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# Submission to the Indigenous Skills Engagement and Employment Program (ISEP) Discussion Paper

Submitted by the Australian Institute of Marine Science (AIMS), September 2021

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## 1. Introduction

The Australian Institute of Marine Science (AIMS) is Australia's Commonwealth government funded tropical marine science agency. Governed by the *Australian Institute of Marine Science Act 1972*, AIMS is a statutory authority within the portfolio of the Minister for Industry, Science and Technology. The AIMS mission is to provide research and knowledge of Australia's tropical marine estate to support growth of its sustainable use, effective environmental management, and protection of its unique ecosystems, underpinned by a commitment to be a reliable and trusted advisor and partner. AIMS' main headquarters is in Townsville where the National Sea Simulator is also located. Additional AIMS facilities are in Perth and Darwin. AIMS provides major large-scale, long-term and world-class research to help governments, industry, the wider community and Traditional Owners to make informed decisions about sea Country management. We achieve this with innovative scientific and technological research with the help of our people, our partners, our world class research infrastructure including two ocean-going purpose built research vessels, and our long term comprehensive data sets. See [www.aims.gov.au](http://www.aims.gov.au).

AIMS is not a training organisation. However, we are committed to greater participation of Indigenous Australians across our operations in future, by using our research and supporting operations as a platform for training, capacity building and future employment opportunity either with AIMS or with partner organisations.

This submission outlines our approach to fostering more Indigenous partnerships within our research portfolio, and facilitating Indigenous training and capacity building in areas of high mutual interest and future employment opportunity for our first nations partners. We believe there is great potential for development of a national marine science training and employment pathways program for Indigenous Australians that will deliver employment opportunity leading to real social, cultural, economic and environmental benefits. We invite the Indigenous Skills, Engagement and Employment Program (ISEP) team to consider our approach and help us identify new ways in which NIAA and AIMS can leverage each other's national position and investment. By building greater Indigenous capacity in marine science and sea Country management, together we can contribute to the employment targets in The National Agreement on Closing the Gap:

- By 2031, increase the proportion of Aboriginal and Torres Strait Islander youth (15-24 years) who are in employment, education or training to 67 percent (Target 7); and
- By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25-64 who are employed to 62 per cent (Target 8).

## 2. AIMS' approach to marine science partnerships.

AIMS' tropical operational footprint intersects with the sea Country of Australia's northern coastal Traditional Owners and a significant management capacity in remote communities and Indigenous ranger programs. For some time, we have realized that greater research impact and value can be generated, and new insights gained when we partner with this capacity and bring our western science and technology together with Indigenous knowledge, interests, capacity, and capability. The [AIMS Strategy 2025](#) sets ambitious targets for more projects within our research portfolio that are genuinely co-designed and co-delivered partnerships with Traditional Owners, to take advantage of this opportunity for 2-way learning.

[The AIMS Indigenous Partnerships Plan \(IPP\)](#) and [Policy](#) outline how AIMS will achieve this. The IPP and policy are the result of a comprehensive review of ethical guidance (eg [AIATSIS](#) and [UN](#) guidelines); the plethora of Traditional Owner generated land and sea management plans (eg [individual sea country plans](#) and [regional syntheses](#)); and discussions with our Traditional Owner partners. We learnt that the AIMS mission overlaps strongly with that of the Traditional managers of sea Country. Besides finding opportunity in the synergies between AIMS and Traditional Owners in science, capability and capacity needs and priorities, the IPP and Policy requires AIMS to respect and value Traditional Knowledge and support the inherent rights of Traditional Owners and their obligations to look after sea Country.

A novel element of the IPP and Policy is a new research governance model based on four tiers of Indigenous engagement (Figure 1). The entire AIMS research portfolio is now mapped across these tiers:

- The bronze tier is appropriate for researcher-led projects that have minimal or no requirement to access sea Country. The researcher is required to identify and acknowledge the relevant Traditional Owners, and inform them about the research and its results.
- The Silver tier is appropriate for researcher-led projects that have a significant intersection with sea Country, for example by collecting samples, deploying equipment or doing manipulative experiments. The researcher is required to do everything in the bronze tier plus consult extensively with Traditional Owners prior the project commencing, in order to seek (and hopefully obtain) their Free Prior Informed Consent (FPIC).
- The Gold tier is appropriate for co-designed and co-delivered genuine partnerships.
- The Platinum tier is appropriate for Traditional Owner initiated and led projects that AIMS supports.



