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Science at a Turning Point

International Decade of Sciences
for Sustainable Development

GLOBAL REPORT

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SHORT SUMMARY

The scientific future cannot belong to the few

The scientific revolution for sustainable development has begun, but its benefits must reach everyone, everywhere. During the first two years of the International Decade of Sciences for Sustainable Development (IDSSD 2024–2033), proclaimed by the United Nations General Assembly, 396 initiatives — 209 endorsed and 187 under review — across 79 countries mobilized scientific collaboration in support of all 17 Sustainable Development Goals.

Yet significant challenges remain. A persistent "science divide" continues to separate those at the frontier of innovation from those at risk of being left behind. Inequalities in infrastructure, skills, and access to scientific opportunities limit participation and impact. Sub-Saharan Africa, for example, represents 17.5% of the global population but accounts for less than 1% of the world's researchers.

Addressing these gaps requires rethinking how science is organized, financed, and connected to decision-making. The first two years of the Decade demonstrate that a distributed, science-led approach can mobilize global action, strengthen partnerships, and build a more inclusive and sustainable scientific future.

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"Since wars begin in the minds of men and women, it is in the minds of men and women that the defences of peace must be constructed"

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Mr Khaled El-Enany
Director-General of UNESCO

Foreword

The first lesson of this Report is clear: the scientific community is mobilizing. In only two years, the International Decade of Sciences for Sustainable Development has generated nearly 400 initiatives across 79 countries, covering all 17 Sustainable Development Goals.

This momentum matters. Climate disruption, biodiversity loss, water stress, persistent inequalities, and rapid technological change are putting the 2030 Agenda under severe pressure. At such a moment, science must help societies understand risks, guide decisions, and deliver solutions where they are most needed.

This is the purpose of the Decade, proclaimed by the United Nations General Assembly for 2024–2033 and led by UNESCO across the UN system: to mobilize all sciences — basic and applied, natural, social and human — in support of sustainable development.

This first Global Report shows what is already possible: open laboratories, remote access to scientific equipment, data science schools, climate modelling, agroecology, artificial intelligence for sustainable development, and programmes supporting women in science.

It also shows where greater effort is required. Too many countries, especially in Africa and Small Island Developing States, still lack the infrastructure, skills and resources needed to participate fully in science. Too many women and young researchers remain excluded from opportunity. This science divide is a matter of equity, development, and human rights.

The next phase must therefore turn momentum into action, investment, and impact. UNESCO will continue working with Member States and partners to ensure that science is open, trusted, responsibly governed, and shared fairly — so that it serves humanity as a whole.

Prof. Khaled El-Enany
Director-General, UNESCO

Acknowledgement

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Special appreciation is extended to the members of the Executive Committee of the International Decade of Sciences for Sustainable Development (IDSSD), including representatives of UNESCO, UNEP, WHO, WMO, FAO, IAEA, UNU, the International Science Council (ISC), the World Federation of Engineering Organizations (WFEO), the Earth-Humanity Coalition (EHC), and UNESCO Member States, for their strategic guidance and continued support to the implementation of the Decade.

UNESCO further wishes to thank all partners, experts, institutions, researchers, practitioners, and stakeholders whose contributions, consultations and initiatives helped shape this Report and reflect the global vision and ambitions of the International Decade of Sciences for Sustainable Development (2024–2033).

Editorial note
This Report has been prepared under UNESCO's coordination, based on information, data, case materials, photographs, and contributions gathered throughout the first two years of the IDSSD, including inputs from partners, sponsors, event organizers, and contributors across regions. It combines documentation of activities and achievements with analysis and forward-looking reflections developed during its preparation. The analytical sections of the Report, including its framing, assessment, and recommendations, are under UNESCO's editorial responsibility. They aim to provide an informed synthesis of experiences, lessons learned, and emerging priorities related to IDSSD and its continued pathway. While every effort has been made to ensure accuracy and consistency, some minor inaccuracies or omissions may remain. UNESCO gratefully acknowledges all contributors whose inputs made this Report possible and helped reflect the global scope and impact of IDSSD.

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Executive Summary

The 2030 Agenda is in serious jeopardy. Of SDG targets monitored, 47% are advancing too slowly and 18% have regressed since 2015. Among the multiple causes of this situation, the 'knowledge and scientific gap' is widely identified at the forefront of roots of this setback. The gap is not a shortage of scientific knowledge, it is a failure to translate that knowledge into policy, governance and action at scale. This failure, not only stalls progress, but also undermines the need for new innovations and discovery.

Sciences for Sustainable Development (2024–2033) was established by the UN system precisely to address this challenge. In its first two years, the response from the global scientific community has been swift and substantial. This report assesses what that mobilization has achieved, what it reveals about structural constraints, and what must change in the years ahead.

The Decade in numbers · first two years

397
initiatives received across all calls

79
countries participating

17 SDGs
all goals addressed

USD 50M
confirmed funding mobilized

Five findings from the first phase

Finding 1
Global reach, uneven participation

All five UNESCO regions engaged. Africa's representation index: 0.33. But 117% growth in African submissions in Call 3 proves targeted outreach works.

EQUITY GAP

Finding 2
All 17 SDGs covered; critical gaps remain

Strongest: SDG 4, 9, 13, 17. Weakest: SDG 1 (29 initiatives), SDG 14 (48), SDG 12 (59) — the goals most off-track globally.

COVERAGE GAP

Finding 3
SDG 16 is the most underserved priority

Innovation (SDG 9) outpaces governance (SDG 16) by 3.2:1. As AI and quantum scale, this gap becomes a structural risk.

GOVERNANCE GAP

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Finding 4
Portfolio maturing; gender needs structural support

Programme-type initiatives rose from 30% to 38%. SDG 5 thematic coverage fell from 50% to 31% — structural tracking measures now in place.

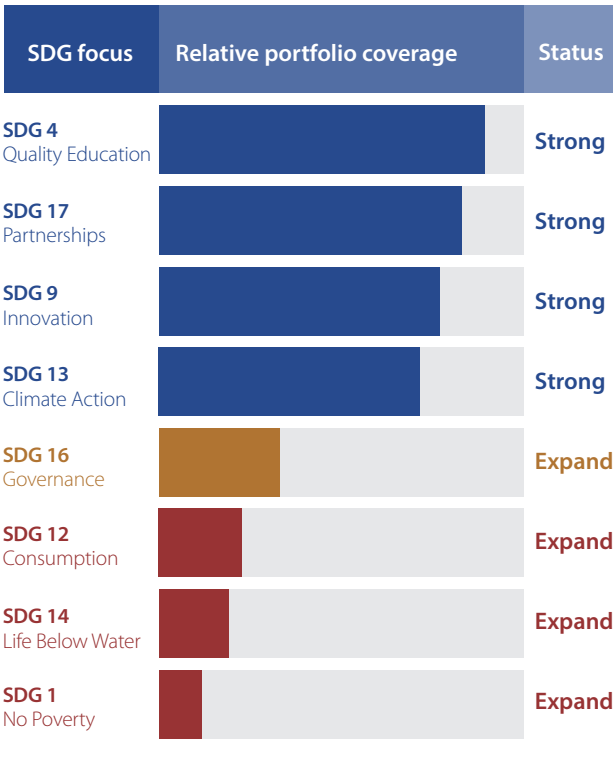
PORTFOLIO MATURITY

Finding 5
Coordination is the primary implementation barrier

40% of responding initiatives cited coordination as their top challenge; only 10% cited funding. The 9.6% response rate is itself a monitoring infrastructure problem.

COORDINATION GAP

SDG portfolio coverage — where the Decade is strong and where gaps remain



Five reform priorities → Chapter 5

1. **Reform research assessment to** reward SDG impact alongside bibliometric output, building on DORA, the Leiden Manifesto and CoARA.

2. **Expand equitable infrastructure access through** distributed facilities, federated data systems and remote-access platforms in developing countries.

3. **Institutionalise science–policy advisory mechanisms at** national and international levels, building on IPCC, IPBES and the National Focal Points Network.

4. **Protect scientific freedom and integrity as** the foundation of trusted evidence-based governance, anchored in the UNESCO 2017 Recommendation.

5. **Align emerging technologies with ethical frameworks operationalising** UNESCO's AI Ethics Recommendation, Neurotechnology Recommendation and the Global Quantum Initiative.

The first phase demonstrates that science can be mobilized at the scale the 2030 Agenda demands. The challenge now is not mobilization, but translation: transforming scientific engagement into governance reform, institutional capacity, effective deployment, and measurable development outcomes. The reform priorities presented in Chapter V and the strategic directions in Chapter VIII outlined a path forward. The choice facing Member States and the global scientific community is no longer whether to act, but how quickly and at what scale. The success of the Decade will ultimately depend on ensuring that the science is inclusive, trusted, actionable, and capable of delivering solutions commensurate with the challenge of sustainable development.

Introduction

The Science Decade in a Snapshot

The International Decade of Sciences for Sustainable Development (IDSSD) (2024–2033) initiated by Serbia and proclaimed by the United Nations, is a system-wide initiative to mobilize science in support of sustainable development. Proclaimed by the United Nations General Assembly in 2023, the Decade provides a global framework to better align scientific knowledge, collaboration, and innovation systems with the needs of people and the planet.

The IDSSD emerges at a moment when the world faces simultaneous transitions across climate systems, technology, geopolitics, public trust, and scientific governance. Scientific knowledge is expanding rapidly, yet progress toward sustainable development remains uneven and insufficient. Emerging technologies are advancing faster than governance systems can adapt, while inequalities in scientific infrastructure and access continue to shape who benefits from scientific progress. The IDSSD therefore represents more than a coordination initiative; it is a global effort to strengthen the role of science as a trusted, inclusive, and actionable public good capable of supporting sustainable

development in an increasingly complex and interconnected world. Since its launch, the Decade has brought together governments, research institutions, universities, civil society organizations, and other stakeholders around a shared objective: to strengthen the role of science in advancing sustainable development. The Decade is structured around strategic action areas that contribute directly to its expected outcomes, such as strengthening scientific capacity, advancing open science, enhancing science-policy interfaces, and promoting more inclusive and equitable access to knowledge. These outcomes are mutually reinforcing and are intended to strengthen the connections between science, policy, education, innovation, and society. Together, they provide a framework for addressing the structural barriers that currently limit the contribution of science to sustainable development.

As the lead agency for the Decade, UNESCO has mobilized a wide range of UN partners, bringing together the natural sciences, the social and human sciences, and diverse societal actors. The Decade creates a unique platform to foster interdisciplinary collaboration and to connect scientific knowledge more directly with policy and implementation. Many initiatives by UNESCO and other UN agencies have already become part of the Decade. In 2024, UNESCO launched the Call to Action to Close the Gender Gap in Science as a contribution to the IDSSD, urging governments and institutions to remove structural barriers to women's participation in science and to integrate concrete gender-equality measures into STI strategies as a condition for scientific excellence and equitable impact.

Why the Science Decade?

Given the legacy of the aforementioned structural imbalances, the cumulative effects from an economic perspective are reflected in a stagflation recession, manifested through the output gap, endemic inflationary pressures, the deepening of macroeconomic imbalances (fiscal, current account, and capital), and the explosion of debt. A common denominator of related structural imbalances and ineffective and counterproductive remedies is population decline, occurring for the first time in human history, along with the degradation of human capital.

Science can serve as a public good when it is developed, shared, and applied in ways that benefit society as a whole. In the context of interconnected global challenges, including climate change, dramatic decline in biosphere diversity and extinction of living organisms, income and wealth inequality, public health risks, technological disruptions, growing impact of (geo)politics on economy and society, mainly through militarization, brain rot caused by colonization of the human mind by echo chambers, and challenges to cognitive sovereignty due to dominance of an AI-mediated environment, science must not only expand knowledge but also support decision-making, inform policy, and contribute to sustainable solutions.

The IDSSD provides a framework for putting this vision into practice by strengthening connections between science, policy, and society, while fostering collaboration across disciplines, sectors, and regions. The added value of the Decade lies not simply in promoting more scientific activity, but in encouraging science to be conducted, shared, and mobilized differently: more openly, more inclusively, and more closely aligned with societal needs and sustainable development priorities. The Decade therefore serves not only as a platform for scientific collaboration, but also as a mechanism for strengthening the capacity of science to contribute meaningfully to sustainable development outcomes.

The Primary Challenge: Member State Ownership

While the scientific community has responded strongly to the Decade, the primary challenge moving forward is securing robust Member State ownership. The structural barriers to mobilizing science for sustainable development, such as fragmented funding, misaligned research incentives, and weak science-policy interfaces, cannot be resolved by scientific institutions alone. They require sustained political action and policy reform at the national level.

To achieve the Decade's objectives, Member States must take the lead in aligning national science funding with sustainable development priorities, reforming research assessment systems, strengthening science-policy interfaces, and building the institutional capacities necessary to translate scientific knowledge into policy and practice. The success of the Decade will ultimately depend on the extent to which governments integrate its vision into their national development strategies, science and innovation policies, and international

cooperation frameworks. Scientific mobilization can catalyse change, but only Member States possess the policy authority, financing mechanisms, and institutional reach necessary to scale that change across society.

Purpose of the Report

This First Global Report of the IDSSD was prepared by UNESCO and is transmitted to the General Assembly by the Secretary-General, pursuant to United Nations General Assembly resolution A/RES/77/326.
It provides an initial assessment of the Decade's early implementation phase, focusing on the process of building the foundations for impact: establishing the governance architecture, launching three global Calls for Initiatives, and engaging Member States and UN partners. Given that the Decade is in its early phase, the emphasis is on the process of mobilization, institutional development, and capacity-building rather than final outcomes.

As the first report of the Decade, it also establishes a baseline for assessing future progress, challenges, and impacts can be assessed throughout the remainder of the implementation period.

The report combines global analysis with evidence drawn from the Decade's portfolio to support Member States, partners, and the scientific community in advancing the Decade's objectives and strengthening the contribution of science to sustainable development. The chapters that follow situate the Decade within the broader global context, analyse the first phase of implementation, and present strategic directions to guide the next phase toward 2030 and beyond.

Chapter 1:

Science at a global turning point

We stand at a moment of contradiction. Humanity has never possessed more scientific knowledge, more computing power, or more interconnected research capacity than it does today, yet progress toward sustainable development remains too slow and uneven. Given the established reality of the central role of knowledge and science in advancing sustainable development, the convergence of these two realities defines both the challenge and the opportunity that the International Decade of Sciences for Sustainable Development (IDSSD) was created to address. Knowledge is being used by those who own it as power to destroy, manipulate and exploit the planet and people.

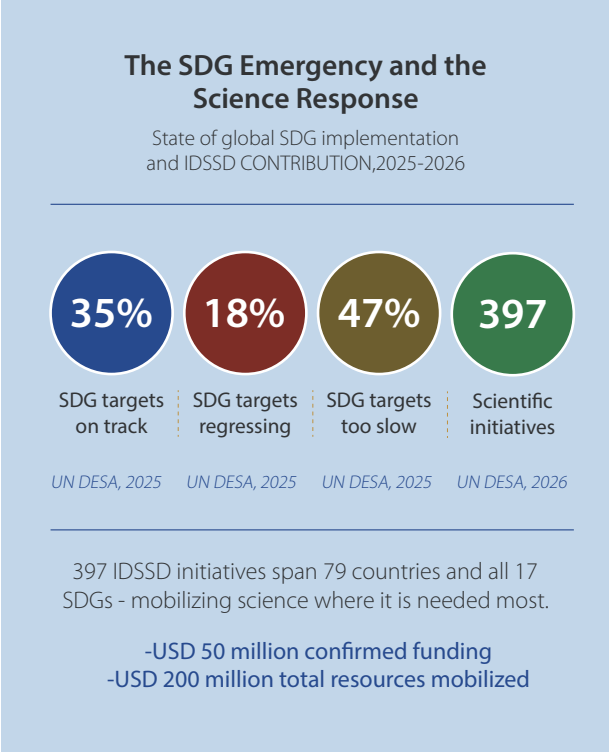


Figure 1.1: The SDG Emergency and the Science Response

A UN system-wide endeavour, facilitated by UNESCO

The IDSSD is fundamentally a United Nations system-wide initiative. While UNESCO was designated by the UN General Assembly to serve as the lead agency and Secretariat for the Decade, this role is one of facilitation and coordination, not exclusivity. The success of the Decade relies on the active participation, mandates, and resources of all UN agencies, funds, and programmes. UNESCO's role as Secretariat is to build bridges between Member States, scientific institutions, and the broader UN system, ensuring that science serves as a catalytic enabler for the entire 2030 Agenda, rather than advancing the mandate of any single agency.

1.1. The International Decade of Sciences for Sustainable Development

The International Decade of Sciences for Sustainable Development (IDSSD) was proclaimed by the United Nations General Assembly on 25 August 2023 through Resolution A/RES/77/326, designating UNESCO as the lead agency for its implementation in close cooperation with Member States, other UN entities, the International Science Council, scientific unions, academies of science, the private sector and civil society. Running from 2024 to 2033, the Decade provides a ten-year multilateral framework for harnessing science as a global public good in support of the 2030 Agenda for Sustainable Development and beyond, while strengthening the role of science in addressing emerging global challenges.

A mandate grounded in science

The Decade rests on a clear mandate from the international community. UN Member States, recognizing both the scale of the sustainable development challenge and the central role science must play in addressing it, established the Decade as a dedicated framework for advancing science as a common good, fostering scientific cooperation across borders, and connecting the research enterprise more directly to the people and policies it is intended to serve.

UNESCO, as the lead UN agency for the Decade, draws on its long-standing role at the intersection of science, education, culture and policy to coordinate implementation. UNESCO's mandate places it at the heart of multilateral science cooperation, with established mechanisms for working with Member States through National Commissions, with the global research community through programmes such as the Recommendation on Open Science and the Recommendation on Science and Scientific Researchers, and with other UN agencies through inter-agency coordination structures.

The Decade's Strategic Plan 2024 to 2033 translates the UNGA mandate into an operational framework for the ten-year period, setting out the governance architecture, the implementation mechanisms, the expected outcomes, and the priorities through which UNESCO, Member States and partner institutions will advance the Decade's mission.

Five outcomes

The Decade's Strategic Plan defines five interconnected Outcomes that, taken together, articulate what the Decade is intended to deliver by 2033:

The Five Outcomes of the IDSSD

International Decode of Sciences for Sustainable Development | 2024-2033

1

Outcome 1

Global community empowered through scientific literacy.

2

Outcome 2

Actionable scientific knowledge produced and used to advance the SDGs in alignment with human rights.

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Figure 1.2: The Five Outcomes of the IDSSD.

These Outcomes are not pursued in isolation. Each one connects to the others, and all five are pursued through a portfolio of endorsed initiatives, partnerships and policy actions developed by Member States, scientific organizations, UN entities and civil society partners under the Decade's coordinating framework.

The five Outcomes are mutually reinforcing rather than independent objectives. Strengthening scientific literacy can help build public trust in science; open science can expand access to knowledge and participation in scientific processes; stronger science-policy interfaces can improve the translation of evidence into decision-making; and more inclusive research and innovation systems can broaden the range of perspectives contributing to solutions for sustainable development. Together, the Outcomes provide an integrated framework for addressing the structural barriers that currently limit the contribution of science to sustainable development and for strengthening the connections between science, policy, and society that are essential for long-term impact.

The chapters that follow document how this work is unfolding in the Decade's first two years, and the wider scientific landscape it is operating within.

Why a Decade

Sustainable development challenges of the scale set out in the 2030 Agenda do not respond to short-term interventions. Strengthening the global scientific enterprise, building durable cooperation across regions and disciplines, embedding open science as a structural reform, and reconnecting science with the public it serves are objectives that require sustained, decade-scale effort. The Decade format is the United Nations' established instrument for this kind of long-horizon coordination, and previous Decades, including the ongoing UN Decade of Ocean Science for Sustainable Development (2021 to 2030), have demonstrated how this format can mobilize resources, partnerships and political attention at scale.

The Decade also provides a unifying framework for work that is already underway across the UN system, in scientific unions and academies, in research institutions and in civil society. By drawing this work into a shared mission, the Decade aims to amplify what is already being done while addressing the structural challenges that no single institution or country can resolve alone. The Decade therefore serves not only as a mechanism for coordination, but also as a platform for identifying gaps, fostering partnerships, and accelerating the application of scientific knowledge to sustainable development challenges.

Where the Decade stands today

In its first two years of implementation, the Decade has received 396 initiatives — 209 endorsed and 187 under review — from 79 countries, spanning all five UNESCO regions and addressing all 17 Sustainable Development Goals [1]. The first two Calls for Initiatives endorsed 209 initiatives, drawing participation from individuals and institutions across 59 countries. The third Call, which closed for submissions in January 2026 and received 187 proposals, introduced thematic priorities aligned with Member State guidance and is currently under review by the Decade's Advisory Committee.

This early mobilization indicates clear engagement from the international scientific community. It also points to where the Decade's coordinating function is most needed: in the structural challenges that shape the global research enterprise, and in the gap between the deployed and urgency of the sustainable development agenda and the pace at which science is currently being organized to meet it. The remainder of this chapter examines five dimensions of that wider context, and Chapter II presents the empirical evidence and findings emerging from the Decade's first two years of work.

1.2. The SDGs in 2026 : A crisis of progress

In 2015, 193 nations committed to the most ambitious coordinated development agenda in human history. The 17 Sustainable Development Goals and their 169 targets promised a world, by 2030, free from extreme poverty, with universal access to quality education and healthcare, sustained by clean energy, among other goals and targets and a stable climate. A decade later, that commitment is in serious jeopardy.

The UN SDG Report 2025 - prepared by the UN Department of Economic and Social Affairs in collaboration with more than 50 international and regional organizations - presents a sobering assessment. Only 35% of SDG targets with available data are currently on track or making moderate progress. A further 47% are progressing too slowly to meet their 2030 deadlines. And 18% have actively regressed, meaning measured outcomes are worse today than when the Goals were adopted in 2015. When only "fully on track" targets are counted (rather than those showing any positive movement), the UN Sustainable Development Solutions Network's independent assessment puts the figure even lower: 17% of SDG targets on course for achievement by 2030 [2]. By any measure, the midpoint review of the 2030 Agenda reveals not a moment of cautious optimism but a global development emergency demanding a structural response.

The pattern of regression is not random. It is concentrated in the goals that require the most systemic change and coordinated scientific effort, including food systems.

