G20 Research and Innovation Ministerial Meeting

Manaus Declaration—September 19, 2024

We, the Research and Innovation Ministers and equivalents of the G20 members and invited countries, met in Manaus, Brazil, on 19 September 2024, to advance our discussion on the importance of international cooperation in research and innovation as a tool to address the major global challenges that we face, to reduce global inequalities and asymmetries in the access and production of science, technology, and innovation (STI), and to achieve the objectives of the 2030 Agenda for Sustainable Development of the United Nations and its Sustainable Development Goals (SDGs), under the theme “Open Innovation for a Just and Sustainable Development”.

We recognize that open innovation is a distributed innovation process based on partnership, cooperation, and voluntary knowledge flow across organizational boundaries, on mutually agreed terms. Open innovation leverages both internal and external resources for researchers and others in the innovation ecosystem to unlock the latent economic value of ideas and knowledge. This collaborative process highlights the importance of a strong innovation ecosystem and innovator-led approach based on voluntary partnerships and respect for intellectual property. It also includes respect for diverse cultures and human rights; the protection of national security; and principles and rules related to academic freedom, research ethics and integrity, and privacy and personal data.

The Research and Innovation Working Group (RIWG) meetings, hosted by Brazil during its G20 Presidency, provided a platform for governments, International Organizations, and experts to discuss the importance of open, fair, diverse, and mutually beneficial international cooperation in research and innovation. The discussions and activities of the RIWG were carried out through the five priority topics: (1) Open innovation for strengthening international cooperation in science, technology, and innovation; (2) Open innovation towards lowering emissions and the achievement of net-zero greenhouse gas emissions/carbon neutrality, including just and inclusive energy transitions and more circular and sustainable bioeconomies; (3) Open innovation to promote global health; (4) Research and open innovation for a sustainable Amazon and other forests; (5) Diversity, equity, inclusion, and accessibility in science, technology, and innovation.

We recognize that the asymmetries and inequalities in the access to and production of STI can hinder green, socially just, and sustainable development, in all countries, but in particular in developing countries. In this sense, we commit to enhance international cooperation in science, technology, and innovation to close those gaps, foster equitable access to research and innovation opportunities, and support the achievement of the 2030 Agenda for Sustainable Development and its SDGs.

This cooperation can be facilitated by using tools such as open innovation, open science, research infrastructures as appropriate, voluntary technology transfer

and co-development of capacities on mutually agreed terms, exchanges of researchers, scientists, and resources around the world, science and technology assistance to developing countries, and enhanced science communication. In this context, we acknowledge the critical role that circular economy policies and resource efficiency approaches can play in achieving sustainable development.

We note that open innovation has the potential to change the business-as-usual model and achieve transformative results that can leverage national capacities in STI for collectively addressing the contemporary global challenges and crises we face, such as climate change, global warming, increasing extreme weather events, biodiversity loss, land degradation, marine ecosystems degradation, waste, pollution, and pandemics, which contribute to greater poverty and inequality, subdued economic growth, hunger, food insecurity, disaster risks, and migration.

We reiterate that in 2022 and 2023 our leaders confirmed that: “Mindful of our leadership role, we reaffirm our steadfast commitments, in pursuit of the objective of UNFCCC, to tackle climate change by strengthening the full and effective implementation of the Paris Agreement and its temperature goal, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances.” To tackle the climate crisis and related challenges, we should move together towards the lowering of emissions and the achievement of net-zero greenhouse gas emissions/carbon neutrality, including through enhancing international cooperation, just energy transitions, resource efficiency, circular economies, and the development and use of various new and emerging sustainable technologies, as appropriate. We encourage the voluntary sharing of knowledge, technologies, policies, and best practices on mutually agreed terms related to environmentally-sound technologies, especially in the energy sector, to developing countries.

In addition, research and innovation should play a key role in halting and reversing biodiversity loss and fighting air, water, and soil pollution. We underline the importance of science-policy platforms such as IPCC, IPBES, IRP, and the forthcoming Science-Policy Panel on Chemicals, Waste and Pollution.

