



Recommendation of the Council on International Co-operation in Science and Technology



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Background Information

The Recommendation concerning a General Framework of Principles for International Co-operation in Science and Technology was adopted by the OECD Council on 21 April 1988 (the "[1988 version of the Recommendation](#)") on the proposal of the Committee for Scientific and Technological Policy (CSTP) and was complemented in 1995 by the Recommendation concerning Principles for Facilitating International Technology Co-operation Involving Enterprises [[OECD/LEGAL/0282](#)] (the "1995 Recommendation"). In view of the changes that have occurred in the overall context and framework conditions for international co-operation in science and technology over the past 30 years, the Recommendation was revised by the Council on 23 June 2021 and renamed Recommendation on International Co-operation in Science and Technology.

The Recommendation aims to ensure scientific co-operation is efficient and effective by removing barriers to international co-operation, reducing duplication and ensuring co-operation that is mutually beneficial to partners. It covers an expanded scope of principles for international co-operation in science and technology to reiterate some elements of the existing principles in the 1988 version of the Recommendation, notably, the importance of collaboration on basic research and the exchange and mobility of research personnel to advance knowledge.

OECD's work on international co-operation in science and technology

The CSTP is the premier intergovernmental body for discussing science, technology and innovation policies. As part of its mandate, the CSTP has been charged with facilitating international co-operation in science, technology and innovation to advance knowledge and address global challenges. It is also tasked with policy co-ordination among Members and among Members and Partners on the development of research agendas, access to scientific data and information the international mobility of researchers and increasing understanding of the dynamics of international co-operation in science and technology.

The 1988 version of the Recommendation made a powerful case for international co-operation in science and technology at the time, by providing a general framework for international co-operation in science and technology, based on mutual interest and reciprocity, with a view to advance knowledge and contribute to economic growth and societal well-being. A review on its continued relevance in 2019 (the "2019 Review") showed that among the most impactful provisions of the 1988 version of the Recommendation were those related to advancing basic research through international co-operation, the protection and enforcement of intellectual property rights and the promotion of the international mobility of researchers.

However, since its adoption in 1988, many developments have occurred in the global landscape for international co-operation in science and technology: the evolution in the practice of scientific research, notably the digitalisation of scientific discovery; the increase in actors, new funding streams for international research and global challenges; the growth of international co-operation in science and technology among OECD Members and with non-Members; the advent of the United Nations 2030 Agenda and the Sustainable Development Goals; as well as the growing importance of scientific integrity.

A fully inclusive process for revising the Recommendation

At the Meeting of the CSTP at Ministerial Level held in Daejeon, Korea in March 2015, Ministers adopted the Daejeon Declaration on Science, Technology and Innovation Policies for the Global and Digital Age [[OECD/LEGAL/0416](#)] (hereafter the "Daejeon Declaration") inviting the OECD to explore the need for updating the 1988 version of the Recommendation.

In view of the developments occurred since 1988 and in accordance with the [CSTP Action Plan](#) for Standard Setting which confirmed the continued relevance of both the 1988 version of the Recommendation and the 1995 Recommendation while pointing at the need to assess the possibility of a revision of both Recommendations, the CSTP conducted a review in 2019 and decided to revise each of them separately.

An ad hoc steering group, comprised of CSTP delegates and invited experts, was charged by CSTP with defining the scope and breadth of the revision to be proposed to the CSTP. After several drafts, a consultation was launched in February 2021 with relevant OECD bodies beyond the CSTP, as well as selected international organisations and other external stakeholders. The input from the consultation process helped to integrate the concerns and views from different communities and stakeholders on issues such as the access to and sharing of data in the context of international research collaboration and, encouraging a more balanced mobility of researchers and removing obstacles that hinder the mobility of women researchers.

Scope of the Recommendation

The Recommendation offers principles for international co-operation and is targeted in particular to the needs of the scientific community. It is intended to assist Adherents in the development of policies to remove barriers to co-operation whilst ensuring appropriate policies are in place to mitigate against the risks inherent in international co-operation in the digital age.