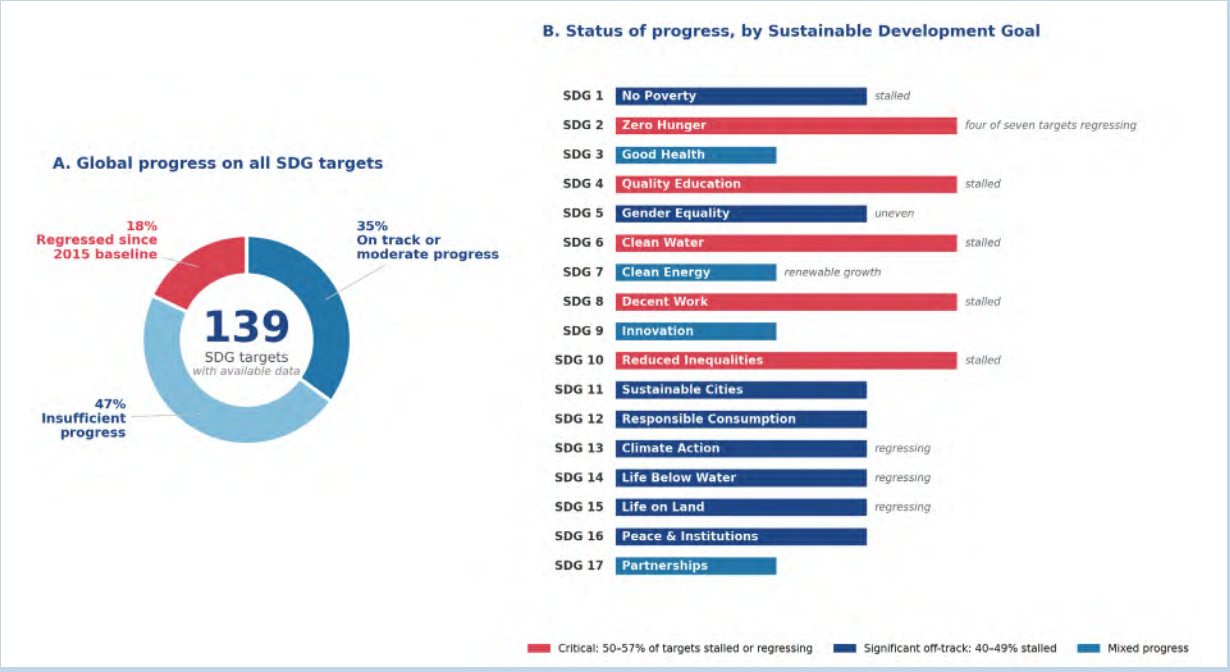
The SDG Progress Breakdown — UN DESA SDG Report 2025

35% of SDG targets: On track or making moderate progress

47% of SDG targets: I Insufficient progress - will not meet 2030 deadline

18% of SDG targets: Actively regressing - outcomes worse than 2015 baseline
Separately, the SDSN Sustainable Development Report 2025 (June 2025) applies a stricter "fully on track" standard and finds only 17% of targets achievable by 2030, reinforcing that neither on the optimistic nor on the cautious measure is the world close to meeting its commitments.

Figure 1.3: SDG progress dashboard — % on track / insufficient / regressing, by goal. Source: UN SDG Report 2025.



transformation, climate stabilization, ocean health and terrestrial biodiversity. These are also areas in which the gap between available knowledge and effective implementation remains particularly wide. The SDG crisis can therefore be understood, in part, as a science-to-policy-and-implementation translation challenge. The challenge is not simply generating new scientific knowledge. In many cases, the knowledge required to address these problems already exists. The more pressing challenge is ensuring that scientific evidence can be translated into policies, institutions, technologies, and practices capable of producing meaningful societal change at scale.

The consequences fall most heavily on those least responsible for creating the crisis. Sub-Saharan Africa, home to 17.5% of the world's population, accounts for the largest share of people affected by SDG regression. The region's R&D investment stands at approximately 0.38% of GDP [3], a fraction of the 2.58% invested by China or the 4.96% by the Republic of Korea in 2023 [4]. This pattern is not coinci-dental: the countries most exposed to SDG failure are systematically the least equipped, in research and innovation infrastructure, to generate local solutions.

1.3. The climate-inequality nexus

Climate change is no longer a future risk. It is a present-tense reality reshaping the context in which every other SDG must be pursued. The IPCC Sixth Assessment Report (AR6) Synthesis Report, adopted in March 2023, confirms that human activities have caused global surface temperature to reach 1.1°C above 1850–1900 pre-industrial levels over the 2011–2020 period. The Synthesis Report warns that "there is a rapidly closing window of opportunity to secure a liveable and sustainable future for all," and that limiting warming to 1.5°C will require immediate, deep emissions reductions across all sectors this decade. Observational records for 2024 subsequently indicated that the global annual mean temperature temporarily exceeded 1.5°C above pre-industrial levels, although a single year above that threshold does not represent an exceedance of the Paris Agreement's long-term temperature goal. The more analytically important finding for the purposes of this report is the intersection of climate change with social and economic inequality. The communities most exposed to climate impacts - through sea

level rise, extreme heat, food system disruption, and water scarcity - are disproportionately located in the Global South, in small island states, and in the least-resourced regions of middle-income countries. These communities are simultaneously the least responsible for cumulative greenhouse gas emissions and the least equipped, in terms of institutional and scientific infrastructure, to develop adaptation solutions.

Climate change increasingly functions as a threat multiplier, amplifying existing challenges related to food security, water availability, public health, migration, and economic inequity. As a result, the consequences of unequal scientific capacity extend far beyond climate adaptation itself, affecting the ability of societies to respond to a broad range of interconnected sustainable development challenges.

> **"The cumulative net CO2 emissions from 1850 to 2019 are dominated by a small number of regions. The top 10% of emitters per capita contribute a disproportionate share of global emissions, while the most climate-vulnerable populations have contributed the least."** - IPCC AR6 Synthesis Report, Summary for Policymakers (2023)

This creates a double bind for the scientific community. On one hand, the scale and urgency of the climate challenge demands a mobilization of research capacity and innovation unlike anything the scientific world has organized before. On the other hand, the geographic distribution of that capacity is almost the inverse of where the need is greatest. The countries with the weakest research systems are those facing the most acute climate pressures and the least ability to afford the adaptive technologies that wealthier nations are developing. Gender further compounds this asymmetry. UIS data show that women still represent approximately one-third of the world's researchers, with the lowest shares concentrated in many of the same regions where overall scientific capacity is most limited [5], narrowing the diversity of perspectives available to design context-relevant climate adaptation responses.

The inequality dimension extends beyond climate. The same structural inequalities that characterize climate vulnerability run through food security, public health, and digital access. In each domain, scientific knowledge and the infrastructure needed to apply it are concentrated in high-income countries, while the populations most in need of that knowledge lack the means to generate or access it. The 2030 Agenda recognized this pattern; it has not yet been able to change it.

1.4. Inequalities in the global research system

The global scientific enterprise is more productive than ever in absolute terms. Global R&D expenditure reached approximately USD 2.78 trillion in 2023 and rose further to USD 2.87 trillion in 2024 (WIPO, 2025), expressed in purchasing power parity-adjusted constant 2015 prices. Researcher density has grown in parallel, from 1,141 to 1,486 researchers per million inhabitants globally between 2015 and 2023 [6]. These trends reflect a period of unprecedented global investment in scientific knowledge and innovation. Yet the system that produces this knowledge remains profoundly and structurally unequal in ways that directly undermine its ability to contribute to sustainable development.

1.4.1. The R&D investment gap

Global R&D spending is concentrated in a small number of economies. In 2023, the United States (approximately USD 784 billion), China (USD 723 billion) and the European Union (USD 410 billion) together accounted for around two-thirds of global R&D expenditure [7]. Sub-Saharan Africa, home to approximately 1.2 billion people, represented only 0.56% of global R&D spending in 2024, up from 0.27% in 2000, but still a small fraction despite the region's growing population (WIPO, 2025). Expressed as a share of GDP, R&D investment stood at 2.55% in Europe and Northern America and 2.42% in Eastern and South-Eastern Asia in 2023, compared with 0.57% in Latin America and the Caribbean and just 0.38% in Sub-Saharan Africa [8]. The gap is structural and self-reinforcing, low investment produces weak research infrastructure, which produces few researchers, which limits the ability to attract further investment.

The result is a global research system in which scientific capacity is often weakest where development challenges are greatest. This imbalance limits not only the production of locally relevant knowledge, but also the ability of countries to adapt scientific advances to their own social, economic, environmental, and cultural contexts.

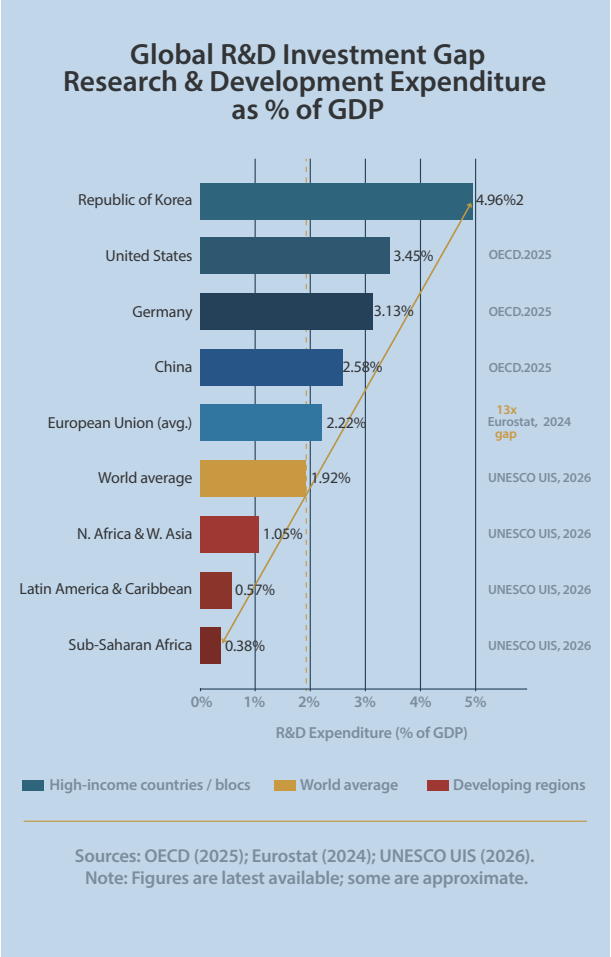


Figure 1.4: Global R&D Investment Gap.

The consequences for the SDGs are direct. Research on the challenges most pressing in lower-income countries; neglected tropical diseases, climate-resilient smallholder agriculture, low-cost sanitation, informal settlement safety, receives a fraction of the global research investment directed at challenges of concern to wealthier markets. Within health research, the pattern is well documented: annual funding for neglected diseases that disproportionately affect low- and middle-income populations, stood at approximately USD 3.75 billion in 2024, with two-thirds concentrated on just three diseases (HIV, tuberculosis and malaria). Other conditions such as trachoma, yaws and mycetoma received essentially no dedicated R&D, with trachoma funding falling to zero in 2023 [9]. The same logic extends to agriculture, sanitation and other sectors: research agendas continue to track the priorities of well-resourced markets rather than the global burden of need.

1.4.2. The researcher distribution gap

Beyond investment, the distribution of researchers is equally skewed. The global research workforce has expanded from 1,141 to 1,486 researchers (full-time equivalent) per million inhabitants between 2015 and 2023, but regional disparities remain stark. As of 2023, Europe and Northern

America reported 4,358 researchers per million inhabitants, while Sub-Saharan Africa reported only 88; meaning researcher density in Europe and Northern America is therefore nearly 50 times higher than in Sub-Saharan Africa [10]. This asymmetry means that the regions where scientific knowledge is most urgently needed to address SDG challenges are precisely the regions with the fewest people trained to generate that knowledge. These regional asymmetries are also gendered: globally, women represent approximately one-third of researchers [11], and in many of the regions with the lowest researcher densities the share of women is lower still, compounding the structural inequalities documented above.

The implications extend beyond scientific productivity. Researcher shortages limit the ability of countries to develop locally relevant research agendas, mentor future generations of scientists, engage effectively in international scientific collaborations, and translate scientific knowledge into policies and innovations that address national priorities.

The researcher gap is compounded by brain drain dynamics. In many lower-income countries, the scientists who do complete advanced training frequently leave for research positions in better-resourced institutions abroad. The flow of scientific talent remains predominantly from South to North, reinforcing the concentration of research capacity in already-well-resourced systems.

1.4.3. The research infrastructure gap

Investment and researcher counts are the most easily quantified dimensions of global research inequality. A third dimension, less visible in aggregate statistics but no less consequential, is the gap in the physical and digital infrastructure on which modern science depends. Instruments, facilities, and data systems are themselves products of sustained investment: high-performance computing clusters, synchrotron light sources, electron microscopes, advanced genomic sequencing platforms, reference collections, biobanks, federated data infrastructures, and the specialized technical staff required to operate and maintain them. The distribution of this infrastructure closely mirrors the distribution of R&D investment and researcher density.

A scientist working on a climate-resilient crop, a novel antimicrobial compound, or an energy-efficient material in Lagos, Dar es Salaam, or Cochabamba routinely has no local access to the instruments required to characterize, validate, or scale their findings. The default condition is reliance on collaborations with overseas partners, travel to foreign facilities, or remote-access arrangements that are fragile, expensive, and dependent on relationships that researchers in the Global South do not control.

Access to scientific literature is a parallel problem. Even with partnerships such as Research4Life, which provides free or low-cost access to subscription journals for institutions in low-income countries, researchers in many developing contexts face both reading barriers for paywalled content and publishing barriers for open-access venues whose article processing charges can exceed several thousand US dollars per article. The UNESCO Open Science Outlook 1 documents that approximately 85% of open publication and data repositories worldwide are located in Western Europe and North America, while Africa accounts for less than 2% and the Arab region for less than 3%. The result is that research conducted in the Global South is systematically under-represented in the high-impact literature on which careers, funding decisions, and policy uptake depend.

The consequences extend beyond academic visibility. When research from developing regions is under-represented in global knowledge systems, local challenges may receive less scientific attention, context-specific solutions may remain overlooked, and policy decisions may be informed by evidence generated in environments that differ substantially from the realities in which those decisions must be applied.

Recent initiatives demonstrate that the infrastructure divide is not fixed. Remote laboratory access platforms, federated data infrastructures, cloud-based computing, and shared regional facilities such as the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) have all demonstrated that deliberate investment and coordinated governance can narrow specific gaps. The Global Bioimaging network, the African Light Source Foundation, the International Centre for Theoretical Physics (ICTP) in Trieste, and the UNESCO Remote Access to Laboratory Equipment (UNESRALE) initiative launched under the IDSSD itself provide further examples of how distributed scientific infrastructure can be built

across resource asymmetries. Complementing these regional and remote-access platforms, the Organization for Women in Science for the Developing World (OWSD), a programme unit of UNESCO hosted at The World Academy of Sciences (TWAS), has been expanding women researchers' access to scientific infrastructure since 1987 through PhD and Early Career fellowships in 66 science and technology lagging countries [12]. These remain exceptions rather than the rule. Closing the infrastructure gap at scale requires precisely the coordinated international intervention that Chapter V sets out under the heading of equitable access to research infrastructure in developing countries.

1.4.4. The incentive crisis in research assessment

A research system produces what its incentives reward. Across most of the world, academic hiring, promotion, tenure, and grant decisions remain dominated by quantitative proxy indicators: counts of publications, journal impact factors, citation counts, and h-indices. These metrics were originally designed to support rather than replace scholarly judgement, but their simplicity and perceived objectivity have made them dominant in the decisions that determine which research careers are built and which research agendas are funded.

The mismatch between what these metrics measure and what the Sustainable Development Goals require is substantial. Research that contributes directly to SDG implementation is typically transdisciplinary, locally grounded, slow to produce traditional publications, and oriented toward outputs such as datasets, policy briefs, capacity-building materials, trained local researchers, and community-validated interventions. These outputs are poorly captured by traditional bibliometric indicators. An early-career researcher in most parts of the world has strong career incentives to avoid such work, because the outputs it produces are undervalued in the systems that determine their next position. This dynamic intersects with gender inequalities in science. Research that is community-engaged, locally grounded and oriented toward applied SDG outcomes, the kind that current assessment systems undervalue, is disproportionately conducted by women researchers, particularly in the Global South, as documented in OWSD's work on women scientists' research patterns. Reform of research assessment systems therefore advances both SDG delivery and gender equality in science as connected objectives.

More fundamentally, assessment systems shape what kinds of knowledge are produced, whose contributions are recognized, and which societal challenges receive sustained scientific attention. Reforming research assessment is therefore not simply an administrative exercise; it is a strategic intervention in the way scientific priorities are established and rewarded.

The reliability of the research base that current metrics reward is itself under question. A 2016 Nature survey of 1,576 researchers found that more than 70% had tried and failed to reproduce another scientist's experiments, and more than half had failed to reproduce their own [13]. 52% agreed that a significant 'crisis' of reproducibility existed. Subsequent replication projects across psychology, economics, cancer biology, and preclinical medicine have documented non-reproduction rates between 40% and 65%, depending on field and methodology [14]. These findings do not imply widespread misconduct. They point to the cumulative effect of an incentive system that rewards novelty over verification, positive results over null findings, and publication velocity over methodological rigour.

A substantial reform movement has taken shape in response. The San Francisco Declaration on Research Assessment (DORA), launched in 2013, has been signed by thousands of individuals and institutions committed to evaluating research on its intrinsic merits rather than the prestige of the journal in which it appears. The Leiden Manifesto for Research Metrics set out ten principles for the responsible use of quantitative indicators. The Coalition for Advancing Research Assessment (CoARA), launched in July 2022, has gathered more than 900 signatory organizations, including universities, research funders, assessment authorities, and learned societies, committed to implementing ten reform commitments by 2027 [15]. UNESCO's Recommendation on Open Science reinforces these commitments in the context of open and equitable scientific practice, and the UNESCO Open Science Outlook 1 identifies the alignment of research assessment criteria as one of the most imperative challenges in the transition to globally equitable open science [16].

Progress has been uneven. CoARA signatories are concentrated in Europe, and even among them the translation of commitments into hiring and promo-

tion practice has lagged the principles agreed on paper. Outside Europe, the movement remains more limited. In many research systems, the metrics that CoARA asks institutions to downgrade remain the primary basis on which careers are built and grants are awarded. The reform agenda documented in Chapter V on reforming research assessment systems reflects the conclusion that without deliberate intervention in how research is assessed, the global scientific enterprise will continue to optimize for outputs that are easy to count but only loosely connected with sustainable development outcomes.

Each of the four dimensions of research-system inequality documented in this section corresponds directly to a strategic priority of the IDSSD. The R&D investment gap and the researcher distribution gap are addressed through the Decade's work on equitable access to research infrastructure, including UNESCO partnerships such as SESAME and the African Light Source Foundation, and the UNESCO Remote Access to Laboratory Equipment (UNESRALE) initiative noted earlier in this section. The research infrastructure gap is being narrowed through the Decade's promotion of open science as structural reform, anchored in the UNESCO Recommendation on Open Science and operationalized under Outcome 4 of the Strategic Plan. The incentive crisis in research assessment is being addressed through UNESCO's engagement with the Coalition for Advancing Research Assessment, which is reshaping how research contributions are valued in hiring, promotion and funding decisions. Read together, the four challenges documented in this section are also a map of where the Decade's action agenda is most active, and the empirical findings in Chapter II document how that agenda has progressed in its first two years.

1.5. The crisis of trust in science

Science faces a paradox in the 2020s. Its technical achievements, such as mRNA vaccines developed in under a year, global real-time genomic surveillance of pathogens, and AI systems that fold proteins, represent genuine breakthroughs. And yet public trust in science and scientists has declined sharply in many parts of the world and remains fragile in others where it was never fully established.

The UNESCO Science Report (2021) found that while global trust in science as an institution remains broadly positive, with approximately 80% of respondents expressing trust in scientists, this headline figure conceals significant regional, demographic, and ideological variation. Trust is substantially lower among populations with limited access to quality science education, in countries where science has been associated with colonial knowledge extraction, and in communities where scientific advice has been perceived as inconsistent, inaccessible, or politically motivated.

The COVID-19 pandemic both demonstrated the critical importance of public trust in science and exposed its fragility. In countries where public health communication was most effective, trust in scientific institutions correlated directly with vaccination uptake and compliance with evidence-based public health measures. In countries where misinformation spread unchecked, or where governments politicized scientific advice, the consequences were measurable in excess mortality.

Three drivers of declining science trust (UNESCO 2021/UNESCO 2025 Science Trust analysis)

1. **Misinformation and disinformation:** The rapid spread of health and climate misinformation online, often amplified by algorithmic recommendation systems, competes directly with evidence-based scientific communication.

2. **Perceived irrelevance:** In many communities, science appears to address the priorities of wealthy societies and institutions rather than local needs. Where science fails to speak to lived experience, trust erodes..

3. **Historical and political context:** In regions with legacies of extractive research practices — where scientific study was conducted without benefit to or consent of studied communities — rebuilding trust requires active engagement, not simply better communication.

The science trust crisis is not merely a communication problem. It is a structural problem rooted in how the global scientific system has been organized: who it has historically served, whose knowledge it has validated, and how it has engaged with the communities most affected by the problems it studies. Rebuilding trust requires not just better outreach but more inclusive, equitable, and community-responsive models of research, exactly the kind of transformation the IDSSD is designed to catalyse. For this reason, strengthening trust in science is not a separate objective from sustainable development; it is one of the conditions necessary for achieving it.

1.5.1. Scientific freedom and integrity under pressure

Trust in science rests in part on the public perception that science is conducted freely and responsibly. Both conditions are under measurable strain. The Academic Freedom Index, a collaboration between Friedrich-Alexander-Universität Erlangen-Nürnberg and the V-Dem Institute at the University of Gothenburg, draws on assessments from more than 2,300 country experts to track the de facto protection of academic freedom in 179 countries and territories. Its 2026 update found that between 2015 and 2025, academic freedom declined substantially and statistically significantly in 50 countries, while only nine countries recorded a significant improvement [17]. The countries registering declines include long-standing democracies, among them Argentina, Finland, Greece, Kingdom of the Netherlands, Poland, Portugal, the United Kingdom, and the United States, indicating that the erosion is not confined to authoritarian contexts.

Institutional autonomy, which the Academic Freedom Index identifies as the mechanism through which political pressure most often translates into constraints on what can be researched, taught, and published, declined significantly in 43 countries over the same period, including in 21 countries where it had previously been very well protected. Scholars at Risk, in its Free to Think 2025 report, documented 395 attacks on higher education communities between July 2024 and June 2025, with a notable rise in incidents threatening physical safety. [18].

395 Countries with declining academic freedom (2015 to 2025)

21 Countries with improving academic freedom (2015 to 2025)

50 Documented attacks on higher education communities (2024-25) Countries where institutional

9 Countries where institutional autonomy eroded from a high base

Sources: Kinzelbach, K. et al. (2026) Academic Freedom Index Update 2026; Scholars at Risk (2025) Free to Think 2025 Report.

These pressures on scientific freedom interact with parallel concerns about the integrity of the scientific record. The reproducibility questions set out in the preceding subsection are one symptom. A second is the rise of predatory publishing, with several thousand journals listed by monitoring services mimicking the form of peer review without its substance. A third is the documented activity of so-called paper mills, which produce fabricated or manipulated articles at scale and have contributed to a substantial increase in annual retractions over the past decade, tracked systematically by the Retraction Watch database and addressed in guidance from the Committee on Publication Ethics (COPE) and the International Association of Scientific, Technical and Medical Publishers.

Together, these developments weaken confidence in the reliability of scientific knowledge and place additional strain on public trust in scientific institutions. The challenge is therefore not only to protect scientific freedom, but also to strengthen the quality-assurance mechanisms that enable science to maintain its credibility and societal legitimacy.

