



International Science Council

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The International Science Council is a non-governmental organization with a unique global membership that brings together 250 organizations including international scientific Associations and Societies, national and regional scientific Academies and Research Councils, and Young Academies and Associations.

Chapeau

Science is a critical, cross-cutting tool to support multilevel, multisectoral action across the entire multilateral agenda.¹ It is a valuable tool for enhancing evidence-informed decision-making, international relations, and collective action, and is essential to accelerating progress on shared global challenges. Because science has been historically underutilized and siloed in global decision-making, Member States, the UN and other actors are increasingly acknowledging the need to strengthen the interface between global science and the multilateral system. This is all the more urgent in order to catalyze effective multilateral action on major global issues during this time of rapid change and polycrises.

Therefore, the Chapeau should:

- ⇒ **Reaffirm Member States' commitment to meaningful engagement of science in multilateral processes, noting the importance of science for evidence-informed decision-making and action across all chapters of the Pact for the Future.**

¹ Throughout this submission, “**science**” refers to the systematic organization of knowledge that can be rationally explained and reliably applied, tested against reality and the scrutiny of peers, referring to a knowledge community inclusive of natural sciences and social sciences as well as humanities, medical, health, computer, and engineering sciences. This submission also refers to “**interdisciplinary science**,” which indicates scientific practice involving multiple disciplinary approaches, as well as “**transdisciplinary science**,” which indicates the co-design of research and co-production of knowledge by scientific and societal actors.

Chapter I. Sustainable development and financing for development

1. Science is an essential tool for sustainable development.

Science is essential to accelerating the implementation of the SDGs.ⁱ It plays a key role in breaking deep-seated siloes in understanding and action, enabling decision-makers to address the root causes of challenges and identify synergies and trade-offs among solutions. Science also can help decision-makers assess vital transformation pathways and roadmaps, while identifying key areas for sustainable investments that maximize development and sustainability co-benefits.

Therefore, Chapter I should:

- ⇒ **Affirm the crucial importance of interdisciplinary and transdisciplinary science to understanding and addressing interconnected obstacles to achieving the SDGs and related intergovernmental commitments.**

2. Evidence-informed sustainable development requires multilateral support.

Among the most urgent challenges for the global scientific community is to support accelerated progress toward the transformative vision of the SDGs. Both natural and social sciences have made significant contributions in this regard; however, to effectively support the rapid progress required to achieve the SDGs, new approaches to conducting, harnessing, assessing, and funding science are urgently needed.

To unlock the full potential of science for sustainable development requires a transformative approach by Member States. This includes a well-funded, globally-supported, “big science” approach to complex sustainability challenges (especially in regions where SDG progress is most lagging); implementation of “science missions for sustainability,” which mobilize and implement knowledge across disciplines and sectors for societal transformations towards sustainability; and a shift in funding and institutional arrangements away from intense competition and fragmentation, and toward transdisciplinary integration, collaboration, and societally-relevant outcomes.ⁱⁱ

Therefore, Chapter I should:

- ⇒ **Express Member State support for transformative approaches to sustainable development via mission-oriented science as a key priority in pursuing the SDGs.**

Chapter II. International peace and security

1. Science is vital to advancing international peace and security.

Scientific inputs are vital to understanding the root causes of conflict and advancing conditions that enable social stability and sustainable development in diverse contexts. Science also is crucial to mitigating and managing the impacts of complex environmental, social, and

economic challenges that exacerbate risk and instability,ⁱⁱⁱ and for facilitating anticipatory action to meet emerging security challenges related to energy, climate, environment, health, technology, nuclear weapons, inequality, and more.

