

Muscat Global Knowledge Dialogue

MUSCAT, OMAN 2025

Agenda

26–28 January 2025



**International
Science Council**

حوار المعرفة العالمي مسقط
Muscat Global Knowledge Dialogue



وزارة التعليم العالي
و البحث العلمي والابتكار
Ministry of Higher Education
Research & Innovation



Muscat Global Knowledge Dialogue

The ISC General Assembly is the premier occasion for ISC Members and partners from all domains of science and parts of the world to meet and engage in cross-disciplinary, strategic discussions on challenges, priorities and agendas for international cooperation in science. The 2025 ISC General Assembly is hosted by the ISC Member in Oman, the Ministry of Higher Education, Research and Innovation.

The Muscat Global Knowledge Dialogue, which takes place on 27–28 January, with pre-event workshops on 26 January, is the segment of the ISC General Assembly focusing on science. It is organized around three streams:

- A. **Science systems and science futures** – covering issues around current and anticipated developments in science, including AI and other emerging technologies, open science, research assessment, science publishing and transdisciplinary science. These topics relate particularly to the following missions of the ISC:
 - Promoting the continued and equal advancement of scientific rigour, creativity and relevance in all parts of the world.
 - Assisting the scientific community and relevant stakeholders in their roles in the conduct of science and in the face of the evolution of science systems.
- B. **Science and just transformations to sustainability** – focusing on the role of science in the social and environmental transformations needed to move towards sustainability. These sessions relate particularly to the following missions of the ISC:
 - Stimulating and supporting international, interdisciplinary collaboration, particularly among Members of the Council, on scientific research and scholarship on issues of global concern.
 - Articulating scientific knowledge on issues of global concern in the public and policy domains.
- C. **Stream C: Science and society** – addressing issues around trust in science, the use of science in and for diplomacy, social cohesion and inequalities, and gender equality. These sessions relate particularly to the following missions of the ISC:
 - Speaking for the value of all science and the need for evidence-informed understanding and decision-making at all levels, from local to global;
 - Promoting and assisting science diplomacy, particularly where it advances the common good and addresses global challenges;
 - Defending and promoting the free and responsible practice of science.

Overview

Sunday, 26 January	
14:00–17:00	Pre-event workshops <ul style="list-style-type: none"> - Freedom and Responsibility in Science - Science is Social: Increasing the role and visibility of the social sciences - Leveraging the ISC membership to strengthen science advice to policy - Data policy and skills in a rapidly changing world
9:00–17:00	- Workshop on Artificial Intelligence (by invitation only)
14:00–17:00	- Meeting on Oman national biotechnology strategy (by invitation only)

Monday, 27 January Muscat Global Knowledge Dialogue day 1	
8:00–9:30	Registration
9:30–11:00	Opening
11:00–11:30	Break
11:30–13:00	Plenary session: Rethinking international science collaboration in today's world
13:00–14:30	Lunch
14:30–16:00	Parallel sessions <ul style="list-style-type: none"> - Transforming science: open science, research assessment, science publishing - Ocean science for sustainability - The changing context for science diplomacy
16:00–16:30	Break
16:30–17:30	Announcement of the Pilot Science Missions for Sustainability
18:15–22:30	Gala Dinner at the Al Bustan Palace Ritz-Carlton Hotel

Tuesday, 28 January Muscat Global Knowledge Dialogue day 2	
9:00–10:30	Plenary session: Emerging technologies and the evolution of science
10:30–11:00	Break
11:00–12:30	Parallel sessions <ul style="list-style-type: none"> - Artificial intelligence and its impact on science systems - The Decade of Science for Sustainability: The post-2030 agenda - From Barriers to Breakthroughs: Shaping the Future of Gender Equality in Science
12:30–14:00	Lunch
14:00–15:30	Parallel sessions <ul style="list-style-type: none"> - Science education for our future – building capacity for global challenges - Polar science and the International Polar Year - Social cohesion and inequality
15:30–16:00	Break
16:00–17:30	Plenary session: Beyond borders: Science, public trust & multilateral policy
17:30–18:00	Closing and Muscat Declaration

