



Declaration on Transformative
Science, Technology and
Innovation Policies for a
Sustainable and Inclusive
Future



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Background Information

The Declaration on Transformative Science, Technology and Innovation Policies for a Sustainable and Inclusive Future was adopted on 24 April 2024 on the occasion of the meeting of the Committee for Scientific and Technological Policy (CSTP) at Ministerial level (the “Ministerial meeting”) held at the OECD in Paris, France.

Meeting of the Committee for Scientific and Technological Policy at Ministerial level

Nearly 10 years after Science and Technology ministers from OECD Members and participating non-Members met in Daejeon, Korea, charting out a vision for the digitalisation and globalisation of science and technology through the *Daejeon Declaration on Science, Technology and Innovation Policies for the Global and Digital Age* [[OECD/LEGAL/0416](#)], the world is a different place as it recovers from the COVID-19 crisis amidst a deteriorating geopolitical environment, resurgence of conflicts and worsening effects of climate change.

The challenges facing governments and societies call for a re-think and reassessment of STI policy and governance arrangements to cope with the urgency of global challenges, including climate change and to seize the opportunities of new and emerging technologies while addressing the risks they raise. As a result of this evolutions and new challenges, [several new international standards and initiatives](#) were launched in the recent years.

In this context, the Ministerial meeting was an opportunity to further reaffirm the key role of STI in addressing new global challenges, as well as reinforcing CSTP’s central contributions to the field. In particular, two policy deliverables were launched and welcomed at the Ministerial meeting: an [OECD Agenda for Transformative Science, Technology, and Innovation Policies](#); and the [OECD Framework for Anticipatory Governance of Emerging Technologies for responsible innovation](#).

Scope of the Declaration

The Declaration makes a case for transformative science, technology, and innovation (STI) policies to accelerate sustainability transitions, while embedding shared values in the governance of science and emerging technologies and reaffirming the need for international co-operation in science, technology, and innovation to address global challenges.

There are four pillars in the Declaration, in which Adherents make commitments and call on the OECD to support their efforts in achieving those commitments:

- The first pillar focuses on **transformative science, technology, and innovation policies to address societal challenges** through inclusive, anticipatory, adaptive, experimental, and evidence-based approaches and greater cross-government co-ordination.
- The second pillar on **shared values in international co-operation and technology governance** makes the case for policy makers to embed values in the design of technology governance systems in order to seize the opportunities from emerging technologies while managing the potential risks.
- The third pillar focuses on **making STI more inclusive by advancing equity, diversity, inclusivity, and accessibility**, and developing tools for monitoring education and training to promote talent, inclusivity, mobility and careers in research and innovation, including through a new research and innovation careers observatory.
- The fourth pillar focuses on **strengthening the evidence base** for STI strategies and policies through statistical improvements and strategic intelligence and foresight.

The four pillars are complementary and mutually reinforcing to achieve more transformative STI policies for a sustainable and inclusive future.

For further information please consult the OECD Science and Technology Policy Ministerial Meeting website at OECD Science and Technology Policy Ministerial ([oecd-events.org](#)).

*For further information on STI work at the OECD please visit www.oecd.org/sti.
Contact information: STI.contact@oecd.org.*

WE, THE MINISTERS AND REPRESENTATIVES of Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Costa Rica, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Peru, the Philippines, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Thailand, Türkiye, the United Kingdom, the United States, and the European Union, in the context of the meeting of the Committee on Scientific and Technological Policy (CSTP) at Ministerial level, which took place at the OECD headquarters in Paris on 23-24 April 2024, chaired by France and supported by Austria, Colombia, Korea, Norway, Spain and Switzerland as Vice-Chairs, that discussed an agenda for transformative science, technology and innovation (STI) policies that fosters responsible and equitable research, development and innovation, based on shared values and enhanced international co-operation, in order to respond more effectively to critical global challenges, such as climate change, to accelerate progress towards achieving the Sustainable Development Goals and to increase economic and social well-being of people:

WE REAFFIRM the core values of the OECD, notably the preservation of individual liberty, the values of democracy, the rule of law and the protection of human rights.