UNESCO's Recommendation on Science and Scientific Researchers, adopted in 2017 and endorsed by all 193 Member States, provides the most comprehensive international standard-setting instrument in this area [19]. It codifies the rights of scientific researchers, the responsibilities of states, and the institutional conditions required for science to serve the public interest. The second quadrenni-

al consultation on implementation of the Recommendation, launched in 2024 and running through 2025, is generating comparable data on how Member States are translating its commitments into national practice. Early returns suggest a persistent gap between the principles agreed in 2017 and the conditions faced by scientific researchers in many parts of the world.

Freedom and integrity are mutually reinforcing preconditions for the kind of science the Decade requires. A research system that is politically constrained produces less reliable knowledge, because inconvenient findings cannot be published, and independent replication is discouraged. A research system whose outputs cannot be trusted loses the political legitimacy that protects its freedom. The reform priority in Chapter V on protecting scientific freedom and integrity addresses both dimensions as a single structural challenge.

1.5.2. From trust to institutions: The science-policy interface

The trust dimension of science's contribution to sustainable development is inseparable from a more structural question: whether functional channels exist between what scientists know and what policymakers decide. The formal mechanisms for providing scientific advice to governments remain uneven, and in many countries, they are absent or underdeveloped.

The International Network for Government Science Advice (INGSA), established in 2014 under the auspices of what is now the International Science Council and based at the University of Auckland, has become the most comprehensive global community of practice in this area. It brings together chief science advisors, advisory committees and policy units through regional chapters in Africa, Asia, Europe, Latin America and North America, and provides capacity building, comparative research and training in evidence-informed policymaking. Countries show a wide variation in how they formally integrate scientific evidence into policy processes, from well-established chief scientific advisor structures in a limited number of countries to ad hoc, politically negotiated arrangements in others. A recent systematic mapping identifies only seven countries (the United States, United Kingdom, Canada, Australia, New Zealand, India and Ireland) that have formally institutionalized a Chief Science Advisor model [20], meaning the large majority of UN Member States still lack any formal institutionalized scientific advisory role at the head-of-government level.

The Global Alliance on the Science of Learning for Education is comprised of experts from all domains that study learning, as well as educators, technology developers and policymakers, with the objective of translating the scientific knowledge of how people learn for application to education policies and practices. Members of the Alliance contribute their expertise in-kind; UNESCO functions as the Secretariat. The group represents UNESCO at high-level global political events in education to advocate for integrating the science of learning in education policies, curricula designs, pedagogical approaches and assessment practices. The Alliance has a focus on student training in the science-policy nexus and capacity-building of researchers in Africa and other low- and middle-income countries. A forthcoming White Paper will synthesize the latest scientific evidence to showcase the potential of the science of learning to transform education and bridge the science-policy gap.

At the international level, the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) are the best-established examples of science-policy interfaces producing consensus assessments that governments can act on. Both operate on intergovernmental mandates, both draw on volunteer scientific labour at very large scale, and both have demonstrated that scientific assessment processes can inform international policy when their mandates, independence, and political legitimacy are protected. The UN Secretary-General's Scientific Advisory Board provides an additional mechanism at the global level, established in August 2023 as part of the Our Common Agenda initiative to provide independent scientific advice at the intersection of science, technology and sustainable development.

Despite these advances, science-policy advisory mechanisms remain unevenly distributed across regions and levels of governance. Many countries lack permanent structures capable of translating scientific evidence into policy options, while local and regional decision-making processes often have less systematic access to scientific expertise.

The limitations of these mechanisms, as much as their achievements, point toward the reform priority in Chapter V on institutionalizing science-policy advisory mechanisms. Science-poli-

cy interfaces function when their mandates are clear, their independence is protected, and the political will to act on their findings exists. Where any of those conditions fail, the interface breaks down and the gap between what science knows and what policy does widens. Strengthening the interfaces that connect evidence to decision-making is a precondition for the Decade's substantive ambitions, ensuring that scientific knowledge can be translated into policies, investments, and actions capable of advancing sustainable development.

1.6. Emerging technologies and the pace of governance

Perhaps the most significant development reshaping the global scientific landscape since 2020 is the emergence of a cluster of transformative technologies, notably large language models and generative AI, quantum computing, synthetic biology, and advanced Earth observation systems, that are advancing at a pace that existing regulatory and governance frameworks are not designed to handle. These technologies offer extraordinary potential for accelerating sustainable development. They also carry risks that, if not governed proactively, could deepen existing inequalities and create new ones.

In the post-industrial era, the primary drivers of growth are no longer land, water, position to market and/or transportation routes, deposits of rare metals/minerals, or even technology, human capital, and data, but cognition. AI-driven technologies no longer contribute solely to the acceleration of research; their impact on behavioural and related social sciences is growing exponentially. In closing the AI governance gap, the IDSSD should take this perspective when defining a priority list for future investigation.

The challenge is not simply technological innovation, but institutional adaptation. Scientific advances increasingly emerge on timescales measured in months and years, while governance systems, regulatory frameworks, and international agreements often evolve over decades. This growing mismatch between the pace of innovation and the pace of governance has become one of the defining policy challenges of the 2020s.

1.6.1. The AI governance gap

Artificial intelligence (AI) has moved from academic research to operational deployment across virtually every sector of science and society in under a decade. AI systems now assist in drug discovery, climate modelling, crop yield prediction, and disease surveillance. They are embedded in hiring decisions, credit assessments, and criminal justice systems in ways that have significant equity implications.

The governance of this transformation is lagging dangerously. The OECD AI Policy Observatory tracks more than 700 national AI strategies and policy initiatives, but the translation of strategy into effective, enforceable governance remains uneven. For sustainable development, the governance gap in AI is particularly consequential. The data used to train large AI models are predominantly drawn from high-income countries and from a small number of languages. The resulting systems reflect the priorities, assumptions, and blind spots of those environments. For instance, AI agricultural advisory systems trained on Iowa corn farm data may offer little useful guidance to a smallholder farmer in Malawi; AI-assisted diagnostic tools validated in European hospital datasets may perform poorly when deployed in contexts with different disease prevalence and patient demographics, highlighting the importance of context-specific data, local knowledge and adaptive design.

The implications extend beyond technical performance. When AI systems are developed using data, assumptions, and priorities that do not reflect the diversity of global contexts, they risk reinforcing existing inequalities rather than reducing or eliminating them. Countries and communities with limited capacity to develop, adapt, or govern AI technologies may become increasingly dependent on systems designed elsewhere, creating new forms of technological dependence and exclusion.

The same data-asymmetry mechanism produces gendered consequences. Women's experiences, health data, labour patterns and social roles are systematically under-represented in the global datasets on which AI models are trained, with effects ranging from biased diagnostic tools to discriminatory hiring algorithms. UNESCO's 2021 Recommendation on the Ethics of Artificial Intelligence dedicates a full policy area to gender equality and is implemented in part through the Women4Ethical AI platform [21].

1.6.2. The Quantum and data divide

Beyond AI, quantum computing and advanced data infrastructure represent the next frontier of transformative technology, and the next potential axis of inequality. Quantum computing, when it reaches practical scale, will transform cryptography, drug discovery, and materials science in ways that could either democratize scientific capability or create a new form of technological stratification depending entirely on who controls the technology and under what governance model.

Unlike previous generations of scientific infrastructure, emerging technologies such as quantum computing and advance Earth observation systems are developing at a scale and cost that may place them beyond the reach of many national research systems. This raises important questions about how access, governance, and capacity-building can be structured so that the benefits of these technologies contribute to global sustainable development rather than further concentrating scientific and technological advantage.

Earth observation infrastructure, such as satellites, sensors, and the data processing systems that make them useful, is similarly concentrated in a small number of countries. The data that could most powerfully support climate adaptation planning in vulnerable regions is largely generated by, owned by, and processed in high-income countries. Access to this data is often conditional on licensing arrangements, infrastructure capacity, or political relationships that many lower-income countries cannot meet.

1.6.3. UNESCO's normative response to emerging technologies

The governance lag documented above is not a problem without precedent or tools. UNESCO has spent the past decade building normative and operational frameworks designed to close the gap between the speed of technological change and the speed of governance.

This role reflects UNESCO's unique mandate within the United Nations system as the lead agency for science, education, culture, and ethics, enabling it to convene governments, scientific communities, and other stakeholders around shared principles for the responsible development and use of emerging technologies.

The UNESCO Recommendation on the Ethics of

Artificial Intelligence, adopted by all 193 Member States at the 41st session of the General Conference in November 2021, is the first global standard-setting instrument on AI ethics [22]. It establishes principles of human rights, fairness, transparency, accountability, and human oversight, and defines eleven policy areas for implementation, ranging from data governance to environment and ecosystems, from health and social wellbeing to gender, culture, and education. UNESCO has developed a Readiness Assessment Methodology (RAM) to help Member States assess the institutional, legal, technical, and social capacities required to implement the Recommendation in practice. By 2025, the RAM had been applied in more than 60 countries [23]. The resulting assessments identify specific institutional gaps and produce country-level roadmaps for ethical AI governance. The pattern across these assessments is consistent: most countries lack the enforcement capacity and technical expertise required to translate ethical principles into operational governance. This global compact must be complemented by activating and operationalizing existing ethics charters at the national and regional levels, such as the Arab Science and Technology Ethics Charter, translating indicative documents into enforceable government policies.

In the field of quantum science and technology, UNESCO served as the lead agency for the International Year of Quantum Science and Technology, proclaimed by the UN General Assembly in June 2024 to mark one hundred years since the foundational development of quantum mechanics. The IYQ opening ceremony at UNESCO Headquarters on 4 and 5 February 2025 convened more than 1,200 participants, including several Nobel Prize laureates, to launch a year of activities focused on raising awareness, building capacity in the Global South, and addressing the emerging 'quantum divide' between well-resourced and under-resourced regions. UNESCO's global mapping of quantum capacity, conducted as part of IYQ, identified more than 150 countries without any formal national quantum strategy, while global investment in quantum research and development had reached approximately USD 55.7 billion. Women represent fewer than 2% of job applicants in the quantum sector.

Building on the legacy of IYQ 2025, UNESCO launched the Global Quantum Initiative 2026 to 2028 as a long-term platform for dialogue, cooperation, and capacity building. The Initiative focuses on three priorities: mapping and expanding access to quantum research infrastructure; building capacity

Prof. Anne L'Huillier, physicist and 2023 Nobel Laureate in Physics, delivered the keynote address at the OpeningCeremony of the International Year of Quantum Science and Technology at UNESCO Headquarters, Paris, France.
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in the Global South, with an initial focus on women scientists in Africa through open-access courses and mentorship programmes that have already engaged 40 women from 15 African countries; and developing ethical and governance frameworks for quantum technology in advance of large-scale deployment. The Initiative represents an explicit attempt to apply the lessons of the AI governance experience to a technology still at an earlier stage of maturity: building the steering mechanisms before the vehicle reaches full speed.

UNESCO has also adopted the Recommendation on the Ethics of Neurotechnology at the 43rd General Conference in November 2025, extending the normative framework established by the 2021 AI Ethics Recommendation to a domain that directly touches cognitive autonomy and mental privacy. Together, these instruments and initiatives represent the most substantial attempt by any international organization to close the governance lag in emerging technologies. Their scale and reach remain substantially smaller than the commercial forces shaping technology deployment on the ground. The reform priority in Chapter V on aligning emerging technologies with ethical and sustainability frameworks reflects the conclusion that this normative infrastructure, while necessary, must now be matched by operational capacity in Member States and in the research communities the Decade mobilizes.

1.7. From diagnosis to action: The Decade's response

The five challenges set out in the previous sections, stalled SDG progress, the climate-inequality nexus, the unequal distribution of research capacity, pressures on trust in science, and the governance gap around emerging technologies, are not separate problems. They are mutually reinforcing dimensions of a single broader challenge: organizing the global scientific enterprise in ways that match the scale, urgency and equity demands of the 2030 Agenda.

This is not primarily a question of what science knows. In most of the domains where the SDGs are regressing, the scientific community already possesses substantial knowledge about what needs to be done. The gaps are in translation, from knowledge to policy, from policy to implementation, and from high-income-country research to applications in the contexts where the need is greatest. They are in incentives, where academic reward systems still undervalue the transdisciplinary and solutions-oriented work that the SDGs require. And they are in inclusion, with a global research system that remains significantly skewed toward the priorities of a small number of well-resourced nations.

> **"In a world of unprecedented wealth, knowledge and technologies, the denial of basic needs for so many is outrageous and inexcusable. At the same time, we have what it takes to breakthrough to a better future."** - UN Secretary-General's remarks at the launch of the SDG Report 2024, New York, June 2024

These challenges define the Decade's action agenda. The Five Outcomes set out in §1.1 provide the structure through which the Decade is responding: Outcome 1 addresses the trust crisis through scientific literacy and public empowerment; Outcome 2 addresses the SDG implementation gap through the production and application of actionable scientific knowledge; Outcome 3 addresses the governance gap around emerging technologies by advancing AI and data science for sustainable development responsibly and inclusively; Outcome 4 addresses the equity and access dimensions of the global research system through open science; and Outcome 5 addresses the structural fractures in research and innovation systems through their transformation toward the needs of science and society. The Decade's value lies in the coherence of this response, treating the five challenges as connected dimensions of a shared agenda rather than as isolated problems.

Many of the challenges highlighted throughout this chapter do not fit neatly within traditional disciplinary boundaries. Climate change, emerging technologies, public health, inequality, food systems, and sustainable urbanization are simultaneously scientific, social, economic, ethical, and governance challenges. The Decade therefore emphasizes interdisciplinary and transdisciplinary collaboration not simply as a desirable scholarly approach, but as a practical necessity for addressing interconnected global problems whose causes and consequences span multiple sectors and systems.

The IDSSD provides a unique framework for fostering these connections across scientific disciplines, policy communities, civil society, governments, and international institutions that have often operated in parallel rather than in partnership.

Chapter II turns from the global context to the Decade's empirical record so far, presenting the findings that have emerged from the first two years of implementation and the priorities for the years ahead.

Chapter 2:

Global findings from the first two years

The International Decade of Sciences for Sustainable Development has, in under two years, assembled a portfolio of 396 initiatives — 209 endorsed and 187 under review — across 79 countries and all five UNESCO regions. This chapter draws on the IDSSD Initiative Database and the 2024 to 2025 Progress Questionnaire to document what the Decade's first phase reveals so far: where the portfolio is reaching, what it is covering, where opportunities for expansion are clearest, and what the early implementation experience suggests about the conditions for delivery at scale. Five findings are presented, each grounded in the data available at the time of writing and interpreted alongside external benchmarks where relevant [24].

The data presented in this chapter reflects responses to a series of open, publicly announced Calls for Initiatives, complemented by active outreach through UNESCO's regional offices, scientific unions, academies, and partner networks. The 396 initiatives (209 endorsed and 187 under review) from 79 countries are therefore the result of a broad, multi-channel mobilization effort rather than a closed targeted survey. The response rate should be understood in this context: participation was self-selected and open to any qualifying scientific entity worldwide, which means the portfolio reflects genuine voluntary engagement rather than a statistically bounded sample.

2.1. Approach and methodological note

The findings in this chapter are drawn principally from two data sources held by the IDSSD Secretariat. The IDSSD Initiative Database records the 396 initiatives received across the first three Calls for Initiatives, including the 209 initiatives endorsed in the first and second Calls and the 187 initiatives submitted to the third Call and currently under review by the Decade's Advisory Committee. The

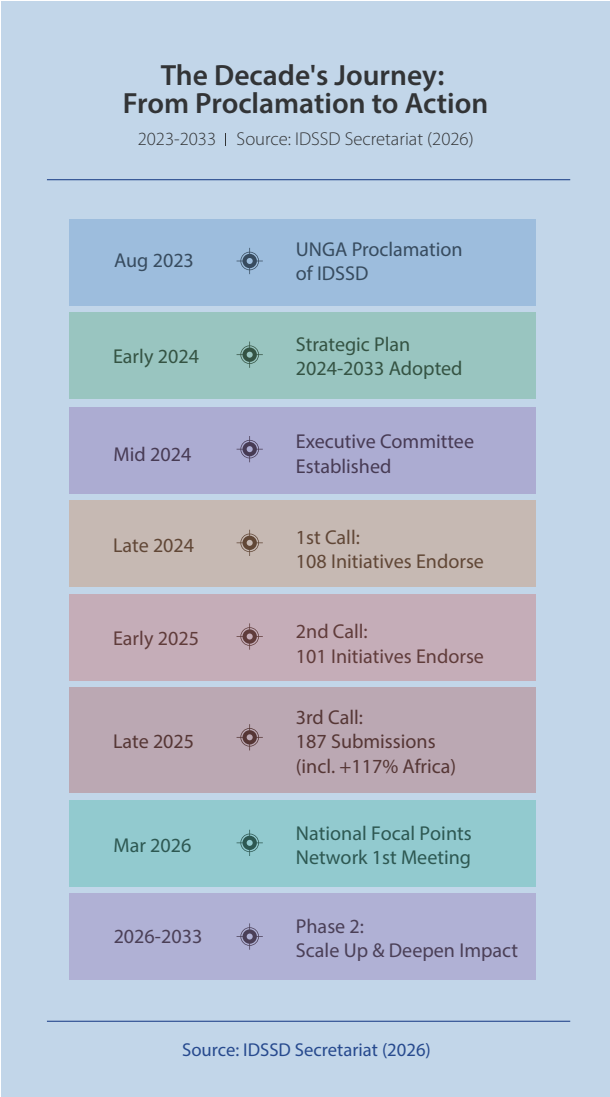
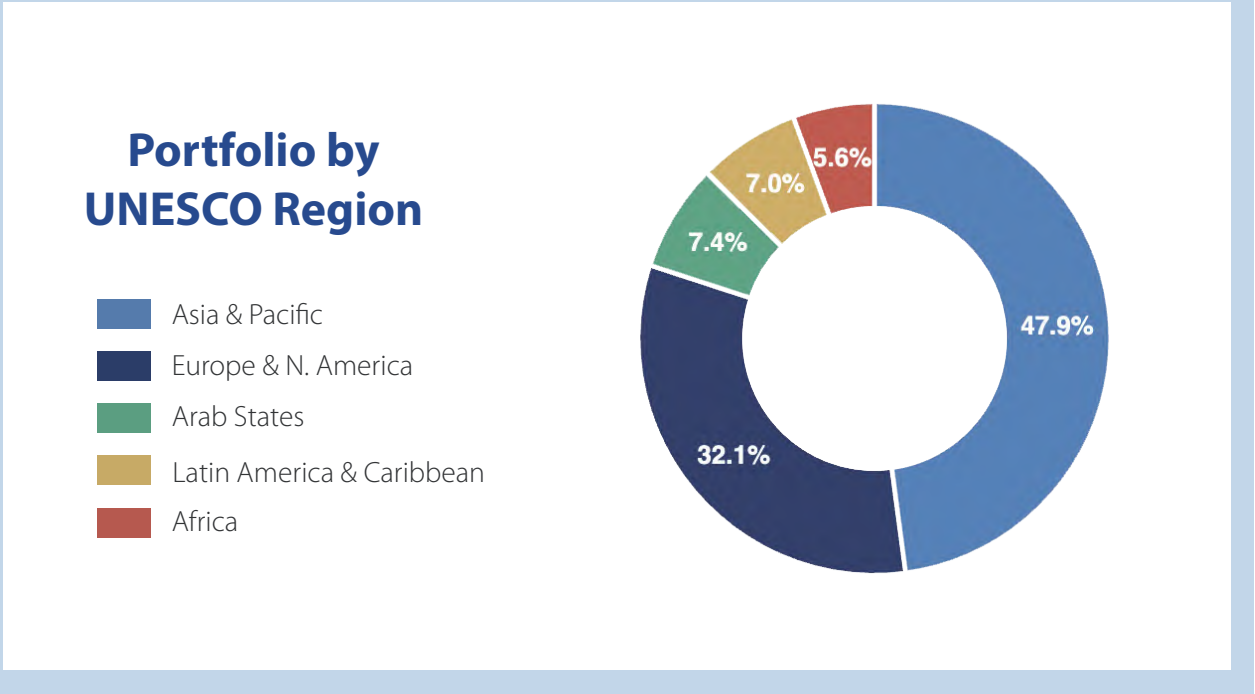


Figure 2.1. The Decade's Journey Timeline.

Figure 2.2. Diversity of Coverage Across the IDSSD Portfolio.



2024 to 2025 Progress Questionnaire was completed by 20 of the 209 endorsed initiatives, providing a first set of self-reported observations on implementation. External benchmarks for the global SDG context, R&D investment, food security and other contextual variables are drawn from the most recent UN, UNESCO, OECD and FAO published sources.

The unit of analysis is the endorsed or submitted initiative. The chapter therefore documents what the Decade's mobilization of scientific initiatives shows about thematic coverage, regional participation, portfolio composition, accessibility and implementation considerations. It does not attempt to draw findings on the Decade's governance architecture, its engagement of Member States beyond initiative counts, its partnerships with other UN entities, or its interactions with private sector and civil society actors. These dimensions are documented in Chapter III (The IDSSD Response Model), which sets out the Decade's governance structure, the National Focal Points Network and the mechanisms for partner engagement, and in Chapter VIII (Way Forward), which identifies stakeholder engagement as a priority for the next phase.

Two methodological notes apply throughout the chapter and shape how the findings should be read.

First, the analysis covers the first two years of a ten-year Decade. The endorsed-initiative base of 209 and the third-Call submission base of 187 are sufficient to identify clear directional patterns, but they are not large enough to support firm statistical conclusions about the global scientific community's overall response to the Decade. Where the chapter notes ratios, gaps or imbalances in portfolio composition, these are best read as indicative observations from the Decade's first phase, pointing to opportunities for future Calls and to areas where targeted Secretariat action can shape the portfolio's evolution.

Second, the Progress Questionnaire response base of 20 endorsed initiatives represents 9.6% of the endorsed portfolio at the time of analysis. This is a small and self-selecting sample, and the patterns it surfaces, on coordination, funding, partnerships and reporting, should be read as early signals from initiatives engaged enough with the Decade to file a return, rather than as a representative measure of the implementation experience across all endorsed initiatives. Strengthening the response base in subsequent reporting cycles is itself a priority for the next phase.

These caveats do not weaken the findings; they locate them properly. The Decade is at the beginning of its work, and the data infrastructure that will

support more comprehensive future analysis is now being built, and the patterns documented in this first Global Report are intended to guide the second phase of implementation rather than to draw definitive conclusions about a Decade that is still unfolding. Subsequent Global Reports, supported by larger response bases and a maturing National Focal Points Network, will be able to build progressively on the foundation set out here.

Finding 1: The Decade has achieved global reach, but participation remains uneven

Three global Calls for Initiatives have drawn 650 proposals (221, 242 and 187 across the three Calls), with 209 endorsed through the first two Calls and 187 under review in the third [25]. The portfolio spans all five UNESCO regions, addresses all 17 Sustainable Development Goals, and engages institutions ranging from national academies to community-based organizations. Endorsed initiatives include large-scale research programmes on Earth system modelling, open-access laboratory networks, collaborative data science schools, and community-based projects in fields from agroecology to heritage conservation. By any benchmark, this represents a rapid and substantive operationalization of the Decade's mandate.