Sunday, 26 January

14:00–17:00 Pre-Event Workshops

1. Freedom and Responsibility in Science

Room: Junior Ballroom A

Chair: [Quarraisha Abdool Karim](#), The World Academy of Sciences (TWAS)

Speakers

- [Saja Al Zoubi](#), Global Young Academy; Saint Mary's, University of Oxford
- [Emily Borzcik](#), International Institute of Education – Scholar Rescue Fund
- [Rana Dajani](#), Hashemite University Jordan
- [Amina Hamshari](#), UNESCO Doha
- [Ilyas Saliba](#), Global Public Policy Institute (GPPi) Berlin
- [Seteney Shami](#), Arab Council for the Social Sciences
- [Vivi Stavrou](#), International Science Council
- [Konstantinos Tararas](#), UNESCO Paris

This knowledge-sharing event aims to discuss region-specific trends, challenges, and opportunities for collaboration around freedom and responsibility in science in the Middle East and North African region and between the global ISC membership. Through roundtable and interactive discussions, the workshop will discuss related initiatives, identify members' priority concerns and explore how the ISC, its member and related networks can support and promote the free, ethical and equitable conduct of science throughout the region and globally.

- ISC discussion paper [A contemporary perspective on the free and responsible practice of science in the 21st century](#)
- ISC working paper [Protecting Science in Times of Crisis](#)

2. Science is social: increasing the role and visibility of the social sciences in sustainable development policy and practice

Room: Meeting room 8+9

Chair: [Sawako Shirahase](#), Research Unit of Inclusive Global Future Society, the University of Tokyo

Speakers

- [Craig Calhoun](#), Arizona State University (remote)
- [Moushira Elgeziri](#), Arab Council for the Social Sciences
- [Pablo Vommaro](#), Latin American Council of Social Sciences (CLACSO)
- [Wiparat De-ong](#), National Research Council of Thailand (NRCT)
- [Francis Akeng](#), Society for the Advancement of Science in Africa (SASA)
- [Dhananjay Singh](#), Indian Council of Social Science Research (ICSSR)

This workshop will explore how ISC can help strengthen the role social sciences play in the current policy landscape at national and multilateral levels and how members can collaborate, exchange ideas and lessons in this area.

The discussion will address the following questions with a focus on potential next steps:

- How can barriers to the contribution of social sciences to sustainability policy and practice be addressed?
- How can ISC bring more value to our social science members? How to strengthen the involvement and visibility of our social science members and experts in ISC's work, including in providing expertise for sustainability policy advice?
- How can our social science members collaborate with each other and with the ISC (collaborative research projects, capacity building workshops and knowledge exchange events, collaborative publications for example)? What are the potential concrete ideas for next steps in this regard?

3. Leveraging the ISC membership to strengthen science advice to policy

Room: Junior Ballroom B

Chairs: [Mobolaji Oladoyin Odubanjo](#) (Nigerian Academy of Science) and [Margaret Spring](#) (Monterey Bay Aquarium)

Speakers

- [Salim Abdool Karim](#), CAPRISA & ISC Governing Board
- [Christian Acemah](#), International Network for Government Science Advice (INGSA) Africa
- [Markus J. Prutsch](#), European Parliament & Global Young Academy
- [Rémi Quirion](#), International Network for Government Science Advice (INGSA)
- [Brigitte Khoury](#), International Union of Psychological Science (IUPsyS)
- [Anne-Sophie Stevance](#) and [James Waddell](#), International Science Council

With a focus on case studies and practitioners' insights, this session will provide a forum for ISC Members to share their experience of working at the science-policy interface and strategize on opportunities to strengthen scientific advice to policy-makers from the national to the global levels.

