be used operationally to improve fire management outcomes for land managers across the NT. We will also have a look at the 2023-2024 fire season, the biggest in the NT in over a decade.



Presenter Summary

Rohan Fisher has worked with satellite data and GIS for the last 30 across Northern Australia and Eastern Indonesia. Rohan works with NAFI and directs the Landscape Knowledge Visualisation Lab at Charles Darwin University, where he focuses on developing practical tools to support savanna fire management and facilitate clear communication for effectively engaging with complex, landscape-scale human-ecological challenges.

4.00PM

CLOSE OF THE DAY'S PROGRAM

6.00PM – 10.00PM

2024 NT NRM AWARDS GALA DINNER

Celebrate excellence in natural resource management at the 2024 NT Natural Resource Management Awards Gala Dinner!

Join us for an evening of recognition and inspiration as we honour the finalists and winners who have made significant contributions to natural resource management in the Northern Territory.

Enjoy a delightful dinner, engaging conversations, and the chance to acknowledge the outstanding achievements of Territorians in natural resource management!

Find out more about this year's fantastic finalists at www.tnrmconference.org.au/nt-nrm-awards

Registration required.



8.00AM

REGISTRATIONS OPEN

If you have not already registered on Day 1 or Day 2, please make your way to the registration desk to collect your delegate information.

We kindly ask you to keep your conference lanyard and name tag visible at all times. You may be asked to show them on entry to a workshop, due to limited registered places.

9.15AM – 1.00PM MORNING WORKSHOP SESSIONS

Water Country - Looking after water from Coast to Desert

Everybody needs and loves water! But what are we doing to care for it?

This workshop brings like-minded people together to discuss the vital role of coastal and freshwater ecosystems. We'll delve into the health of our waterways, aquatic and water dependent species, and management actions across Country. We will hear from people who are leading the way with innovative solutions for sustainable water management and conservation. This workshop will explore topics of groundwater, water mapping, scientific research, and more.



Open discussions will facilitate knowledge sharing between individuals, organisations and stakeholders, fostering collaborative and collective action. This workshop will provide resources, information and networking opportunities.

Mind mapping animals with the Reading the Country Team

Discover practical activities and knowledge from the Animal Tracking Training Framework

In this workshop, the Reading the Country Team will introduce some of the resources and activities they have created as part of their Animal Tracking Training Framework "Yitaki Maninjaku Ngurungka". Participants will have the opportunity to try out some of the activities, including a mind map session and learn how to use them with their communities back home.



The collective knowledge of the Reading the Country Team is immense. Expert Warlpiri trackers, educators and Rangers from across the North and South Tanami IPAs have brought their skills and experiences to the development of this training framework. All members of the team have experience and interest in many areas such as intergenerational teaching, language, working with schools, hunting and in two-way land management. Many have also contributed to research papers, presentations and represented their community on boards and various initiatives.



Agriculture - Innovations for Sustainable Success

Discover practical tools and opportunities to adapt your business to a variable climate and enhance sustainability in your operations!

This workshop will focus on how agricultural businesses and individuals are adapting and innovating to achieve greater sustainability, whether through economic strategies, environmental practices, or by responding to evolving market trends.

Presentations from local producers, industry experts, and researchers will showcase the management practices they have implemented or supported to help secure their long-term sustainability. We'll highlight which practices have succeeded and explore those that presented challenges, evaluating their success based on the goals set by the innovators themselves.

Hear from experienced pastoralists, producers, and industry experts in this informative forum. They will share insights on sustainable practices and the latest technologies.