However, the geographic distribution of this activity also reflects the speed with which the Decade moved from proclamation to implementation. The interval between the proclamation of the Decade and the launch of its first operational phase was relatively short, leaving limited time for broad-based outreach, preparatory coordination and awareness-raising across all regions. As a result, many countries and institutions, particularly in regions with more limited access to international scientific networks and communication channels, were not yet fully aware of the Decade during its initial phase. This affected the regional balance of proposal submissions and endorsed initiatives. Asia and the Pacific account for 52.8% of all initiatives (209 of 396), with a single country contributing 154 initiatives, or 38.9% of the total portfolio. Europe and North America contribute 23.4% (93 initiatives). Together, these two regions account for three-quarters of the current portfolio. While this concentration partly reflects broader global asymmetries in scientific capacity and investment, it should also be understood as a feature of the Decade's early implementation phase rather than a fixed pattern. Improving regional balance through stronger outreach, wider awareness, and more targeted engagement therefore became a priority for subsequent Calls for Initiatives.


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Figure 2.3. IDSSD Portfolio Coverage vs. SDG Implementation Gap.

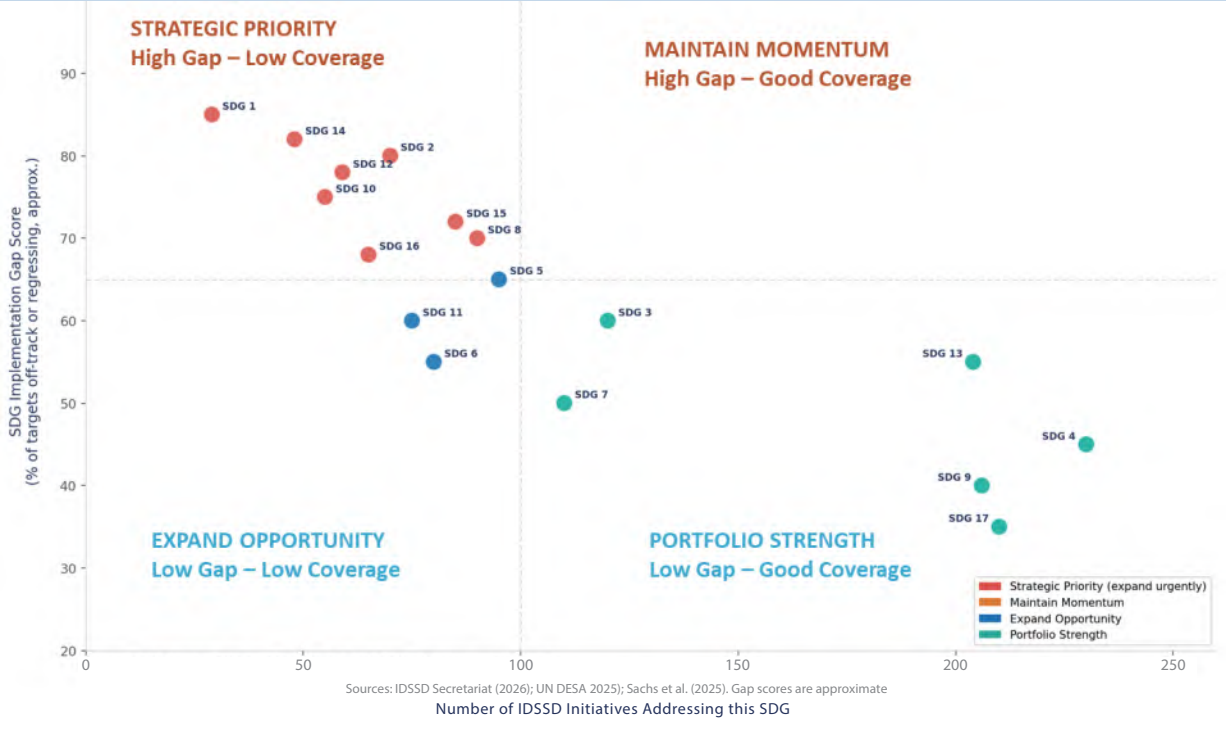
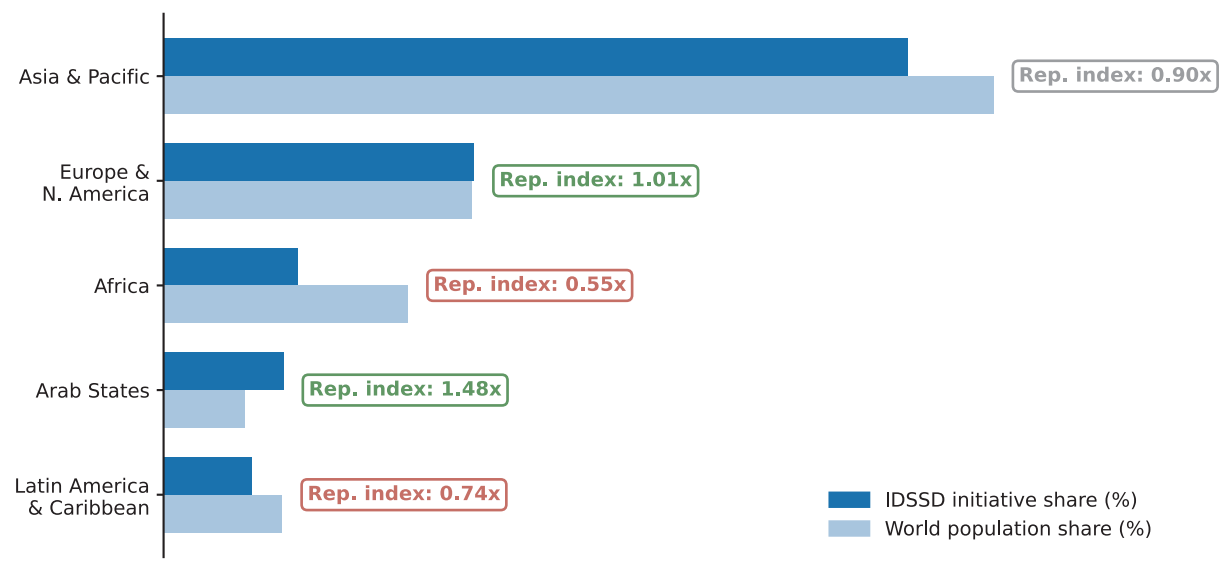


Figure 2.4. Regional Equity - Initiative Share vs. Population Share (UNESCO Regions).



The underrepresentation is most acute in the regions where scientific capacity-building is most urgently needed. Africa, home to 17.5% of the world's population, accounts for just 9.6% of IDSSD initiatives (38 of 396), yielding a representation index of 0.55 relative to its population share. When only endorsed initiatives are counted (excluding 3rd Call submissions still pending review), Africa's representation index drops to 0.33, meaning Africa accounts for roughly one-third of the portfolio share that its population would warrant. Latin America and the Caribbean, with 8.5% of the global population, holds 6.0% of initiatives (25 of 396), a representation index of 0.71. At the country level, the top five countries account for 58.3% of all submissions and the top ten for 68.6%. Meanwhile, 37 of the 79 participating countries, nearly half, have contributed only a single initiative each. The

portfolio's apparent geographic breadth thus conceals a fragile structure: its global character depends heavily on many countries whose engagement remains minimal. This pattern suggests that expanding participation is only one dimension of the challenge. Sustaining engagement across multiple Calls and supporting countries as they move from initial participation to long-term involvement may be equally important for building a geographically balanced and resilient portfolio. This imbalance should therefore be understood not only as a question of unequal participation, but also as a reflection of differing levels of implementation readiness, institutional capacity and existing scientific foundations across countries and regions. In response, the IDSSD Secretariat placed particular emphasis in the Third Call for Initiatives on "Science, technology and innovation for and with Africa" to help strengthen participation and engagement from the region.

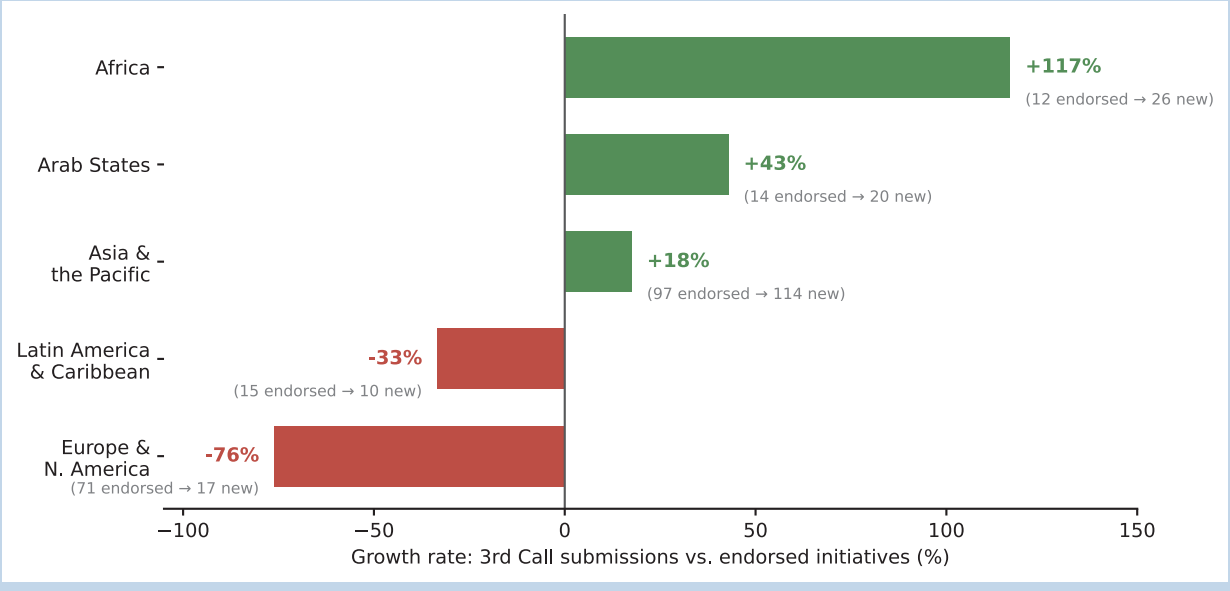
African initiatives grew by 117% relative to the endorsed baseline, as 26 new Third Call submissions joined the 12 initiatives endorsed in the first two Calls. The Arab States expanded by 43% and Asia and the Pacific by 22%. Europe and North America, whose endorsed baseline is already the largest of any region, submitted proportionally fewer initiatives, consistent with their already-high baseline of participation. This distribution is precisely the effect that targeted outreach is designed to produce: new participation grows disproportionally in previously underrepresented regions, while established participants continue to sustain their existing portfolios. Of Africa's total activity to date, 68.4% now consists of Third Call submissions currently under Advisory Committee review, and their consolidation through the endorsement process is the next step in cementing the diversification the Third Call initiated.

Finding 2: Portfolio coverage across the 2030 agenda and opportunities for strategic expansion

The IDSSD portfolio now spans the full breadth of the 2030 Agenda, with endorsed initiatives contributing in varying degrees to all 17 Sustainable Development Goals. Mapping that coverage against the UN Global Sustainable Development Report 2025 offers a picture of the Decade's current emphases and of the Goals where future Calls can extend the portfolio's reach.

SDG 4 (Quality Education), SDG 17 (Partnerships), SDG 9 (Industry and Innovation) and SDG 13 (Climate Action) represent the areas of deepest coverage to date, each attracting between 107 and 135 of the 209 endorsed initiatives (51% to 65% of the endorsed portfolio). Coverage across the other Goals varies and reflects the natural priorities of the proposing institutions, as well as the scope for strategic growth. Goals with lighter present coverage include SDG 2 (Zero Hunger, 69 initiatives,

Figure 2.5. 3rd Call Participation - Regional Diversification.



Agroecology farm in Cambodia (NGO free schools for girls), an IDSSD-endorsed initiative led by Toutes à l'école and Happy Chandara Schools
© Antony Holvoet/Toutes à l'école

17.4%), SDG 12 (Responsible Consumption and Production, 59, 14.8%), SDG 8 (Decent Work and Economic Growth, 54, 13.6%), SDG 14 (Life Below Water, 48, 12.1%) and SDG 1 (No Poverty, 28, 7.1%).

Cross-referencing portfolio coverage with the UN's assessment of global progress highlights both the areas of deepest current engagement and the areas where future Calls can extend the Decade's reach. The mapping for a selection of Goals is summarized below.

The Goals flagged as opportunities for expansion align closely with some of the UN's most pressing global concerns. SDG 2 (Zero Hunger) is classified by the UN as regressing, with four of its seven

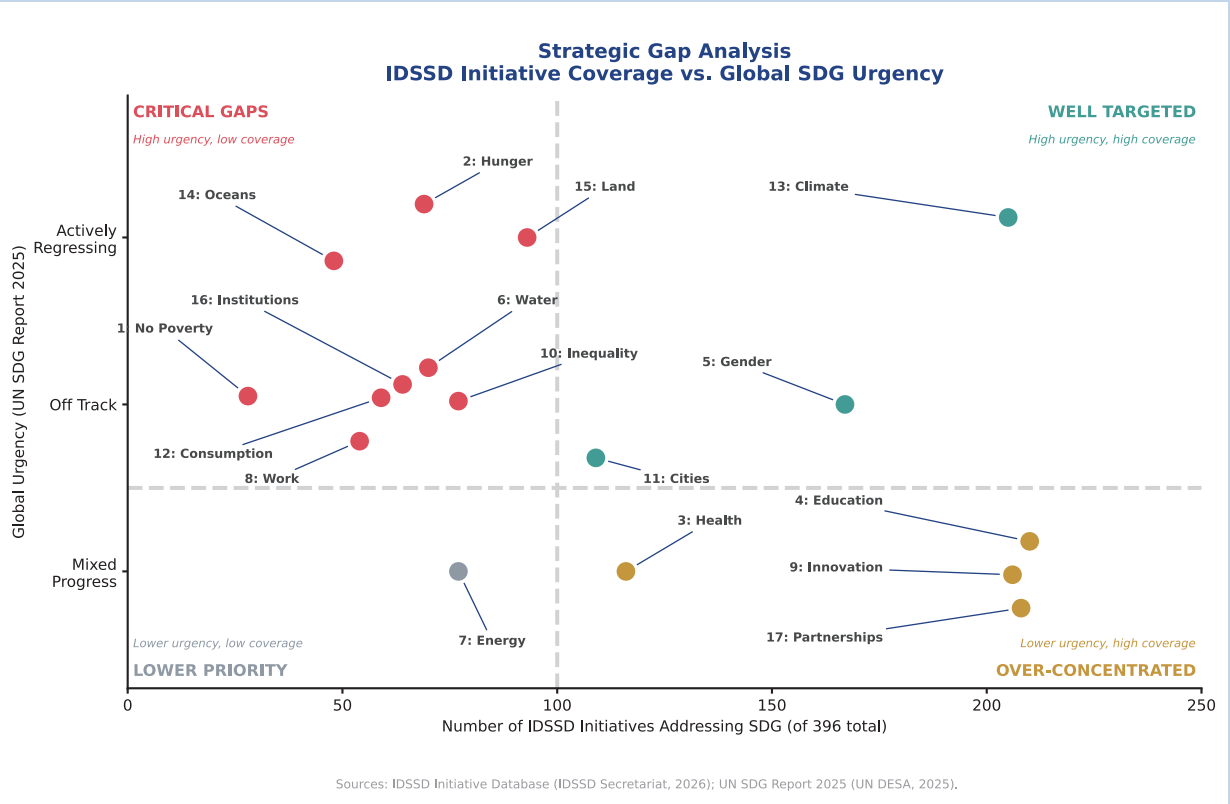
SDG	Endorsed Initiatives	Portfolio Coverage	UN Progress Status	Strategic Focus for Future Calls
SDG 1: No Poverty	29	7.3%	Off Track	Opportunity for expansion
SDG 2: Zero Hunger	70	17.6%	Regressing	Opportunity for expansion
SDG 14: Life Below Water	48	12.1%	Regressing	Opportunity for expansion
SDG 12: Responsible Consumption & Production	59	14.8%	Off Track	Opportunity for expansion
SDG 13: Climate Action	205	51.8%	Regressing	Area of established emphasis

tracked targets in decline and nearly 2.33 billion people facing moderate or severe food insecurity in 2023 [26]. SDG 14 (Life Below Water) is similarly classified as regressing, with 40% of its targets off-track. SDG 1 (No Poverty) remains an area of stalled global progress, with approximately 800 million people still below the international poverty line [27]. Strengthening the portfolio's contribution to these Goals in future Calls would connect the Decade's scientific capacity directly to some of the most urgent global development challenges. SDG 13 (Climate Action) offers a useful reference point for how portfolio scale can be achieved around a Goal of sustained global urgency. Endorsed initiatives in this area include programmes addressing marine observation systems, Earth system modelling, green fuel production and climate-resilient agriculture. The pattern shows that when a topic commands sustained political attention, scientific infrastructure and funding, the Decade's mechanisms are capable of mobilizing coverage at scale. The Secretariat's experience with climate-focused calls offers a template for extending similar depth to other strategic priorities over time.

The portfolio also demonstrates the flexibility of the Decade model. While broad thematic coverage has emerged organically through open Calls for Initiatives, targeted thematic priorities can be used to strengthen areas that are underrepresented yet closely aligned with pressing global needs. This combination of bottom-up initiative development and strategic portfolio steering provides a mechanism for maintaining openness while progressively improving alignment with emerging sustainable development priorities.

The shape of the portfolio reflects a structural feature of the open-call model that underpins much of the Decade's work. Universities and research institutions, which form the majority of initiative leads, tend to anchor their proposals in education (SDG 4), partnerships (SDG 17) and innovation (SDG 9), Goals that align naturally with their institutional mandates. Goals that call for community-level engagement, applied field science or cross-sectoral coordination, such as poverty reduction, food systems transformation, marine ecosystem protection and sustainable consumption, are typically harder to address through academic structures alone and often depend on partnerships with governments, NGOs and development agencies. The 3rd Call's introduction of strategic themes has already shown that

Figure 2.6. IDSSD Portfolio Coverage and Strategic Opportunities Across the SDGs.



targeted priorities can shift the portfolio's composition, and building on this approach in future Calls, in combination with cross-sectoral partnerships, represents a clear pathway for extending the Decade's coverage across the full 2030 Agenda.

The shape of the portfolio is not accidental. It reflects the research assessment dynamics analysed in Chapter I (§1.4). The Goals where the Decade's coverage is deepest (SDGs 4, 17, 9 and 13) tend to produce research outputs that align with conventional academic assessment, such as peer-reviewed publications, indexed journal articles and cited methodologies. The Goals where coverage is lighter (SDGs 1, 2, 12 and 14) typically call for field-based, community-engaged and transdisciplinary work whose outputs are less easily captured by those same metrics. The relative weights across the portfolio are therefore also a function of the wider research assessment system that Chapter V proposes to reform. The 3rd Call's targeted thematic rounds have already demonstrated that deliberate Call design can widen the portfolio's reach, and this rebalancing will be reinforced as institutions progressively recognize and reward the kinds of contribution that the broader 2030 Agenda requires. The two reform levers, targeted Call design and research assessment reform, work in combination rather than in isolation.

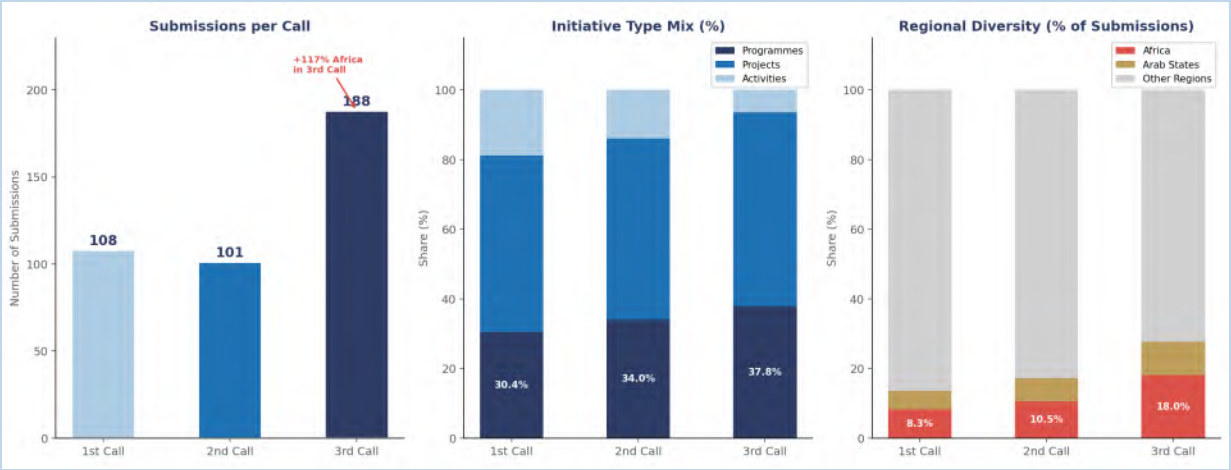
To address goals that are currently underrepresented but critical to the 2030 Agenda, such as SDG 1 (No Poverty) and SDG 16 (Peace, Justice and Strong Institutions), future Calls for Initiatives will implement targeted prioritization mechanisms. Proposals directly addressing these critical gaps will receive additional weighting during the endorsement process.

Finding 3: SDG 16 portfolio coverage and opportunities for strategic expansion in future calls

The IDSSD portfolio's coverage of SDG 16 (Peace, Justice and Strong Institutions), the Goal that addresses research and applied work on accountable institutions, the rule of law, access to justice, and effective and inclusive governance for sustainable development, offers a useful lens on how the Decade is currently engaging with one of the 2030 Agenda's most cross-cutting priorities. Across all three Calls, initiatives aligned with SDG 9 (Industry, Innovation and Infrastructure) outnumber those aligned with SDG 16 by a ratio of 3.2 to 1 (206 initiatives versus 65). This distribution reflects the strong representation of innovation-focused research actors among the proposing community and points to SDG 16-aligned research, particularly on peace, justice, and the institutions that make sustainable development possible, as a natural priority area for future expansion of the portfolio.

The distribution also varies across Calls. Among endorsed initiatives from the 1st and 2nd Calls, 21.0% are aligned with SDG 16. Among 3rd Call submissions currently undergoing Advisory Committee review, the preliminary share is 11.2%. The final share following 3rd Call endorsement may differ from the submission-stage figure. Taken together with the steady growth of innovation-fo-

Figure 2.7. Portfolio Evolution Across Calls.



cused work in areas such as AI, data platforms, Earth observation and digital infrastructure, this pattern highlights a clear opportunity to strengthen the complementary SDG 16 dimension of the Decade's work in the next phase.

A clear policy direction follows. Future Calls could consider a dedicated thematic stream on SDG 16, with particular emphasis on enabling developing countries to build regulatory, ethical and oversight frameworks for the technologies that the Decade's work is helping to advance, alongside applied research on accountable institutions, access to justice and inclusive policy processes. The endorsed portfolio already includes initiatives focused on science diplomacy, science-policy interfaces and institutional capacity-building, and these offer strong foundations to build on when scaling SDG 16-aligned work in future Calls.