4. Data policy and skills in a rapidly changing world

Room: Meeting room 10+11

Chair: [Simon Hodson](#), ISC Committee on Data (CODATA)

Open science is facing a major test with the emergence of generative AI, placing greater stress on the principles of transparency and reproducibility. What are the current and emerging policy and technical responses? With greater emphasis needed on data quality, what are the skills required of scientists and data specialists? In this session ISC Members will be invited to discuss the challenges, policy responses and explore how they can collaborate on practical responses, including skills development with Early-Career Researchers.

Speakers

- [Mercè Crosas](#), Head of Computational Social Sciences, Barcelona Supercomputing Center and CODATA President - "Major developments and challenges for data and science in a rapidly changing world"
- [Steve McEachern](#), Director, UK Data Service and CODATA Officer; [Simon Hodson](#), Executive Director, CODATA - "The contours of a policy response"
- [Richard Hartshorn](#), Professor, School of Physical and Chemical Sciences, University of Canterbury, Christchurch, New Zealand and CODATA Vice-President - "The challenges in research disciplines: example from Chemistry"
- [Steve McEachern](#), Director, UK Data Service and CODATA Officer - "The challenges in research disciplines: example from Social Sciences"
- [Shaily Gandhi](#), Senior Post-Doctoral Researcher, Geosocial Artificial Intelligence Research Group, Interdisciplinary Transformational University, Linz, Austria and ISC Fellow - "What skills do researchers need?"

Invitation-only events

E. Workshop on Artificial Intelligence (by invitation only)

9:00-17:00

Meeting room 12

Coordinator: [Dureen Samandar Eweis](#)

F. Roundtable on Oman National Biotechnology Strategy (by invitation only)

14:00-17:00

Meeting room 13+14

Contact: [Fahad Al Zadjali](#)

8:00–9:30 Registration

9:30–11:00 Official Opening

Exhibition Hall 1

Moderator: [Melissa Hogenboom](#), BBC

Welcome

- [H.E. Prof. Rahma Al-Mahrooqi](#), Minister of Higher Education, Research and Innovation
- [Sir Peter Gluckman](#), ISC President

Keynote speeches

- [H.E. Csaba Kőrösi](#), President of the 77th United Nations General Assembly
- [Ruth Morgan](#), Director of the University College London Centre for the Forensic Sciences

Panel discussion

- [Salim Abdool Karim](#), Director, CAPRISA, & ISC Vice-President for Membership
- [Irina Bokova](#), ISC Patron, former UNESCO Director-General
- [H.E. Abdulsalam Al Murshidi](#), President, Oman Investment Authority; ISC Global Commissioner
- [H.E. Munir Eldesouki](#), President of King Abdulaziz City for Science and Technology

11:00–11:30 Break

11:30–13:00 Plenary session I

Rethinking International Science Collaboration for the 21st Century

Exhibition Hall 1

Chair: Lidia Brito, Assistant Director-General Natural Sciences, UNESCO

Speakers

- [Quarraisha Abdool Karim](#), President, The World Academy of Sciences (TWAS)
- [H.E. Saif Al-Hiddabi](#), Undersecretary of Research and Innovation, Sultanate of Oman
- [H.E. Macharia Kamau](#), Ambassador and Special Envoy, Kenya
- [Seteney Shami](#), Director, Arab Council of Social Sciences (ACSS)
- [Teatulohi \(Lohi\) Matainaho](#), President, Pacific Academy
- [Mark Walport](#), Foreign Secretary, Royal Society UK

This session will explore the importance of science as a truly global endeavour, the current challenges to international science collaboration along with the need to re-imagine how we progress in this area.

13:00–14:30 Lunch

14:30–16:00 Parallel sessions I

A. Transforming science: open science, research assessment, science publishing

Room: Junior Ballroom A

Chair: [Geoffrey Boulton](#), Edinburgh University & ISC Governing Board

Speakers

- [Mohammed Al Badi](#), Arab Open University
- [Priya Bondre-Beil](#), Deutsche Forschungsgemeinschaft (DFG)
- [David Castle](#), World Data System (WDS)
- [Sarah de Rijcke](#), University of Leiden
- [Graciela Diaz de Delgado](#), International Union of Crystallography (IUCr)
- [Asja Prohic](#), Springer, Nature
- [Ana Persic](#), UNESCO

Science systems are in need of urgent reform to enhance transparency, efficiency, inclusion and integrity. This session will explore key priorities and actions towards this in the areas of open science, research assessments and publishing.

