



SUMMIT OF THE FUTURE INFORMATION CLEARINGHOUSE

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First and Second Reading of Chapter 3 on Science, Technology and Innovation and Digital Cooperation, April 2024



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First and Second Reading of the zero draft of the Pact for the Future – Chapter 3 on Science, Technology and Innovation and Digital Cooperation

ABOUT: Following informal consultations and written inputs from Member States (MS) and stakeholders, the co-facilitators of the Summit of the Future released the zero draft of the Pact for the Future in January 2024. Subsequently, there was a chapter-by-chapter First Reading in early February, followed by a paragraph-by-paragraph Second Reading from February to early April. This process ended with the release of a compilation text in early April 2024, which is primary source material of this ICH bulletin. This bulletin will focus on Chapter 3 of the Pact for the Future – Science, Technology and Innovation and Digital Cooperation.

EXECUTIVE SUMMARY:

Member States collectively stressed on utilizing technology and science to address global challenges and achieve the Sustainable Development Goals, emphasizing an inclusive, and human rights-based approach. Some Member States highlighted the significance of nuclear technology for peaceful purposes and in addressing development issues. Furthermore, Member States urged partnerships, technology transfer, and balanced geographical representation in scientific advisory boards. They advocated for responsible business conduct, sustainable supply chains, and flexible intellectual property rights. Commitments were made to manage technological risks, bridge digital divides, and empower vulnerable groups. Emphasis was placed on capacity building, digital literacy, and enhancing connectivity. Member states prioritized South-South cooperation, transparency in norm-setting, evidence-based policymaking, and addressing specific challenges like gender-based violence and healthcare accessibility. They also invited all countries to integrate modern science and technology with local and indigenous knowledge and innovation. Additionally, they highlighted the importance of global support for STEM education and human rights-based approaches in digital cooperation.

HEADLINES:

- Member States recognized the potential of nuclear technology for peaceful purposes and in tackling development challenges and voiced their support for collaboration with the International Atomic Energy Agency to propel advancements in new nuclear technologies.
- MS emphasized the use of technology to promote inclusive development and achieve the Sustainable Development Goals (SDGs), while also recognizing the transformative impact of science and technology in addressing global challenges.
- Several Member States urged for strengthening partnerships, sharing best practices, and promoting research and technology transfer, particularly to developing nations.
- Member States welcome the establishment of the Secretary-General’s Scientific Advisory Board and the Office of the Secretary-General’s Envoy on Technology, emphasizing the importance of balanced representation across geography, gender, and developing countries.
- Member States advocated for responsible business practices, compliance with human rights principles, sustainable supply chains, and flexible intellectual property rights to support sustainable development efforts and tackle global crises.
- Some Member States expressed their commitment to mitigating risks associated to new technologies to ensure societal and environmental advantages.

- Member States affirmed their commitments to narrowing digital disparities and advocating for digital inclusion, especially for vulnerable groups like women, youth, the elderly, individuals with disabilities, and rural communities.
- MS support capacity building, digital literacy, and access to technologies to empower individuals and communities, with a focus on utilizing digital technologies to expedite progress towards the SDGs and improve connectivity.
- Member States emphasizes the significance of enhancing South-South and triangular cooperation in science, technology, and innovation. They concentrate on key areas such as food security, pandemic prevention, vaccines, and open-source AI, while also stepping up support for research institutions in developing countries.
- Member States pledge to promote transparency, openness, and inclusivity in setting norms for new technologies. Some recognizes the significance of adapting technology to local requirements, respecting traditional knowledge, and ensuring inclusivity in digital cooperation.
- Member States advocated for evidence-based policymaking, enhancing the utilization of science and scientific evidence, and investing in high-quality data. They also endorse initiatives like the Global Sustainable Development Report and the Global Pilot Program on Science, Technology, and Innovation for SDGs Road Maps.
- Some Member States stressed the significance of responsible research that upholds human rights and ethical principles. They underscored the importance of researcher autonomy, freedom, and safety to ensure accuracy and objectivity in scientific results.
- The discussion also focused on addressing specific challenges such as gender-based violence, healthcare accessibility, and sustainable agriculture through technology and innovation.
- Several Member States urged for global support to provide STEM education and research opportunities, particularly for youth and women in developing countries. They stressed the importance of improving working conditions to prevent brain drain and adapting to technological advancements through upskilling programs.
- There was a strong emphasis on advocating for human rights-based approaches in digital cooperation, ensuring accessibility and inclusivity for everyone. Additionally, there were commitments to safeguarding human rights both online and offline, addressing gender disparities, and empowering marginalized communities.
- Member states proposed a key commitment by recognizing the universal importance of science in fostering international cooperation, sustainable development, and global peace.