The Recommendation addresses the rationale, the capacity and the policies and practices of governments and stakeholders to engage in international co-operation in science in technology. In particular it:

- extends the scope of co-operation from basic research to global challenges; many of which are embodied in the Sustainable Development Goals;
- takes into account the digitalisation of science and technology that enable wider opportunities for collaboration;
- addresses some of the challenges that may arise from differences in national regulations, policies and scientific norms in areas such as research integrity and academic freedom of inquiry and expression;
- calls for the consideration of ethics in international research co-operation especially as concerns research on human subjects.

Next steps

The Recommendation invites Adherents to disseminate it by translating it into different languages and to disseminate it among national stakeholders. Moving forward, to support its implementation and dissemination, the CSTP is instructed to:

- serve as a forum for, among other things, exchanging information on international co-operation in science and technology; monitoring the evolution, drivers and impacts of international co-operation in science and technology and developing an implementation toolkit with guidance and good practices to help Adherents implement the Recommendation;
- conduct voluntary implementation reviews;
- review the implementation, dissemination, and continued relevance of the Recommendation and report to the Council no later than five years following its adoption and at least every ten years thereafter.



Relevance to COVID-19 Response and Recovery

The COVID-19 pandemic underscored the importance of the cross-border co-operation promoted by this Recommendation. This is the case, in particular, in the context of the search for and development of therapeutics and vaccines that can exceed the capacity and capabilities of individual firms or countries, and therefore necessitate international co-operation.

For further information please consult: <https://www.oecd.org/sti/>
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THE COUNCIL,

HAVING REGARD to Article 5 b) of the Convention on the Organisation for Economic Co-operation and Development of 14 December 1960;

HAVING REGARD to the Recommendation of the Council concerning Principles for Facilitating International Technology Co-operation Involving Enterprises [[OECD/LEGAL/0282](#)]; the Declaration on International Science and Technology Co-operation for Sustainable Development [[OECD/LEGAL/0320](#)]; the Recommendation of the Council on Access to Data from Public Research Funding [[OECD/LEGAL/0347](#)]; the Recommendation of the Council on Health Data Governance [[OECD/LEGAL/0433](#)], the Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information [[OECD/LEGAL/0362](#)]; the Recommendation of the Council on Artificial Intelligence [[OECD/LEGAL/0449](#)]; the Recommendation of the Council on Responsible Research and Innovation in Neurotechnology [[OECD/LEGAL/0457](#)] and the draft Recommendation of the Council on Enhancing Access to and Sharing of Data [[OECD/LEGAL/0463](#)];

HAVING REGARD to the Daejeon Declaration on Science, Technology and Innovation Policies for the Global and Digital Age [[OECD/LEGAL/0416](#)] which calls for greater international co-operation to address global challenges and strengthening the innovation capacities of developing countries;

HAVING REGARD to the 1948 Universal Declaration of Human Rights, the 2017 UNESCO Recommendation on Science and Scientific Researchers and the 2030 Agenda for Sustainable Development (hereafter the '2030 Agenda') adopted by the United Nations General Assembly;

HAVING REGARD to the OECD's Frascati Manual on Research and Experimental Development (R&D) and the Oslo Manual on Innovation which, together, set international statistical standards for the measurement of scientific, technological and innovation activities;

CONSIDERING that a new context affects the contribution of science and technology to economic growth and social development, the main features of which are: the increase in global capabilities in scientific education and research; the acceleration in the internationalisation of science and technology; the digital transformation of science and technology; the emergence of global challenges, such as climate change or pandemics, which can best be addressed by coordinated multilateral co-operation in science and technology that requires long-term as well as short-term responses in times of crises;

RECOGNISING that international co-operation in scientific research remains critically important for advancing science and technology as well as solving global challenges that cannot be solved by one country alone;