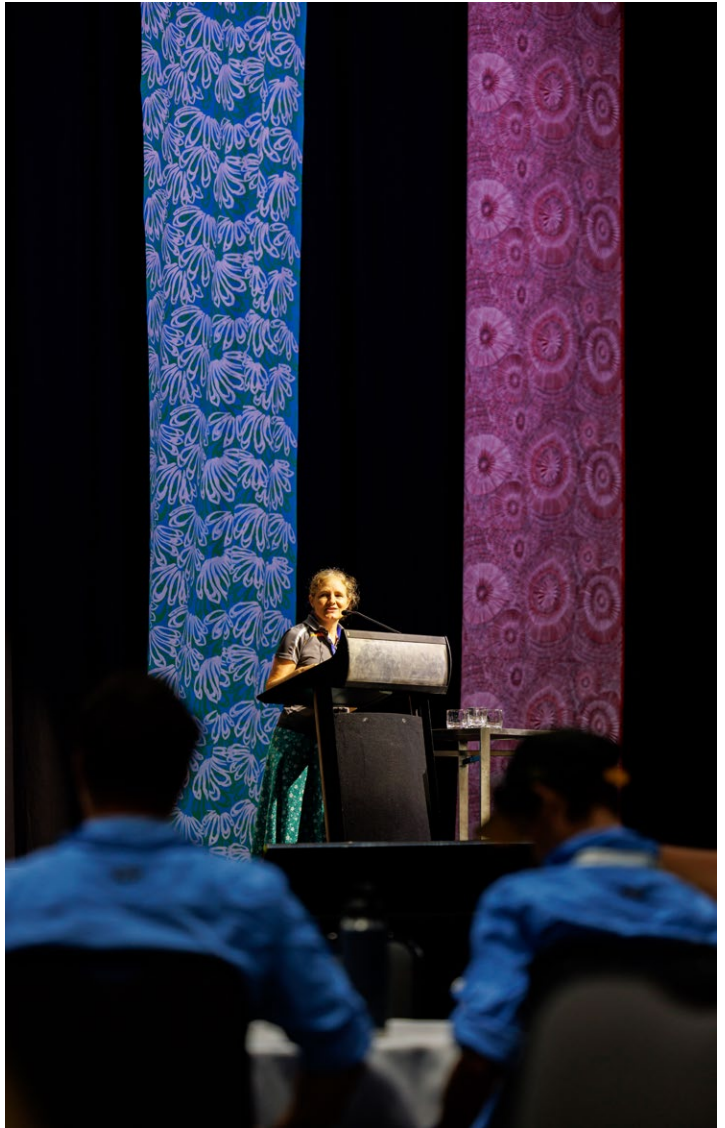


1.00PM – 2.00PM NETWORKING LUNCH

Day 3 Workshop attendees are invited to join us for a fully-catered networking lunch to connect with fellow delegates, exchange ideas, and enjoy delicious food as you finish an inspiring day of workshop sessions.

2.00 PM CLOSE OF THE DAY'S PROGRAM





Best Collaboration in NRM Award

Digital Women Ranger Program and Network in collaboration with the Digital Women Ranger Research Team

Landcare NT in collaboration with Territory Native Plants

Malak Malak Traditional Owners and Rangers in collaboration with Charles Darwin University

Environment & Conservation Award

Casuarina Coastal Reserve Landcare Group
- Gamba Grass Adopt-a-Spot

Landcare NT

Land For Wildlife - Central Australia

Indigenous NRM Award

Arafura Swamp Rangers Aboriginal Corporation

Mimal Land Management Aboriginal Corporation

Reading the Country Project Team; North and South Tanami IPAs and the Central Land Council

Lifetime Achievement Award

Julie Roy, Northern Land Council

Graeme Sawyer, Biodiversity Watch

Jerry Jangala Patrick, Northern Tanami IPA, Central Land Council

Farmers and Fishers Sustainability Award

Dionne Walsh, Range IQ

Fiona McBean, Old Cameron Downs

Thuan Nguyen, Hieu Thao Produce

Resilient & Sustainable Enterprise Award

Big Rivers Conservation and Land Management

Curtin Springs

Collaborative Research for NRM Award

Anindilyakwa Land Council Land and Sea Rangers

Arid Zone Monitoring Project

Next Generation NRM Award

Dripstone Middle School

The Essington School

Lifetime Achievement Award

Shaun Evans, li-Anthawirriyarra Sea Rangers

Tristin Maroney Lami Lami, Jawoyn Association Aboriginal Corporation



Vote for the Peoples Choice Award

All finalists of the 2024 NT Natural Resource Management Award are eligible to win the People's Choice Award. True to its name, the People's Choice Award is decided by YOU!

Voting is now open and closes on Wednesday, 20th November at 1.00pm.

The winner will be announced at the 2024 NT Natural Resource Management Awards Gala Dinner on Wednesday, 20th November.

See a full list of our finalists at www.tnrmconference.org.au

How to Cast your Vote

1. Open the camera on your mobile device and scan the QR code
2. Click on the hyperlink that appears to open the voting survey
3. Select the finalist you want to vote for
4. Answer how you heard about our event
5. Click Done!





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The INPEX-led Ichthys Joint Venture is proud to support the Aboriginal Ranger Grants Program.

Aboriginal rangers play a critical role in the management and protection of the Northern Territory's pristine land and sea environments.

The Ichthys LNG Coastal Management Offset Fund, which is part of the broader NT Government-led Aboriginal Ranger Grants Program, will assist rangers and sea managers deliver a program for the conservation and management of dugongs, cetaceans and threatened marine matters of national significance.

The SA 24 million funding is part of a much bigger voluntary commitment by Ichthys LNG which includes SA 91 million of environmental and social offsets over the 40-year life span of our development.

For more information visit: www.depws.nt.gov.au

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- Savanna and arid ecology
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- Food production

RIEL is home to and works together with:

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- North Australia Centre for Autonomous Systems
- North Australia and Rangelands Fire Information
- Darwin Centre for Bushfire Research
- Bioscience North Australia

Contact RIEL about research opportunities, postgraduate study, consultancy services, and partnerships.

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Thank you

We would like to thank the following organisations that have continually supported and assisted TNRM in creating the professional and quality event we proudly present to you.

2024 TNRM Conference Partners, new and returning. Your support is absolutely essential to the delivery of the conference and we thank you sincerely! A full list of our Partners is available at the back of this program.

Darwin Convention Centre Thank you to the whole team! We enjoy returning to this venue every year for your professionalism, creativity and hospitality.

Hodge Environmental Kate Hodge consistently provides a fantastic design service, which coupled with her understanding of the NRM space has helped to elevate our conference to a new level through the development of the high-quality design of our event branding and programs.

Charlie Bliss for his excellent photography. We thank him for his hard work and creativity to ensure our event is captured perfectly.

Top End Print The friendly and reliable printing team who meet every deadline in the production of our banners, posters and programs.

Enchanted Moments are responsible for creating the beautiful atmosphere in the dressing and decorations of the NT NRM Awards Gala Dinner.

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