METHODOLOGY:

The next section will have the text as in the zero draft at the start of every operational paragraph (*italicized*) of the third chapter of the Pact for the Future, titled "Science, Technology, and Innovation, and Digital Cooperation". Following this there will be a summary of the comments, feedback and observations provided by member states during the first and second reading of the zero draft, which occurred at the United Nations Headquarters in New York from February to the first week of April 2024. Present summary is based on a thematic analysis, where similar points raised by member states were grouped into key themes by each operational paragraph (non-italicized).

RESOURCES:

1. [Zero draft of the Pact for the Future](#)
2. [Compilation text \(as of 3 April 2024\)](#)
3. [Letter from the co-facilitators – 26 January](#)

KEY ELEMENTS:

Operational Paragraph 91

We acknowledge the contribution of science, technology and innovation to sustainable development and as a critical source of economic growth and industrial development. We recognize that rapid technological change, in particular, can contribute to the faster achievement of the 2030 Agenda by improving real incomes, enabling faster and wider deployment of novel solutions, supporting more inclusive forms of participation and more sustainable modes of production, and giving policymakers powerful planning tools.

Advancing Sustainable Development

- Several Member States (MS) proposed language to leverage science, technology, innovation, and digital collaboration to protect human rights, bridge digital gaps, and achieve sustainable development goals inclusively.
- Several MS advocated for promoting research, technology transfers, and access to existing technologies in crucial areas like food, nutrition, health, water, and energy, to eradicate poverty and foster sustainable and inclusive growth and human well-being.
- Emphasizing the importance of science, technology, and innovation, MS stressed that the focus must be on accelerating economic diversification, enhancing productivity, and facilitating the full participation of developing countries in the global economy.

Ethical and Responsible Use of Technology

- MS stressed on managing the risks from emerging technology for societal and environmental benefits, upholding ethical standards, and holding businesses accountable for human rights impacts, urging systematic and responsible use to promote sustainable development.
- MS emphasized on providing policymakers with robust planning tools and advocated for an ethical, human-centric approach to technology.

The Value and Contribution of Science

- The value of science is recognized as a common good contributing significantly to sustainable development, economic growth, and peace. While rapid technological advancements offer opportunities, concerns about governance and societal adaptability were raised.
- The peaceful use of nuclear technology is acknowledged for its potential in overcoming development challenges, with an emphasis on supporting collaboration with the International Atomic Energy Agency to advance new nuclear technologies.
- It was acknowledged that the use of technology in peacekeeping is beneficial for implementing mandates, protecting civilians, and preventing conflicts.

Digital Cooperation and Human Rights

- A human-rights based approach in digital cooperation is stressed, and the potential of artificial intelligence to address global challenges in alignment with international laws is

recognized.

- A group of MS acknowledged the guiding principles for international digital cooperation as outlined in the Tunis Agenda and the Geneva Declaration of Principles and Plan of Action.
- Emphasizing that human rights hold the same value online as offline, MS proposed language to secure these rights digitally and enhance digital literacy for protection.