WE RECALL the outcomes of the 2015 meeting of the CSTP at Ministerial level held in Daejeon, Korea, in particular the Declaration on Science, Technology and Innovation Policies for the Global and Digital Age [[OECD/LEGAL/0416](#)], that provides policy principles to expand open science, acknowledges the importance of the multi-stakeholder approach and emphasises the need for international co-operation in the digital age.

WE RECALL the statements of the OECD Council condemning the aggression by Russia against Ukraine in the strongest possible terms as a clear violation of international law and a serious threat to the rules-based international order; and **RECALL** the United Nations General Assembly Resolution [A/RES/ES-11/1](#).

WE REMAIN deeply concerned by the impact of conflicts on international co-operation in science, technology, and innovation, as well as on global science and innovation networks.

DESIGNING AND IMPLEMENTING TRANSFORMATIVE SCIENCE, TECHNOLOGY, AND INNOVATION POLICIES

WE ACKNOWLEDGE the crucial role of science, technology, and innovation policies to urgently tackle global crises such as climate change, biodiversity loss and pollution, including their impacts on the Ocean, as well as emerging diseases and pandemics, and growing insecurity in food, water, and energy supplies, against the backdrop of rising inequalities, poverty, geopolitical tensions, and conflicts.

WE ACKNOWLEDGE that the COVID-19 pandemic demonstrated the value of long-term public and private investments in science, technology, and innovation, as well as in the social sciences and humanities, and emphasised the importance of greater preparedness and resilience to deal with unforeseen shocks.

WE ACKNOWLEDGE that to have a real impact on transformation, science, technology, and innovation policy makers have a critical role in informing and contributing to evidence-based policies across sectors through a whole-of-government and whole-of-society approach that recognises the interconnected nature of science, technology and innovation, and considers local context.

WE COMMIT to:

- develop and implement transformative science, technology, and innovation agendas, as appropriate, that are more inclusive, agile, anticipatory, allow for policy experimentation and reflect socially relevant directions, to help achieve the Sustainable Development Goals, including for climate and the sustainable use of the Ocean;

- continue investing in public research and development (R&D), including basic and experimental research, use-inspired research, mission-oriented-research, sustainable research infrastructures, and human resources, all of which are needed to advance knowledge and address global challenges;
- promote incentives for the private sector, including businesses and private finance actors, to invest in R&D and innovation and to engage in public-private partnerships from lab to market, especially to respond to societal and environmental needs;
- foster human capital and a skilled and agile workforce by promoting diverse, equitable, and inclusive access to skills training and lifelong learning programmes in science, technology, and innovation.

WE WELCOME an ambitious [OECD Agenda for Transformative Science, Technology, and Innovation Policies](#) that calls for a whole-of-government and whole-of-society approach and enhanced international co-operation in research and innovation to better address global challenges, whilst promoting economic competitiveness, security and resilience of Member and partner economies.

WE CALL on the OECD, through the CSTP and in collaboration with other relevant OECD committees, to:

- provide guidance for the governance, design, implementation, and evaluation of efficient whole-of-government transformative science, technology, and innovation policies, to achieve more just and sustainable economies and societies;
- further its analysis on the efficiency and effectiveness of public and private funding for R&D, challenge and mission-oriented research and innovation, and research infrastructures to improve countries' capacities to respond to global challenges and build resilience.

REINFORCING SHARED VALUES IN INTERNATIONAL CO-OPERATION AND TECHNOLOGY GOVERNANCE

WE ACKNOWLEDGE that diverging national approaches in the governance of international science, technology and innovation co-operation present challenges to the open circulation and exchange of scientific knowledge, requiring the reassessment and realignment of international co-operation mechanisms which promote openness, reflect legitimate security concerns, and are based on shared values and principles, including reciprocity, transparency, accountability, and mutual benefit.