Figure 1: The AIMS 4 tier research governance model

### 3. Marine science partnerships as a platform for meaningful Indigenous training, capacity building and employment.

At any point in time, it is expected that the AIMS research portfolio would include projects across the whole spectrum from bronze to platinum. However, for research areas with strong mutual interest between AIMS and Traditional Owners, we are already realising great potential for projects to progress through the tiers as relationships build and mutual capacity (including cross-cultural competency) is developed. There is enormous potential to use AIMS' research platform to build significant professional capacity amongst the Traditional Owner and Indigenous ranger community in ways that can lead to social, cultural, economic and environmental benefits.

The following two research areas are already proving suitable for this approach.

#### 3.1. A proposed Northern Australian Marine Monitoring Alliance (NAMMA).

Marine monitoring is a core capability and objective of AIMS, and AIMS plays a key role in delivering knowledge from robust monitoring and reporting to support management and decision making (eg [AIMS monitoring on the GBR](#)). However, there are large gaps in the geographic coverage of AIMS monitoring projects in areas that coincide with an Indigenous ranger workforce. A review of Traditional Owner sea country priorities and objectives within Healthy Country plans and regional syntheses shows that generally, Traditional Owners also understand the importance of robust monitoring and want to be empowered to conduct their own monitoring of country. This shared interest is the basis for NAMMA.

A key objective of NAMMA is to empower and increase the capacity of Indigenous Rangers and Traditional Owners in the ability to undertake scientifically robust marine monitoring to inform sustainable management of sea country. The alliance would coordinate and integrate the application of state-of-the-art technology and science, combined with traditional knowledge and understanding to generate a platform to inform and support best possible management and decision making for sea country, at a range of scales – from the local-interests level, through to cross-regional and national scales.

The concept proposes that those groups who opt to become members of the alliance will determine their monitoring priorities based on individual needs, environmental concerns and aspirations, and objectives within their respective healthy country plans. The alliance could provide support in monitoring program design, as well as provide access to the relevant (and in some cases nationally accredited) training, operating procedures, and equipment required to conduct the program. Initially AIMS proposes to play a primary role in training and planning support, however expects that over time, this capability will be transferred to alliance members (Traditional Owners and Indigenous rangers) as knowledge and expertise of the techniques and methodologies become more advanced.

AIMS has already undertaken a number of successful projects to validate this model at small scale, with the Bardi Jawi Rangers in Western Australia, the Anindilyakwa Rangers at Groote Eylandt, Dhimurru rangers in the NT and with Traditional Owners and TSRA in eastern Torres Strait. The Bardi Jawi project was the first NAMMA project and their rangers are now successfully executing their own co-developed sea country monitoring program using world-class technology on-country, with minimal support from AIMS. Bardi Jawi rangers have co-presented results with AIMS scientists at national conferences and co-authored peer reviewed papers. The following videos describe the different stages of the Bardi Jawi project:

- Participatory mapping and co-designing the monitoring program  
<https://www.youtube.com/watch?v=npXHUjK2aQ>

- 3 years later – a video focused on rangers’ perspectives which one a ‘best film’ award at the 2021 Mud and Saltwater Film Fest <https://www.youtube.com/watch?v=hHNYitXuNXy>
- A special outreach project to explore how best to return results to community across multiple generations <https://www.youtube.com/watch?v=FJ1Obvi9Vlc>

AIMS was consulted during the 2019/20 review of the *Conservational and Land Management* vocational training package, which is the qualification that most Indigenous rangers undertake. As a result, the new package is now called *Conservation and Ecosystem Management* and includes marine monitoring and operational competencies. The new Certificate III (AHC31420) has a marine stream made up of the following:

- AHCMAR301 Conduct a subtidal marine monitoring operation from a vessel or platform
- AHCMAR302 Conduct intertidal monitoring
- AHCMAR303 Coordinate marine conservation activities on small vessels
- AHCMAR304 Identify and collect marine life
- AHCMAR305 Monitor ocean conditions and marine environmental quality
- Plus 5 units from the Cert III in maritime operations (Coxswains units)

With completion of nationally recognised competencies Traditional Owners and Indigenous rangers will be well placed to attract fee-for-service marine monitoring that contributes to scientifically robust national datasets. For those that wish to go further, the Certificate III can also be used to transition to university studies as described in section 4 of this submission.