B. Ocean science for sustainability

Room: Junior Ballroom A

Chairs: [Martin Visbeck](#), GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel & ISC Governing Board; and [Mia Strand](#), Nelson Mandela University

Keynote speakers

- [Mia Strand](#), Nelson Mandela University
- [Rashid Sumaila](#), University of British Columbia

Roundtable

- [Felix Bast](#), Central University of Punjab
- [Sergey A. Dobretsov](#), Sultan Qaboos University
- [Marie-Alexandrine Sicre](#), CNRS & Scientific Committee on Oceanic Research (SCOR)
- [Teatulohi Matainaho](#), Pacific Academy
- [Maria Paradiso](#), University of Naples & ISC Governing Board

The session will highlight the ocean dimension of sustainability and explore the ocean-related work of the ISC. It will develop a shared understanding of the challenges and opportunities they face and identify shared priorities for joint action.

C. The changing context for science diplomacy

Exhibition Hall 1

Chairs: [Luis Sobrevia](#), Pontificia Universidad Católica de Chile & ISC Regional Focal Point for Latin America and the Caribbean Liaison Committee and [Frances Colón](#), American Progress

Speakers

- [Salim Abdool Karim](#), CAPRISA & ISC Governing Board
- [Yousuf Al Bulushi](#), GU Tech
- [Anna-Maria Arabia](#), Australian Academy of Sciences
- [Chagun Basha](#), Office of Principal Scientific Adviser to the Government of India

The session will reflect on the changing context for science diplomacy and present a discussion paper on the role of the ISC in science diplomacy.

16:00–16:30 Break

16:30–17:30 Special Event

Announcement of the Pilot Science Missions for Sustainability

Exhibition Hall 1

Chair: [Salvatore Aricò](#), ISC CEO

- [Irina Bokova](#), ISC Patron, ISC Global Commissioner
- [H.E. Abdulsalam Al Murshidi](#), President, Oman Investment Authority, ISC Global Commissioner
- [H.E. Macharia Kamau](#), Ambassador and Special Envoy, Kenya; Oversight Committee, Science Missions for Sustainability
- Principal Investigators of Pilot Missions (to be announced)
- [Gilbert de Gregorio](#), Frontiers Planet Prize

The selected Pilot Science Missions for Sustainability will be announced, with reflection on the urgent need to transform how we perform and fund science for sustainability.

18:00–22:30 Gala Dinner at the Al Bustan Palace Ritz-Carlton Hotel

Shuttle buses will depart for the Al Bustan Palace from the three conference hotels ([JW Marriott Hotel Muscat](#), [Crowne Plaza Muscat OCEC](#), [Hormuz Grand Muscat Radisson](#)) at 18.15 and 18.30, and from the Palace at 21.30 (50 mins each way).

9:00–10:30 Plenary session II

Emerging technologies and the evolution of science

Exhibition Hall 1

Chair: [Françoise Baylis](#), President-elect, Royal Society Canada, & ISC Governing Board

Speakers

- [Ali Al Shaithani](#), Undersecretary for Communications and Information Technology, Oman
- [Daniel Andler](#), Paris-Sorbonne University; Académie des sciences morales et politiques
- [Marileen Dogterom](#), Royal Netherlands Academy of Arts and Sciences (KNAW)
- [Shohini Ghose](#), Chief Technology Officer, Quantum Algorithms Institute (remote)
- [Anicia Peters](#), National Commission of Research, Science and Technology, Namibia

This session will try to unpack the complex relationship between emerging technologies and science systems, where new opportunities co-exist with critical ethical concerns. It will include a panel discussion and open discussion with the audience, as well the announcement of the ISC Digital Journal pioneers.

