



TERN Australia Education Strategy

TERN is supported by the Australian Government through the National Collaborative Research Infrastructure Strategy, NCRIS.

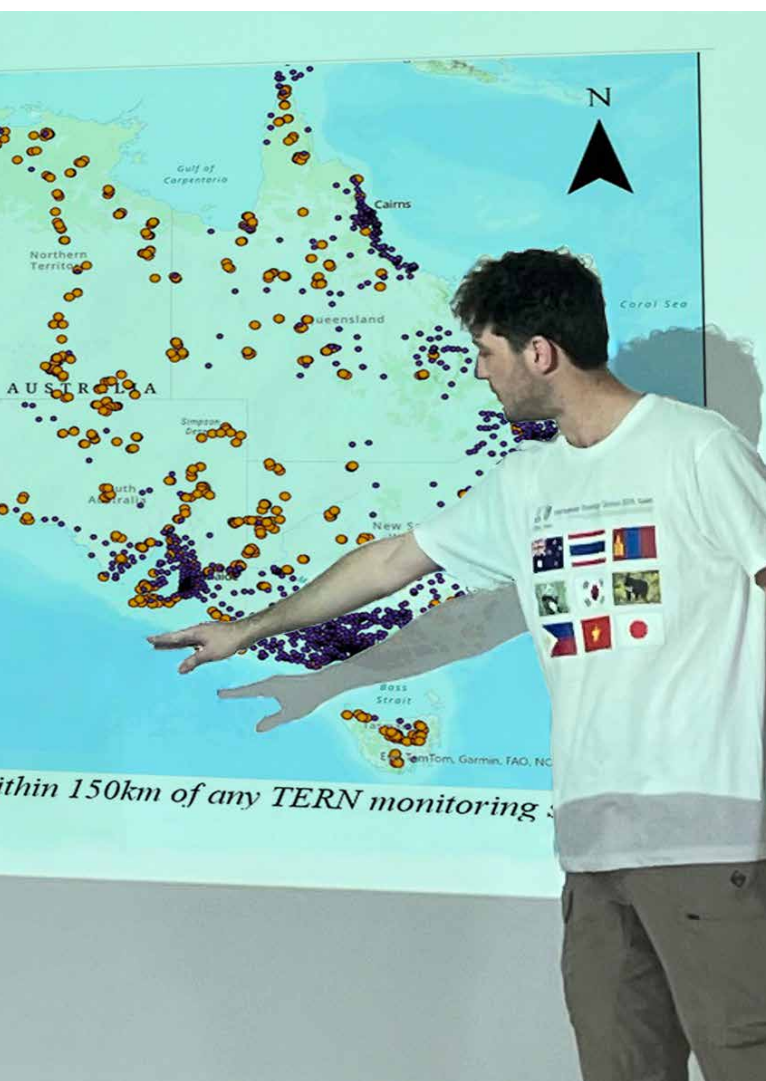
We at TERN acknowledge the Traditional Custodians throughout Australia, New Zealand and all nations. We honour their profound connections to land, water, biodiversity and culture and pay our respects to their Elders past, present and emerging.

Introduction

The 21st century is characterised by significant alterations to ecosystems and the vital services they provide to society, demanding a radical shift in our approach to problem-solving. To effectively manage these “wicked problems” like climate change, biodiversity loss, food insecurity and resource depletion, we need to foster adaptive, innovative societies capable of responding to rapidly changing conditions.

To meet these challenges, Australians need to have well-developed skills in creativity, innovation and team-work to improve Australia’s productivity, economic prosperity, and community cohesion.

The TERN education strategy and associated modules aim to benefit society by fostering awareness and skills in ecological and environmental management, while expanding the reach and impact of TERN’s rich datasets and expertise beyond traditional research communities.



TERN’s Vision

TERN’s vision is to advance ecosystem science and contribute to the sustainable management of Australia’s environment.

The Education Strategy’s Alignment with TERN’s Vision & Mission

TERN’s education strategy aligns closely to our overall vision and mission by advancing the understanding of ecosystem science and sustainable management of the environment via increased awareness of ecological principles and environmental science due to the embedded information within our educational materials.

Further to this, the education strategy aligns to TERN’s ‘key strategies’ by advancing our vision through making ecosystem science accessible and meaningful to broader audiences, whilst embodying our mission through the translation of our monitoring network and data resources into engaging educational materials. This approach directly supports key organisational priorities, such as data accessibility, capacity building, stakeholder engagement and research translation, creating pathways for the next generation to understand and contribute to sustainable environmental management.

Objectives

TERN education aims to advance understanding and contribute to managing Australia's environment and unique ecosystems through awareness raising of our long-term environmental monitoring programs, protocols and data products.

