Scientific and Technological Community Major Group co-convened by the International Science Council (ISC) and the World Federation of Engineering Organizations (WFEO)

Accelerating the recovery from the coronavirus disease (COVID-19) and the full implementation of the 2030 Agenda for Sustainable Development at all levels

Position paper for the 2023 High-level Political Forum, prepared by the ISC Fellows

Think globally and act locally

Headlines:

- *The time is now.* We **must** urgently adopt a **transformative systemic approach** to the implementation of the SDGs through the development of **coherent roadmaps** by multiple stakeholders and critically the global science community in their classification of six integrative SDG transformations and potential to develop composite and progressive targets and indicators.
- *Collaboration not fragmentation***.** These roadmaps must recognize the **interdependencies of the post-2015 agendas** - Sendai, Paris, and Agenda 2030 – with the UN and member states taking a lead in identifying and communicating synergies, trade-offs and opportunities for integration.
- *Beyond rhetoric.* We **must** move the central promise of "Leaving no-one behind" beyond rhetoric with the UN and member states placing a strong focus on **building capacities and capabilities at all levels,** as well as a **social contract** with all publics.
- *Think globally, act locally.* The world's political and scientific communities must vigorously increase their efforts to **strengthen the science-policy-society interface**, accounting for local realities and needs, and ensuring that decision-making at all levels – global, regional, national and local – is rigorously evidence-informed.

Introduction

The 2030 Agenda, with its 17 Sustainable Development Goals (SDGs), provides a vision of an aspirational, equitable and just future for all, thriving on a safe and resilient planet. Together with other key multilateral agreements, it provides a compass for reorienting development in a fundamentally new direction for the benefit of all people and the planet. The window of opportunity within the 2030 timeframe is rapidly closing and demands genuine commitment and urgent action on all fronts.

Is the 2030 Agenda on track?

While differential progress has been made across some SDGs since 2015, it is indisputable that all SDGs are lagging and recent shocks – pandemics, wars, climate change, economic crises - have thrown the world even further off course. The urgency of the 2030 Agenda risks being lost at a time of multiple crises, when international cooperation and concerted political will are paramount in tackling shared and profound challenges, and building a resilient, just and sustainable world for everyone: we must use the "power of unity and solidarity to overcome the biggest test of our times" (Guterres, 2020[1]).

Restoring human and planetary health is paramount for achieving the SDGs and building the foundations for a true transformation; one that recognizes people as part of nature and the safe and resilient functioning of the Earth system as a precondition for human well-being. Already, there is a real and present danger of irreversible natural and social tipping elements, such as the destruction of

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[1] Global wake-up call | United Nations Secretary-General

ecosystems, unabated climate change, increasing poverty, and inequalities compounded by multiple crises.

A transformative[2] systemic approach

The SDGs were conceived as an integrated and holistic agenda, but their implementation has been managed through sectoral and institutional silos, due to fragmented governance, regulation, financing and monitoring. It is vital to unite efforts at all levels and foster a genuine understanding of the multifaceted challenges we face. This will unlock multiple shared benefits, build resilience to risks and facilitate collaboration: it requires a concerted, collective effort, from rethinking funding conditions to integrated monitoring and evaluation systems.

Further, the SDGs are an integral part of other interrelated global agendas and frameworks with important synergies and multiple benefits, including the Paris Agreement on Climate Change, Post-2020 Global Biodiversity Framework, Sendai Framework for Disaster Risk Reduction, Addis Ababa Action Agenda, and New Urban Agenda. These agendas are all interconnected and interdependent: they require a joined-up, sustainable investment and coherent approach on a longer time-horizon (to 2050), to maximize synergies and minimize trade-offs: without this, they all risk failure.

There is an urgent need to develop **coherent roadmaps** for achieving the collective ambitions of these global policy frameworks for scaling up impactful interventions at all levels; and for experimenting with novel interventions related to – for example – the emergence of new technologies or the emergence of new behaviors, lifestyles, norms, and values.

The roadmaps should be framed around:

- the **six integrative SDG transformations** articulated in numerous scientific assessments e.g. The World in 2050[3] (2018, 2019, 2020) and the Global Sustainable Development Report[4] (GSDR, 2019): 1. Human capacity, well-being, and health; 2. Consumption and production toward sustainable and just economies; 3. Decarbonization and universal energy access; 4. Food and nutrition, biosphere and water; 5. Urban and peri-urban areas and mobility; 6. Global environmental and human commons including the digital revolution;
- the use of *composite* **rather than disaggregated targets and indicators** for monitoring nexus issues and identifying critical paths of interdependency up to and beyond 2030; a topic that could be the focus of the next GSDR;
- **supported and expanded pilot countries, regions, and communities** that provide a rich portfolio of diverse approaches towards a common goal and include **compelling and convincing people-oriented** success stories that align global goals with local and regional implementation, and examples of overcoming barriers to change. Such "bright spots" can inspire and motivate younger generations and accelerate change;
- a **compelling economic case** for why long-term political commitment to building resilience and a green economy now (through managing risk and uncertainty, prevention and recovery, mitigation and adaptation) is vital (e.g. ISC, 2023[5]).