10:30–11:00 Break

11:00–12:30 Parallel sessions II

A. Artificial intelligence and its impact on science systems

Room: Junior Ballroom A

Chair: Ke Gong, Chinese Institute of the New Generation Artificial Intelligence Development Strategies; ISC Standing Committee for Freedom and Responsibility in Science

Speakers

- [Sultan Al Yahyai](#), Code Academy Oman, Nama Electricity Supply Company
- [Christina Yan Zhang](#), The Metaverse Institute & Advisory Council, ISC Centre for Science Futures
- [Mariette Awad](#), AI, Science and Computing Hub at American University Beirut
- [Sirirug Songsivilai](#), National Research Council of Thailand

With guided use of AI, there are wide opportunities to advance science. What are these opportunities and how are we preparing for them? The use of AI also raises concerns on impact on science and science processes. What are the most evident positive and negative impacts of AI for science? And how do we tackle these issues? This session will explore how AI is transforming science, its vast potential, and the challenges it poses to scientific integrity.

Background reading: [Preparing National Research Ecosystems for AI: Strategies and progress in 2024 - International Science Council](#)

B. The Decade of Science for Sustainability: The post-2030 agenda

Room: Exhibition Hall 1

Chair: [Mike Meadows](#), International Geographical Union (IGU)

Speakers

- [Lidia Brito](#), UNESCO
- [Silvina Ponce Dawson](#), International Union for Pure and Applied Physics (IUPAP)
- [Daniel Muth](#), Vrije Universiteit Amsterdam
- [Mia Strand](#), Nelson Mandela University
- [Munther Al Busaidi](#), Vision 2040, Oman
- [Nathalie Lemarchand](#), Université Paris 8, International Geographical Union (IGU)

The UN Decade of Sciences for Sustainable Development (2024 – 2033) provides an opportunity to sharpen our focus on how actionable science can contribute to the sustainability agenda. It also provides a bridge between the 2015 Sustainable Development Goals and any subsequent expression of the development agenda. This session will explore how the breadth of the ISC Membership will contribute to the Decade, and how it has the potential to shape our thinking and goals around the role of science in future sustainability agendas.

C. From Barriers to Breakthroughs: Shaping the Future of Gender Equality in Science

Junior Ballroom B

Chair: [Catherine Jami](#), National Centre for Scientific Research (CNRS)/ International Union of History and Philosophy of Science and Technology (IUHPST)/ Standing Committee for Gender Equality in Science (SCGES)

Speakers

- [Beatriz Caputto](#), Science Academy of Argentina & Inter-American Network of Academies of Sciences (IANAS)
- [Javier García-Martínez](#), International Union of Pure and Applied Chemistry (IUPAC), Universidad de Alicante
- [Palesa Sekhejane](#), Human Sciences Research Council (HSRC)
- [Tonya Blowers](#), Organization for Women in Science for the Developing World (OWSD)

Although women represent a third of researchers globally, they make up only 12% of science academy members worldwide. This session will explore strategies to address this disparity, introducing the ISC-IAP-SCGES 2025 initiative aimed at improving women's representation and participation in scientific organizations and showcasing successful partner-driven efforts in academies, unions and councils. Half of the session will be dedicated to an open discussion, inviting participants to share insights, discuss challenges, and provide feedback to help shape the initiative and foster a more inclusive and equitable future in science.