The COVID-19 pandemic impacted our societies, stressed national health systems and caused the loss of millions of lives around the world. The pandemic also demonstrated how inequities between and within nations in accessing, developing, producing and using vaccines, diagnostics, treatments, and other medical countermeasures can impact how countries respond to health emergencies and disasters. We should make every effort to collaborate with all countries, particularly developing countries, so that they have the necessary capabilities and enabling environments for preventing and preparing for future health emergencies, through the development of research, development, regulation, production, delivery of and innovation for vaccines, diagnostics, treatments, and other health technologies, and also through international cooperation in science, technology, and innovation, with a view toward achieving universal health coverage.

From the perspective of research and innovation, we take note of the ongoing discussion in the G20 Health Working Group on the “Alliance for Local and Regional Production and Innovation” and appreciate the work of the G20 Health Working Group for their close cooperation in this initiative.

We acknowledge the importance of fostering research and innovation in the Amazon and other forests and in global marine and coastal environments to combat global crises and related challenges, including climate change; biodiversity loss and the loss and degradation of vital ecosystems like forests; and pollution; and to support sustainable development in general and the livelihoods of Indigenous Peoples and of local communities.

We recommend increasing the availability and cataloging of biodiversity data and information through open science platforms and the use of FAIR (Findable, Accessible, Interoperable, and Reusable) data principles, as well as principles and frameworks for ethical data governance, such as CARE (Collective benefits, Authority to control, Responsibility and Ethics), to strengthen research, innovation, and public policies to address biodiversity, sustainable and circular bioeconomies, health, seas and ocean, and climate, among other policy fields.

We affirm the potential of financial assistance and grants for research and innovation to harness synergies and maximize the impact of scientific and technological projects, including for biodiversity conservation and restoration of tropical forests. We appreciate the contributions from experts and academics gathered in the Amazon and Tropical Forest scientific seminar held in Manaus, on September 17 and 18.

Diversity, equity, inclusion, accessibility, and sustainability should be at the core of STI initiatives, and should include economic, social, environmental, gender, and race/ethnicity aspects, and inclusion of vulnerable and underserved groups, Indigenous Peoples and local communities, particularly in biodiversity conservation, restoration and sustainable use, sustainable development, and climate action. We encourage finding common understanding on actions and measures to address those issues, as well as sharing of appropriate data, information, and indicators through platforms for collecting statistical data and monitoring policies, including open science platforms. In this sense, we welcome practices and actions to implement open science.

The mobility of researchers can foster innovation and economic growth through enhanced collaboration. In this sense, we encourage discussions between G20 members and guest countries of promoting ways that can facilitate talent mobility.

As a response to tackle the above-mentioned issues, we endorse the following RIWG deliverables:

1. The Terms of Reference of the G20 RIWG.
2. The G20 Strategy to Promote Open Innovation Cooperation.
3. The G20 Recommendations on Diversity, Equity, Inclusion, and Accessibility in Science, Technology, and Innovation.

We also welcome the following deliverables:

1. The G20 and Belmont Forum Partnership for Research and Innovation in the Amazon and Tropical Forests.
2. The G20-GBIF facilitation process for species cataloging and expansion of open biodiversity databases.
3. The G20 international seminar on challenges and opportunities for research and innovation in the Amazon and Tropical Forests.

We also take note of the following deliverables:

1. The G20 overview of clean energy technologies to be targets of voluntary co-development, transfer, dissemination and diffusion of knowledge on mutually agreed terms, with the aim of lowering emissions and the achievement of the protection of the environment and of net-zero greenhouse gas emissions/carbon neutrality.
2. The G20 compendium of national clean energy innovation policies for the just energy transitions.
3. The RIWG recommendations, from the perspective of research and innovation, for the “Alliance for Local and Regional Production and Innovation”, under discussion in the G20 Health Working Group.

The above-mentioned deliverables will be known as the **Manaus Package**.

We thank the knowledge partners of the G20 RIWG Brazilian presidency — the UN Trade and Development (UNCTAD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Energy Agency (IEA), the Amazon Cooperation Treaty Organization (ACTO), the Belmont Forum, and the Global Biodiversity Information Facility (GBIF) — for their insights, collaboration, and contribution to the deliverables.

We commend and thank Brazil’s Presidency for its leadership of the G20 RIWG in 2024, and we look forward to our next meeting under the South African Presidency in 2025.