Global Collaboration and Partnership

- MS recognized that the impact of rapid technological change varies among states and urged international cooperation to maximize opportunities and address challenges. Concerns were also raised about potential technological disparities between developed and developing countries.
- Several MS emphasized the importance of capacity development policies and sustainable support to enhance national and local initiatives, aiming to build an inclusive, people-centered, and development-oriented information society.

Operational Paragraph 92

We undertake to increase the use of science and scientific evidence in policymaking. We recognize that solutions to complex global challenges call for cross- and trans-disciplinary collaboration and a strong science-policy-society interface in order to build trust in science. We encourage the United Nations system to take an active role in forging closer links with national and multilateral science advisory bodies to optimally leverage science, technology and innovation for the Sustainable Development Goals. We welcome the establishment of the Secretary-General's Scientific Advisory Board.

Enhancing the Role of Science in Policy Formation

- Emphasis was given to enhance the use of science and scientific evidence in policymaking at all levels, based on statistics and high-quality, timely, and reliable disaggregated data, including futures thinking and foresight.
- Few MS emphasized on responsible research that respects human rights and ethical principles, highlighting the importance of the autonomy, freedom, and safety of scientific researchers for accuracy and objectivity in scientific results.

Support for Sustainable Development Goals

- Many Member States support the significance of the independent, quadrennial Global Sustainable Development Report (GSDR) with its focus on transformative policies and supported expanding the Global Pilot Program on science, technology, and innovation to accelerate the achievement of the SDGs.
- MS reaffirmed the mandate of the Technology Facilitation Mechanism to utilize science, technology, and innovation to achieve the SDGs. It pledges to enhance all aspects of the mechanism to expedite progress towards the SDGs.

UN's Role in International Cooperation

- MS urges the UN system to improve international cooperation by strengthening ties with science advisory bodies, aiming to maximize the use of science, technology, and innovation for the SDGs and translating scientific insights into policy-relevant information.

- MS welcomed the establishment of the Secretary-General’s Scientific Advisory Board and the Office of the Secretary-General’s Envoy on Technology. Some MS emphasized on the importance of its independent advice, while few urged for balanced representation across geography and gender, particularly from developing countries.
- **Inclusive Norm-Setting for Emerging Technologies** Several MS insisted on promoting transparency, openness, and inclusivity in norm-setting processes for new and emerging technologies, emphasizing a human rights-based perspective.

Digital Connectivity and Inclusion

- MS emphasized the transformative potential of improved connectivity and digital inclusion, highlighting the Internet’s role in promoting learning, social participation, cooperation, and innovation.
- Acknowledges the need to develop human resources and social protection mechanisms to mitigate the negative effects of digital transformation.

Operational Paragraph 93

We note with deep concern the existing disparities between developed and developing countries in terms of conditions, possibilities and capacities to produce new scientific and technological knowledge and to generate innovation.

Bridging Technological Divides and Inclusive Development

- Several Member States called for revised language to address disparities within countries with some proposing to add language on gender divide.
- Emphasis was given to digital infrastructure, connectivity, and technology access. Some Member States stressed on the fair sharing of the benefits of technology and called for tailored support for digital transformation in developing nations.
- Few MS advocates for bridging divides in science, technology, and innovation to facilitate sustainable transformations.

Open Access and Digital Literacy

- Some MS recognize the significance of open access initiatives for global scientific accessibility.
- Advocating for digital technologies to accelerate the SDGs, MS emphasized on universal digital access and combating misinformation through enhanced digital literacy.

Technological Advancements for Equity and Inclusion

- Some MS highlight the importance of technological advancements to reduce income inequality.
- The importance of digital public infrastructure in strengthening democratic values and ensuring equitable access, particularly for vulnerable communities, was emphasized.

Integrating Local Knowledge and Modern Technology

- MS stress the need to adapt technology to local needs and incorporate traditional and indigenous knowledge, while also addressing associated risks.
- Several MS pledge to promote STEM education, with a particular focus on women and girls.