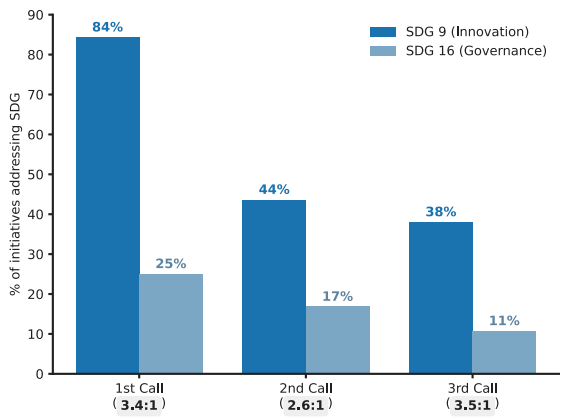


Fig 2.8A. Innovation vs. Governance Coverage Across Calls.

SDG 16 is addressed by 21.0% of initiatives endorsed in the 1st and 2nd Calls. Among 3rd Call submissions currently under Advisory Committee review, the preliminary share is 11.2%. Governance and institutional capacity work represents a clear opportunity for strategic emphasis in future Calls.

The finding highlights the importance of ensuring that advances in science, technology, and innovation are accompanied by corresponding investments in governance capacity. As emerging technologies become more prominent across the portfolio, strengthening expertise in regulation, ethics, institutional oversight, and science-policy interfaces may help ensure that technological progress contributes effectively to sustainable development outcomes.

The portfolio's relative emphasis on SDG 9 over SDG 16 connects directly to the global governance analysis in Chapter I (§1.5), which documents how governance and ethical frameworks are being established at a slower pace than the technologies they are intended to govern. Chapter V's reform priority on aligning emerging technologies with ethical and sustainability frameworks addresses this through two complementary mechanisms. The first is operational support for the implementation of existing UNESCO normative instruments, notably the 2021 Recommendation on the Ethics of Artificial Intelligence and the Global Quantum Initiative 2026 to 2028, in countries that have signed them and are now moving toward operationalization. The second is a dedicated SDG 16 thematic stream in future IDSSD Calls, designed to enable researchers and institutions, particularly in developing countries, to build regulatory and oversight capacity alongside the technologies the Decade is helping to advance. The finding also reinforces the value of the science-policy interface reform in Chapter V, which provides the functional channels connecting technical expertise to legislative and regulatory decisions so that normative frameworks translate into practice.

Finding 4: Portfolio maturity, SDG coverage shifts, and cross-cutting priorities across calls

The portfolio that has emerged across the first three Calls shows clear signs of maturation in two complementary dimensions: the type of initiative being submitted, and the breadth of SDG coverage across the proposing community. This finding documents both, and surfaces gender mainstreaming as a featured cross-cutting priority for the Decade.

On initiative type, the evolving composition of submissions reveals a broadly positive strategic shift. Programmes, the most ambitious initiative category requiring multi-year institutional commitments aligned with at least two Decade outcomes, rose from 30.4% of 1st Call submissions to 37.8% of 3rd Call submissions. Projects remained stable at approximately 51% to 56%. This pattern suggests that the Decade is catalysing increasingly structured, long-term scientific collaborations rather

than one-off interventions. Endorsed programmes in fields ranging from research data science and open laboratory access to light source facilities for Global South scientists illustrate this trajectory toward sustained, infrastructure-building commitments.

The most notable compositional shift over this period, however, is the decline of Activities, which fell from 18.8% in the 1st Call and 21.4% in the 2nd Call to 6.4% in the 3rd Call. Activities, defined as standalone events such as science popularization campaigns, workshops and training courses, serve a function of broader strategic value than their scale suggests: they are the lowest-barrier entry point for institutions and countries engaging with international science frameworks for the first time. The decline is not uniform across regions. In Europe and North America, Activities fell from 32% of endorsed initiatives to zero in the 3rd Call. In the Arab States, the drop was similarly severe, from 21% to zero. In Asia and the Pacific, by contrast, Activities remained stable at approximately 9% across both periods. This regional pattern suggests that the decline is partly driven by a shift in the types of institutions engaging with the Decade, as European and Arab State actors move toward larger-scale commitments, rather than by a uniform increase in the barriers to entry. Sustaining accessible entry points for less-resourced institutions in subsequent Calls will be important to ensure that portfolio maturation does not narrow the Decade's base of participation.

Beyond initiative type, the SDG coverage of the portfolio shifted across Calls in both directions, reflecting the changing thematic emphases of the proposing community as the Decade expanded. The most pronounced single shift was in SDG 5 (Gender Equality), which is examined in detail below. Broader SDG coverage patterns between endorsed and 3rd Call portfolios will be analysed more fully in the next Global Report, once the 3rd Call endorsement process is complete and like-for-like comparisons can be drawn.

Gender equality is highlighted here as a featured cross-cutting priority because it is both a strategic priority for UNESCO and the IDSSD, and was named explicitly as one of three strategic themes in the 3rd Call for Initiatives, alongside artificial intelligence for sustainable development and science, technology and innovation for and with Africa. It is important to distinguish two related but separate dimensions when reading the data that follows. The first is the share of initiatives that include SDG 5 (Gender

Women at the Core: Digital Community Centers for Inclusive Innovation, an IDSSD-endorsed initiative led by New Sun Road Guatemala

Equality) as a substantive thematic focus in their design and stated objectives, that is, initiatives whose research questions and outputs are oriented toward advancing gender equality as a Goal in its own right. The second is the gender composition of the institutions, teams and individuals leading the initiatives, which is a different question and is addressed separately below. The figures presented in this paragraph relate to the first dimension only.

The share of initiatives aligned with SDG 5 as a thematic focus declined from 50.5% of initiatives endorsed in the 1st and 2nd Calls to 31.4% of 3rd Call submissions, a 19.1 percentage point shift that represents the largest proportional drop in coverage for any SDG between the two periods. The decline is not uniform across regions. Europe and North America held steady (59% to 59%). Latin America and the Caribbean increased its SDG 5 thematic coverage substantially between endorsed and 3rd Call submissions. The aggregate decline is driven primarily by Asia and the Pacific (down 18 percentage points) and the Arab States (down 37 percentage points), the two regions that also contributed the largest volume of 3rd Call proposals. This pattern suggests that the SDG 5 challenge is not one of declining global commitment to gender equality, but rather one of differential thematic engagement: the regions driving the Decade's quantitative growth are not integrating SDG 5 as a substantive research focus at the same rate as those with more established gender-equality frameworks.

Alongside the SDG 5 thematic-coverage analysis above, the Secretariat has begun implementing structural measures to capture gender data at additional levels in subsequent reporting cycles. These measures address the second dimension introduced earlier in this finding, the gender composition of the people and institutions leading the Decade's work, and include capturing submitter and lead-investigator gender at the point of application, gender-disaggregated reporting from endorsed initiatives on team composition and intended beneficiaries, and the development of minimum gender criteria for endorsement under future Calls. These measures align with broader UNESCO priorities on gender equality in science and will provide a more granular evidence base for subsequent Global Reports, complementing the SDG 5 thematic-coverage data presented above.

Read together, the trends documented under this finding, the decline of Activities and the regional

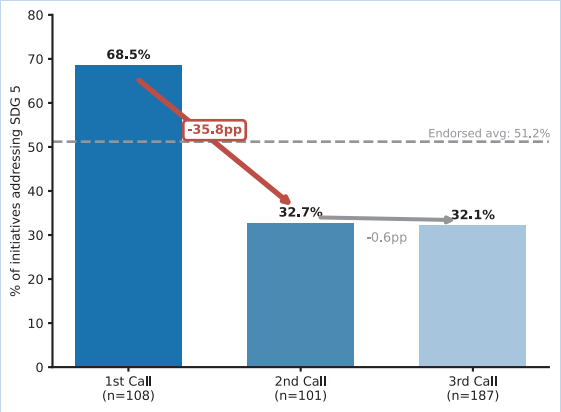


Fig 2.8B. SDG 5 (Gender Equality) Coverage Decline Across Calls.

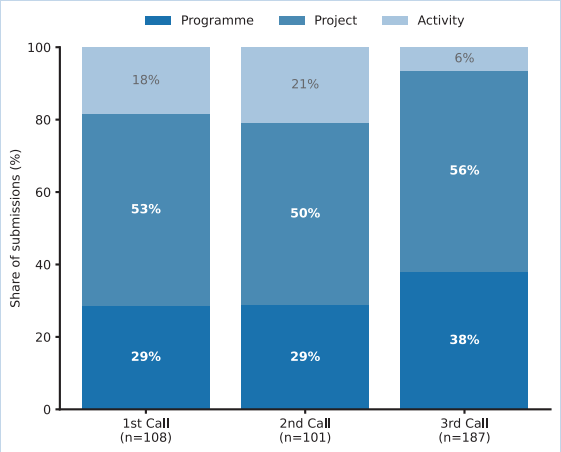


Fig 2.9. Portfolio Composition - Initiative Type by Call.

concentration of the SDG 5 thematic-coverage decline, point in the same direction: voluntary thematic framing alone is not sufficient to sustain cross-cutting commitments as a portfolio grows. The 3rd Call explicitly named gender equality in science as one of three strategic themes, yet SDG 5 thematic coverage fell by 19.1 percentage points overall, driven by the two regions contributing the largest volume of submissions. Regions with established gender-equality frameworks (Europe and North America, Latin America and the Caribbean) held steady or improved. This pattern supports the reform priority in Chapter V on gender mainstreaming through structural rather than purely rhetorical mechanisms: structured gender data collection, minimum gender criteria for endorsement, and regionally differentiated support for the integration of gender considerations into research design. The decline of Activities similarly highlights the importance of maintaining accessible entry

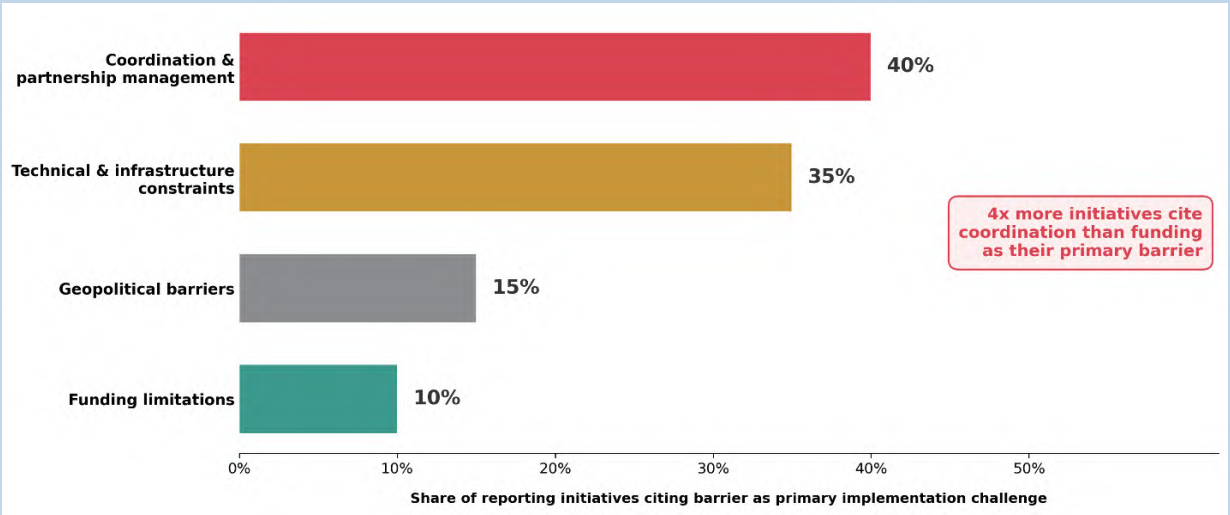
points for institutions with more limited resources or experiences in international scientific collaboration, ensuring that portfolio maturation remains compatible with broad participation.

Finding 5: Strengthening coordination and monitoring in the next phase of implementation

Of the 209 endorsed initiatives, 20 submitted progress questionnaires during the 2024 to 2025 reporting period, a response rate of approximately 9.6%. This rate should be interpreted in context. A substantial share of initiatives were endorsed in the more recent rounds of the Decade, and for many partners the endorsement notification, the reporting cycle and the first operational milestones have only recently aligned, meaning the current cycle captures an early snapshot of implementation rather than a steady state. The relatively small sample of 20 responses therefore cautions against firm portfolio-wide conclusions at this stage. What it does indicate clearly is a valuable opportunity to strengthen the monitoring framework so that progress reporting becomes simpler, more consistent and more closely aligned with the rhythm of implementation, which would in turn expand the evidence base available to the Secretariat and Member States in future reporting cycles.

Within this limited sample, the picture is broadly positive. 95% of responding initiatives cite concrete achievements, all 20 have produced outputs or organized events and 80% report active international partnerships. The reporting initiatives span a range of categories and regions, including collaborative data science schools, resilience and sustainability research programmes and earth science research collaborations. The sample is small and is likely to be self-selecting, since actively progressing initiatives are more inclined to report, but these responses provide early, encouraging evidence that

Figure 2.10. Primary implementation considerations reported by IDSSD initiatives] Distribution of primary implementation considerations cited by the 20 endorsed initiatives (of 209) that responded to the 2024 to 2025 progress questionnaire. Within this limited sample, coordination and partnership management is cited more frequently than funding, pointing to coordination support as an area where targeted investment may yield particularly strong returns as the portfolio grows. Source: IDSSD Progress Questionnaire.



As this report reflects the Decade's early implementation phase, several findings should be interpreted as directional indicators rather than definitive long-term trends. The initiative portfolio, reporting systems, and National Focal Points Network are still evolving, and future reporting cycles will benefit from expanded participation, improved monitoring mechanisms, and larger longitudinal datasets capable of assessing implementation outcomes over time.

the endorsed portfolio is already generating tangible scientific outputs and partnerships where implementation is under way.

Within this limited sample, a clear pattern emerges on the nature of the challenges that responding initiatives identify. When asked to identify their primary implementation challenge, 40% of responding initiatives cited coordination and partnership management, including the complexity of managing multi-stakeholder and cross-border scientific collaborations. Technical and infrastructure constraints were cited by 35%, geopolitical considerations by 15% and funding limitations by 10%. While 20 responses are too few to support firm portfolio-wide conclusions, the consistency with which coordination is cited as a primary consideration suggests that it warrants closer attention as the monitoring base expands in the coming reporting cycles.

If this early pattern is confirmed as the sample expands, the practical implication is encouraging. The Decade's multi-stakeholder model, which is one of its defining strengths in terms of inclusivity and reach, also creates genuine coordination demands for participating institutions. Targeted investment in coordination support, rather than in programme funding alone, may therefore yield particularly strong returns at this stage of implementation.

This points to a set of practical next steps that are largely within the Secretariat's operational capacity. Regional coordination hubs, standardized partnership frameworks and dedicated facilitation support would directly ease the coordination demands identified by responding initiatives. A reformed monitoring framework that makes progress reporting simpler and more consistent with the rhythm of implementation, and that is connected where appropriate to endorsement renewal, would expand the evidence base and strengthen accountability in parallel. The recently established National Focal Points Network, which held its first meeting in March 2026, offers a further structural mechanism for addressing coordination at the national level and for keeping the monitoring cycle aligned with partner realities.

Taken together, the early reporting coverage and the preliminary pattern on implementation considerations point toward a practical reform agenda that is largely within the Secretariat's operational capacity. Strengthening the monitoring framework, by making progress reporting simpler and more consistent and by linking it where appropriate to endorsement renewal, would expand the evidence base on which future analysis can rest. Investing in coordination infrastructure, through regional hubs, standardized partnership frameworks and dedicated facilitation support, would directly address the considerations most frequently cited by responding initiatives. These two investments are mutually reinforcing, since stronger monitoring generates the evidence needed to refine coordination support, and stronger coordination reduces the reporting burden on initiatives. Together they form a key precondition for the Decade's substantive ambitions in its second phase, connecting this finding directly to the reform priorities on institutionalizing science-policy advisory mechanisms set out in Chapter VI.

2.2. From findings to reform

Taken together, the five findings documented in this chapter form a coherent empirical case for the reform agenda presented in Chapter V. Each finding maps onto one or more of the reform priorities through a specific, evidence-based mechanism.

Three general conclusions follow from this mapping. **First,** the reform priorities in Chapter V are not abstract aspirations. Each is anchored in at least one quantitative finding from the Decade's own portfolio, reinforced by the global analysis in Chapter II, and supported by operational evidence from the progress questionnaire. The reform agenda is therefore empirically grounded rather than normatively imposed.

Second, the reforms are interconnected. Addressing the regional inequalities documented in Finding 1 without reforming the research assessment system that penalizes SDG-relevant work (Finding 2) would produce surface-level diversity without substantive rebalancing. Building governance capacity (Finding 3) without strengthening the science-policy interface (Finding 5) would produce frameworks without the channels to apply them. Each reform priority depends on at least one other to be fully effective. This is why Chapter V presents them as a single, integrated reform agenda rather than a menu of independent options.

Finding	Primary evidence	Reform priority
1. Global reach across regions, with strategic opportunities for further diversification	Asia-Pacific and Europe and North America account for the largest regional shares; Africa's endorsed representation index of 0.33; 117% 3rd Call growth in African submissions demonstrates how targeted outreach translates into new participation	Expand equitable access to research infrastructure
2. Portfolio composition and strategic opportunities across the 2030 Agenda	Portfolio coverage ranges from approximately 209 initiatives on SDG 4 to 29 on SDG 1; Goals including SDGs 1, 2, 12 and 14 represent strategic opportunities for expansion in future Calls	Reform research assessment systems (structural cause); targeted Call design (operational remedy)
3. Technology outpacing governance	3.2:1 SDG 9 to SDG 16 ratio; governance coverage declining from 21% to 11% between endorsed and 3rd Call	Align emerging technologies with ethical frameworks; Institutionalize science-policy mechanisms
4. Accessibility and gender mainstreaming at risk	Activities declined from 19% to 6%; SDG 5 coverage fell 19 percentage points despite being a strategic theme	Cross-cutting: structural gender integration and protection of entry points for smaller institutions
5. Strengthening coordination and monitoring in the next phase	Within the 20 responding initiatives, coordination was cited by 40% as the primary implementation consideration and funding by 10%; overall reporting rate 9.6% reflects an early stage of the monitoring cycle	Institutionalize science-policy advisory mechanisms; operational strengthening of IDSSD monitoring

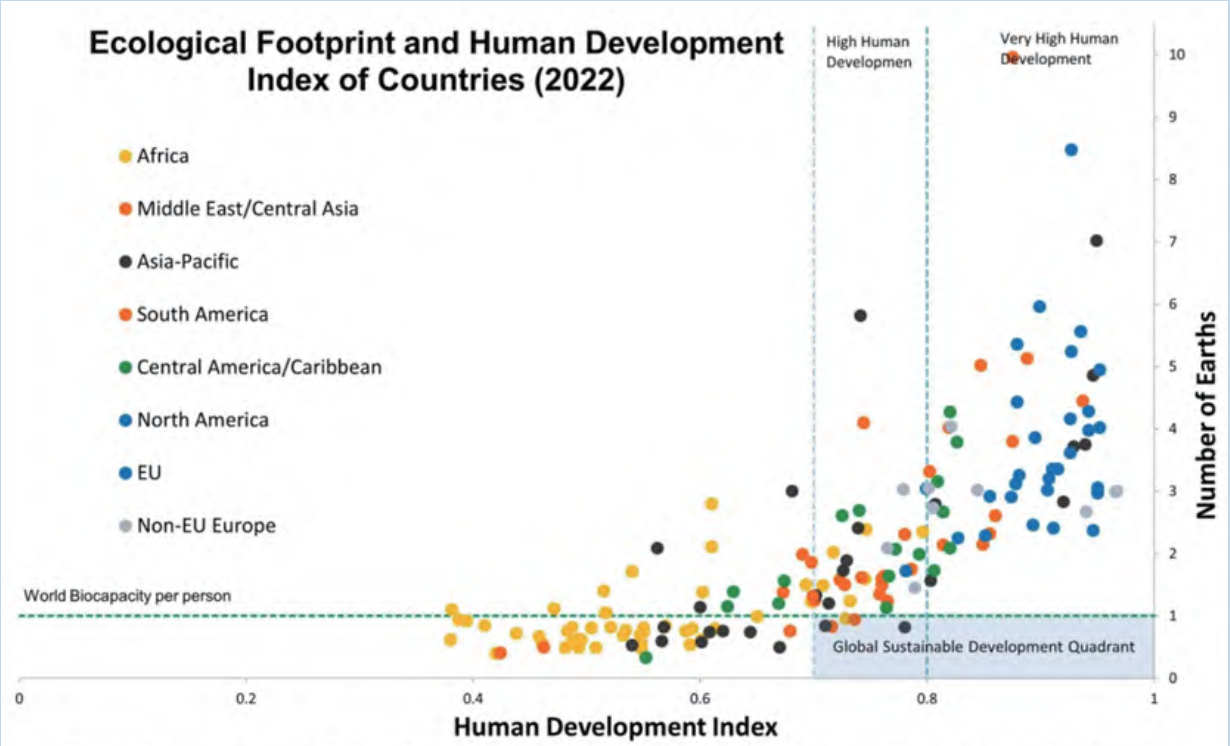
Third, the findings identify which reforms are within the Decade's own operational capacity and which require action by Member States. Coordination infrastructure, monitoring reform, call design, and gender-disaggregated reporting requirements can be implemented by the IDSSD Secretariat with existing resources. Research assessment reform, research infrastructure investment, institutionalized science-policy mechanisms, and the operationalization of UNESCO's emerging-technology frameworks require commitments from Member States and the wider research community. Chapter VI sets out the specific actions that governments can take to address the second set of reforms. Chapter V synthesizes both sets into a coherent agenda for the second half of the Decade. Chapter III describes the operational architecture through which the Decade pursues these objectives, the mechanisms, governance structures, and implementation logic that translate the evidence documented here into coordinated global action.

PERSPECTIVE:
Rethinking the Role of Science in Society
A contribution from the Earth-Humanity Coalition

About the Earth-Humanity Coalition

The Earth-Humanity Coalition (EHC) is an international network of scientific organizations established in April 2024 and publicly launched at the Sustainability Research and Innovation Congress in Helsinki in June 2024. Operating under the auspices of the IDSSD and led by the International Union of Pure and Applied Physics (IUPAP) in partnership with UNESCO, the Club of Rome, the BRIDGES (UNESCO-MOST) programme, the World Academy of Art and Science and others, the EHC works to integrate basic sciences, humanities, social scienc-

Figure 2.11. Ecological Footprint and Human Development Index. Source: Global Footprint Network.



es, traditional and indigenous knowledge and citizen inputs through transdisciplinary hubs at local, national and global levels. Its strap-line, Sciences for Equitable Wellbeing on a Healthy Planet, reflects its central proposition: that the global scientific enterprise can be reorganized to address sustainability challenges through deeper integration across knowledge systems, sectors and societal actors.

The EHC proposition

Scientific and technological progress has supported significant advances in human development, while also contributing to growing pressures on planetary systems. The central challenge of the 2030 Agenda is therefore not only to advance science, but to organize it differently: to support pathways that simultaneously increase human wellbeing and reduce environmental impact, in ways that vary across social, cultural and ecological contexts.

Five directions for transformative science:

Co-creating knowledge with society. Scientific knowledge is most effective when developed and applied in collaboration with communities, policymakers and other stakeholders, allowing locally relevant solutions to contribute to shared global objectives.

Integrating knowledge systems. Addressing complex global challenges requires bringing together insights from multiple disciplines and recognizing the value of traditional and indigenous knowledge systems alongside academic science.

