

LEADERSHIP-IN-ACTION REFLECTIONS

ON TWO MONTHS AT THE AUSTRALIAN INSTITUTE OF MARINE SCIENCES
TOWNSVILLE, AUSTRALIA

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LAIDLAW LEADERSHIP-IN-ACTION INTERNSHIP

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Reflecting on 56 days, 30,578 kilometres travelled and a head full of thoughts in one page is an intriguing challenge. It will take me three to even summarise the experience.

‘So, where should we start ?’

Given my engineering background, I’m inclined to start with rationales. My name is Nicolas Robson and I just graduated from EPFL (Switzerland) in Microengineering, say, some sort of micro-scale robotics. This summer, thanks to the Laidlaw Program, I had the opportunity to work with the Australian Institute of Marine Science, AIMS. This Australian government institution is a world pioneer in tropical marine research, home to state-of-the-art coral sciences and at the forefront of protecting one of nature’s biggest achievements : the Great Barrier Reef. This experience has been eye-opening in many ways, which I will attempt to give you a taste of.

The Journey

Flying to Australia is in itself a journey. Spending about two days in transportation gives your mind time to contemplate. Flying over the majestic Alps, the arid Gulf with its skyscraper forests, and then the vast void of the Pacific Ocean—cruising over day and night, literally and figuratively—evokes deep contemplation. What is legally enforced and widely accepted here, courts still pronounce ‘punishable by death’ there. Witnessing the world’s diversity and contradictions —from your window and within a few hours—makes your core beliefs not so obvious, anymore.

The Challenges

Then there is Australia—a continent-country, roughly the size of Europe. In this land of contrasts, one can only expect to be surprised. Like finding a country ‘Cowboy’s superstore’ between two world-cuisine restaurants. But it quickly reminded me that what makes a place home has two names: ‘the people’ and ‘the memories’. Sleep, too, is crucial, as it profoundly affects your thoughts and emotions at their core. On this matter, moving from a home with 20-centimeter thick walls to a 100-year-old ‘Queenslander’ tropical house with neither airtight walls nor windows was a shock. The first week of my stay coincided with ‘exceptionally cold’ temperatures, dropping to 10°C at night... but I soon got to appreciate the airflow during sunny days. This was just one of many instances that prompted a need to critically examine habits and standards—constructively, of course. Such introspection required time and often an uncomfortable experience, but it brought joy in what I chose to adopt and spared me some pain.

My time there was also about staying open-minded and letting others speak first. It was about understanding the emotional paths that lead to words, rather than simply focusing on statements themselves. This approach allowed to have deep exchanges with strangers I now call friends. During a day out with some fellow students, someone praised a foreign government official widely depicted in Europe as a notoriously harsh dictator. Yet, by listening to them without interruption and looking into the depth of the eyes, I got to understand where these words came from. Experiencing something in real life is

so different from seeing it on screen or paper. It is the most powerful reminder that we don't all share the same textbooks, news, social media feeds and priorities in life. This became increasingly evident throughout my work with AIMS, a truly multicultural yet unified workplace. So far on this journey, I've had the pleasure of meeting people from over 16 nationalities. How many versions of the same events do we share?

The Project

Finding my place at AIMS felt quite intimidating at first. During this 8-week stint within the Reef Restoration and Adaptation Program (RRAP), I focused on creating robotics tools for environment monitoring and conservation. Specifically, the project centered around using accessible GPS technologies to track both local and remote events with real-world efficiency, so that various teams can know 'what happened where' on the field. This feeling of getting started in a domain, amongst 'certified experts' in their respective disciplines, was a constant reminder of humility's virtues. Arguably, it acted as the biggest catalyst for growth. Then, conceptualizing a design on paper is one thing, but implementing it—building it with plumber pipes and workshop hardware to withstand the crushing ocean—is quite another. Thanks to the heartwarming support from AIMS' teams of technicians and scientists, particularly my supervisor Dr. MOSHIRIAN, I found the confidence to dive into the challenge headfirst.

The Reflections

The motivations were high: protecting oceans is, in a way, protecting people's lives. Coral reefs, in particular, are a lifeline for food, economy, mitigating tsunamis—a long list—to coastal communities and far beyond [1]. Despite this, my primary drive must have come from reefs being a jewel of nature, forever acknowledged as such by Traditional Owners given the deep roots in community culture, religious practises and identities.

