



# G20

SOUTH AFRICA 2025



Solidarity

Equality

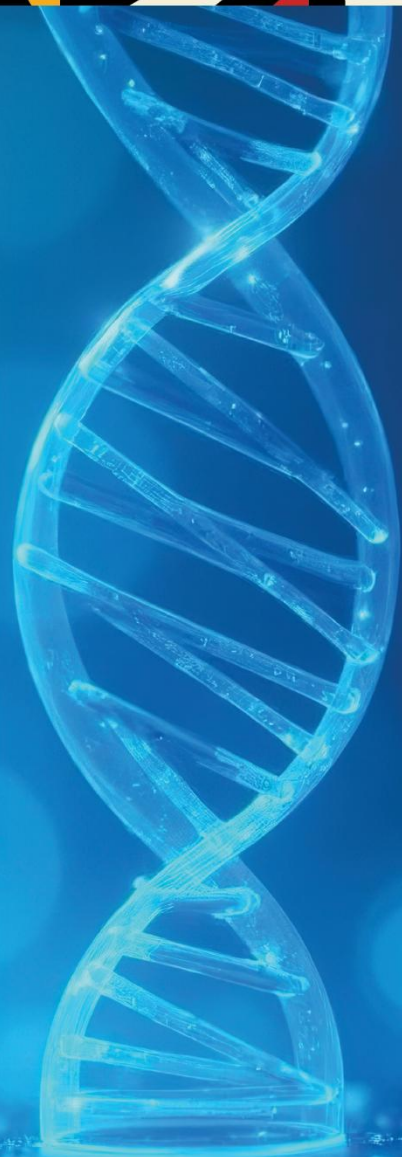
Sustainability

Sherpa Track  
**ISSUE NOTE**

# Research and Innovation Working Group

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December 2024



# Research and Innovation Working Group (RIWG)

## Table of Contents

1.	Introduction and Background	2
2.	Priorities and Deliverables	3
2.1	Priority 1: Open Innovation for Development	3
2.1.1	Proposed Deliverables	3
2.2	Priority 2: Biodiversity Information for Sustainable Development	4
2.2.1	Proposed Deliverables	5
2.3	Priority 3: Diversity, Equity, Inclusion and Accessibility in Science, Technology and Innovation	6
2.3.1	Proposed Deliverables	6

## 1. INTRODUCTION

Under the Brazilian Presidency of the G20 in 2024, the Research and Innovation Working Group (RIWG) inaugural meeting was held, where the Terms of Reference (ToRs) were developed. The ToRs outline the functional modality for the RIWG. The mandate of the RIWG is to address how to better employ research and innovation to address global challenges; to promote science, technology, innovation, and international cooperation for sustainable development; to share knowledge, experiences, and best practices; and to reduce gaps in the access to and the production of science, technology, and innovation.

Stemming from the previous two G20 presidencies of India and Brazil, India's Research and Innovation Initiative Gathering theme was *Research and Innovation for Equitable Society*, supported by the following priority areas: material for sustainable energy; circular bio-economy; eco-innovations for energy transition; and scientific challenges and opportunities towards achieving a sustainable blue economy. Brazil's 2024 theme was *Open Innovation for a Just and Sustainable Development*, supported by the following priority areas: Priority number 1 was open innovation for strengthening international north-south cooperation in science, technology, and innovation (STI) solutions. Priority number 2 focused on open innovation for the decarbonisation of the economy, including energy transitions and bioeconomy. Priority number 3 was on open innovation to guarantee the right access and information about health; priority number 4: research and open innovation for a sustainable Amazon; and priority number 5: inclusion, diversity and combatting inequalities in science, technology and innovation.

In line with South Africa's G20 theme, *Solidarity, Equality, Sustainability*, the Department of Science, Technology and Innovation (DTSI) has identified the following theme for the RIWG: *Equity in Science and Innovation-based Approach to Sustainable Development*. The theme will be supported by the following three key priority areas:

- Priority 1: Open Innovation for Development.
- Priority 2: Biodiversity for Sustainable Development.
- Priority 3: Diversity, Equity, Inclusion, and Accessibility in Science, Technology, and Innovation.

