

Catalyst: Influence Annual Reporting Template

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| Supported international union membership: | International Council of Associations for Science Education (ICASE) |
| New Zealand national delegate: | Dr Steve Sexton |
| Affiliated New Zealand organisation/national committee: | New Zealand Association of Science Educators (NZASE) |
| President/Chair of New Zealand organisation or national committee: | Catherine Hunter chunter@mhjc.school.nz |
| Reporting year: | 2025 |
| Report due date: | Friday 06 February 2026 |
| Estimate the number of NZ/NZ-based researchers engaged* with the International Union (please update as relevant): *Engaged is defined by activities including, but not limited to: attending conferences/workshops; receiving newsletters; interacting with or serving on the Executive Committee. | 50% |
| Estimate of the number of participants of the New Zealand Research, Science, or Technology community of relevance to the International Union you represent as a delegate (please update as relevant): | 100 |

We anticipate that this report has been discussed with the national committee or organisation identified above and provides the wider view of this network.



1. Catalyst: Influence assessment criteria

- *Please comment on how the supported union membership involves recognised global science and innovation leaders, and how these connections benefit New Zealand.*

The International Council of Associations for Science Education (ICASE) was created in 1972 by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to extend and improve science education throughout the world. Today, ICASE is a vast network of science teacher associations, institutions, foundations and companies, working together to promote science and technology education around the world. ICASE facilitates communication and cooperation at national, regional, and international levels. The ICASE Strategic Plan (2013-2023) calls for ICASE to adopt a position of Excellence and Leadership in Science Education. Throughout the world, people and societies in which they live are profoundly influenced by science and technology. The improvement of quality of life and the achievement of sustainable development places a high demand for scientific and technological literacy on all citizens. ICASE has worked with member organizations in over 75 countries to support science educators in their important role of developing such literacy.

- *Please comment on how the International Union membership has advanced New Zealand's research, science and technology reputation over the last year and presented new opportunities for collaboration in research fields of strategic importance to New Zealand.*

HUman Intelligence on WORLD - From core to life: The overall aim of this project is to support and empower secondary school teachers in delivering interdisciplinary, inclusive, and digitally enriched education centred on Earth Science and sustainability. The HUI-World Methodology is a pedagogical framework designed to enhance the teaching of Earth Science and STEM subjects within secondary education. Rooted in the principles of sustainability, digital transformation, and inclusive learning, this methodology aims to equip teachers with innovative tools and strategies that foster interdisciplinary collaboration, critical thinking, and student engagement. Developed in alignment with Erasmus+ European educational priorities and the United Nations Sustainable Development Goals (SDGs), the project integrates direct teaching, inquiry-based learning, and peer communication to support diverse learning needs and contexts. It encourages educators to facilitate meaningful exploration of environmental and societal challenges, preparing students to become active, informed citizens in an interconnected world. By promoting digital literacy, civic responsibility, and cross-curricular teaching, the HUI-World Methodology serves as both a practical guide and a catalyst for educational innovation across Europe and beyond.

- *Please comment on what the New Zealand research sector, aligned with the International Union membership, can offer to international researchers, with a view to creating new partnerships and strengthening long-term involvement for New Zealand.*

The 22nd annual international conference on Hands-on Science, HSCI2025, will be held in Cairo, Egypt, from Sunday 21 to Thursday 25 September 2025. Although the in-person participation is the norm for the conference, the organizing committee may accept virtual presentations (online or offline) by well deserving colleagues unable to travel to Cairo this time. This year the main moto of the conference is: "Science Education - Contemplating the Future" The Conference will provide the ideal opportunity for presentation of

work and in the widest range of perspectives related to Science Education. The Hands-on Science Network is open to all views and approaches on Science Education. However, we advocate an active learning of Sciences through an enlarged use of hands-on experiments in the classroom. The aim of the Conference is to promote friendly and broad exchange of experiences on good practices, syllabus and policy matters, social factors and the learning of science, and other issues related to Science Education and its development.