Spending a day in AIMS's Indigenous Partnership 'Cultural Appreciation Training' introduced me to an entirely new view of the world. This workshop gave participants a first contact with Australian First Nations' cultures and complex histories. Little was I exposed to these aspects, despite having been to Australian schools twice. Throughout the day, we discussed perspectives that would turn the world around.

Instead of emphasizing a need to care for the Universe, from some sort of goodwill to protect it, the Traditional narratives seemed to be the opposite : 'Caring so that the Universe takes care of Us back'. We, Humans, were no longer an independent, dominant power walking the Earth with the option of safeguarding it, instead, we were now a part of it. Suddenly, Mankind had to face the humility of being solely a set of entities, a cog with a part to play within the Universe's intricate mechanisms. Mind-blowing to me, all these considerations were already deeply rooted in a complex system of Traditional customs to ensure the balance and harmony between individuals and 'Country', with a capital 'C'. This came to me as the fundamental key to understanding how First Nations aimed to live in harmony with the Land and Sea, for over 60,000 years, long before any sort of climate-change-alike emergencies came into play.

This day definitely challenged the standard Western views on Life, family, kinship and social structure... My extended gratitude goes to AIMS's Indigenous Partnership Team and everyone who took part in the event for the precious teachings.

‘Now, how to summarize my findings after such an experience?’

That’s a tough one.

First, I’ve learned about hope and gratitude. The latter indeed can change a rainy day into sunshine. I would therefore like to extend it to the Laidlaw Foundation and the Australian Institute of Marine Science for their support and funding, and to all the wonderful people I met Down Under. They will leave a permanent touch of positivity in my heart.

Second, this adventure highlighted a belief that the world is quite a small place, in the end. Although humans have developed so many different cultures and ‘top layers’, it seems that we are all quite similar at the core. Who cares about a smile’s skin tone anyway? This experience emphasized the need for space to understand other’s perspectives with both heart and mind.

Finally, I’ve experienced a deep mix of responsibility and relief. This feeling stems from realizing the power of education and the thin line between being part of the cure instead of the cause. Speaking as a STEM graduate, it’s clear that the same degree in Robotics could lead to creating wonderful machines—perhaps even one that performs surgery to allow someone to walk again. Yet the same set of skills allowed to create drones, one of which may have turned this person’s life upside down. Most of us will be involved either in generating, processing, or acting upon situations if not all at once. We must not hide behind numbers or lengthy reports, but instead give rightful power to figures and words. However, all the amazing people I met there left me with the confidence that great, responsible work is being done to address today’s and tomorrow’s issues. People have never been as educated and aware as they are now. Let’s keep up the good work.

The Purposeful Ending Note

To conclude, here’s a small list of meaningful actions to help maintain our oceans healthy :)

- Help reduce littering of plastics and cigarettes at your scale. Even far away from the coast, these will most likely end up in the ocean some way or the other and cause massive pollution issues (such as ‘microplastics’).
- Use non-synthetic clothing (like cotton or linen-based) as much as possible. This will reduce plastic microfiber pollution, as these are often torn apart from garments during the washings. [2]
- Use ‘Reef-friendly’ sunscreen. [3]. Unfortunately, this label isn’t strictly regulated. Therefore, a 2-second check with a product-scanning app is all it takes.
- Be mindful of your carbon footprint. Climate change and warming water temperatures are killing reefs worldwide, very quickly. [4] Swap some beef for chicken, or even lentils :)

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References

- [1] Fredrik Moberg and Carl Folke. “Ecological goods and services of coral reef ecosystems”. In: *Ecological Economics* (1999). ISSN: 0921-8009. DOI: 10.1016/S0921-8009(99)00009-9. URL: <https://www.sciencedirect.com/science/article/pii/S0921800999000099>.
- [2] Judith S. Weis. “Improving microplastic research”. In: *AIMS Environmental Science* (2019). DOI: 10.3934/environsci.2019.5.326. URL: <https://www.aimspress.com/article/doi/10.3934/environsci.2019.5.326>.
- [3] Roberto Danovaro et al. “Sunscreens cause coral bleaching by promoting viral infections”. In: *Environmental Health Perspectives* (2008). DOI: 10.1289/ehp.10966. URL: <https://ehp.niehs.nih.gov/doi/10.1289/ehp.10966>.
- [4] Great Barrier Reef Foundation. *Climate Change - Climate change is the single biggest threat facing the Reef*. 2023. URL: <https://www.barrierreef.org/the-reef/threats/climate-change>.