## 2. PRIORITIES AND DELIVERABLES

### 2.1 PRIORITY 1: OPEN INNOVATION FOR DEVELOPMENT

As part of the deliverables for 2024 under the Brazilian Presidency of the G20, an Open Innovation Strategy was developed. To continue the momentum and to build on the open science concepts, open innovation is considered to be a relevant topic for South Africa to take forward in 2025.

The G20 partners collectively see the importance of promoting inclusive collaborations in research and innovation to achieve the Sustainable Development Goals (SDGs) and to address global cross-border challenges. Partners also see the need for commitment to pursue development models that implement sustainable, inclusive, and just transitions globally while leaving no one behind and also see open innovation as an enabler and facilitator for active international North-South cooperation in Science, Technology and Innovation (STI). South Africa also plans to submit a proposal to the Belmont Forum Africa Call focusing on Disaster Risk Reduction (the Belmont Forum is a group of international research and innovation funders) as a demonstration project on how open innovation can respond to STI challenges. To this end, the South African G20 Presidency will act to implement the G20 Open Innovation Strategy. The following are the proposed deliverables under this priority:

#### **Proposed deliverables**

##### **2.1.1 The G20 Open Innovation Platform of Platforms**

##### **2.1.2 An Open Innovation Demonstrator Project on Disaster Risk Reduction**

To better deliver on this topic, South Africa will work with the United Nations Scientific, Educational and Cultural Organisation (UNESCO) and the United Nations Conference on Trade and Development (UNCTAD) as knowledge partners. UNESCO has already done a lot of work related to the topic through the 2021 Open Science recommendations, which will assist in unpacking the topic in relation to South Africa, the African continent's development, and the G20 members.

#### **Side events**

A G20 dialogue with the youth and communities in innovation on their expectations from a G20 Open Innovation Platform of Platforms is proposed. A

joint Youth Digital Techpreneurs event is also planned in partnership with the Department of Small Business Development (DSBD) and the Department of Communications and Digital Technologies, to take place on the margins of the RIWG Ministerial Meeting in September 2025.

### Knowledge Partners

Proposed local knowledge partners are the African Open Science Platform (AOSP) hosted by the National Research Foundation, the Technology Innovation Agency (TIA), and the National Intellectual Property Management Office (NIPMO).

## 2.2 PRIORITY 2: BIODIVERSITY INFORMATION FOR SUSTAINABLE DEVELOPMENT

South Africa is the third-most mega-diverse country in the world, after Indonesia and Brazil. Here, biodiversity plays a critical role in sustainable development; it provides vital ecosystem services and is one of our greatest national and regional assets. The benefits of biodiversity are also crucial to key conservation and economic sectors (i.e., forestry, agriculture, fisheries, tourism, health, and energy) and to providing solutions to sustainable development and poverty alleviation on the continent. Thus, good and accurate data are key building blocks for analysis in support of the 17 SDGs, including the management of our biodiversity and ecological infrastructure. Ultimately, we cannot monitor what we cannot measure.

South Africa wishes to highlight the critical importance of species cataloguing or data mobilisation to support the ability to monitor, report, and conserve biodiversity for sustainable development and a sustainable planet. In keeping with other RIWG meetings on joint actions on open science themes to support the cataloguing of biodiversity, and following on from the G20 commitments for expanding the information base of the Global Biodiversity Information Facility (GBIF) through data mobilisation (species cataloguing) and human capacity development for policy-relevant biodiversity data through the Biodiversity Information for Development (BID) programme, the G20 should also explore how best to use and uptake GBIF data towards further impact in science, policy, and the bioeconomy. Data mobilisation, technology transfer, and capacity development have been key GBIF enablers. Further mechanisms, like the development of centres to grow biodiversity informatics as a developing field of

science, are also needed. South Africa intends on expanding on this topic to focus on building capacity for species cataloguing.