We will do this by providing learners, educators, and, end-users, with a multitude of data-driven educational activities that can be accessed via a modular, self-paced format with online and offline options.

Our education users are

1. **Learners** – those that are 'learning' about ecology and long-term environmental monitoring at a school, university, or other educational platform or institution. This definition also includes the general public, who are interested in learning more about science and ecology;
2. **Educators** – those who use TERN modules to meet specific learning objectives or outcomes, including teachers and lecturers in educational institutions, who must adhere to the Australian curriculum or higher education learning frameworks, standards and graduate attributes. This grouping also includes public servants, members of natural resource management (NRM) groups, and other professionals engaged in environmental education, training and outreach;
3. **End-users** – those that are currently using or aiming to use TERN data and associated research infrastructure, but who wish to further their skills in this area using the TERN education strategy and modules.



Completion of modules will enable

- **Learners** to become aware of, understand and navigate TERN's data-driven products, alongside building awareness of ecological and environmental science principles, monitoring methodologies and careers. Facilitating the development of transferable work-ready skills.
- **Educators** to deepen their understanding of, and ability to navigate TERN's data-driven products, provide new understanding of TERN's data sources, long-term environmental monitoring and access to pre-developed educational materials that are ready for use in the classroom, lecture hall or workshop.
- **End-users** to move beyond basic understanding and navigation of TERN's data-driven products to using this information to an advanced level to make environmental management decisions and answer research questions.

TERN education modules will be skills-appropriate, with links to the Australian Curriculum, Higher Education Learning Frameworks and University Specific learning objectives identified for each module where applicable. Use of TERN's educational products will enable users to tailor the experience for their own needs. While modules may show alignment with Higher Education Learning Frameworks or conservation group specific outputs. This does not preclude other users from accessing or gaining educational benefit from the resource.

The educational principles that will guide our suite of modules are outlined below

- Modular (can be accessed independently of other modules)
- Self-paced
- Assessed by age- or stage- appropriate challenges (optional certification will be available for specific modules)
- Development of transferable and work-ready skills where desired
- Australian examples and case studies
- Inclusive of regionally relevant data and examples

Learners, educators and end-users we aim to target through our educational program include

- F—12 learners and teachers
- University undergraduate, postgraduate coursework and research students
- Academics and researchers
- The general public
- Government stakeholders
- Industry groups
- Conservation groups

Outcomes

- Enhanced scientific literacy throughout the broader community
- Next generation ecologists exposed to TERN data products, methodologies and protocols at the national scale
- Strengthened industry engagement and understanding
- Greater transparency for TERN data and associated products to funding agencies
- Improved understanding and uptake of TERN's data and associated products due to bespoke instructions for various TERN datasets
- Broader awareness of TERN throughout the community, including groups not traditionally exposed to TERN or its products
- The creation of bespoke co-designed educational modules and learning outcomes on an as-needs basis in consultation with thought leaders and stakeholders

Aboriginal and Torres Strait Islanders Linkages

TERN Australia acknowledges the importance of incorporating Aboriginal and Torres Strait Islander pedagogies into our educational materials which pay respect to long lineages of cultural and knowledge sharing of Australia's first people and the deep ecological knowledge they hold in connection to place. TERN education products are informed by Aboriginal and Torres Strait Islander perspectives as per TERN's Indigenous Engagement Principles (*internal document*) and follow the Reconciliation Action Plan of partner institutions in the first instance.

The TERN education approach: beginner, intermediate, and advanced

TERN tools and learning experiences are aimed at beginner, intermediate, and advanced levels. This approach enables individuals to self-define their interests and abilities regardless of their affiliations (e.g., K—12 teacher, citizen scientist, family). As individuals take more responsibility and control of their own learning, it is critical that TERN facilitates ample free-choice learning opportunities where individuals can easily access, use, and contribute to TERN products to meet their needs and interests. TERN will include in-person and virtual capabilities to enable educational and public use of the TERN ecosystem research infrastructure.

TERN education is supported by our comprehensive communications strategy which will promote and engage users via our website, social medial channels, webinars and other outreach activities.

Summary of TERN educational resources within the framework				
TERN Resource	Find it	Beginner	Intermediate	Advanced
Website	https://www.tern.org.au/	✓	✓	✓
Webinars	https://www.tern.org.au/webinars/	✓	✓	✓
TERN YouTube	https://www.youtube.com/@TERNvideo	✓	✓	✓
Product training courses	https://www.tern.org.au/educational-resources/	✓	✓	✓
Online workshops	https://www.tern.org.au/vegetation-data-synthesis-workshop		✓	✓
TSX	https://tsx.org.au/tsx-resources/		✓	✓
TERN knowledge hub	https://ternaus.atlassian.net/wiki/spaces/TERNSup/overview			✓
TERN github	https://github.com/ternaustralia			✓