Therefore, Chapter II should:

⇒ **Highlight the value of open and responsible science to advance conditions that support peace and security and mitigate the impacts of conflict.**

2. Science-policy dialogue is needed to address STI-related risks to peace and security.

It is critical to engage the scientific community in multilateral discussion to understand both the risks to peace and security associated with emerging scientific and technological developments, and the benefits of these developments that can be harnessed toward advancing development, peace and security. For example, artificial intelligence and synthetic biology are fast-developing science-based technologies with limited oversight, large implications in terms of misuse, and large potential benefits, which must be considered through active dialogue between global scientific and policymaking communities.^{iv}

Therefore, Chapter II should:

⇒ **Emphasize the importance of engaging the scientific community to identify and assess risks and benefits to peace and security associated with emerging scientific and technological developments.**

3. Scientific collaboration can support peaceful international relations.

Science has long been a global enterprise underpinned by universal principles and plays a valuable role in strengthening international relations in support of international peace and security. Cross-national scientific collaborations support track two diplomacy to help build relationships across borders, achieve common understanding around shared questions, and identify cooperative approaches to global challenges.

Therefore, Chapter II should:

⇒ **Affirm the importance of enhancing and expanding international scientific collaborations to advance peaceful international relations.**

Chapter III. Science, technology and innovation and digital cooperation

1. Science is critical to evidence-informed decision-making and action.

The multi-scale and multi-faceted natures of issues on the multilateral agenda require inputs from across the natural and social sciences, as well as practitioner and other forms of knowledge. Such transdisciplinary scientific inputs are critical to breaking deep-seated siloes in how global issues are framed, understood, and acted upon, thereby enabling more effective responses. This is vital to addressing the root causes of global issues, identifying synergies and

trade-offs in solutions, and enabling effective anticipatory action to enhance prevention, preparedness, resilience and transformation.

Therefore, Chapter III should:

- ⇒ Explicitly refer to the importance of science as a critical, cross-cutting tool to advance evidence-informed decision-making across the multilateral agenda.
- ⇒ Reflect increased commitment among Member States to enhancing the science-policy interface in the UN General Assembly, with links to system-wide science-policy processes.
- ⇒ Affirm Member States' support for enhancing trust in science across the UN system, including among and within Member States.^v

2. Science is a global public good requiring multilateral support.^{vi}

Science has the potential to be among the most powerful of public goods, serving as a vital tool to build capacity, enhance human well-being, and tackle complex issues across demographics, geographies, and scales.

To realize the full potential of science as a global public good requires multilateral support for open science policies and practices, including through equitable inclusion of historically underrepresented groups such as women and researchers from low-income countries; as well as for increasing international scientific collaboration to address urgent, emerging, and future global challenges.^{vii}

Furthermore, as the COVID-19 pandemic illustrated, addressing global challenges depends on the ability of global, national, and local decision-makers and communities to take up scientific evidence to inform action. As such, science as a global public good requires multilateral support for national science systems worldwide, including through multilateral finance, knowledge sharing, capacity building, and technology transfer; as well as country-level commitments to enhancing country-specific scientific advisory systems.

Therefore, Chapter III should:

- ⇒ Highlight the value of science as a global public good.
- ⇒ Reaffirm Member State commitment to full implementation of the UNESCO Recommendation on Open Science as well as support for mission-oriented science.^{viii}
- ⇒ Affirm Member States' commitment to capacitating and/or strengthening national science systems worldwide to advance evidence-informed decision-making across scales.

Chapter IV. Youth and future generations

The following input has been coordinated with the Global Young Academy.²

Chapter IV represents a critical opportunity for Member States to acknowledge and leverage science as an essential tool to support youth and future generations, and to facilitate the engagement of youth and early career scientists in advancing evidence-informed policymaking for the benefit of all.

To successfully promote thinking and acting in the interests of youth and future generations, the Pact must acknowledge that science is essential to:

- Creating an enabling environment that empowers young people to reach their development potential through a comprehensive and holistic approach to growth;^{ix}
- Building capacity among youth and future generations, including women and other underrepresented groups, by creating economic opportunities and helping to solve future social, environmental, and economic challenges and improve well-being, including through intergenerational conversations incorporating young scientists;
- Foresight analysis and anticipatory action to mitigate future consequences of today's actions, enhance long-term resilience and transformation, and safeguard the rights and interests of youth and future generations;
- Facilitating systems leadership among young and future leaders by fostering diversity, inclusivity and equity in bringing about systems-level change towards an equitable future;
- Supporting evidence-based approaches to achieving the SDGs for the benefit of present and future generations.