CONSIDERING that, in this context, the economic growth and social development of all countries depend on advances in scientific and technological knowledge, which require both a sustained research effort, and the widest possible circulation and interchange of ideas and information, enabled notably by the use of the Internet and the promotion of open science – the unhindered access to scientific publications, access to data from publicly funded research, and collaborative research enabled by digital tools and incentives – which also includes the societal engagement in science for example through dialogue formats, participatory agenda-setting and co-production;

CONSIDERING the lower levels of capacity in developing countries to engage in international co-operation in science and technology as well as their need for support in capacity building (e.g. material capacity to engage in co-operation, capacity to meet international legal and regulatory standards, and capacity to educate and train researchers) from the international development and scientific communities;

CONSIDERING that, in order to transfer to other countries certain technologies and related information involved in or resulting from research and development programmes, some countries require, for reasons of national defence or security, assurances of adequate protection of such technologies and related information; further noting that such issues are dealt with in bilateral arrangements;

CONSIDERING that international co-operation in science and technology is also subject to risks of misuse or adverse effects such as: the non-respect (by co-operating partners) of scientific values and norms such as academic freedom, freedom of inquiry and expression, scientific rigor, scientific independence and transparency, meritocracy and the appropriate recognition of contributions to scientific works (e.g. data and publications);

On the proposal of the Committee for Scientific and Technological Policy:

I. **AGREES** that the purpose of this Recommendation is to provide guidance on how Members and non-Members having adhered to this Recommendation (hereafter the “Adherents”) can engage in and promote international co-operation in science and technology that is mutually beneficial and contributes to sustainable development, removing barriers which have harmful effects on scientific and technological progress and its contribution to inclusive economic growth and social well-being, and taking into account the role of public research organisations and other relevant stakeholders.

II. **AGREES** that, for the purpose of this Recommendation, the following definitions are used:

- **“International co-operation in science and technology”**: refers to both bilateral and multilateral co-operation that occurs mainly among governments, scientists, public research organisations, universities, and businesses. It is initiated for a number of reasons, including advancing knowledge through basic and applied research, sharing economic costs of large-scale research infrastructures, fostering peace-building and diplomatic goals, and responding to emergency crises and addressing global challenges.
- **“Stakeholders”**: refer to actors involved in international co-operation in science and technology, including but not limited to, international organisations, public research organisations, scientists, universities, science and innovation agencies and research funding councils, development aid agencies, non-profit philanthropies, businesses, technical standard-setting bodies as well as civil society actors (e.g. citizen science and patient groups, associations of researchers and scientists, non-governmental organisations (NGOs), community organisations and non-traditional actors).

**CAPACITY WITHIN ADHERENTS TO ENGAGE IN INTERNATIONAL
CO-OPERATION IN SCIENCE AND TECHNOLOGY**

III. **RECOMMENDS** that Adherents build capacity to engage in international co-operation in science and technology and take necessary actions, in particular through:

1. Strengthening scientific research, maintaining up-to-date research facilities, participating in international research infrastructures and encouraging the development of efficiently managed co-operative projects including in the framework of multilateral initiatives or co-operation with international organisations;
2. Promoting advanced training of scientists from all disciplines by fostering links between education, research and innovation;
3. Encouraging brain circulation by supporting a balanced international mobility of students and scientific staff, especially early career researchers, and facilitating their access to major basic research facilities, international research infrastructures and international fora such as scientific conferences;
4. Removing gender-specific barriers to the international mobility, recruitment, career paths and advancement of women researchers including unequal pay and unequal access to compensation and facilitating women’s greater participation in international co-operation in science and technology;
5. Encouraging the participation of students and researchers from minority population groups in international mobility programmes through special outreach activities, scholarships and awareness raising;

6. Promoting the dissemination of the results of international collaboration research through dissemination frameworks and strategies that make full use of open access publications, access to databanks and networks, open participation in scientific meetings, and communication with the wider public.