International Cooperation and Support for Technological Integration

- MS emphasized the need for cooperation, foreign investment, trade, and international assistance to help developing countries in utilizing technological advancements.
- MS calls for promoting North-South cooperation to enhance resources for technical and scientific initiatives, highlighting the supportive role of South-South and triangular cooperation.
- Concern over the technology gap in least developed countries was expressed, with MS pledging assistance in integrating emerging technologies to meet the SDGs.

Operational Paragraph 94

We reaffirm that the creation, development and diffusion of innovations and new technologies and associated know-how, including the transfer of technology on mutually agreed terms, are powerful drivers of economic growth and sustainable development. We reiterate the need to accelerate the transfer of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed, and we note the importance of facilitating access to and sharing accessible and assistive technologies.

Human Rights and Digital Inclusion

- Many member states emphasize a human rights-based approach to science, technology, and digitalization, with some members highlighting the importance of promoting digital inclusion for persons with disabilities.

International Cooperation and Equity

- Many MS stressed on promoting international cooperation, opposing technological monopolies, ensuring a secure global supply chain, and making scientific and technological development equitable and beneficial for all.
- MS highlight persistent global asymmetries in access to science and emphasized the need for a reciprocal and non-discriminatory business environment.

Open and Fair Access in Scientific and Technological Development

- An open, fair, and inclusive global environment is essential for scientific and technological cooperation. Some Member States advocate for fair business practices, the free exchange of ideas, and collaborative development and ownership of technologies to advance knowledge and promote an inclusive digital economy.
- Research data should be accessible and usable, emphasizing that protecting intellectual property rights encourages the voluntary transfer and dissemination of technological innovation globally.

Promotion of Technological Innovation

- Intellectual property rights should foster technological innovation while considering social and economic welfare and national laws. Member States urged for flexibility in applying international legal obligations concerning intellectual property rights when appropriate.

Operational Paragraph 95

We reaffirm the Beijing Declaration and Platform for Action, in which it is recognized that it is essential that all women not only benefit from technology, but also participate in the process from the design to the application, monitoring and evaluation stages. We pledge to harness the potential of technology and innovation to improve women's and girls' lives and to close the development divide and the digital divide, including the gender digital divide, as well as address the risks and challenges emerging from the use of technologies. We commit to addressing persistent barriers to equal access for women and girls to science, technology and innovation.

Digital Inclusivity and Protection

- Improving digital inclusivity, particularly for vulnerable groups such as women, youth, the elderly, people with disabilities, and rural communities.
- Many MS stressed the need for legislation to prevent technology-amplified violence against women and girls, urging both public and private sectors to prioritize its prevention and elimination.
- Addressing inequalities, especially those experienced by marginalized groups, by closing the digital divide through access and technology transfer. It is crucial to ensure inclusivity in designing and testing new technologies, including artificial intelligence, with regard to gender, ethnicity, and class.

Gender Equality and Social Protection

- Several Member States emphasized the issue of gender-based violence, harassment, and abuse, including those exacerbated by technology and perpetuated gender stereotypes. They underscore the importance of leveraging technological capabilities to address these challenges.
- The importance of investing in robust, inclusive, and gender-transformative laws and policies was highlighted.

Education, Research, and Inclusiveness

- Several Member States proposed to add Program of Action of the International Conference on Population and Development (ICPD) and their outcomes along with Beijing Declaration in operational paragraph. Additionally, some Member States proposed the inclusion of language advocating for women to hold meaningful leadership roles in policy, regulatory, and governance processes. Many Member States urged enhancing access to global tertiary education, particularly in STEM fields for women and girls, and emphasized the sharing of knowledge to improve education and skills for marginalized groups in Low- and Middle-Income Countries.
- Several MS emphasized on fostering research ethics, youth empowerment, and inclusiveness in research.

Operational Paragraph 96

We recognize the need to mobilize and scale up the means of implementation, including financing, for science, technology and innovation, especially in developing countries, in support of the Sustainable Development Goals.