### 3.2. Indigenous reef restoration

The [Reef Restoration and Adaptation Program \(RRAP\)](#) is a partnership between eight research providers led by AIMS. Supported with [Reef Trust Partnership](#) funding, It brings together global experts to develop an integrated set of reef interventions that are safe, acceptable and effective in helping the Great Barrier Reef (GBR) tolerate, adapt to and survive the impacts of climate change and other stressors into the future. The Traditional Owner engagement framework for RRAP follows the AIMS IPP and Policy. All projects that access sea Country trigger the Silver tier and require Free Prior and Informed Consent from Traditional Owners, in addition to relevant research permits from management agencies. Figure 2 illustrates the Traditional Owners with which FPIC discussions have occurred or are underway.

Not surprisingly, the FPIC discussions have identified deep concerns held by Traditional Owners of the GBR who have been consulted, regarding the risks to their sea Country posed by climate change and the environmental trends they have observed. They have demonstrated a keen interest in the research being proposed, and expressed a strong desire to be involved. AIMS is coordinating their participation to the extent possible, within limits of available resources. However there is significant potential to incorporate more formally structured capacity building within the RRAP R&D projects, leading to new skillsets in reef interventions that are developed in ‘real time’ as the research occurs.

In 3 or 4 years time, there is likely to be a new emerging reef restoration industry that will need an appropriately skilled and located workforce. There is a real opportunity now, to establish suitable skillsets amongst the Traditional Owners of the GBR. As the industry does not yet exist, activities within the RRAP R&D program can provide the platform for training and capacity building to deliver hands-on work-based “learning by doing” training within projects that are developing the skills and knowledge for the new industry.

The vocational training landscape presents thousands of units of competency within a hierarchy of training packages that are built around ‘[industry groups](#)’. An RRAP industry-specific package may in future be

established around customised units of competency, possibly moderated by an independent industry body. However, for the time being, there is a lot within existing packages to cherry-pick from that is relevant to RRAP. The following are particularly suitable:

- Aquaculture – with streams for aquaculture operations (eg propagating coral for restoration activities), diving operations and vessel operations.
- Certificates in maritime operations – vessel and maritime equipment operation.
- Conservation and ecosystem management – monitoring the effectiveness of interventions.
- Construction and electrical – equipment assembly and operation.
- Manufacturing and production – equipment manufacture.

AIMS has already employed the first two Indigenous-identified aquaculture assistants who are undertaking a Certificate III in Aquaculture while learning how to propagate coral for research related to RRAP and operate and maintain aquaculture systems within the National Sea Simulator at AIMS. A further two Indigenous identified positions are currently being recruited.