12:30-14:00 Lunch

14:00-15:30 Parallel sessions III

A. Science education for our future – building capacity for global challenges

Room: Exhibition Hall 1

Co-Chairs: [Motoko Kotani](#), Tohoku University & ISC Governing Board; [Mei-Hung Chiu](#), NTN University & ISC Governing Board

Moderator: [Heide Hackmann](#), Stellenbosch University

Speakers

- [Francis Akena Adyanga](#), Society for the Advancement of Science in Africa (SASA)
- [H.E. Abdullah Ambusaidi](#), Undersecretary for Education, Ministry of Education
- [Anne-Teresa Birthwright](#), Belmont Forum
- [Nathalie Fomproix](#), International Union for Biological Sciences (IUBS)

How we educate and train scientists and researchers is key to our ability to address current and future existential challenges. This session will consider what the ISC and other stakeholders in the science system – science funders, policy makers, research institutions and scientists themselves – can and should do to promote a shift in the institutional environment and in higher-level education and training, to equip current and future scientists globally with the necessary skills and capacities to tackle the challenges of today and tomorrow. The aim of the session is to converge to a set of possible priorities for ISC action in the domain of science education

Background reading for the session:

[Report of the ISC Consultative Group on Science Education](#)

B. Polar Science and the International Polar Year

Room: Junior Ballroom A

Co-Chairs: [Mike Sparrow](#), World Climate Research Programme (WCRP); [Johanna Grabow](#), Scientific Committee on Antarctic Research (SCAR)

Speakers

- [H.E. Ólafur Ragnar Grímsson](#), Arctic Circle
- Anna Mauranen, University of Helsinki
- [Ramcharan Vijayaraghavan](#), Polar Educators International
- [Paul Arthur Berkman](#), Science Diplomacy Centre, Inc.

- [Mark Wuddivira](#), Caribbean Academy of Sciences (CAS)
- [Anne Husebekk](#), Arctic University of Norway, ISC Governing Board

Exploring how the International Polar Year (IPY) 2032–33 will reshape global scientific collaboration in the face of rapid climate and societal changes. This session will offer key insights into how polar science is addressing real-world challenges through interdisciplinary, cross-regional research. Participants will gain an understanding of how the IPY model can enhance the co-production of knowledge, drive actionable solutions, and set a blueprint for future international scientific cooperation to tackle global issues beyond the polar regions.

C. Social cohesion and inequality

Room: Junior Ballroom B

Chair: [Don Kalb](#), GRIP, Law and Social Transformation program, University of Bergen

Speakers

- [Karina Batthyany](#), CLACSO & ISC Governing Board
- [Craig Calhoun](#), Arizona State University (remote)
- [Maretta Kula-Semos](#), Pacific Academy
- [Kathryn Robinson](#), Australian National University
- [Sawako Shirahase](#), University of Tokyo

This session will reflect on the need to focus on inequality as a central challenge of our times, look at the current state of inequality research including gaps that need attention for science to play an effective role in addressing this global concern.

15:30–16:00 **Break**

16:00–17:30 **Plenary III**

Beyond borders: Science, public trust & multilateral policy

Room: Exhibition Hall 1

Co-Chairs: [Anna-Maria Arabia](#), Executive Director of the Australian Academy of Sciences, and [Peggy Oti-Boateng](#), Executive Director of African Academy of Sciences

Keynote: Hugo Mercier, research director in cognitive science at the CNRS (Institut Jean Nicod, Paris)

Panel

- [Dr. Abdul Moneam Al Hasani](#), former Minister of Information, Oman
- [Robbert Dijkgraaf](#), ISC president-elect, former Minister of Education, Culture and Science of the Netherlands
- [Luisa Fernanda Echeverría King](#), Director of Diplomacy and International Scientific Cooperation, Universidad Simón Bolívar, Colombia
- [Sir Jeremy Farrar](#), chief scientist of the World Health Organization (remote)
- [H.E. Ólafur Ragnar Grímsson](#), Chair of the Arctic Circle, former President of Iceland
- [Julia Marton-Lefèvre](#), Chair of The Tyler Prize for Environmental Achievement and Chair of the Board of the Villars Institute Foundation

The final plenary session will debate science as a universal endeavour can be positive force to bridge across divides and foster trust and collective action on shared global challenges and set the scene for the ISC's work in the years to come.

17.30–18.00 **Closing and Muscat Declaration**

- [H.E. Prof. Rahma Al-Mahrooqi](#), Minister of Higher Education, Research and Innovation, Oman
- [Sir Peter Gluckman](#), ISC President

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