



International Commission on Mathematical Instruction

Open Call for contributions to an ICMI Symposium on:

Mathematics Education and the Socio-Ecological

ICMI is hosting a one-day symposium on **20th March 2023**, to act as a gathering point for scholars working in what might be diverse areas, but whose concerns could be broadly grouped together as “socio-ecological”.

We invite expressions of interest from researchers, teachers, community-educators, activists, and policymakers across the globe who are working on issues in mathematics education that make links across social (including political) and ecological (including environmental) questions and related ethical concerns. We include or appreciate within the socio-ecological any perspective which engages in theorisation or practice around socio-ecological issues, and their relations to mathematics and mathematics education.

We imagine the socio-ecological may have resonance for scholars working in the following areas (but not restricted to): critical mathematics education, climate change education, Indigenous ways of knowing, ethnomathematics, decolonial and antiracist perspectives, mathematical modelling, STEM approaches, arts-based research, and other interdisciplinary work involving mathematics or theoretical approaches that address the socio-ecological aspect.¹ Such areas of scholarship commonly include multiple-stakeholders such as teachers, community educators, learners, community-members, scholars of various disciplines, and we encourage contributions that are inclusive in this regard.

The aims of the symposium are as follows:

- To gather the “state of the art” of socio-ecological research from around the world and engage in dialogue across perspectives.
- To explore the different ways in which a theorisation of the socio-ecological influences the focus and methodological approach of mathematics education research.
- To consider practical implications of socio-ecological research for school/university curriculum and pedagogy, education outside formal structures, teacher preparation, and policy.

With these aims, the symposium will contribute to knowledge building, relating to mathematics education and the socio-ecological, and, moreover, it has the potential to lead to a proposal for consideration as an ICMI Study on the topic.

¹ Moves towards considering the socio-ecological can be identified in recent journal special issues, including *Mathematics Education and the Living World* (eds. Boylan & Coles, 2017); *Mathematics for “citizenship” and its “other” in a “global” world: Critical issues on mathematics education, globalisation and local communities* (edited by Chronaki & Yolcu, 2021); *Mathematics education in a time of crisis—a viral pandemic* (edited by Chan, Sabina, & Wagner, 2021); *Innovating the Mathematics Curriculum in Precarious Times* (edited by le Roux, Brown, Coles, Helliwell, & Ng, 2022).

The symposium will take place online and, depending on the response from colleagues, the event may run twice, to cater as much as possible for participants in different time zones. The overall structure will comprise: a plenary talk and related discussion; research reports and posters (in parallel sessions); and a panel discussion.

We invite proposals – from a diversity of voices – for research reports and posters. These may focus on practice or theory or both, in relation to socio-ecological issues. In both formats, we welcome plans for active engagement of the audience: Research reports will involve a 20-minute presentation and 20-minute discussion (or equivalent). Poster sessions will include engagement and discussion with participants.

Proposals, in the form of abstracts, should be submitted to (socio_ecological_symposium@yahoo.com) by the **deadline of 20th January 2023**.

In your covering email **please indicate** whether you are available to participate during:

- Schedule 1: GMT 14.00 – 20.00 = CDT 10.00 – 16.00
- Schedule 2: GMT 05.00 – 11.00 = AEST 15.00 – 21.00
- Or Either

And,

- For research reports, please include, as a Word attachment, a one-page abstract that includes: Your proposal title; author name(s) and institutional affiliations; a description of the theoretical and/or practical work to be presented, including its relation to the socio-ecological; and a plan for using the session time itself (abstract in English, and no more than 500 words).
- For a poster, please include, as a Word attachment, a one-page abstract that includes: your proposal title; author name(s) and institutional affiliations; a description of the theoretical and/or practical work to be presented, including its relation to the socio-ecological (abstract in English, and no more than 500 words).

Word documents should be in the prescribed style given below and named as follows: First author surname_ResearchReport OR First author surname_Poster.

There will be a review process for all applications and two reviewers will read each submission. The criteria for review will be the extent to which the proposal addresses how the work, in its current form and/or future direction, links and relates across socio-political, ecological, and ethical issues. Scholarship involving multiple stake-holders as described above will be an advantage.

At the symposium, written and oral contributions will be offered in English. Informal engagement and meaning-making in the representative languages will be encouraged.

Informal proceedings of the symposium, including research report abstracts, will be collated, and made available. There are no current plans to invite fuller papers. However, there are plans to make the symposium resources available online; we will be encouraging participants to disseminate their work more widely, potentially in collaboration with each other; furthermore, developing the symposium writing into a journal special issue is under consideration.

Deadline for submissions: 20th January 2023

Decision on outcome of submissions: 20th February 2023

Symposium event: 20th March 2023

Prescribed Style for abstract

Margin: 2.3cm margin all round

Spacing: 1.5 line spacing, 6pt between titles and paragraphs

Font: Times New Roman

SUBMISSION TITLE IN BOLD, 14 POINT, centred

Author(s), 12 point, centred, Institution or Affiliation

Body text, 12 point, justified (include key citations)

List of key references (maximum 5), to locate the contribution, in APA7, 12 point, hanging indent left aligned.

This symposium is a collaborative initiative, with the kind support of ICMI, involving Kate le Roux, Alf Coles, Richard Barwell, Marcelo Borba, Anna Chronaki, Rochelle Gutiérrez, Mariam Makramalla, Aldo Parra, Milton Rosa, Armando Solares, and Jayasree Subramanian.