Capacity Building and International Cooperation

- Many MS emphasized on capacity building and technical assistance and focused on international cooperation.
- Few MS reaffirmed their support of the UN Technology Bank for the Least Developed Countries in enhancing their science, technology, and innovation capacities for structural transformation and productive development, while also supporting the integration of emerging technologies into agriculture, manufacturing, and services sectors to achieve the SDGs. Some MS suggest closing the science, technology, and innovation gap by offering financial and technical support, technology transfer, and cooperation to least developed countries, ensuring their effective engagement in sustainable and resilient development that protects vulnerable populations.

Technological and Digital Cooperation

- Several Member States stressed the importance of incorporating language on technological cooperation, knowledge transfer, and digital cooperation for science, technology, and innovation, particularly in developing countries.

Gender Considerations and Policy Focus

- Some MS stressed on taking into account gender-specific considerations, especially in the context of policymaking process.

Operational Paragraph 97

We resolve to take action to enhance the ability of developing countries to benefit from science, technology and innovation. We commit to addressing the major structural impediments to accessing new and emerging technologies, including by scaling up the use of open science, affordable and open-source technology, research and development.

Capacity Building and Support for Developing Countries

- Supporting developing countries in enhancing their capabilities, developing and producing their own science, technology, and innovation, and aiding these nations in developing and retaining talent for inclusive global innovation.
- Many Member States stressed on scaling up open science, data, and affordable technology to foster innovation, while emphasizing protection against monopolies and unfair practices. They advocate for fair and inclusive data governance through strengthened partnerships between developed and developing countries.
- Member States proposed to consider and evaluate the need for an international technology framework in line with the SDGs, this could include providing preferential access for developing countries to advanced technologies and directing global research and development efforts towards scientific breakthroughs.

Technological Cooperation and Development

- Member States emphasize digital cooperation for structural transformation and the fourth industrial revolution. Many MS highlight the importance of international talent mobility to strengthen the global innovation ecosystem.
- MS invite countries to promote synergies between modern science and technology and local and indigenous knowledge and innovation.

Digital Inclusion, Literacy, and Human Rights

- Several MS called for promoting technologies that uphold fundamental freedoms, democratic values, and human rights, ensuring accessibility and inclusivity for persons with disabilities, older persons, and other vulnerable groups, especially during shocks and disasters.
- Several MS acknowledged the challenges from technology use, including digital divides, cyber threats, and human rights abuses. They affirmed the protection of human rights online equivalent to offline.
- Emphasizing ethical development and governance of artificial intelligence, prioritizing human rights, and aiming to achieve the Sustainable Development Goals, while ensuring digital opportunities are accessible to all.

Open Science, Data Governance, and Innovation

- It is essential to scale up open science, open data, and affordable technology to nurture innovation.

Protection of Vulnerable Populations and Children's Rights

- Many MS expressed deep concern over the increased risks and harm to children, particularly girls, from digital technologies, including psychological harm, violence, discrimination, and unlawful surveillance. They advocated for implementing comprehensive, coordinated, and gender-responsive measures to prevent abuses of children's rights and provide affected children with appropriate support through strengthened protection systems.

Operational Paragraph 98

We aim to increase funding for research and innovation related to the Sustainable Development Goals and build capacity in all regions to contribute to and benefit from this research.

Capacity Building, Data Quality, and Inclusive Science

- Some MS emphasized the importance of sharing lessons and best practices, particularly in developing countries, and providing foresight on evolving trends and needs within communities.
- Many MS proposed to increase capacity-building support for developing countries to produce quality disaggregated data and encourage international cooperation to strengthen national statistical systems with technical and financial support.
- Several Member States emphasized the importance of open science, highlighting its accessibility, inclusivity, and transparency. They stressed the right of all individuals to participate in scientific progress and reap its benefits.

Promotion of STEM Education, Access, and Workforce Development

- A MS proposed to speed up investment in promoting understanding of accessibility and universal design across governance, academia, private sector, urban planners, designers, technology providers, and innovators.
- Many MS urged the international community to back developing countries in offering STEM education and research opportunities for all, especially youth and women. They emphasize the need for suitable working conditions to prevent brain drain and adapt to technological advancements through workforce upskilling and reskilling programs.