Advancing Ocean Sustainability for Climate-Resilient Change

The United Nations (UN) Decade of Ocean Science for Sustainable Development spans from 2021 to 2030 as a global call to action for marine scientists and Early Career Ocean Professionals (ECOPs) to collaboratively create, implement, and communicate science-based solutions to the critical challenges faced by our shared Ocean. The Decade integrates science, policy, and international engagement of a broad base of civil society stakeholders through interdisciplinary research challenges aimed at establishing sustainable marine practices to confront issues related to climate change. This chapter presents a synopsis of the UN-led initiatives that culminated in the launch of the Ocean Decade and describes the global vision articulated in the UN 2030 Agenda for Sustainable Development, focusing on Sustainable Development Goal 14, Life Below Water. The critical need for multidisciplinary Ocean research and innovation, collaborative sharing of findings grounded in data, and recommendations for global mitigation and policy development are discussed. The Global Ocean Ship-based Hydrographic Investigations Program (GO-SHIP) is recognized as an exemplary Ocean Decade endorsed action, offering collaborative research experiences and opportunities to contribute to data-driven recommendations influencing policy development on an international scale. Enhancing Ocean literacy through the dissemination of precise, data-driven information is essential for advancing Ocean sustainability for climate-resilient change and safe-guarding the well-being of our Ocean.

FUTURE STEPS Wherever you start from, there's a space for you in the Ocean Decade. Scan the QR code and access the Ocean Decade Manual for NGOs!




Design by Kiersten Runte, The SOI Foundation.

- *Please comment on plans for New Zealand to leverage the opportunities identified in 1.2 or 1.3. If these are ongoing activities, please comment on the progress since last year's report.*

In conjunction with the above opportunities, I was asked to contribute a chapter to the upcoming book from Springer titled: The Convergence of Learning Sciences and Science Education. My chapter is titled "The role of cognitive psychology in science education." Book is expected to be published in Marh 2026

2. Information relevant to the research community in the previous year

- *Please list any New Zealander(s) participating in International Union work programmes and/or the Union council(s).*

| Person | Role | Active |
|-----------------|--|--------|
| Dr Steve Sexton | Executive Board Member; Editor and Chair of Pre-secondary & Informal Science Education Committee | Yes |

- *Please list International Union activities over the last year of relevance to your research community and describe how these have been communicated.*

Our second visitor was Dr Steven Sexton, lecturer of Science Education at the University of Otago, New Zealand. Dr Sexton stayed in Cork, Ireland for one month as a visiting academic. It was a pleasure to have Dr Sexton in the Eureka Centre for the visit, and our student science teachers learned a lot from him. This led to the co-authored paper submitted for publication to *TEANGA, the Journal of the Irish Association for Applied Linguistics*: “To be or Gan a bheith: An instructional coaching culturally responsive and sustaining teaching intervention for Irish secondary science”

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²College of Education, University of Otago, Dunedin, New Zealand

This will time in Ireland has also led to a conference presentation that has been accepted for the 1st International Online Conference on Education Sciences (IOCES 2026), 15 to 17 June, 2026, titled “What is culturally response and sustaining teaching practice through primary science in Aotearoa New Zealand”

3. Additional comments

- *Additional comments relevant to the International Union membership that you would like to share with the Society, MBIE, and the research community.*

The 2024 International Conference of NGOs in Official Partnership with UNESCO (ICNGO 2024) was held at UNESCO Headquarters in Paris from 17-19 December 2024. The theme of the conference was “Building Capacity for Action.” During the event, the UNESCO courtyard proudly displayed its arrangement of international flags representing the organization's commitment to global unity and cooperation, a hallmark of UNESCO's mission. The UNESCO headquarters in Paris is a hub for fostering dialogue and collaboration among its member states, and its courtyard serves as a symbolic and physical space for international engagement, aligning with UNESCO's role in fostering international cooperation in education, science, and culture. ICASE holds the title of an “NGO in Official Partnership with UNESCO, with consultative status.”

Upcoming event for which Catalyst funding has been approved:

ICASE 8th WORLD CONFERENCE ON SCIENCE AND TECHNOLOGY EDUCATION

22nd - 25th June, 2026 University College Cork, Ireland

Further information at <https://icaseonline.net/web/>

Signatures:

Delegate:



Date submitted to the Society: ____15/01/2026____

Please return this form to the Royal Society Te Apārangi by email using the email address International.Unions@royalsociety.org.nz. For transparency reasons, we would appreciate if the report is copied to the President/Chair of the affiliated New Zealand organisation/national committee.

Note that all or parts of this report may be made accessible to the public on the Royal Society Te Apārangi Catalyst: Influence website and through a Catalyst: Influence newsletter.