WE ACKNOWLEDGE the need to balance the transformative potential of emerging technologies for providing novel solutions to global challenges and opportunities for sustainable economic growth against the ethical, safety and security risks arising from possible misuse or unintended consequences.

WE ACKNOWLEDGE the asymmetries between countries in access to technology to support their development and to overcome crises of various natures and tackle social inequalities, and the need to discuss and propose effective mechanisms to foster and expedite the safe and secure development, transfer, and diffusion of technology on voluntary and mutually agreed terms.

WE COMMIT to promote:

- shared values and principles in science, technology, and innovation, notably academic and scientific freedom, scientific excellence, openness, transparency, reciprocity, accountability, research ethics, integrity, and security, as well as diversity, equity, inclusion, and accessibility, all of which underpin responsible research and innovation;
- open science principles and practices for data management and stewardship, including the Findability, Accessibility, Interoperability, and Reusability (FAIR) principles and frameworks for ethical data governance, such as the Collective Benefit, Authority to Control, Responsibility, and Ethics (CARE) principles, to facilitate the inclusive production of knowledge and ensure the equitable access to scientific literature and research data from public funding, across disciplines,

sectors, and borders, while also respecting privacy, security, statistical confidentiality and ethical considerations;

- voluntary and mutually beneficial exchange of scientific knowledge and international cooperation in science, technology and innovation that is open, fair, secure, equitable, reciprocal, with respect for intellectual property rights, data protection, privacy as well as human rights, and ethical precepts, to advance knowledge and address global challenges.

WE WELCOME the [OECD Framework for the Anticipatory Governance of Emerging Technologies](#) that aims to equip policymakers and other actors to design technology governance systems that help realise the transformative potential of emerging technologies while managing the potential risks.

WE WELCOME the role of the OECD in fostering multistakeholder exchanges on shared values in international co-operation and technology governance, including with non-Member economies and other international organisations, in particular in the framework of the Global Forum on Technology.

WE CALL on the OECD, through the CSTP and in collaboration with other relevant OECD committees, to:

- develop guidance for a human-centric, rights-based technology governance framework and for responsible research and innovation, building upon the insights of the Global Forum on Technology and technology assessment tools to better anticipate the societal, environmental, and economic impacts of technology;
- support Member and partner economies in implementing open science principles, as well as guidelines for promoting and establishing open science policies and practices, notably as regards enhancing capacity for public access to peer-reviewed publications and research data;
- support Member and partner economies in their efforts to strengthen international co-operation, and solidarity in research, talent mobility and circulation, including with emerging and developing economies, based on shared values, while considering research integrity and security and the situation in each country.

MAKING SCIENCE, TECHNOLOGY, AND INNOVATION MORE INCLUSIVE

WE ACKNOWLEDGE the importance of placing people at the centre of science, technology and innovation and actively engaging diverse stakeholders and civil society, including business and trade unions, in the design, implementation and evaluation of policies.

WE RECOGNISE the need to foster safe environments for diverse representation —including to enable full participation of women — in Science Technology Engineering and Mathematics (STEM) education and careers, including by recognising the need to prevent and respond to technology-facilitated gender-based violence and harassment.

WE COMMIT to make science, technology, and innovation more inclusive, participatory, and accessible, notably by:

- promoting measures to facilitate the engagement of all stakeholders, 'including through strengthened dialogue with relevant civil society stakeholders;
- strengthening the relationships and synergies among education, science, and society, by encouraging policies to promote public engagement in science and research and build public trust in science, technology, and innovation;
- continuing to advance diversity, equity, inclusivity, and accessibility, including through the inclusion of underserved, marginalised and underrepresented population groups, including women and girls to enable society at large to fully participate and succeed in science, technology, and innovation;

- promoting measures to enhance the attractiveness and availability of quality careers for research and teaching professions, notably by reducing precarity among researchers, improving their working conditions, and fostering mobility of talents and circulation of researchers across sectors and international borders.