TOOLS FOR MUTUALLY BENEFICIAL INTERNATIONAL CO-OPERATION IN SCIENCE AND TECHNOLOGY

IV. RECOMMENDS that Adherents promote and support the use of tools for mutually beneficial international co-operation in science and technology for economic growth and social development, and to address global challenges, in particular through:

1. Promoting the participation of research funders and performers in international multilateral co-operation programmes and projects to address specific global challenges such as the environment and global health, including emergency preparedness and response;

2. Encouraging stakeholders involved in the funding and performance of research (including scientists, governments, universities and public research organisation, NGOs, foundations) to establish a harmonised understanding of scientific values and norms (such as research integrity and freedom of scientific inquiry and expression) when engaging in international co-operation in science and technology;

3. Ensuring ethical concerns of the different parties are considered in the design and implementation of research collaboration, in particular as regards research on human subjects, and in the exploitation and diffusion of the results of collaborative research;

4. Taking appropriate measures to mitigate and to counter the possible risks associated with international co-operation in science and technology in order to facilitate the effectiveness and efficiency of co-operation for mutual benefit;

5. Promoting improved universal protection and enforcement of intellectual and industrial property rights as well as privacy and personal data protection rules;

6. Ensuring that the transfer of scientific and technological knowledge from and to public research organisations and businesses is subject to national and international controls on dual-use knowledge, technology and products in science.

INTERNATIONAL CO-OPERATION IN SCIENCE AND TECHNOLOGY BETWEEN ADHERENTS

V. RECOMMENDS that Adherents take measures to foster international co-operation in science and technology to address global challenges at international level between themselves by:

1. Sharing information and consultation among Adherents with a view to identify common challenges and priorities that could lead to co-ordinated or joint initiatives at bilateral and multilateral levels;

2. Mobilising international structures including international organisations, international fora, collaborative R&D platforms and international research infrastructures to co-ordinate science and technology activities on global challenges with a view to avoid duplication and improve co-ordination with national activities;

3. Promoting science diplomacy as means to facilitate international co-operation in science and technology;

4. Sharing international best practices in basic scientific education and skills training and as a way to improve public awareness and understanding of science and technology.

**INTERNATIONAL CO-OPERATION IN SCIENCE AND TECHNOLOGY
BETWEEN ADHERENTS AND DEVELOPING COUNTRIES**

VI. RECOMMENDS that Adherents take measures to increase co-operation with developing countries in particular through:

1. Fostering the development of research funding mechanisms that can increase collaboration with developing countries such as global challenge funds, joint research calls, funding for mobility;
2. Leveraging development funding including official development assistance (ODA) and technical assistance, multilateral development bank funding and private finance for investing in science and technology;
3. Supporting the capacity of developing countries to mobilise science and technology for their own social and economic development through the co-design and co-development of research programmes, researcher training, and the transfer of appropriate technologies;
4. Enable the equitable participation of researchers in developing countries to take part in bilateral and multilateral research programmes and infrastructures, including digital research infrastructures.

VII. ENCOURAGES all stakeholders in science and technology, notably government research funders and performers such as universities and public research organisations to support and promote the implementation of this Recommendation.

VIII. INVITES the Secretary-General and Adherents to disseminate this Recommendation.

IX. INVITES non-Adherents to take due account of, and adhere to, this Recommendation.

X. INSTRUCTS the Committee for Scientific and Technological Policy to:

- a) Serve as a forum for:
 - i. exchanging information on international co-operation in science and technology and experiences with respect to the implementation of the Recommendation through a multi-stakeholder dialogue;
 - ii. conducting further work on policies to promote international co-operation in science and technology;
 - iii. monitoring the evolution, drivers and impacts of international co-operation in science and technology using and developing, whenever possible, indicators, statistics, and complementary data resources;
 - iv. developing an implementation toolkit with guidance and good practices to help Adherents implement the Recommendation;
- b) Conduct voluntary reviews with respect to the implementation of this Recommendation;
- c) Continue work in this policy area in order to determine what further actions might be necessary to foster international co-operation in science and technology; and
- d) Report to the Council on the implementation, dissemination and continued relevance of this Recommendation no later than five years following its adoption and at least every ten years thereafter.

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.

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