SUMMIT OF THE FUTURE
INFORMATION CLEARINGHOUSE

BULLETIN NO. 35:

Pact for the Future

Chapter 3 Science, Technology and Innovation and Digital Cooperation

Comparison between Zero draft and Rev-1

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Information Clearinghouse for the UN Summit of the Future

Pact for the Future: Chapter 3 on Science, Technology and Innovation and Digital Cooperation

Comparison between Zero draft and Rev-1

ABOUT: The Zero Draft of the Pact for the Future was released on January 26th, 2024. This 5-chapter draft aimed to initiate formal intergovernmental negotiations in preparation for the SOTF scheduled for September 2024. Following this, a chapter-by-chapter first reading was organized in early February, resulting in a compilation text (242 pages) of the zero draft being circulated. A paragraph-by-paragraph second reading was conducted from late February until April, after which a revised compilation text (224 pages) was circulated on April 3rd, 2024 (refer here for the ICH bulletin on the first and second readings). In response to the Membership's mandate to streamline the Pact into a more concise and action-oriented document, Rev-1 of the Pact for the Future was released on May 14th, 2024. This bulletin will focus on Chapter 3: Science, Technology, and Innovation and Digital Cooperation, comparing the Zero Draft and Rev-1 in light of the compilation text to provide detailed insight.

EXECUTIVE SUMMARY:

This bulletin compares the Zero Draft, and Rev-1 in the light of compilation text of the Pact for the Future, focusing on Chapter 3: Science, Technology, and Innovation (STI) and Digital Cooperation. Rev-1 marks a significant departure from the initial zero draft in its approach to harnessing STI for sustainable development under the 2030 Agenda. While broadly covering STI's role across diverse sectors, Rev-1 diverges from the zero draft in several key aspects. It introduces novel elements such as integrating **social sciences, arts, and humanities** into policymaking, **Independent scientific advice** in scientific advisory board and promoting **responsible research that upholds human rights.** However, certain specific benefits and provisions outlined in the zero draft, such as word like **disparities** and citing international declarations like the **Beijing Declaration and Platform for Action** are absent in Rev-1. Despite these omissions, Rev-1 reflects emerging priorities voiced by Member States as per compilation text document. It prioritizes issues such as **fostering North-South cooperation,** integrating human rights perspectives into technology **norm-setting,** and adopting **flexible intellectual property rights** for technological innovation. These additions underscore a commitment to equitable access and inclusive development in the realm of technology. Moreover, Rev-1 addresses current challenges posed by digital technologies, especially concerning gender-related risks and the need for conducive working conditions to **prevent brain drain.** It acknowledges heightened risks to children, especially girls, from digital technologies and proposes effective measures to mitigate these risks. Overall, Rev-1 integrates the essence of the Zero Draft and spirit of compilation text while aiming to create a more concise and action-oriented document.

HEADLINES:

- Rev-1 broadly covers the role of science, technology, and innovation (STI) in sustainable development and the 2030 Agenda.
- Specific contributions of rapid technological change mentioned in (OP-91) of the zero draft, such as improving real incomes and enabling faster deployment of novel solutions, are not explicitly included in Rev-1.
- New elements, including integrating social sciences, arts, and humanities into policymaking (Action 25) and promoting responsible research that upholds human rights (Action 28), have been added to Rev-1.
- The references to disparities (OP 93) and international declarations like the Beijing Declaration and Platform for Action (OP 95) from the zero draft have been removed in Rev-1.
- Rev-1 reflects emerging priorities voiced by Member States from the compilation text, such as fostering North-South cooperation (Action 26(e)), integrating human rights perspectives into technology norm-setting (Action 28(b)), and adopting flexible intellectual property rights for technological innovation (Action 27(b)), which were not part of the zero draft.
- Rev-1 addresses contemporary challenges posed by digital technologies, particularly concerning gender-related risks and the need for conducive working conditions to prevent brain drain (Action 29 and Action 25(e)), as significantly negotiated and highlighted in the compilation text. These were not part of the zero draft.
- Rev-1 acknowledges heightened risks to children, especially girls, from digital technologies and proposes effective measures to mitigate these risks (Action 29).
- The term “independent scientific advice” has been added to the scientific advisory board in Action 31 (39), based on suggestions from some member states in the compilation text.
- Rev-1 gives significant place to adapting technology to local needs and incorporating traditional and indigenous knowledge (Action 30) to integrate local knowledge and modern technology, as suggested by member states in the compilation text. This was not present in the zero draft.
- Rev-1 promotes transparency, openness, and inclusivity in norm-setting processes for new and emerging technologies (Action 28(b)), an addition based on the compilation text that was not found in the zero draft.
- The Program of Action of the International Conference on Population and Development (ICPD), along with the Beijing Declaration mentioned in OP-95 of the zero draft, was suggested by some Member States in the compilation text but is not explicitly mentioned in Rev-1.
- Rev-1 emphasizes promoting STEM education, particularly for women and girls (Action 29 37(a)), based on suggestions from Member States in the compilation text, and has been added in Rev-1.
- Corporate social responsibility, which was present in OP-100 of the zero draft, is not specifically highlighted in the context of STI efforts in Rev-1.
- Emphasis on universal connectivity, the free flow of trusted data, and promoting inclusive and interoperable AI governance is not explicitly mentioned in Rev-1. However, these aspects were also not present in the zero draft but were significantly negotiated according to the compilation text.

METHODOLOGY:

This bulletin will focus on Chapter 3, comparing the Zero Draft and Rev-1 in light of the compilation text. It will identify key terminology, language, and paragraphs that were removed, modified, maintained, or added in Rev-1. The table will have three columns: the first column for the original Zero Draft content, the second column for Rev-1 content, and the third column for the author's observations ***(in Italic)*** on content changes between the Zero Draft and Rev-1 in light of the compilation text. The content and language changes in Rev-1 are highlighted in colors corresponding to those used in the Zero Draft. This color coding makes it easier for readers to track content and revise language. For example, content from the Zero Draft is highlighted in yellow, and its corresponding content or revised language in Rev-1 is also highlighted in yellow. This method allows readers to easily identify where content from the Zero Draft has been placed in Rev-1. Each Operational paragraph (OP) of the Zero Draft is assigned a different color for reference:

OP-91 **OP-92** **OP-93** **OP-94** **OP-95** **OP-96** **OP-97** **OP-98** **OP-99** **OP-100** **OP-101**

Additionally, in the third column, 'Author's observations,' It explains the journey of the content from the Zero Draft through the compilation text to Rev-1. This column details whether content was maintained, modified, removed, or added. The content which has been taken from the compilation text is highlighted in green for reference, **Compilation text.** It appears in both Column 2 (Rev-1) and Column 3 (Author's observations).

RESOURCES:

1. Zero draft of the Pact for the Future
2. Compilation text (as of 3 April 2024)
3. Rev-1 of the Pact of the Future

Comparison:

Comparison between Zero Draft and Rev-1		
Zero Draft *(January 2024)*	**Rev-1** *(May 2024)*	**Author's observation**
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.	30. Science, technology and innovation have the potential to accelerate the realization of the United Nations' aspirations across all three pillars of its work. We will only realize this potential if we act now to harness the benefits and take bold and ambitious steps to bridge the growing divide between developed and developing countries. There are too many people in our world, especially the poorest and most vulnerable in developing countries, that do not have access to critical life-changing technologies. If we are to make good on our promise to leave no one behind, science and technology cannot be the preserve of the few. Innovations that can make our planet more sustainable and our countries more prosperous should be shared by all of humanity.	*Rev-1 broadly covers the role and potential of science, technology, and innovation in sustainable development and the 2030 Agenda. However, it does not explicitly include certain specific benefits of rapid technological change mentioned in OP 91 of zero draft, such as improving real incomes, enabling faster and wider deployment of novel solutions, These specific contributions of rapid technological change are points from OP 91 that have not been explicitly included in Rev-1.* *In introductory point no. 30 of Rev-1, there is an emphasis on science, technology, and innovation (STI) and their potential to advance the United Nations' goals across all three pillars of its work. This language has been added in Rev-1.*
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	31. At the same time, we must responsibly manage the risks of science and technology, in particular the ways in which science, technology and innovation can perpetuate and deepen divides and patterns of discrimination and inequality within and between countries and threaten human rights. We will deepen our partnerships with relevant stakeholders, especially the international financial institutions, the private sector and academia, and we will	*The term "social sciences, arts, and humanities" has been added to Action 25 to emphasize the increasing use of science and scientific evidence in policy-making, which was not present in the Zero Draft of OP-92.* *The term "independent scientific advice," based on some member states' suggestions in the compilation text regarding the Secretary-General's Scientific*

Colour coding for each operational paragraph of zero draft for reference.
OP-91 **OP-92** **OP-93** **OP-94** **OP-95** **OP-96** **OP-97** **OP-98** **OP-99** **OP-100** **OP-101**
Compilation text content highlighted in green refers to compilation text.

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.	ensure science, technology and innovation is a catalyst for a more sustainable, secure and prosperous world.	*Advisory Board, has been added to Action 31 (39) of Rev-1. However, a few member states also urged for balanced representation across geography and gender, particularly from developing countries in scientific advisory board, which is not explicitly mentioned in Rev-1.* *Based on the compilation text, a few Member States emphasized responsible research that respects human rights and ethical principles, ensuring the autonomy, freedom, and safety of scientific researchers. This is prominently included in Action 28 of Rev-1, which was not present in the zero draft.* *Several member states insisted on promoting transparency, openness, and inclusivity in norm-setting processes for new and emerging technologies, emphasizing a human rights-based perspective in the compilation text. This emphasis is given a prominent place in Action 28(b) of Rev-1 by adding: "Integrate a human rights-based perspective to norm-setting processes for new and emerging technologies."*
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.	32. Digital and emerging technologies, including artificial intelligence, are dramatically changing our world and offer huge potential for progress for people and planet in the future. We are determined to realize this potential and manage the risks through enhanced international cooperation. We have annexed a Global Digital Compact to this Pact in this regard	*The specific term "disparities" mentioned in OP 93 of the zero draft has been removed in the Rev-1 document.* *In the compilation text, several member states stressed the need to adapt technology to local needs and incorporate traditional and indigenous knowledge to*

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		integrate local knowledge and modern technology, while also addressing associated risks. This has been prominently detailed in Action 30 of Rev-1, which was not in the Zero Draft. *In the compilation text, member states called for promoting North-South cooperation to enhance resources for technical and scientific initiatives, highlighting the supportive role of South-South and triangular cooperation. This has been prominently included in Action 26(e) of Rev-1, which was not specifically mentioned in the zero draft.*
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.	**Action 25. We will seize the opportunities presented by science, technology and innovation for the benefit of people and planet.** 33. We will be guided by the principles of equity and solidarity, and promote the responsible and ethical use of science, technology and innovation. We agree to: (a) Foster an open, fair, inclusive and non-discriminatory environment for scientific and technological development and cooperation worldwide, including through actively building trust in science. (b) Increase the use of science and scientific evidence in policy-making and ensure that complex global challenges are addressed through multidisciplinary collaboration, including the social sciences, arts and humanities. (c) Encourage talent mobility and circulation, and support developing countries to provide suitable working conditions and opportunities for their	*Rev-1 does not explicitly mention the transfer of "associated know-how." While it focuses on the transfer of technologies, the detailed transfer of the accompanying knowledge and expertise is not specifically mentioned.* *Rev-1 does not specifically mention "accessible and assistive technologies." Although it addresses the transfer of technologies and capacity building broadly, it does not explicitly include provisions for technologies designed to aid individuals with disabilities or those requiring special assistance.* *As per the compilation text, Member States urged for flexibility in applying international legal obligations concerning intellectual property rights when appropriate for the promotion of technological*