Furthermore, the Pact must acknowledge the importance of youth and early career scientists to science, and therefore to evidence-informed decision-making in the United Nations. Youth and young scientists must be engaged in dialogue and deliberations related to science across the UN.

Therefore, Chapter IV should:

- ⇒ **Refer to the central importance of engaging diverse scientific inputs to safeguard the rights and interests of youth and future generations.**
- ⇒ **Reflect Member States' commitment to enhancing the science-policy interface across the UN system including by engaging young scientists.**

² The Global Young Academy (GYA, <https://globalyoungacademy.net>) develops, connects and mobilizes young talent from six continents, and empowers young researchers to lead international, interdisciplinary and intergenerational dialogue. The ISC, through its network of members including the GYA and national young academies and international associations, stands ready to support the UN in its aims to include the voices of early career scientists in UN scientific mechanisms and processes, such as the newly established Group of Friends and the UNSG's Scientific Advisor Board. See <https://council.science/current/blog/isc-engagements-emcr-2023/>.

Chapter V. Transforming global governance

1. Scientific insights are key to effective transformation of global governance.

The value of science extends to questions around reforming governance and renewing multilateralism. Transdisciplinary scientific insights illuminate the root causes of governance challenges, as well as synergies and trade-offs in interventions; and they are critical to understanding key dynamics, impediments and enabling conditions to achieve meaningful transformation to global governance, including as related to global commons such as Outer Space and ocean areas beyond national jurisdiction.

Therefore, Chapter V should:

- ⇒ **Reflect the central importance of science as a critical, cross-cutting tool to support an effective and equitable transformation of global governance.**

2. Transforming global governance requires enhancing science-policy interfaces.

Challenges on the multilateral agenda are complex, urgent, and interconnected. Reversing biodiversity loss, tackling deepening inequalities, addressing the climate emergency, governing technological change for the public good, and transforming to a sustainable, equitable and resilient world all require global cooperation and robust scientific information. The challenge for multilateral governance is to mobilize authoritative and integrated knowledge taking full account of complex interactions across human and planetary systems, to inform decision-making at multiple levels and steer action towards desired outcomes.

This requires effective coordination between interface mechanisms operating within and between multilateral forums and agencies, and greater coordination between science-policy interfaces at national and international levels. In the context of the UN General Assembly, it requires an institutionalized science-policy interface through which actionable science can be integrated across all stages of decision-making and action. This will help ensure that the latest and best available science is made available on an equitable basis to all Member States; it will support consensus-building through common understanding of the nature, scope, and scale of challenges, as well as the range of possible solutions and their implications; and it will support risk-informed (anticipatory) governance arrangements with a view to building whole-of-society resilience.^x

Experts have drawn on large bodies of evidence to highlight concrete options for enhancing the multilateral science-policy interface, including but not limited to:

- Establishing a regular **UNGA platform for science-policy exchange** during the high-level segment, with parallel regional events;^{xi}
- Creating a set of **principles or suggested mechanisms for national delegations** on how to effectively consult with knowledge actors ahead of UNGA participation;^{xii}
- Further **engaging the scientific community** within UNGA and ECOSOC proceedings to provide expert inputs and briefings, thus systematizing a practice of working with scientific knowledge in multilateral deliberations;^{xiii}

- Establishing modalities for a clear set of policy priorities and challenges, with a corresponding **call for scientific inputs, to be issued ahead of each UNGA term**;^{xiv}
- Developing **science-policy-action networks** to draw from existing bodies and generate recommended actions for governments and non-state actors (e.g., around earth system risks^{xv} and/or to support the Independent Group of Scientists producing the Global Sustainable Development Report);
- Ensuring the **High-level Political Forum** is a knowledge-based, coherent, and action-oriented arena through improved evaluation and analysis of evidence-based inputs, including those stemming from the STI Forum.^{xvi}

Therefore, Chapter V should:

- ⇒ **Affirm Member States' commitment to integrating enhanced interfaces between science, policy, and society across the multilateral agenda through a UN system-wide approach.**
- ⇒ **Affirm Member States' commitment to enhancing and/or institutionalizing the science-policy interface in the UN General Assembly.**

ⁱ Stockholm Environment Institute, UNDP, International Science Council, and Sustainable Development Solutions Network. 2023. *Harnessing Scientific Evidence and Decision-making to Accelerate the SDGs*. Joint statement summarizing Science Day at the 2023 HLPF. https://council.science/wp-content/uploads/2023/09/ScienceDayReport_SDG-Summit-2023.pdf.