Translating knowledge into action. Sustained impact requires methodologies grounded in local realities and collaboration across sectors, anchored in concrete challenges such as food systems, environmental management and urban sustainability.

Expanding access to knowledge. Open access, knowledge sharing and collaborative infrastructures are essential conditions for science to function as a public good and for wider participation in research and innovation processes.

Engaging diverse perspectives on emerging technologies. Technologies such as AI and quantum computing carry significant implications for equity, governance and global power dynamics,

and their development should be examined from a plurality of perspectives, including those of the Global South.

Alignment with the IDSSD

The EHC's perspective complements the IDSSD's structured response by surfacing how the practice of science itself can evolve to meet sustainability goals. Where the Decade's portfolio documents what is being done through endorsed initiatives, the EHC contribution offers a vision of how science, knowledge systems and societal actors can co-evolve in support of equitable wellbeing on a healthy planet.

High-resolution earth system modeling, analysis and prediction for a society resilient to hydrometeorological hazards, an IDSSD-endorsed initiative led by the Institute of Atmospheric Physics, Chinese Academy of Sciences
© Xing Yuan, Institute of Atmospheric Physics, Chinese Academy of Sciences

Chapter II – Key Messages

1.The Decade has achieved early mobilization across all five UNESCO regions, with clear evidence that targeted outreach can broaden participation. Three Calls for Initiatives have generated 397 proposals from 79 countries, with 209 initiatives endorsed in the 1st and 2nd Calls and 188 currently under Advisory Committee review. Asia-Pacific and Europe and North America account for the largest regional shares, while Africa's endorsed representation index sits at 0.33 relative to its population share. The 117% growth in African submissions in the 3rd Call, following the Secretariat's strategic emphasis on "Science, technology and innovation for and with Africa" and expanded linguistic accessibility, demonstrates that targeted outreach can shift regional participation. Consolidating this growth through the 3rd Call endorsement process is a clear priority for the next phase.

2.The portfolio addresses all 17 Sustainable Development Goals, with clear opportunities to expand coverage on Goals where the UN identifies the greatest implementation pressure. Deepest coverage to date is on SDG 4 (Quality Education), SDG 17 (Partner-ships), SDG 9 (Industry, Innovation and Infra-structure) and SDG 13 (Climate Action), each addressed by between 204 and 209 endorsed initiatives. Lighter coverage on SDG 1 (No Poverty, 29 initiatives), SDG 2 (Zero Hunger, 70), SDG 12 (Responsible Consumption and Production, 59) and SDG 14 (Life Below Water, 48) presents an opportunity for strategic expansion in future Calls, particularly given that several of these Goals are flagged as facing major challenges by external assessments. The 3rd Call's targeted thematic rounds have already shown how Call design can shift the portfolio's coverage.

3.SDG 16 (Peace, Justice and Strong Institutions) coverage is currently the lightest in the portfolio and represents a natural

priority for strategic expansion in future Calls. Initiatives aligned with SDG 9 outnumber those aligned with SDG 16 by 3.2 to 1 (206 versus 65). This portfolio observation reflects the strong representation of innovation-focused research actors among the proposing community. A dedicated SDG 16 thematic stream in future Calls, focused on accountable institutions, regulatory and ethical frameworks for emerging technologies, and inclusive policy processes, would complement the Decade's existing innovation work and align with the reform priority in Chapter V on aligning emerging technologies with ethical and sustainability frameworks.

4.The portfolio is maturing in both initiative type and SDG coverage, and the Secretariat is putting in place structural measures to track gender mainstreaming systematically. Programmes, the most ambitious initiative category, rose from 30.4% of 1st Call submissions to 37.8% of 3rd Call submissions, while Activities declined from 18.8% to 6.4%, narrowing the lowest-barrier entry point for first-time participants. The share of initiatives that include SDG 5 (Gender Equality) as a substantive thematic focus declined from 50.5% to 31.4% between endorsed and 3rd Call submissions, with the decline regionally concentrated. The Secretariat has begun implementing structural measures including capture of submitter and lead-investigator gender at application, gender-disaggregated reporting from endorsed initiatives, and minimum gender criteria for endorsement under future Calls, complementing the SDG 5 thematic-coverage analysis presented in this chapter.

5.The first progress data, although limited in scope, point to coordination support and reporting infrastructure as priorities for the next phase. Among the 20 endorsed initiatives that responded to the 2024 to 2025 progress questionnaire, 40% cited coordination and partnership management as their primary implementation consideration, and 10% cited funding. The 9.6% questionnaire response rate reflects the early stage of the Decade's monitoring cycle and, as set out in §2.1, the patterns surfaced should be read as early signals from initiatives engaged enough with the Decade to file a return rather than as a representative measure across the full endorsed portfolio. Expanding coordination support through regional hubs, standardized partnership frameworks, and progress reporting better aligned with implementation milestones, alongside the structural data improvements being put in place by the Secretariat, will strengthen both the operational foundations and the analytical baseline for the second half of the Decade.

Chapter 3:

The IDSSD response model

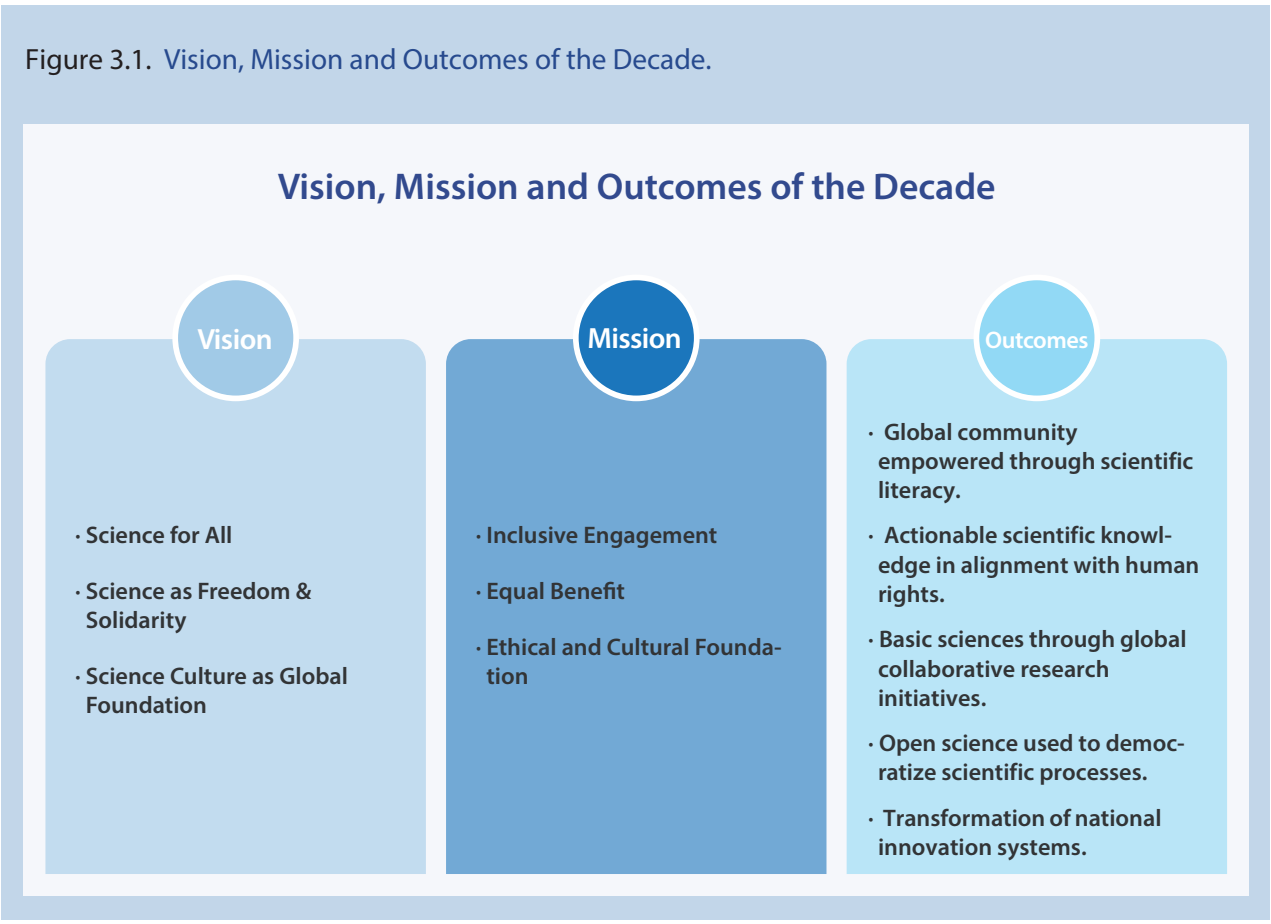
3.1. How the Decade works

The five findings documented in Chapter II converge on a single conclusion: the science-to-policy pipeline is broken, and repairing it requires not only better science, but a different architecture for how science is organized, funded, and connected to decision-making. The International Decade of Sciences for Sustainable Development (2024–2033) was designed precisely to provide that architecture, a global coordination framework for mobilizing scientific knowledge, partnerships, and innovation in service of the Sustainable Development Goals. Rather than implementing projects directly, the Decade operates by convening and endorsing initiatives led by scientific institutions, governments, international organizations, civil society, and the private sector. The Decade serves as an "umbrella" for many scientific initiatives, programs, events, and activities taking place both under the auspices of the UN and UNESCO and outside their formal structures. This decentralized model allows scientific communities worldwide to contribute to a shared global agenda [28].

The principal operational mechanism of the Decade is a series of global calls for initiatives through which institutions are invited to co-design and propose programmes, projects and activities aligned with the Decade's objectives. Together, these initiatives represent a rapidly expanding global portfolio of science-for-sustainability actions spanning all five UNESCO regions (Africa, Arab States, Asia and the Pacific, Europe, Latin America and the Caribbean). The portfolio demonstrates strong engagement from research institutions and scientific networks. The endorsed initiatives reflect a balance between long-term institutional collaborations and targeted scientific interventions. The Decade also functions as a platform for global scientific collaboration. Initiatives address all 17 Sustainable Development Goals, though the distribution reflects the strengths and capacities of the global research system. The Decade is guided by five strategic outcomes that shape the design of initiatives and partnerships.

Programmes	Projects	Activities
Programmes aim to contribute to achieving one or more expected outcomes of the Decade and support the realization of at least two objectives. A programme should last at least two years.	Projects are more specific initiatives, typically smaller in scope and scale compared to a programme. A project can be associated with a programme or implemented as an independent initiative.	Activities are standalone initiatives (such as science popularization campaigns, scientific workshops, or training courses). An activity may support a programme or project.

Figure 3.1. Vision, Mission and Outcomes of the Decade.



Monitoring and evaluation are integral to the Decade's implementation model. Initiative leaders submit periodic progress updates, which are consolidated by the Secretariat into annual reports and global assessments.

Early reporting indicates that 95% of responding initiatives report on concrete achievements, 100% have produced outputs or organized events, and 80% report on active international partnerships. Through this combination of global calls, distributed implementation, and coordinated monitoring, the Decade transforms hundreds of independent scientific efforts into a shared international movement. By connecting researchers, governments, and societal actors across regions and disciplines, it creates a collaborative ecosystem capable of accelerating the production and application of scientific knowledge needed to address the world's most pressing sustainability challenges.

3.2. Three Calls for Initiatives

The First Call: Establishing the operational baseline

Launched in November 2024, the first call for initiatives marked the transition from strategic commitments to implementation. In this initial cycle, which received 221 proposals, 108 initiatives were endorsed worldwide, including 20 Activities, 31 Programmes and 57 Projects, mobilizing governments, research institutions, industry and civil society across multiple scientific disciplines.

This mobilization responded to an urgent global context. According to the 2024 UN Sustainable Development Goals Report [29], only 17% of SDG targets are currently on track, while more than one-third are stalled or regressing, highlighting the need for science-based solutions.

The endorsed initiatives address major global risks including climate change, biodiversity loss, pollution, food insecurity, and growing inequalities. These initiatives demonstrate strong

Figure 3.2. The three Calls of the IDSSD: a staged evolution of the portfolio. Source: UNESCO. IDSSD Secretariat, 2026

First Call

Establishing the Operational Baseline
- starting implementation
- 108 endorsed initiatives
- first mobilization
- urgent global context

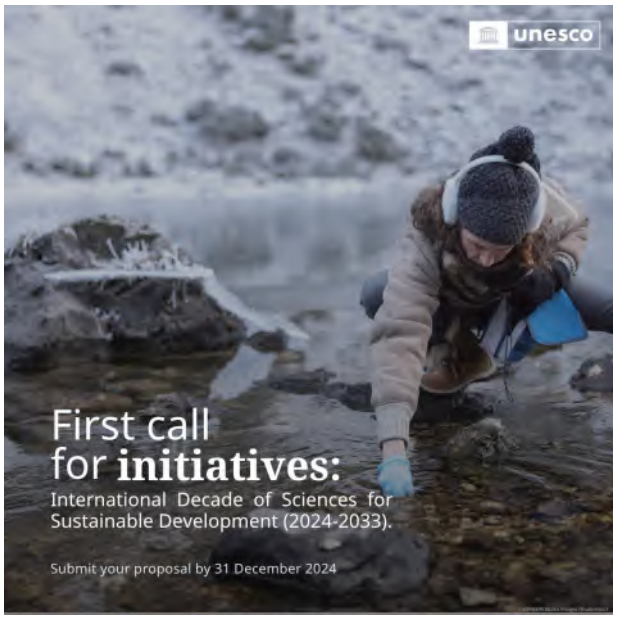
Second Call

Expanding Participation and Scientific Cooperation
- 101 endorsed initiatives
- 8 Priority Areas
- broader participation

Third Call

Strategic Targeting and Emerging Priorities
- 3 Priority Areas
- 187 proposals under review
- Africa +117%
- Arab States +43%

In its first two years of implementation, the Decade has received 396 initiatives — 209 endorsed and 187 under review — from 79 countries, spanning all five UNESCO regions and engaging with all 17 Sustainable Development Goals



Poster of the first call
© UNESCO

interdisciplinary collaboration, integrating climate science, engineering, biodiversity research, artificial intelligence, biotechnology, and digital infrastructure. They also promote open science and science diplomacy, strengthening equitable access to knowledge and international scientific cooperation.

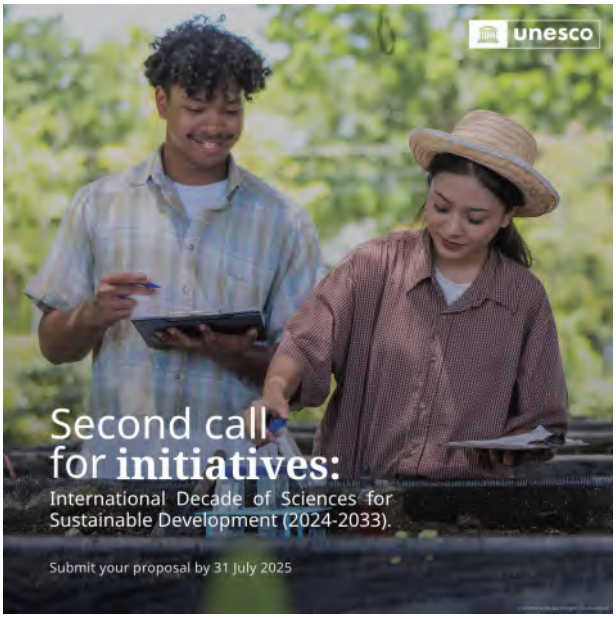
Together, the 108 endorsed initiatives established the operational baseline of the Science Decade, demonstrating how coordinated scientific action can contribute directly to sustainable development.

The Second Call: Expanding participation and scientific cooperation

Following evaluation by the IDSSD Secretariat and Advisory Committee in September and October 2025, among the 242 proposals received, 101 additional initiatives were endorsed, including 29 Programmes, 51 Projects and 21 Activities. Together with the first call, this brought the total to 209 endorsed initiatives from 59 countries.

Building on the experience of the first Call, and with a view to addressing gaps in the implementation of endorsed initiatives and strengthening delivery, the second Call placed particular emphasis on eight Strategic Priority Areas, including Artificial Intelligence and Big Data, Green Energy and Climate Solutions, Life Sciences and Health Technologies, Smart Agriculture and Food Security, Biodiversity and Ecosystem Restoration, Quantum Science and Emerging Technologies, Science Literacy, and Science-Policy Ecosystems.

Across the portfolio, initiatives emphasize capaci-



Poster of the second call
© UNESCO

ty-building, international cooperation and evidence-informed decision-making. Many projects highlight collaboration with vulnerable populations and under-served regions, particularly across Africa, aligning with the Decade's objective of reducing global disparities in scientific capacity.

At this stage, the Decade had mobilized initiatives across all five UNESCO regions Africa, Arab States, Asia and the Pacific, Europe, and Latin America and the Caribbean), forming a rapidly expanding platform for science-based international cooperation.

The Third Call: Strategic targeting and emerging priorities

The Third Call for Initiatives in December 2025 builds this momentum and generates 187 additional proposals, bringing the total database across all Calls to 396 initiatives — 209 endorsed and 187 under review — from 79 countries worldwide.

This rapid growth demonstrates the increasing global visibility of the Science Decade and its capacity to mobilize scientific communities. At the same time, Member States have emphasized the need for stronger strategic targeting, improved science–policy linkages and more focused action in priority areas [30].

The third call therefore introduced three strategic themes:

Artificial Intelligence for Sustainable Development

Promoting AI and advanced data systems to support climate resilience, health systems, food security, education and crisis response, while ensuring ethical and equitable deployment.

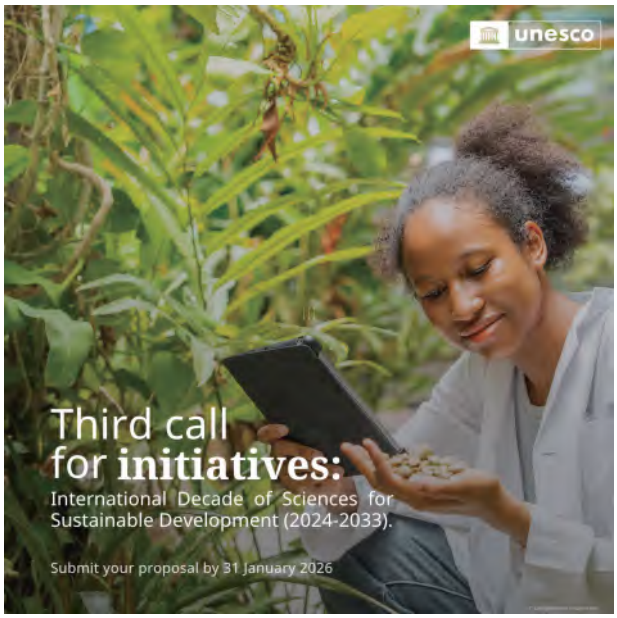
Gender Equality in Science

Advancing women's leadership in science, addressing systemic barriers to participation and strengthening inclusive scientific ecosystems.

Science for and with Africa

Strengthening African scientific capacity, knowledge ecosystems and regional cooperation led by African partners.

Regional participation patterns reveal both progress and persistent inequalities. While Africa remains underrepresented relative to its population share, the third call recorded a 117% increase in African participation, and participation from the Arab States increased by 43%, demonstrating that targeted outreach and thematic priorities can significantly broaden engagement.



Poster of the third call
© UNESCO

The third call aims to strengthen the strategic impact of the Decade by expanding both thematic focus and geographic participation. Expected outcomes include:

- **A stronger portfolio of high-impact initiatives ready for scaling, building on 397 science-for-sustainability initiatives worldwide**

- **Greater regional and thematic diversity, particularly from underrepresented regions Enhanced visibility for initiatives demonstrating measurable SDG contributions**

- **Stronger cooperation between scientific and policy communities, reinforcing evidence-based decision-making.**

Together, the three calls demonstrate the rapid evolution of the Science Decade from initial mobilization toward strategic coordination. Within less than two years, the Decade has built a global portfolio of 396 initiatives — 209 endorsed and 187 under review — across 79 countries, reflecting both the scale of scientific engagement and the growing recognition of science as a global public good essential for achieving the Sustainable Development Goals.

Chapter 4:

Spotlight case studies

This chapter presents evidence of the Decade in action across its ten thematic Priority Areas. Section 4.1 profiles two initiatives per area, summarizing key activities, results and SDG links. Section 4.2 captures the strategic contributions of key institutional partners, with a spotlight on the WFEO Engineering Capacity Building for Africa Programme (ECBAP).

Three patterns recur across the portfolio and connect directly to the report's earlier findings: the value of multi-country partnerships in amplifying national capacity; the imperative of moving from knowledge production to implementation; and the need for governance frameworks that keep pace with rapid technological change.

Overview: Ten priority areas

The 20 case studies in this chapter span all ten thematic Priority Areas of the Decade, covering 14 countries and all five UNESCO regions.

1. AI & Big Data	**2. Green Energy**
3. Life Sciences	**4. Smart Agriculture**
5. Biodiversity	**6. Quantum Science**
7. Science Literacy	**8. Science-Policy**
9. Gender Equality	**10. STI for Africa**

SDG coverage in the Chapter IV portfolio

The initiatives profiled below engage 13 of the 17 SDGs. Coverage is strongest on education, climate and partnership goals — consistent with the broader portfolio analysis in Chapter II.

SDG	Goal	Overall Status
SDG 4	Quality Education	●●● Strong
SDG 13	Climate Action	●●● Strong
SDG 17	Partnerships	●●● Strong
SDG 9	Industry & Innovation	●●● Strong
SDG 3	Good Health	●●○ Moderate
SDG 5	Gender Equality	●●○ Moderate
SDG 15	Life on Land	●●○ Moderate
SDG 14	Life Below Water	●○○ Moderate
SDG 1	No Poverty	●○○ Moderate
SDG 2	Zero Hunger	●○○ Moderate

4.1. Case studies by priority area

Each table presents two initiatives side by side under their shared Priority Area. Full initiative profiles are available on the IDSSD portal (unsciences-decade.org).

Priority Area 1 AI and Big Data for Sustainable Development

Digital Sustainable Development Goals Programme (DSP)
China

Co-organized International Forum on Sciences for Sustainable Development at the Zhongguancun Forum (March 2025): Engaged 200 participants from 16 countries and released the Beijing Initiative on Digital Sciences and Technology for Sustainable Development.
Published the Global-Scale Sustainable Development Scientific Monitoring Report (2025) and launched the LingXi SDGs Large Model.

· **SDGs: SDG 2, 6, 7, 11, 13, 14, 15**

Artificial Intelligence and Climate Education for Sustainable Futures (AI-CLIMATE EDU)
Türkiye

Developed a multi-level Monitoring and Evaluation framework covering students, teachers, and policy systems, aligned with a four-pillar model (learning outcomes, AI integration, ethics, and inclusion).
Established learning and feedback loops, including periodic reflection workshops and iterative pilot adjustments

· **SDGs: SDG 4, 5, 9, 13, 17**

Priority Area 2 Green Energy and Environmental Technologies

Innovative Sustainable Education Guided by Sciences for Sustainable Development as an Entrepreneurial Factor of the Local/Global Ecosystem (ESIOCDSEELG)
Brazil

Organized large-scale, inclusive educational events, such as the International Virtual Congress on Sustainability and Innovation, which delivered 21 programme activities including keynote lectures, scientific sessions, technical visits, and training modules, all made freely accessible online.
Developed an intellectual framework on Human Sustainability, translated into multiple languages and structured across five core dimensions (social, economic, environmental, political, and cultural).