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	skilled workforce to retain talent and prevent a brain drain.	*innovation. This emphasis is prominently added in Action 27(b) of Rev-1 by including: "Apply the flexibilities enshrined in relevant international legal obligations in the field of intellectual property rights, where applicable, to enable developing countries to deploy technological innovations."*
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.	**Action 26. We will scale-up the means of implementation to developing countries to strengthen their science, technology and innovation capacities.** 34. Science, technology and innovation are critical to support sustainable growth and accelerate the implementation of the 2030 Agenda. It is imperative that we bridge the science, technology and innovation gap between developed and developing countries, particularly those in special situations. We agree to: (a) Ensure science, technology and innovation contributes to our efforts to eradicate poverty in all its forms and dimensions, including in the areas of food and nutrition, health, water and sanitation, energy, climate and environment. (b) Accelerate the transfer of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed. (c) Build capacity in and scale up the development, deployment and sustainable utilization of emerging technologies for the achievement of the Sustainable Development Goals, especially by developing countries.	*Rev-1 dropped the "Beijing Declaration and Platform for Action," which was prominently present in OP 95 of the zero draft. While it aligns with the goals of gender equality in technology, it does not specifically reference this declaration.* *Based on the compilation text, several Member States proposed adding the Program of Action of the International Conference on Population and Development (ICPD) and its outcomes in OP 95 of the zero draft. However, Rev-1 did not include this anywhere.* *Rev-1 does not explicitly emphasize that women should participate in the design, application, monitoring, and evaluation stages of technology. However, languages have changed. The focus is more on access and addressing barriers rather than detailed participation in all stages of technological processes.* *Several member states in the compilation text pledged to promote STEM education, with a particular focus on women and girls. This commitment is*

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	(d) Call upon developed countries to assist developing countries in capacity-building in science, technology and innovation through policy exchanges, knowledge sharing, technical assistance, financing, joint international research and personnel training tailored to specific needs, policies and priorities of developing countries. (e) Strengthen North-South, and where capacities are available, South-South and triangular cooperation to build capacity for and improve access to science, technology and innovation, and to increase resources for the implementation of technical and scientific initiatives. (f) Scale up financing of relevant scientific research that supports sustainable development and increase opportunities for research cooperation. (g) Attract and support private sector investment in science, technology and innovation, and deepen public-private partnerships by fostering a conducive environment in developing countries that encourages investment and entrepreneurship and by ensuring that innovation can reach global markets.	*reflected in Action 29 37(a) of Rev-1, which includes the phrase "through improving educational opportunities for women and girls in these fields."* *While Rev-1 addresses gender-related risks and access, it does not explicitly mention the commitment to close the development divide and the digital divide, including the gender digital divide*
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.	**Action 27. We will uphold intellectual property rights and apply flexibilities when we can to support developing countries achieve sustainable development.** 35. We recognize the importance of intellectual property rights to progress on science, technology and innovation. We agree to: (a) Protect and enforce intellectual property rights to build trust and encourage and enhance the transfer,	*While Rev-1 discusses scaling up the means of implementation and financing, the specific term "mobilize," which was in OP-96 of the Zero Draft, is not used in Rev-1. However, the concept is effectively covered by the commitments to scale up resources and support developing countries in Action 26 of Rev-1.*