UNESCO supports a global network of more than 2 000 UNESCO-designated sites that serve as hubs for conservation and sustainable development supported by the best available research, data and communication drawing on scientific as well as Indigenous and local knowledge.

In 2024, the Brazilian Presidency of the G20 focused on research and open innovation for a sustainable Amazon and received G20's support for species cataloguing initiatives in partnership with the GBIF.

### **Proposed Deliverables**

**2.2.1 G20's support to promote the GBIF network expansion through the 18 Convention on Biodiversity Regional Support Offices**

**2.2.2 A seminar highlighting museum collaboration to equitably reduce the capacity and knowledge asymmetry**

**2.2.3 The G20 support for GBIF to build a Catalogue of Life (a list of all the world's species)**

### **Side events**

A dialogue between the G20 members and the Khoisan marginalised communities who have been working with the Department of Science, Technology and Innovation of South Africa (DSTI) to contribute towards an Indigenous Knowledge Systems Platform is proposed. A discussion with African Science leaders is proposed during Africa Month in May 2025.

### **Knowledge Partners**

Proposed local partners include the South African National Biodiversity Institute (SANBI), the Department of Forestry, Fisheries and Environment (DFFE), and the Department of Sports, Arts and Culture. International knowledge partners specific to this topic will include the Global Biodiversity Information Facility (GBIF) and UNESCO. The GBIF plans to expand its Biodiversity Information for Development (BID) Programme in Africa.



## 2.3 PRIORITY 3: DIVERSITY, EQUITY, INCLUSION AND ACCESSIBILITY IN SCIENCE, TECHNOLOGY AND INNOVATION

The year 2024 was important for South Africa, as we celebrated 30 years of democracy, and the priority theme of *Diversity, Equity, Inclusion, and Accessibility in Science, Technology, and Innovation* feeds well with the celebration and is taken forward in 2025 during South Africa's Presidency of the G20. The topic aims to promote inclusive development where Indigenous, marginalised, and under-represented groups are included in the STI architecture and the inclusion of developing countries within the global STI enterprise. The Indigenous Knowledge System will also be included on the agenda for this topic. Applying gender lens and gender mainstreaming in STI is also of great importance for equality. This topic will consider these elements, and a dialogue between the G20 members and the marginalised groups can be one of the deliverables in 2025. To celebrate UN Women and Girls in Science Day, a side event will also be co-hosted with UNESCO as part of the Feb 2025 RIWG Meeting.

Proposed local knowledge partners are the Human Sciences Research Council (HSRC), the Academy of Science of South Africa (ASSAf), the National Advisory Council on Innovation (NACI), the Department of Women, Youth and Persons with Disabilities and the University of Free State (UFS). The international knowledge partner proposed is UNESCO. UNESCO has assisted in drafting the recommendations for this topic and is collecting disaggregated data on STI as part of its GO SPIN Platform.

Under this priority area, the Brazilian Presidency developed the G20 recommendations on Diversity, Equity, Inclusion, and Accessibility in Science, Technology, and Innovation and aims to create a G20 platform for monitoring equity policies.

### Proposed Deliverables

The proposed deliverables will include the following:

#### 2.3.1 G20 Analytical Framework for Diversity, Equity, and Inclusion in STI Policies and Policy Instruments

- 2.3.2 Analysis of Innovation for Inclusive Development Policies, Models and Approaches adopted by the G20 and propose recommendations on how to address gaps**
- 2.3.3 Declaration/recommendations on science popularisation (dissemination/ citizen science).**
- 2. 3.4 G20-UNESCO side event on women and girls in science**

### **Side events**

To celebrate UN Women and Girls in Science Day, a side event will also be co-hosted with UNESCO as part of the February 2025 RIWG Meeting. A dialogue between the G20 members and the Khoisan marginalised communities, who have been working with the DSI to contribute towards bio-economy value chains, is proposed.

### **Knowledge Partners**

Proposed local knowledge partners are the Human Sciences Research Council and the South African Agency for Science and Technology Advancement (SAASTA), hosted by the National Research Foundation.