ⁱⁱ International Science Council. 2023. *Flipping the science model: a roadmap to science missions for sustainability*. Paris, France, International Science Council. <https://doi.org/10.24948/2023.08>.

See also: International Science Council, 2021. *Unleashing Science: Delivering Missions for Sustainability*. Paris, France, International Science Council. <https://doi.org/10.24948/2021.04>.

ⁱⁱⁱ Sillmann, J., Christensen, I., Hochrainer-Stigler, S., Huang-Lachmann, J., Juhola, S., Kornhuber, K., Mahecha, M., Mechler, R., Reichstein, M., Ruane, A.C., Schweizer, P.-J. and Williams, S. 2022. *ISC-UNDRR-RISK KAN Briefing note on systemic risk*. Paris, France, International Science Council. <https://doi.org/10.24948/2022.01>.

^{iv} Stauffer, M., Kirsch-Wood, J., Stevance, A., Mani, L., Sundaram, L., Dryhurst, S. and Seifert, K. 2023. *Hazards with Escalation Potential: Governing the Drivers of Global and Existential Catastrophes*. Geneva, Switzerland, United Nations Office for Disaster Risk Reduction. <https://council.science/wp-content/uploads/2023/09/hazards-with-escalation-potential-governing-the-drivers-of-global-and-existential-catastrophes.pdf>. See also: International Science Council. 2023. *A framework for evaluating rapidly developing digital and related technologies: AI, Large Language Models and beyond*. Paris, France, International Science Council. <https://doi.org/10.24948/2023.11>, <https://council.science/publications/framework-digital-technologies/>.

^v International Science Council. 2023. *The Contextualization Deficit: Reframing the Trust in Science for Multilateral policy*. Paris, France, International Science Council. <https://doi.org/10.24948/2023.10>.

^{vi} Boulton, G.S. 2021. *Science as a Global Public Good. International Science Council Position Paper*. <https://council.science/wp-content/uploads/2020/06/ScienceAsAPublicGood-FINAL.pdf>.

^{vii} UNESCO. 2017. *The UNESCO Recommendation on Science and Scientific Researchers*. (Doc. MOST/IGC/2019/9). See also: International Science Council. 2023. *Flipping the science model: a roadmap to science missions for sustainability*. Paris, France, International Science Council. <https://doi.org/10.24948/2023.08>.

^{viii} UNESCO. 2021. *UNESCO Recommendation on Open Science*. (Doc. SC-PCB-SPP/2021/OS/UROS. DOI: 10.54677/MNMMH8546).

^{ix} International Science Council. 2020. *Conversations on Rethinking Human Development*, International Science Council, Paris. <https://doi.org/10.24948/2020.09>.

^x Stauffer et al. 2023.

^{xi} Espey, J., and Casarin, C. 2023. *Strengthening Science Advisory Processes within the UN General Assembly*. Briefing for the Group of Friends on Science for Action. Prepared in partnership with On Think Tanks, The African Centre for Cities, the New South Institute, ACED-Benin and with inputs from the ISC and the Office of the President of the General Assembly.

^{xii} Espey and Casarin. 2023.

^{xiii} Espey and Casarin. 2023.

^{xiv} Espey and Casarin. 2023.

^{xv} Climate Governance Commission. 2023. *Governing Our Planetary Emergency*. https://ggin.stimson.org/wp-content/uploads/2023/11/Governing-Our-Planetary-Emergency-Report_WEB_11.27.23.pdf.

^{xvi} Scientific and Technological Community Major Group. 2020. *Position paper on the theme of the 2020 High-level Political Forum*. <https://council.science/wp-content/uploads/2020/06/Position-Paper-STC-29-June.pdf>.