Operational Paragraph 99

We support calls for sharing technologies and skills to solve the basic health issues of water, sanitation and food security.

Technology Sharing and Capacity Building for Health and Basic Needs

- Member States suggest leveraging technology and innovation and enhancing global skills to address basic health, water, and sanitation issues, as well as food security in developing countries. The focus lies in establishing mechanisms for developing, innovating, and transferring sustainable water-use.
- Several Member States pledge to share innovations in climate adaptation and highlight the importance of quality data for enhancing monitoring, policymaking, and closing gaps in SDG implementation and data.
- Supporting developing countries in vaccine and health technology production for equitable access. Member States urged to promote fair distribution and increased availability of essential medicines, vaccines, and diagnostics to ensure affordable and timely healthcare services.
- Acknowledging the importance of sustainable and affordable agricultural technology to achieve the 2030 Agenda goals, Member States pledged to enhance infrastructure and innovation to support food cultivation, storage, and distribution, with the aim to improve food security, nutrition, and sustainable agri-food systems.

International Collaboration and Research in Science and Technology

- Several MS emphasize the importance of boosting South-South and triangular cooperation in science, technology, and innovation, focusing on areas like food security, pandemic prevention, vaccines, and open-source AI. They also aim to increase support for research institutions in developing countries.

Operational Paragraph 100

We recognize the importance of the creation of a conducive environment that attracts and supports private investment, entrepreneurship and corporate social responsibility, including an efficient, adequate, balanced and effective intellectual property framework, while encouraging access to science, technology and innovation by developing countries.

Partnerships for Sustainable Development:

- Several MS stress the importance of public-private partnerships to utilize science and technology for societal benefits and environmental conservation.
- MS advocated for responsible business practices aligned with international standards, promoting entrepreneurship, innovation, and sustainable supply chains.
- Several MS highlight the necessity of sustainable solutions and access to eco-friendly technology to address future environmental challenges.

Addressing Global Challenges through Innovation and Collaboration:

- Highlights the crucial role of flexible intellectual property rights in addressing global crises like climate change and supporting sustainable development efforts.
- Several Member States acknowledge the role of social innovation and research in the social sciences for understanding cultural and social influences on technology adoption.
- Several MS endorse the UN Guiding Principles on Business and Human Rights, emphasizing the private sector's responsibility in shaping a responsible digital future and promoting human rights.
- Emphasizing support for individuals affected by digital transformations and transitions to green growth through a human-centered approach to future work, aligning with the ILO's vision for the Future of Work.

Operational Paragraph 101

We call upon the United Nations system to support the efforts of developing countries to develop and strengthen their national science, technology and innovation ecosystems. To facilitate these efforts, we welcome the Secretary-General's vision to work towards a UN 2.0 to increase the effectiveness of the Organization through enhancing capabilities in data analytics, digital transformation, strategic foresight, and results orientation.

Enhancing Access to Technology and Digital Inclusion

- Called for improved access to technology for developing countries aligned to their specific plans, needs and priorities Emphasizing the significance of digital inclusion and skills enhancement to propel digital transformation and foster economic growth.
- Emphasis on leveraging digital transformation across economic sectors, promoting innovation, engaging youth, and addressing various challenges such as poverty, job creation, gender inequality, and cybersecurity.

Collaboration and Governance in the Digital Era

- Many MS highlighted the importance of expanding research and education networks, sharing knowledge, and collaborating across the United Nations System.
- A small set of MS emphasize universal connectivity, the free flow of trusted data, and promoting inclusive and interoperable AI governance.
- MS underscored the importance of regional synergy and resource development, acknowledging recent initiatives like the G-77 Summit on Science, Technology, and Innovation

in Havana.

The Global Digital Compact, which is being negotiated separately will be annexed to the Pact for the Future.