WE CALL on the OECD, through the CSTP and in collaboration with other relevant OECD committees, to:

- further its work on scientific and digital literacy, participatory science, scientific communication, combatting scientific mis- and disinformation, and on the contributions of science and knowledge, including traditional and Indigenous knowledge, to policymaking, policy-advice, and decision-making;
- provide guidance for advancing rights, diversity, equity, inclusivity, accessibility, and participation in science, technology, and innovation, of all population groups, especially women;
- develop tools for monitoring education and training to promote talent, inclusivity, mobility and careers in research and innovation, including through the launch of a new observatory on research and innovation careers.

STRENGTHENING THE EVIDENCE BASE FOR STI STRATEGIES AND POLICY MAKING

WE ACKNOWLEDGE the important role of the OECD in advancing the evidence-base for policy making in science, technology, and innovation and as a forum for OECD Members, partners, and stakeholders to share knowledge, experience, and data to identify and improve policy solutions to economic, environmental, and social challenges.

WE ACKNOWLEDGE that designing, implementing, and evaluating transformative science, technology, and innovation strategies and policies, requires investment in the evidence base and the capacity for strategic learning, taking advantage of the opportunities offered by recent technologies, tools, data, and indicators.

WE COMMIT to:

- promote reliable, trustworthy, and internationally comparable official data in alignment with FAIR principles, statistics and empirical evidence in science, technology, and innovation;
- support and provide guidance on the processes needed to collect responsibly and ethically, link and leverage data in science, technology, and innovation for decision-making and policy development;
- promote evaluation mechanisms and strategic intelligence and foresight systems to improve the effectiveness, efficiency, transparency and impacts of research and innovation systems.

WE CALL on the OECD, through the CSTP and in collaboration with other relevant OECD committees, to:

- provide international statistics, data resources and new evidence on science, technology and innovation systems and policies and their impacts, notably regarding Sustainable Development Goals and the just and green transitions;
- further develop policy standards/recommendations and tools to strengthen the statistical capabilities in STI within Member and partner economies;
- serve as a forum to convene the international expert community through the organisation of a new *OECD Blue Sky Forum on Science and Innovation Indicators* conference to co-develop measurement and evidence in support of transformative science, technology, and innovation policy agendas.

WE WELCOME further dialogue, including with other relevant international organisations, on supporting the follow-up to this Declaration in the CSTP, as well as taking stock of the progress made five to ten years after its adoption.

About the OECD

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD Member countries are: Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Türkiye, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Legal Instruments

Since the creation of the OECD in 1961, more than 500 legal instruments have been developed within its framework. These include OECD Acts (i.e. the Decisions and Recommendations adopted by the OECD Council in accordance with the OECD Convention) and other legal instruments developed within the OECD framework (e.g. Declarations, international agreements).

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- **Decisions** are adopted by Council and are legally binding on all Members except those which abstain at the time of adoption. They set out specific rights and obligations and may contain monitoring mechanisms.
- **Recommendations** are adopted by Council and are not legally binding. They represent a political commitment to the principles they contain and entail an expectation that Adherents will do their best to implement them.
- **Substantive Outcome Documents** are adopted by the individual listed Adherents rather than by an OECD body, as the outcome of a ministerial, high-level or other meeting within the framework of the Organisation. They usually set general principles or long-term goals and have a solemn character.
- **International Agreements** are negotiated and concluded within the framework of the Organisation. They are legally binding on the Parties.
- **Arrangements, Understandings and Others:** several other types of substantive legal instruments have been developed within the OECD framework over time, such as the Arrangement on Officially Supported Export Credits, the International Understanding on Maritime Transport Principles and the Development Assistance Committee (DAC) Recommendations.