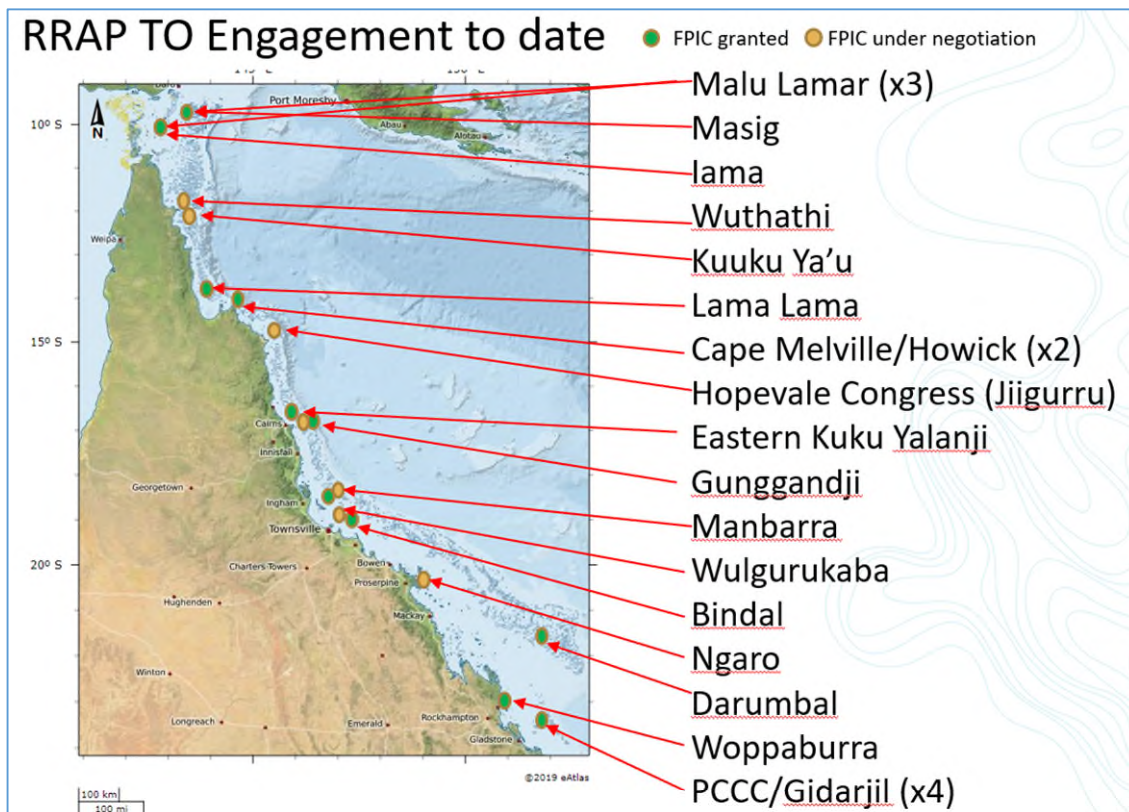


Figure 2: FPIC negotiations on the GBR for RRAP research

#### 4. A National Marine Science Pathways Program for Indigenous Australians

AIMS would like to employ more Indigenous Australians across all functional areas, however recruitment campaigns rarely attract applications from Aboriginal or Torres Strait Islander people. While non-Indigenous people are well represented in vocational and tertiary studies relevant to AIMS operations, we recognise that there is a significant gap to the level of participation of Indigenous people. We are working to address this gap in the following ways (see also Figure 3):

- Improve the pipeline of young people who are interested in marine science – by supporting and facilitating programs such as [ATSIMS](#) and [ASSETS](#), and encouraging work experience placements, internships and participation in AIMS’ activities.
- Create vocational training opportunities within AIMS’ projects and operations. This submission has already discussed NAMMA and RRAP related training. AIMS has also supported an Indigenous Fitter and Turner apprenticeship followed by ongoing employment, and is currently recruiting a further Indigenous identified apprentice.
- Explore the opportunity for development of ‘micro credentials’ – bite-sized, assessed and recognised suites of competencies built around particular activities. This idea is currently being explored for some RRAP activities, and the development of relevant qualifications required to meet WH&S standards and so remove barriers to participation in research field work.
- Celebrate the opportunities for satisfying workforce participation (at AIMS or elsewhere) with vocational training and qualifications.
- For those who show interest, encourage transition to higher tertiary qualifications. A Certificate III is sufficient for entry into many Bachelor courses. University entrance via a vocational qualification (such as a Certificate III) is a demonstrated and available pathway for vocational graduates that show the ambition and motivation to develop their marine science career further with university qualifications.

AIMS has recently added a position (Indigenous identified) within the Indigenous Partnerships team to coordinate Indigenous training and capacity building within AIMS projects and operations. In addition to direct support and employment, AIMS is exploring ways to support Indigenous scholars and young people through scholarships, internships, and mentorship.

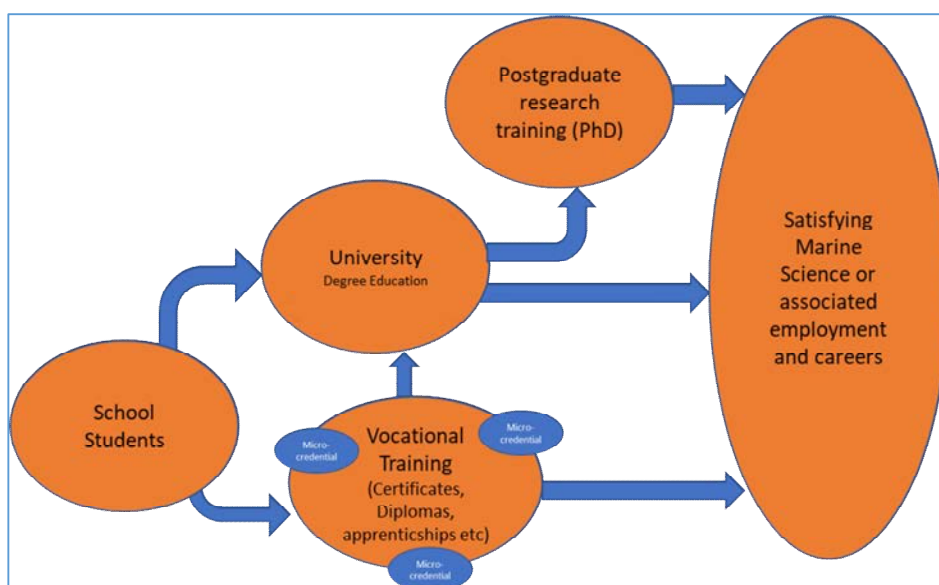


Figure 3: Proposed marine science pathways model