· **SDGs: SDG 4, 9, 10, 17**

Addressing Global Warming Threats through Marine Observation Systems and AI Customizability (MOSAIC)
China

Launched the "Langya" 2.0 AI Model to improve AI-driven forecasting of complex marine phenomena and support disaster risk reduction.
Delivered the 2025 International Mooring Observation Technology Training Course and trained 24 young scientists from 20 countries.
Organized marine science outreach activities to promote public engagement and ocean literacy, including a "Beautiful Ocean City" drawing event for primary school students and guided tours of marine research vessels.

· **SDGs: SDG 4, 9, 13, 14, 17**

2026 Human Cell Atlas General Meeting
© Kyle Klein Photography and Human Cell Atlas, Inc.

Priority Area 3 Life Sciences and Health Technologies

Human Cell Atlas (HCA)
USA

Engaged over 3,900 scientists across more than 100 countries and around 1,700 institutions.
Generated over 100 million single-cell profiles, with its open Data Portal already integrating more than 70 million cells from over 11,000 donors across 500+ projects.
Advanced capacity-building through regional initiatives, including HCA Africa.

· SDGs: SDG 3, 4, 10, 17

Science Diplomacy, Neuroscience, Technology & Society for IDSSD (SciDiNTSforIDSSD)
Uruguay

Organized Art, Neuroscience and Technology events in Montevideo and Quito, including an exhibition on the International Day of Care, and delivered a successful hybrid postgraduate course on applied neuroscience and clinical practice for the Global South.
Organized and promoted the 4th edition of the hybrid postgraduate course on "Science Diplomacy, Neuroscience, Technology and Society".

· SDGs: SDG 3, 4, 16, 17

Priority Area 4 Smart Agriculture and Food Security

Global Fungi Partnership: Reconstruction of Fungal Tree of Life based on Mitochondrial Genomes of 10K fungal genera (10K Fungal Tree of Life)
China

Generated and published mitochondrial genomes for 200–500 previously unsequenced fungal genera, while developing a unified reference framework and online database for fungal genomics.
Established an international research infrastructure, integrating genome sequencing platforms, phylogenetic analysis tools, and collaborative data-sharing systems.

· SDGs: SDG 4, 9, 15, 17

Agroecology farm in Cambodia (NGO free schools for girls) (Happy Chandara)
Cambodia

Expanded to a 9,000 m^2 farm converted into 8 productive plots with automated irrigation systems, integrating 800 m^2 of greenhouses, 1,300 m^2 of anti-insect infrastructure, and 500 m^2 of cultivation tables.
Supported the provision of 2,000 daily meals while embedding sustainability education through over 400 hours of annual environmental training per student and creating pathways for more than 40 students to pursue higher education in agriculture.

· SDGs: SDG 1, 2, 3, 4,

Agroecology farm in Cambodia (NGO free schools for girls), an IDSSD-endorsed initiative led by Toutes à l'école and Happy Chandara Schools
© Antony Holvoet/Toutes à l'école

Agroecology farm in Cambodia (NGO free schools for girls), an IDSSD-endorsed initiative led by Toutes à l'école and Happy Chandara Schools
© Antony Holvoet/Toutes à l'école

Priority Area 5 Biodiversity and Ecosystem-Based Solutions

International Program for Sustainable Development of Aral Sea Region (Action Plan for Green Technology Development in Central Asia)
China

Established a demonstration site for cotton cultivation in saline soil using a "PV & Cotton Integrated Water-Fertilizer System".
Launched an information platform for international sci-tech industrial cooperation on Aral Sea ecological restoration.

· **SDGs: SDG 2, 4, 9, 15, 17**

Flyway University Alliance (FUA)
China

Promoted youth engagement and capacity-building through a 15-day international student summer camp on migratory bird conservation in the East Asian–Australasian Flyway, as well as a 3-Minute Online Speech Competition that attracted over 500 young participants from four countries.

· **SDGs: SSDG 4, 9, 15, 17**

Priority Area 6 Quantum Science and Technologies for Sustainability

Frontiers of Quanta to Cosmos Physics
China

Developed an open gravitational-wave "data challenge" platform, engaging over 10,000 online and on-site participants.
Advanced interdisciplinary capacity-building and scientific exchange through weekly ICTP-AP seminars, International Spring School, workshops and conferences.

· **SDGs: SDG 4, 9, 17**

Empowering BRICS+ with Emerging Technologies (BRICS+ Emerging Tech Empowerment)
China

Organized the 3rd "Su Song Cup" Future Industry Innovation Competition, attracting 186 projects from 12 BRICS member and partner countries.
Co-hosted the "Eurasia International Quantum Science Cooperation & Science Popularization Dialogue", bringing together around 100 participants and establishing a policy dialogue mechanism for Eurasian cooperation in quantum science and technology.

· **SDGs: SDG 4, 9, 16, 17**

Participants of the Flyway University Alliance (FUA) Summer School engage in a Chinese calligraphy session, experiencing traditional cultural practices during the programme.Flyway University Alliance, an IDSSD-endorsed initiative led by Beijing Forestry University

Empowering BRICS+ Countries with Emerging Technologies' Capacity Building for High-Quality and Sustainable Development, an IDSSD-endorsed initiative led by Beijing International Exchange Association

Wings of Sustainable Development: STEAM Laboratory for Scientific Literacy, an IDSSD-endorsed initiative led by Institute of Gifted Child of the National Academy of Educational Sciences of Ukraine

Priority Area 7 Science Literacy and Science Culture

Wings of Sustainable Development: STEAM Laboratory for Scientific Literacy: A training course on popularizing science and forming scientific literacy for adolescents (STEAM Lab for Scientific Literacy)

Ukraine

Developed a comprehensive science education ecosystem, including student learning materials, a practical workbook and a full curriculum, and implemented it through international Summer STEM school (2025), regional expeditions and laboratory-based trainings.

· SDGs: SDG 4, 5, 9, 17

CODATA-RDA Schools of Research Data Science (SoRDS)

UK / France

Hosted 27 schools across five continents, including international, online and regional training programmes that engaged students from more than 20 countries. Provided training in data science, research data management and Open Science to over 1,000 early-career researchers from low- and middle-income countries, and launched "train-the-trainer" schools to expand regional capacity and make training materials openly available online.

· SDGs: SDG 4, 5, 9, 10, 17

Women at the Core: Digital Community Centers for Inclusive Innovation, an IDSSD-endorsed initiative led by New Sun Road Guatemala

Priority Area 8 Science-Driven Policy Ecosystems for the Triple Planetary Crisis

Habitability of Subsurface Oceans in Icy Worlds (HOW)
China

Completed the 2025 Arctic manned deep-diving expedition: 98-day voyage, over 15,000 nautical miles, 56 operational days in the Arctic, 43 dives — including the world's first manned investigation of the Gakkel Ridge at 5,277 m under 80%+ sea-ice coverage.
Demonstrated a mobile "ship–submersible coordinated" mode suitable for drifting-ice environments.

· SDGs: SDG 9, 13, 14

From the Arctic for the Arctic: science diplomacy for sustainable future of the region and its people (FORAS)
Russian Federation

Organized five thematic sessions and two onsite events, reaching over 2,000 participants and establishing a dedicated expert network on key Arctic sustainability challenges.
Developed a long-term scaling pathway from 2025 to beyond 2032 through a MOOC-based open online school.

· SDGs: SDG 13, 14

Priority Area 9 Gender Equality in Science

Women at the Core: Digital Community Centers for Inclusive Innovation (MAYA-DCC)
Guatemala

Improved digital literacy and gender-equitable attitudes among 43 participants through integrated digital and gender training.
Demonstrated the effectiveness of combining digital training with discussions on gender norms in simultaneously improving practical skills, shifting social attitudes, and strengthening the foundations for women's empowerment in rural communities.

· SDGs: SDG 3, 4, 5, 10

Rooted Wisdom, Future Guardians: Transforming Amazonian Education through Intercultural Science (ARAUKI)
Ecuador

Provided comprehensive pre-university training to 16 Kichwa high school students, strengthening academic skills while integrating ancestral Kichwa knowledge with formal education, empowering youth, promoting gender equality, and supporting future access to higher education.

· SDGs: SDG 4, 5, 10

Priority Area 10 Science, Technology and Innovation for and with Africa

Advancing African Scientific Leadership for Sustainable Development (ARISE 2.0)
Kenya

The pilot phase mobilized €25 million to support 45 early-career researchers across 38 African countries, with each researcher receiving a grant of up to €500,000 over a five-year period.
Engaged more than 600 researchers through related networks.
Strengthened research capacity and talent development in Africa, helping build the next generation of scientific leaders.

· SDGs: SDG 4, 5, 10, 17

Building a Sustainable Future with Climate-Resilient and Community-Inclusive Aquaculture in Africa (ISCAPE)
Thailand

Trained 200+ participants across full aquaculture value chain and promoted direct Thailand–Nigeria technology transfer addressing persistent fish supply deficit.
Established a bilateral collaboration platform and Triple Helix network (academia–industry–government), laying the foundation for scalable, community-inclusive aquaculture systems in multiple Nigerian regions.

· SDGs: SDG 1, 2, 4, 10, 13, 17

4.2. Partner Contributions

The IDSSD depends on a network of institutional partners bringing complementary mandates and reach. The following summaries capture each partner's strategic contribution to the Decade's Five Outcomes.

International Science Council (ISC)

The ISC bridges scientific expertise and multilateral policy. Its two most direct contributions to the Decade are (1) science–policy brokerage via the UN, STI Forum and the Secretary-General's Scientific Advisory Board, and (2) building

consensus on research assessment reform — moving institutions away from bibliometric proxies toward criteria that reward transdisciplinary and SDG-oriented work.

Global Policy Unit (est. 2023) active at the UN in New York.

Contributing to DORA, CoARA and transdisciplinary research guidelines.

Scientific advice to UN officials on open science, sea-level rise, water governance and plastic pollution.

ISC Strategy 2025–2028 aligns explicitly with IDSSD Priority Areas 2 and 3.

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United Nations University (UNU)

UNU contributes research, policy analysis and capacity-building at the intersection of digital governance, gender, peace and environment — areas that map directly to the Decade's SDG 16 expansion priority. Its 2024 highlights span digital governance frameworks, gender-and-AI analysis and water security partnerships.

UNU-EGOV: digital governance frameworks for the Kingdom of Saudi Arabia (Vision 2030) and Portugal.

UNU-CPR: reviewed 92 peacebuilding initiatives (2017–2022) for science–human rights synergies.

UNU Macau: advancing Women, Peace and Cybersecurity and gendered implications of AI in Southeast Asia.

UNU-INWEH: water security and climate change partnership with Tajikistan.

4.2.1 Spotlight: Engineering capacity for sustainable development(W-FEO–ECBAP)

The World Federation of Engineering Organizations (WFEO) represents the global engineering community across 100+ countries. Its Engineering Capacity Building for Africa Programme (ECBAP), an endorsed IDSSD Programme, is one of the clearest examples in the Decade's portfolio of a systemic, locally driven model for translating scientific knowledge into development outcomes.

The implementation gap

TScientific advances continue to outpace the engineering systems needed to deploy them — particularly in Sub-Saharan Africa, where SDG progress is most challenged. ECBAP's analysis (drawing on 50+ UN reports) identified four persistent gaps: misalignment between engineering education and labour markets; limited access to Continuing Professional Development; insufficient exposure to AI and digital tools; and fragmented institutional ecosystems. These gaps are most acute in the sectors central to SDG delivery: energy, agriculture, infrastructure and water.

The ECBAP model and implementation circle

Figure 4.1. The ECBAP model: a systemic approach to engineering capacity-building. Source: WFEO–ECBAP.

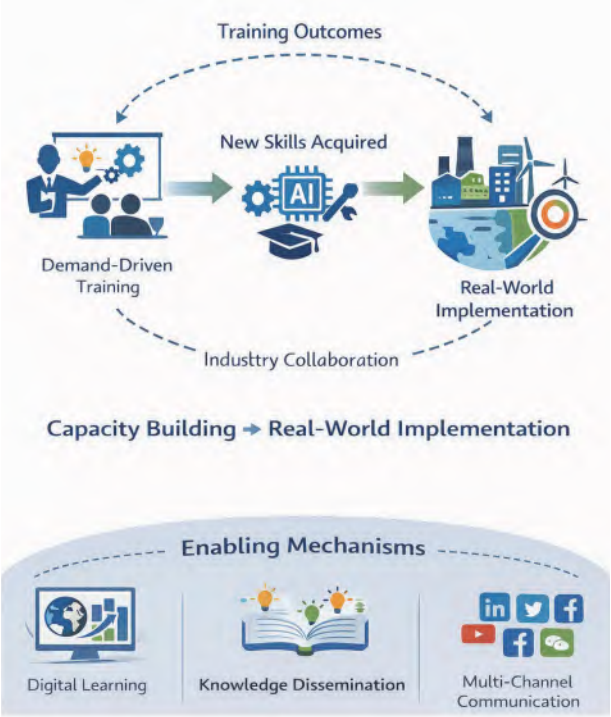


Figure 4.2. The ECBAP implementation circle: from knowledge to implementation. Source: WFEO–ECBAP.

ECBAP operates through a demand-driven cycle in which local stakeholders identify needs, expert groups define priorities, and tailored interventions are co-designed and delivered with local engineering bodies and industry partners.

Four pillars underpin the model: (1) a demand-driven, locally implemented approach ensuring alignment with national priorities; (2) digital-driven capacity development with a focus on AI across agriculture, infrastructure and energy; (3) multi-stakeholder international cooperation including South–South partnerships; and (4) an institutional framework for sustainability with Steering Committees, Local Programme Offices and long-term governance.

ECBAP in practice: From Nairobi to the STI Forum

Recent capacity-building activities include a five-day AI for Engineers intensive in Nairobi (March 2025, 46 participants from public and private sectors, Institution of Engineers Kenya) and an AI-assisted precision agriculture programme in Uganda (September 2025, climate-smart farming and food security). All materials are openly accessible; WFEO Academy online platforms enable continuous learning beyond in-person delivery. At the policy level, ECBAP engages with the STI Forum, HLPF, COP, and WEF, helping to strengthen the visibility of engineering within international discussions on sustainable development and science-policy cooperation.

ECBAP AI for Engineers training, Nairobi, Kenya, March 2025. © WFEO–ECBAP

ECBAP: Five Key Lessons for the IDSSD	
Engineering as enabler	Translates scientific knowledge into real-world SDG outcomes — a precondition for implementation, not a downstream step.
Long-term, systemic approach	Short-term interventions cannot build the institutional ecosystems that sustainable development requires.
Digital transformation needs people	AI and digital tools only deliver impact when accompanied by investment in human skills and institutional readiness.
Local ownership	Relevance, sustainability and alignment with national priorities depend on locally driven processes.
South–South cooperation	International partnerships are most effective when they complement, not substitute, local capacities.

Looking forward

WFEO established a dedicated IDSSD Task Force in March 2026 to accelerate its contribution to the Decade's objectives. Priorities include establishing regional capacity-building centres and deepening synergies between ECBAP, the newly launched WFEO Institute, and Standing Technical Committees.

For the Decade's next phase, WFEO recommends integrating engineering capacity explicitly into the IDSSD core agenda, recognizing it as a precondition for SDG implementation. The ECBAP experience suggests that strengthening engineering education, continuing professional development, digital skills, and institutional capacity can help narrow the implementation gap identified throughout this report by connecting scientific knowledge more directly to practical solutions and deployment.

WFEO also highlights the importance of increasing international investment in engineering education and CPD, particularly digital and AI-related competencies, in developing regions where capacity constraints remain among the most significant barriers to sustainable development.

Chapter 5:

Reform priorities to 2030

This chapter outlines five urgent and interconnected reform priorities that have emerged from the Decade's initial work. These are not incremental adjustments but a call for a profound transformation of the scientific ecosystem. They represent a strategic roadmap for the IDSSD and its partners to 2030, a set of actionable priorities to unlock the full potential of science for a sustainable and equitable world.

5.1. From insight to impact: A global call for scientific reform

The first two years of the International Decade of Sciences for Sustainable Development have provided a clear diagnosis of structural impediments that limit science's contribution to the 2030 Agenda. The findings are unequivocal: without a fundamental reform of the systems that govern, fund, and practice science, we will fail to achieve the SDGs. The challenges of inequality, mistrust, and misalignment are not peripheral; they are core to the functioning of the global scientific enterprise. Overcoming them requires a concerted, global effort to reshape the very foundations of how we produce, share, and value scientific knowledge.

5.2. Reform research assessment systems to reward sustainability impact

The current academic system, dominated by metrics such as publication counts and journal impact factors, creates powerful incentives for researchers to prioritize novelty over relevance and quantity over quality. This "publish or perish" culture actively discourages the kind of long-term, transdisciplinary, and solutions-oriented research that is essential for addressing complex sustainability challenges. It also reinforces gender inequalities, as current assessment systems tend to undervalue the teaching, mentoring, community engagement, and applied research in which women researchers and other underrepresented groups are often more heavily involved, thereby limiting the diversity of scientific leadership needed for SDG progress.

To reorient science towards the SDGs, we must fundamentally reform how we evaluate and reward scientific work. This requires a shift towards a more holistic and qualitative approach to research assessment, one that recognizes and rewards a broader range of scientific contributions. This includes greater emphasis on the societal impact of research, the development of open-source tools and datasets, engagement with policymakers and local communities, and the mentoring of the next generation of scientists. Embedding gender responsive criteria, such as recognizing contributions to inclusive research environments, valuing gender responsive research, and ensuring gender balanced evaluation panels—will be essential to making these reforms equitable and effective.

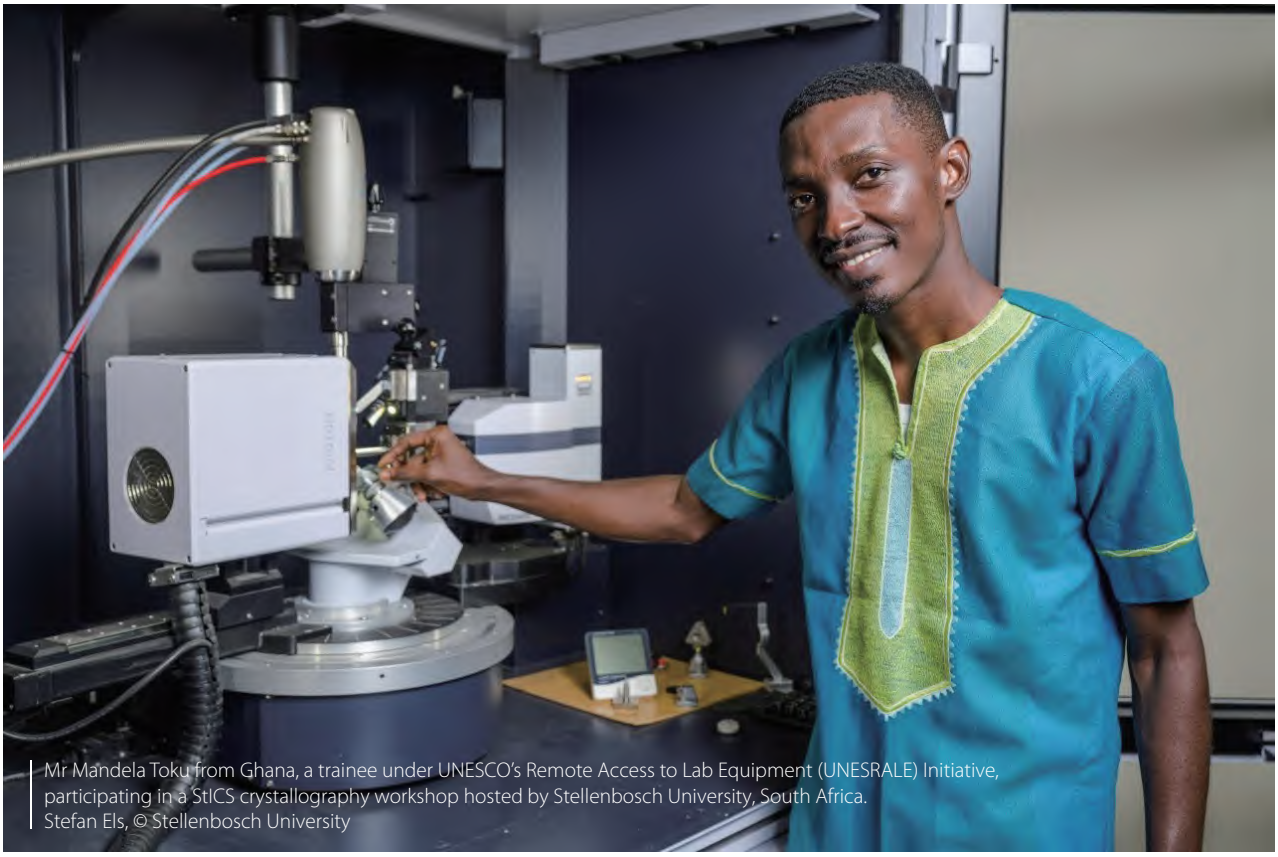
The IDSSD will work with universities, funding agencies, and scientific societies to champion and scale up innovative models of research assessment that are aligned with the principles of sustainability and open science.

A critical component of this expansion is the universal adoption of Open Science principles. Open Science is not merely about open-access publishing; it is a structural reform that democratizes access to data, methodologies, and digital infrastructure, ensuring that researchers in developing countries can participate fully in the global scientific enterprise.

5.3. Expand equitable access to research infrastructure in developing countries

The global distribution of scientific infrastructure, from high-performance computing and advanced laboratory equipment to data repositories and scientific journals, is profoundly unequal. This infrastructure gap is a primary driver of global research inequality, limiting the ability of scientists in developing countries to participate in and contribute to the global scientific enterprise. These inequalities are further compounded by gender: women scientists, particularly in low income countries, face additional barriers to accessing laboratories, field sites, digital tools, and research funding. Closing this gap is not a matter of charity; it is a prerequisite for building a truly global and inclusive scientific community capable of addressing global challenges.

This requires a massive and sustained investment in building research capacity in the Global South. It also requires the development of innovative models for sharing infrastructure and resources, such as remote access to laboratories and the creation of federated data systems. Ensuring that these models are gender responsive, by addressing safety, mobility, caregiving constraints, digital access, and institutional bias, is essential to expanding the participation of women and girls in scientific research. The IDSSD, in partnership with initiatives like the Global BioImaging network will advocate for, and support, the development of a globally distributed and interconnected network of research infrastructure that is accessible to all.



Mr Mandela Toku from Ghana, a trainee under UNESCO's Remote Access to Lab Equipment (UNESRALE) Initiative, participating in a StICS crystallography workshop hosted by Stellenbosch University, South Africa.
Stefan Els, © Stellenbosch University

5.4. Institutionalize science–policy advisory mechanisms

Effective policymaking in the 21st century depends on the ability of governments to access and utilize the best available scientific evidence. However, the channels through which scientific advice flows to policymakers are often ad hoc, fragmented, and politicized. To ensure that policy decisions are informed by robust and independent scientific knowledge, we must institutionalize and strengthen science-policy advisory mechanisms at all levels of governance, from local to global.