Transformative and disruptive systemic change requires robust governance, scientific insight, business readiness, technological solutions and social innovation, ethical and sustainable finances,

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[2] where "transformative" means a shift or break in existing paradigms - pushing boundaries - to bring about significant advancements and positive change

[3] The World in 2050 | IIASA

[4] Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development, (United Nations, New York, 2019)

[5] International Science Council. 2023. Report for the Mid-term Review of the Sendai Framework for Disaster Risk Reduction. Paris, France. International Science Council. DOI: 10.24948/2023.01.

trade models and investment, and incentives to retire old ways and facilitate the uptake of new ones. We need concerted efforts to address **systemic barriers to change**, which include persistent inequalities, political short-termism, and global capitalism that lacks regulation and seeks only profit. We need to tackle spillovers and negative externalities, such as the disregard of negative environmental and social impacts from production to consumption, in order to meaningfully assess progress.

Transformative change and innovation need **robust governance** and "social steering" to ensure they are responsibly regulated and democratized; the rapid and pervasive diffusion of digital innovations such as artificial intelligence can bring both multiple benefits and multiple risks. The response to COVID with the development of vaccines in breath-taking time is a powerful illustration of how vigorous acceleration can be achieved when the world faces shared and profound vulnerabilities; and how the monetization and politicization of knowledge renders everyone vulnerable if access to beneficial innovation is not universal.

We need to systematically assess and communicate the **multiple benefits for people and planet** of operationalizing the six SDG transformations in an inclusive way. Positive narrative is essential across policies and practices to maximize synergies and incentivize action: storytelling is critical to nurturing systems leadership that connects local context needs with global action, sharing learning from the champions who have delivered impactful action and inspiring all to be proactive.

Building and strengthening capacity and capability where it is needed most

Different transformative pathways are required from across the public and private communities, across cities and businesses, and different stakeholders – citizens' movements, indigenous peoples, scientific, engineering, medical, and other communities. Pathways to sustainability may come from diverse and sometimes unexpected places, requiring an urgent priority on **building capacities and capabilities at all levels.** National capabilities and capacities are heterogeneous and tend to be lower in countries where most needed. Knowledge production and provision need to be valued in all countries by improving access to science and education, particularly in countries where it is not universal. To achieve this, all sciences (natural, social, medical, engineering etc) need to evolve and become ever more responsible, ethical, and inclusive with concomitant strengthening of science education, communication and literacy.

Multiple forms of knowledge are required to develop step-by-step evidence-based targets across multiple sectors, with actionable insights to test, apply and scale solutions at different levels. We must step up – and openly learn from – **pilot countries, regions, and communities**.

Everyone, everywhere has agency, and must be part of a **new social contract** - an implicit moral and ethical agreement among all members of society for the 2030 Agenda and other related global agreements and frameworks. Everyone has a stake and can play their part, from governments and business to civil society and local communities.

Strengthening the science-policy-society interface

Determined, accelerated, timebound and spatially explicit strategies and roadmaps at all scales must draw on the best available knowledge. A **strong science-policy-society interface** requires actionable and evidence-based knowledge for decision-making, underpinned by transdisciplinary collaboration, integrated systems perspectives, and new ways of organizing knowledge co-production with multiple stakeholders to achieve shared global outcomes.

Enabling mission-oriented science and engineering for sustainability must be one of the key priorities of governments and science funders in pursuing the SDGs. Accelerating SDG implementation requires visionary thinking and fundamentally disruptive actions from funders worldwide, stepping out of

business-as-usual approaches to funding science and creating supportive institutional arrangements for nurturing impactful sustainability science. To be launched at the 2023 HLPF, the International Science Council (ISC) has established a **Global Commission on Science Missions for Sustainability** that represents an institutional and funding model for operationalizing science missions to support SDG implementation. Balancing curiosity-driven and mission driven science is vital: for example, the mRNA technology for Covid-19 vaccines emanated from four decades of under-funded curiosity science for therapeutic solutions.

The President of the 77th session of the UN General Assembly, Csaba Kőrösi, has summarized the challenge ahead as the focus on "Solutions through solidarity, sustainability and science." Science, education, and evidence-based knowledge must be central to a new, integrated agenda. Recently launched, the "Group of Friends on Science for Action"[6] will help provide the science required to support UN Member States in their decision-making and strengthen evidence-informed policymaking in the UN system.

We must support **transformative science, engineering, medicine, and other forms of knowledge** to be truly integrative and inclusive – engaging providers and users of science from the outset in problem definition and solutions design; and truly transdisciplinary, using natural, political and social sciences to understand levers for change. In closing the implementation gap, supporting **knowledge to action**, strengthening the science-policy-society interface, and supporting mission-oriented research, we can build the conditions for transformation.

Despite the challenges, we must remain **hopeful**, building confidence and positive visions of the future, with a governance architecture to steer change towards common goals and shared benefits, catalyze positive change and adapt to our fast-changing world.

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[6] Creation of a Group of Friends on Science for Action at the UN - International Science Council