

SUBMISSION

Submission to the Australian Human Rights Commission

# Submission to the Wiyi Yani U Thangani Framework for Action for First Nations Gender Justice and Equality

22 December 2023

The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.

The *Wiyi Yani U Thangani (Women's Voices) National Framework for Action on First Nations Gender Justice and Equality* provides an important opportunity to transform the findings of the 2022 [Framework](#) into tangible change. The 2022 Framework provides crucial ideas and reforms including for the STEM (science, technology, engineering and mathematics) sector. ATSE is interested in this project and would like to offer its support and involvement in ongoing discussions about Traditional Knowledge, measurement, and knowledge sharing and learning. This submission highlights how the new Framework for Action can leverage outcomes of Australia's Science and Research Priorities, and support data collection on STEM education and workforce participation. ATSE is also interested in how the outcomes of this work can inform ATSE's [Reconciliation Action Plan](#) (RAP) (ATSE 2022). The *Reflect* RAP outlines a series of actions across relationship building and organisational governance. ATSE has a commitment to reconciliation and also seeks to feature and celebrate Aboriginal and Torres Strait Islander people and organisations in the STEM sector.

ATSE makes the following recommendations concerning measurement and implementation of the Framework for Action:

**Recommendation 1:** Engage with STEM sector leaders on implementing the Science and Research Priorities using Traditional Knowledge.

**Recommendation 2:** Undertake quantitative and qualitative data collection on Aboriginal and Torres Strait Islander women and girls' participation in STEM.

**Recommendation 3:** Use data-driven decision making for expanding and modifying programs to engage Aboriginal and Torres Strait Islander women and girls in STEM.

**Recommendation 4:** Engage the business community to create inclusive workplaces through initiatives such as ATSE's Diversity and Inclusion Toolkit.

## Interfacing with the Science and Research Priorities

There is an inherent alignment between Traditional Knowledge and STEM. Traditional Knowledge and Knowledge Systems can be applied to many of the challenges facing Australia today, including in health, ecology and environmental management. This is highlighted by the 2022 Framework, which puts forward Action 3.2 of applying women's knowledges in key sectors including environmental protection, sciences, medicine, health, and emerging technologies such as Artificial Intelligence. ATSE has advocated for the inclusion of Traditional Knowledge and Knowledge Systems in Australia's Science and Research Priorities (ATSE 2023a). The Framework for Action can leverage the Science and Research Priorities to engage with STEM sector leaders on utilising women's knowledge. This aligns with the Science and Research Priorities' mission-driven approach. At the same time, the Framework for Action should consider data sovereignty over women's knowledge to ensure ownership of intellectual property remains with the rightful individuals and communities.

**Recommendation 1:** Engage with Aboriginal and Torres Strait Islander STEM sector leaders on implementing the Science and Research Priorities using Traditional Knowledge.

## Understanding participation in STEM education and the STEM workforce

Participation in STEM is highlighted throughout the 2022 Framework. Action 3.2 posits educational incubators in communities to integrate First Nations knowledges, sciences and pedagogies into STEM while

supporting girls to learn. Action 5.1 identifies providing STEM fellowships and closing the digital divide as reforms needed to support First Nations girls to access education.

Robust data collection is required to understand the opportunity for change, identify suitable initiatives and track their impact. Data on Aboriginal and Torres Strait Islander participation in STEM is far from comprehensive. As highlighted in ATSE's 2023 [submission to the Diversity in STEM review](#), there is limited data on the participation of diverse groups in STEM (ATSE 2023b). The most comprehensive data on Aboriginal and Torres Strait Islander engagement in STEM is provided by a 2020 report from the Office of the Chief Scientist, which draws on census data. The report shows the rate of Aboriginal and Torres Strait Islander people holding university and VET STEM qualifications, which is further differentiated into four fields (natural and physical science, agricultural and environmental science, information technology, and engineering) (Office of the Chief Scientist 2020). Gaps in the data for Aboriginal and Torres Strait Islander people in STEM include workforce participation, and analysis by gender. Providing this analysis from census data is one aspect of measuring change, alongside program evaluations and qualitative data collection to ensure programs are fit-for-purpose. Census data is also unable to assess all participation in STEM, such as attainment of STEM knowledge outside formal education.

Data collection will enable the expansion of proven programs that engage Aboriginal and Torres Strait Islander girls and women in STEM. This includes programs such as ATSE's [Elevate](#), which provides scholarships to undergraduate and postgraduate women and non-binary people in STEM. ATSE particularly encourages applicants who are Aboriginal and Torres Strait Islander, as well as with other identities such as LGBTQIA+, culturally and linguistically diverse, living with a disability, from regional, rural or remote areas, and low socio-economic backgrounds. While Elevate is a new initiative, there is promising initial data on its impact. The Australian Government's independent review of women in STEM programs found that Elevate participants reported positive short-term education and employment outcomes, and that 100% of surveyed Elevate participants reported that the program met their needs (ACIL Allen 2023).

**Recommendation 2:** Undertake quantitative and qualitative data collection on Aboriginal and Torres Strait Islander women and girls' participation in STEM.

**Recommendation 3:** Use data-driven decision making for expanding and modifying programs to engage Aboriginal and Torres Strait Islander women and girls in STEM.

## Supporting inclusive workplaces

Action 8.3 of the 2022 Framework identifies the need for inclusive workplaces that are culturally safe and engage in proactive recruitment and promotion. ATSE considers that data collection for this element of the Framework for Action should engage the business community to deliver and evaluate programs and identify further opportunities for improvement.

ATSE recently updated its [Diversity and Inclusion Toolkit](#), a resource for science and technology focused small and medium enterprises to create diverse and inclusive workplaces (ATSE 2023c). The Toolkit outlines a process and provides advice across three themes: recruit, retain, and reach. The Toolkit also highlights some specific considerations for hiring and retaining Aboriginal and Torres Strait Islander people, such as alternate job advertising streams, observing days of significance, and engaging in BlackCard cultural capability training.

Implementing change through the business community can be an accountability for the Framework for Action. Measurement should not just be of workforce participation and experiences of Aboriginal and Torres Strait Islander women, but also of the processes used to create culturally safe workplaces and lessons learnt. This information would be useful for designing new initiatives and to support businesses with implementation.

**Recommendation 4:** Engage the business community to create inclusive workplaces through initiatives such as ATSE's Diversity and Inclusion Toolkit.

*ATSE thanks the Australian Human Rights Commission for the opportunity to respond to the consultation on the Wiyi Yani U Thangani Framework for Action for First Nations Gender Justice and Equality. For further information, please contact [academypolicyteam@atse.org.au](mailto:academypolicyteam@atse.org.au).*

## References

ACIL Allen (2023) [\*Women in STEM Evaluation – Final Report\*](#), Department of Industry, Science and Resources, accessed 11 December 2023.

AHRC (Australian Human Rights Commission) (2022) [\*Wiyi Yani U Thangani \(Women's Voices\) - Implementation Framework\*](#), AHRC, accessed 11 December 2023.

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Office of the Chief Scientist (2020), [\*Australia's STEM Workforce\*](#), Australian Government, accessed 11 December 2023.