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## Science, traditional knowledge combine for sea Country

A two-way sharing alliance between the Australian Institute of Marine Science (AIMS) researchers and Indigenous ranger groups from the Kimberley, the Northern Territory and the Torres Strait is building skills and knowledge to help sea Country in an increasingly challenging environment.

The Northern Australian Marine Monitoring Alliance (NAMMA) was formed to bring together Traditional Owners, Indigenous rangers and sea Country managers to protect and manage marine environments collaboratively with AIMS. It seeks to combine the depth of traditional ecological knowledge with the latest scientific techniques for effective marine monitoring.

The founding members of NAMMA – the Bardi Jawi and Oorany Rangers, the Anindilyakwa Land and Sea Rangers and the Kemer Kemer Meriam Nation in eastern Torres Strait - met each other for the first time in Townsville recently with the AIMS team. They shared their science journeys and discussed how the partnership can help them meet the needs and responsibilities of looking after their sea Country through monitoring.

They also launched the new NAMMA website together, which includes newly developed monitoring training modules, access to Certificate III training packages, manuals and reporting dashboards so that monitoring results can be logged and shared with wider community.

Bardi Jawi ranger Azton Howard said: “Since we began working with AIMS, we have been collecting data on our fish stocks and corals. We send it off to the AIMS crew, they analyse our data and then we bring the information back to our community, to our schools to teach the young ones, and to our Elders to make sure they’re informed. We can use the data to help us manage Country.”

Bruce Mountford from the Anindilyakwa Land and Sea Rangers on Groote Eylandt said: “Talking to other rangers and people from different parts of northern Australia about what’s going on is awesome. I’ve learnt a bunch of stuff just listening to people talk about coral bleaching and what they have discovered by using BRUVS (Baited Remote Underwater Video Stations).”

Uncle Kapua Gutchen (AKA KG) from Darnley Island (Erub) in the Kemer Kemer Meriam Nation, said: “We are teaching children our traditional knowledge but that alone won’t help us make the situation improve or come better in our country. We need the western science to marry up with ours so we can come up with plans that help our work.”

AIMS scientists Dr Martial Depczynski, Dr Kathy Cure and Libby Evans-Illidge have been working with these ranger groups since 2018 to integrate traditional ecological knowledge with western science techniques to create more culturally relevant frameworks for marine monitoring.

Dr Depczynski said the partnership between Indigenous rangers and scientists was a natural fit.

“Both Traditional Owners and AIMS share complementary environmental stewardship responsibilities and obligations towards looking after sea Country,” he said.

“Now that the strong network of Indigenous ranger communities around Australia is being established, an important next challenge is to put into motion bespoke tailored monitoring partnerships that address training, capacity building, joint monitoring and community reporting on the state of the environment. We are taking an important step towards this goal with NAMMA.”

Dr Cure added that NAMMA was proud to be rolling out co-designed monitoring tools and frameworks that consider traditional ecological knowledge and science as equally important.

“Unfortunately, while sea Country is often remote and well managed by Traditional Owners and rangers, it is not immune from the impacts of climate change and other disturbances,” she said.

“Just recently the Bardi Jawi and Oorany rangers recorded an extensive coral bleaching event on their sea Country. The data they collected will be joined with long-term monitoring data to provide community with a clearer understanding of coral bleaching impacts.

“Having the rangers on Country keeping an eye on reefs and having the option to quickly respond to bleaching events, reinforces their value as sentinels looking after local marine life and helping inform local management decisions with data collection.”

*The Bardi Jawi Rangers are managed and supported by the Kimberley Land Council and the Anindilyakwa Land and Sea Rangers through the Anindilyakwa Land Council.*

More information about NAMMA is available from its website: [NAMMA - Northern Australian Marine Monitoring Alliance](https://www.namma.gov.au)

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#### More about the Australian Institute of Marine Science:

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