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	promotion and dissemination of technological innovation, on mutually agreed terms. (b) Apply the flexibilities enshrined in relevant international legal obligations in the field of intellectual property rights, where applicable, to enable developing countries to deploy technological innovations.	
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.	**Action 28. We will ensure that science, technology and innovation contribute to the full enjoyment of human rights by all.** 36. We recognize the opportunities and risks presented by science, technology and innovation to upholding human rights. We agree to: (a) Ensure that all scientific and technological research is conducted in a responsible manner that respects human rights, and protects the autonomy, freedom and safety of scientific researchers. (b) Integrate a human rights-based perspective to norm-setting processes for new and emerging technologies. (c) Ensure that all marginalized groups benefit from and can participate in the development and application of science, technology and innovation.	*In the compilation text, many Member States expressed deep concern over the increased risks and harm to children, particularly girls, from digital technologies, including psychological harm, violence, discrimination, and unlawful surveillance. This is significantly addressed in Action 29 of Rev-1 by adding: "Address gender-related risks and challenges emerging from the use of technologies, including violence, harassment, bias, and discrimination against all women and girls that occurs through, or is amplified by, the use of technology."*
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.	**Action 29. We will ensure that science, technology and innovation improve gender equality and the lives of all women and girls.** 37. We are gravely concerned that rapid technological change can exacerbate existing gender inequalities and present serious risks to all women and girls. We agree to:	*In the compilation text, many member states emphasized the need for suitable working conditions to prevent brain drain and adapt to technological advancements through workforce upskilling and reskilling programs. This is significantly addressed in Action 25(e) of Rev-1 by adding: "Encourage talent*

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	(a) Address persistent barriers to equal and meaningful access to and participation and leadership in science, technology and innovation for all women and girls, including through improving educational opportunities for women and girls in these fields. (b) Address gender-related risks and challenges emerging from the use of technologies, including violence, harassment, bias and discrimination against all women and girls that occurs through, or is amplified by, the use of technology.	*mobility and circulation, and support developing countries to provide suitable working conditions and opportunities for their skilled workforce to retain talent and prevent a brain drain."*
99.We support calls for sharing technologies and skills to solve the basic health issues of water, sanitation and food security.	**Action 30. We will build on and complement traditional and local knowledge.** 38. We recognize the need for science, technology and innovation to be adapted and made relevant to local needs and circumstances, including the knowledge of Indigenous Peoples. We agree to: (a) Foster synergies between science and technology and traditional, local, afro-descendant and indigenous knowledge and capacities, while putting in place measures to identify and mitigate potential associated risks.	*Action 26(a) integrates the spirit of OP 99 from the zero draft. However, it adds 'eradicate poverty in all its forms and dimensions', as well as nutrition, energy, climate, and environment, which were not in the zero draft.* *In the compilation text, Member States urged the promotion of fair distribution and increased availability of essential medicines, vaccines, and diagnostics to ensure affordable and timely healthcare services. They also emphasized support for developing countries in vaccine and health technology production to ensure equitable access. However, this major point has been given less importance and is not explicitly mentioned in Rev-1.*
100. We recognize the importance of the creation of a conducive environment that attracts and supports private investment, entrepreneurship	**Action 31. We will support the Secretary-General to strengthen the United Nations' role in science, technology and innovation.**	*OP 100 from zero draft mentions corporate social responsibility explicitly, which involves businesses operating in a socially*

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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.	39. We recognize the critical role of the United Nations in science, technology and innovation. We welcome the establishment of the Secretary-General's Scientific Advisory Board to provide independent scientific advice. We request the Secretary-General to: (a) Strengthen the United Nations' capacities to leverage science, technology and innovation in the work of the Organization, including futures thinking and foresight, and to monitor and measure ongoing global progress to bridge the science and technology gap between developed and developing countries. (b) Explore ways to strengthen the capacity of United Nations Country Teams to support national governments in leveraging science and technology for sustainable development.	*responsible way that contributes positively to society beyond maximizing profits. Rev-1 does not specifically highlight corporate social responsibility in the context of science, technology, and innovation efforts.*
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.		*As per the compilation text, a small set of Member States emphasize universal connectivity, the free flow of trusted data, and promoting inclusive and interoperable AI governance, which are not explicitly mentioned in Rev-1. However, these were also not present in OP 101 of the Zero draft.*

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