This involves the creation of formal structures and processes for providing scientific advice, such as chief scientific advisors, expert committees, and foresight units. It also requires building the capacity of both scientists and policymakers to engage in constructive and ongoing dialogue. Also, gender responsive training, inclusive nomination processes, and the systematic monitoring of gender representation in advisory bodies are key components of this effort. The IDSSD will work with Member States to support the development of national science-policy ecosystems, facilitate the sharing of best practices, and champion the role of independent scientific advice in democratic governance.

5.5. Protect scientific freedom and integrity

Science can only flourish in an environment that protects the freedom of scientists to pursue knowledge without fear of censorship or reprisal, and that upholds the highest standards of scientific integrity. Yet, around the world, scientific freedom is under threat from political interference, funding pressures, and the spread of misinformation and disinformation. At the same time, the integrity of science is being undermined by a growing crisis of reproducibility and a rise in predatory academic practices. These pressures do not affect all scientists equally: women researchers often face additional risks, including gender-based harassment, discrimination, and retaliation—online and within institutions—which can silence their voices, constrain their research, and deter public engagement. Gender-responsive protections are therefore essential, as such threats are not merely workplace

The Global Ministerial Dialogue on Science Diplomacy, hosted at UNESCO Headquarters in Paris
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"Trust, Transformation, and Tomorrow: The Science We Need for 2050", held on 10 November 2025 during the 43rd session of UNESCO's General Conference.
© UNESCO/Husniddin Ato

issues but direct violations of scientific freedom that undermine the diversity and independence on which scientific integrity depends.

Protecting the freedom and integrity of science is a fundamental responsibility of the global community. This requires the development of robust legal and policy frameworks to safeguard scientific freedom, the promotion of education and training in research ethics and integrity, and a concerted effort to combat the spread of anti-science narratives. The IDSSD will serve as a global platform for monitoring threats to scientific freedom and for advocating for the policies and practices needed to ensure that science remains a trusted and reliable source of knowledge for society.

5.6. Align emerging technologies with ethical and sustainability frameworks

As detailed in the previous chapter, the rapid development of emerging technologies poses both immense opportunities and significant risks. To ensure that these technologies are a force for good, we must proactively align their development and deployment with robust ethical and sustainability frameworks. This cannot be an afterthought; it must be an integral part of the innovation process itself.

This requires a global commitment to implementing the principles outlined in the UNESCO Recommendation on the Ethics of Artificial Intelligence, including human rights, transparency, accountability, and fairness. The Recommendation explicitly calls for eliminating gender bias in algorithms, ensuring gender balanced participation in AI governance, and protecting women and girls from AI enabled harms—principles that must guide all emerging technologies, not only AI. It also requires the development of similar normative frameworks for other emerging technologies, such as quantum computing and neurotechnology. The IDSSD will work to foster a global dialogue on the ethical and societal implications of emerging technologies, support the development of inclusive and participatory governance models, and advocate for a human-centered approach to innovation that prioritizes well-being and sustainability over purely commercial or strategic interests.

Together, these five reform priorities constitute an

integrated agenda for strengthening science as a global public good. Reforming research assessment, expanding equitable access to infrastructure, strengthening science-policy interfaces, protecting scientific freedom and integrity, and ensuring responsible governance of emerging technologies are mutually reinforcing priorities. Progress in any one area will be limited without progress in the others. The success of the Decade will ultimately depend on the willingness of Member States, scientific institutions, funding agencies, and international partners to translate these priorities into sustained action during the remainder of the Decade.

Chapter 6:

What governments can do now

The findings presented in Chapter I through V point toward a set of practical actions that can be implemented by Member States, research institutions, funding agencies, and international partners. While many of the reforms outlined in Chapter V require long-term structural change, the recommendations below identify specific measures that can be taken during the remainder of the Decade to strengthen participation, improve implementation, and increase the contribution of science to sustainable development outcomes.

6.1. Invest in national scientific capacity

Africa's 117% growth and the Arab States' 43% growth in the Third Call suggest that the main constraint is not an absence of scientific potential, but the persistence of coordination, access, and financing barriers. When those barriers are lowered, underrepresented regions respond quickly, which indicates substantial latent capacity that can be

Field recording and deployment of sound collection equipment by Soundscape China, an IDSSD-endorsed initiative led by the Institute of Zoology, Chinese Academy of Sciences.
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activated through better national organization and more predictable support. UNESCO's Open Science framework explicitly links equitable participation in science to capacity-building and to reducing scientific and technological divides [31], while regional STI strategies in Africa and the Arab States show strong demand for science-based solutions in areas such as energy, water, agriculture, and environmental resilience. China's contribution of 154 initiatives further illustrates what sustained national coordination, institutional incentives, and clear ownership can achieve at scale.

Action:

Establish national IDSSD focal points, link them to the ministries responsible for science and innovation, and allocate dedicated funding for proposal development, partnership-building, and follow-up reporting.

6.2. Prioritize SDG gaps in national science funding

Within the current portfolio, SDG 1 (29 initiatives), SDG 2 (70), SDG 14 (48), and SDG 12 (59) remain relatively underserved despite their central importance for poverty reduction, food systems, sustainable consumption and production, and ocean sustainability. This imbalance matters because the global SDG picture is already off track: the UN's 2024 assessment found that only 17% of SDG targets are on track, while more than one-third are stalled or regressing. In this context, allowing scientific investment to cluster only around more visible or politically attractive areas risks widening existing implementation gaps [32]. Targeted funding windows, challenge-driven calls, and ring-fenced support for these underrepresented SDGs would help rebalance the portfolio and direct scientific effort toward areas where the need for actionable knowledge is especially acute.

Action:

Create targeted funding streams and call windows specifically for SDGs 1, 2, 12, and 14, with clear incentives for interdisciplinary and implementation-oriented proposals.

6.3. Strengthen monitoring and accountability

A reporting rate of only 9.6% means that 189 of the 209 endorsed initiatives have not yet submitted progress information, making it difficult to assess progress, identify bottlenecks, or communicate credible results. This is not simply an administrative issue: OECD and UNDP guidance both stress that monitoring and evaluation are essential to transparency, accountability, learning, and better decision-making [33]. UNESCO has similarly emphasized that robust monitoring frameworks are necessary to track implementation and assess impact, especially when initiatives are distributed across multiple actors and regions. Without regular progress reporting, the Decade cannot reliably distinguish active initiatives from dormant ones, nor can it generate the evidence base needed for strategic adjustment.

Action:

Require periodic progress reporting as a condition for endorsement renewal, introduce a light but mandatory reporting template, and fund regional coordination hubs to support compliance, mentoring, and portfolio learning.

6.4. Mandate gender-disaggregated reporting

The decline in SDG 5 coverage from 50% to 31% suggests that gender equality is at risk of becoming a secondary concern rather than a systematic dimension of Decade implementation. This is particularly significant because UNESCO data continue to show that women represent less than one third of researchers globally, and that gender disparities persist across scientific careers and institutions. Requiring gender-disaggregated data would not only improve visibility of participation patterns; it would also make it possible to identify hidden barriers in access to funding, leadership, mobility, and collaboration. In policy terms, mainstreaming gender reporting is one of the most practical ways to move from rhetorical commitment to measurable accountability.

Action:

Require all endorsed initiatives to submit gender-disaggregated data on participation, leadership, beneficiaries, and where relevant, research content and societal impact.

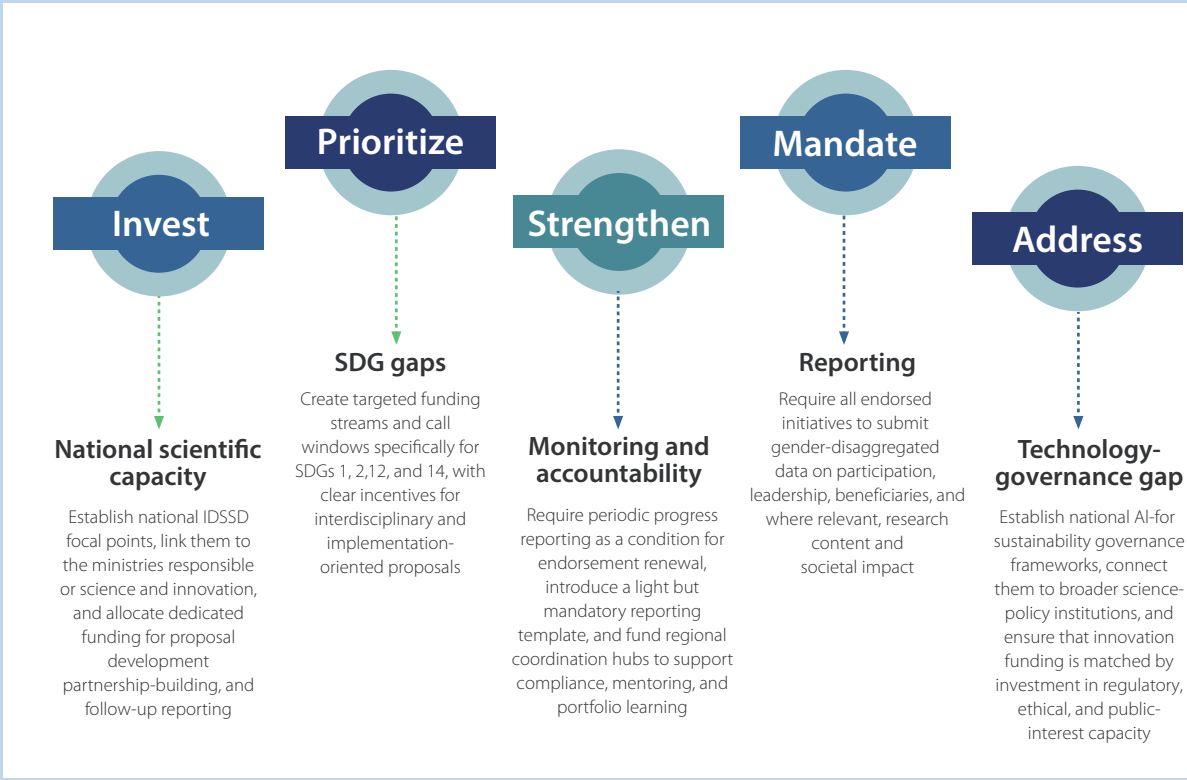
6.5. Address the technology-governance gap

The 3.2:1 ratio between SDG 9 and SDG 16 initiatives suggests that the Decade is generating more science and innovation that require governance than governance capacity able to steer them responsibly. This imbalance is especially visible in areas such as AI, digital systems, and emerging technologies, where scientific and technical advances can outpace institutional preparedness. UNESCO's Recommendation on the Ethics of Artificial Intelligence and the OECD AI Principles both stress that trustworthy AI requires human oversight, transparency, fairness, accountability, and alignment with human rights and democratic values [34]. In other words, innovation without governance is not neutral; it increases the risk that technologies will be deployed faster than states can regulate, evaluate, or direct them toward sustainable development goals.

Action:

Establish national AI-for-sustainability governance frameworks, connect them to broader science-policy institutions, and ensure that innovation funding is matched by investment in regulatory, ethical, and public-interest capacity.

Figure 6.1. Priority measures by governments.



Chapter 7:

Lessons from the first phase

Ten evidence-grounded lessons from the first phase of implementation. Each is linked to the corresponding strategic direction in Chapter VIII. These are not definitive conclusions about an ongoing ten-year process; they are practical observations about what has enabled early mobilization, where structural constraints are strongest, and what adjustments will most strengthen the second phase.

Colour coding:

- mobilization
- participation & equity
- governance & process
- impact & sustainability

1 A clear structure rapidly mobilizes scientific communities

A shared mandate, strategic plan and open-call model generated 397 initiatives from 79 countries in under two years. Structure activates latent capacity.

→ §8.1

2 Broad participation must be actively designed, not assumed

The 117% growth in African submissions in Call 3 followed deliberate outreach and linguistic accessibility measures. Diversification is the result of design, not inclusion by default.

→ §8.1

3 Open calls alone do not resolve structural inequalities

Even within inclusive global frameworks, participation reflects deep disparities in research capacity and infrastructure. Open calls must be paired with targeted equity support.

→ §8.3

4 Broad SDG coverage requires deliberate strategic targeting

All 17 SDGs are addressed, yet SDG 1, 2, 12 and 14 — the goals most off-track globally — remain underserved. Future Calls must direct effort where the global need is most acute.

→ §8.1

5 Scientific innovation must be matched by governance capacity

Innovation (SDG 9) outpaces governance (SDG 16) by 3.2:1 in the portfolio. Without corresponding ethical and regulatory frameworks, new technologies widen rather than close inequalities.

→ §8.2

6 Portfolio maturity matters as much as portfolio size

The shift from Activities to Programmes signals a transition from mobilization to sustained collaboration. Quality of implementation and long-term impact must now lead over quantity.

→ §8.4

7 Gender equality requires structural measures, not rhetorical commitment

SDG 5 thematic coverage fell from 50% to 31% across Calls despite its stated priority. Disaggregated data requirements, minimum gender criteria and accountability mechanisms are essential.

→ §8.5

8 Coordination is a greater barrier to delivery than funding

40% of responding initiatives cited coordination as their primary challenge; only 10% cited funding. Investment in coordination infrastructure will directly accelerate outcomes.

→ §8.1

9 Monitoring systems must be built in early, not added later

A 9.6% questionnaire response rate in the first cycle shows that accountability frameworks cannot be treated as secondary to delivery. Robust monitoring is a precondition for credible results.

→ §8.5

10 The Decade's greatest value is as a knowledge-to-action bridge

The Decade is most effective when it functions not as a scientific platform alone, but as a mechanism linking knowledge with governance, capacity-building and practical action.

→ §8.5

Several lessons have emerged from the Decade's first phase. The rapid growth of the initiative portfolio demonstrates that scientific communities are prepared to mobilize around shared global challenges when provided with a common framework for action. At the same time, significant disparities in scientific capacity, infrastructure, and access continue to limit equitable participation across regions. The findings further suggest that scientific mobilization alone is insufficient; sustained progress requires strong Member State engagement, effective science-policy interfaces, public trust in scientific institutions, and governance systems capable of translating knowledge into action. The experience of the first two years also underscores the importance of open science, shared infrastructures, and inclusive knowledge systems, while highlighting the need for anticipatory governance approaches that can keep pace with rapidly evolving technologies. Collectively, these lessons point toward a future in which sustainable development depends not only on the production of scientific knowledge, but on the institutions, partnerships, and societal conditions that enable that knowledge to generate meaningful impact.

Chapter 8:
Way forward

The first phase of the International Decade of Sciences for Sustainable Development has confirmed both the urgency of the global challenges ahead and the continuing relevance of science as a public good. The strong response to the Decade's initial calls demonstrates a clear readiness within the scientific community to engage more directly with sustainable development priorities. However, translating this readiness into systemic impact will require a shift from building foundations to accelerating implementation.

To achieve the objectives set out in the Strategic Plan for the IDSSD (2024–2033), the next phase of the Decade must focus on scaling up successful models, strengthening institutional capacities, and mobilizing the resources necessary to support transformative scientific cooperation. The following strategic directions, aligned with the Decade's core objectives, provide a framework for action by Member States, scientific institutions, and international partners.

The first phase of the Decade has also reinforced an important reality: sustainable development does not occur in a context of unlimited resources, aligned priorities, or equal scientific capacity. Governments and institutions must continually navigate complex trade-offs between immediate socioeconomic pressures and longer-term environ-

Figure 8.1. Five Strategic Directions for the Next Phase.

mental, technological, and sustainability challenges. International evidence from public, private, and civil society leaders across low- and middle-income countries demonstrates that education, employment, governance, health, and infrastructure consistently remain among the most urgent priorities shaping national decision-making. At the same time, climate-related risks, technological transformation, and growing inequalities increasingly require integrated scientific responses that cut across traditional disciplinary and institutional boundaries. The Decade therefore provides not only a framework for mobilizing science, but also a platform for strengthening the relevance, legitimacy, accessibility, and societal responsiveness of science itself in support of sustainable development.

8.1. Prioritize mission-oriented science that delivers measurable outcomes

The next phase of the Science Decade calls for stronger support for mission-oriented scientific cooperation explicitly designed to address major sustainable development challenges through measurable and time-bound outcomes. Moving beyond traditional, fragmented research funding, mission-oriented science requires co-designing research agendas with National Focal Points, policymakers, and local communities to ensure relevance and uptake.

Member States and funding agencies are encouraged to align their science investments with the Decade's objectives, prioritizing collaborative, cross-disciplinary initiatives that target specific SDG gaps. By focusing on concrete missions—such as accelerating the energy transition, building climate resilience, or ensuring water security—the scientific community can deliver more tangible socio-economic benefits and demonstrate the direct value of science to society.

8.2. Strengthen artificial intelligence and digital innovation as a public good

Within the framework of the IDSSD, and by leveraging the Science Decade as a global platform for

Science outreach activities by Addressing Global Warming Threats through Marine Observation Systems and AI Customizability, an IDSSD-endorsed initiative led by the Institute of Oceanography, Chinese Academy of Sciences
© Institute of Oceanology, Chinese Academy of Sciences

cooperation, governments, scientific institutions, academia, the private sector, civil society, and international organizations are encouraged to work together to strengthen artificial intelligence and digital innovation as public goods for science and sustainable development.

Recent research shows that AI can significantly enhance data analysis, modelling, early warning, and decision support across a wide range of sustainable development domains. The Science Decade provides an important opportunity to foster collaboration, expand access to data, computing resources, digital skills, and scientific applications, and promote more inclusive pathways through which AI and digital innovation can reinforce scientific capacity, support international cooperation, and contribute to sustainable development outcomes.

8.3. Build open science, shared infrastructures and actionable knowledge systems

Open science and shared scientific infrastructures are essential for international cooperation and sustainable development impact. Interoperable data systems, repositories and shared platforms enable cumulative learning and reproducibility.

At the same time, knowledge systems must not only generate evidence but also help translate it into forms that are relevant, accessible, and usable for decision-making and implementation. The Science Decade can serve as a valuable platform for promoting cooperation, capacity-building, and knowledge-sharing in these areas, helping to make science more connected, more inclusive, and more action-oriented.

8.4. Foster science-industry collaboration to enhance the socio-economic impact

Science delivers greater socio-economic impact when connected to innovation ecosystems, industrial development and public needs.

Deeper cooperation among research institutions, universities, industry, governments, and other stakeholders can help translate scientific advances into practical applications, productive capacities, and inclusive development opportunities. The

Passive Radiative Cooling Coatings were applied to school campus walls in Hunan together with students to improve thermal comfort, as part of Fostering Innovation for Resilience and Sustainable Transformation (FIRST), an IDSSD-endorsed initiative led by City University of Hong Kong
© City University of Hong Kong

Science Decade offers an important platform to promote such cooperation, strengthen innovation partnerships, and reinforce the role of science in supporting sustainable and equitable socio-economic progress. Concrete mechanisms for industry engagement—such as joint research-industry task forces, innovation hubs, and technology transfer programs—should be prioritized in the next phase.

8.5. Reinforce trusted science–policy–society interfaces and usable evidence

The Decade must place renewed emphasis on strengthening the institutions, processes, and communication capacities that connect science with decision-making and collective action. Public trust in scientists remains relatively strong in many countries, and recent international evidence suggests that large majorities continue to expect scientists to engage in society and policymaking.

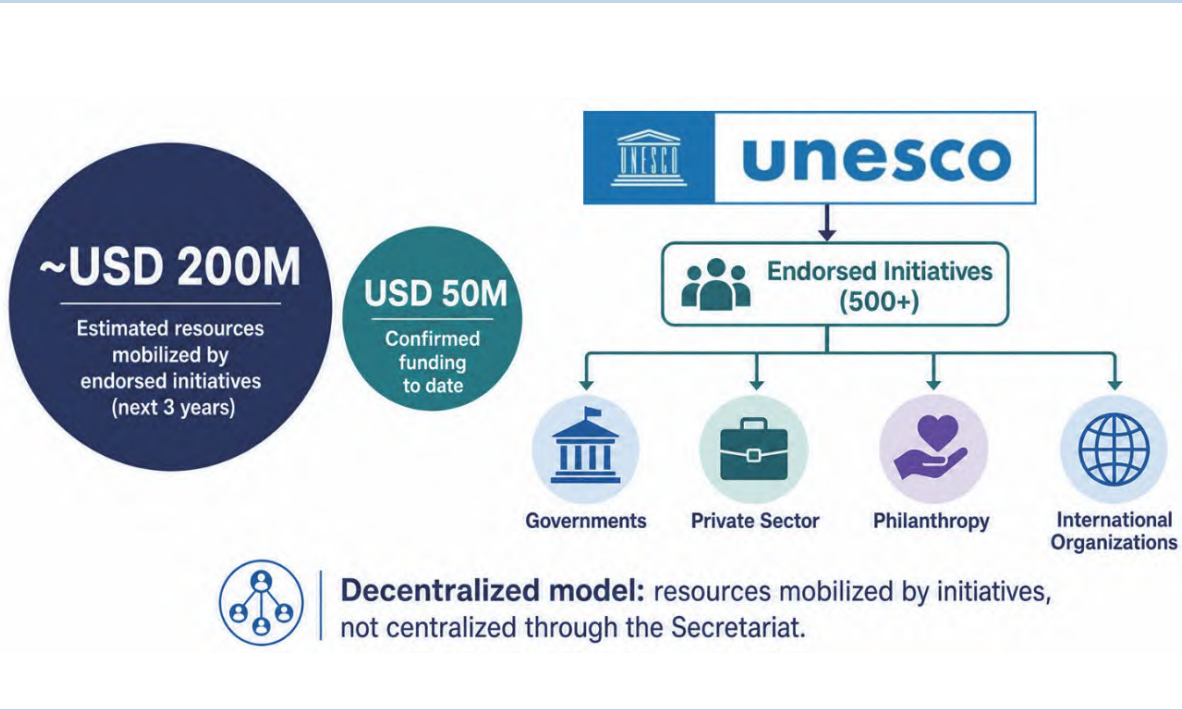
The next phase should invest in synthesis products, accessible evidence formats, and sustained mechanisms for dialogue between scientists, policymakers and society.

8.6. Resource mobilization and the decentralized funding model

It is critical to clarify that the IDSSD does not operate a centralized grant-making facility, and direct funding from the Decade Secretariat or UNESCO should not be expected. For many scientific entities in developing countries operating with limited resources, funding is a primary priority. However, the value of joining the Decade lies in its catalytic role: endorsement provides global visibility, facilitates integration into international research networks, and opens doors for co-funding and strategic partnerships with bilateral and multilateral donors who prioritize IDSSD-aligned initiatives.

Achieving the ambitious goals of the IDSSD requires a robust and sustainable approach to resource mobilization. The Decade operates on a decentralized funding model, where resources are mobilized directly, by the endorsed initiatives and partners, rather than being centralized through the UNESCO Secretariat. This approach empowers stakeholders, fosters local ownership, and ensures that funding is closely aligned with specific programmatic needs, national, and regional contexts.

Figure 8.2. Resource Mobilization - A Decentralized Model.



During the foundational phase, the endorsed initiatives have demonstrated significant capacity to attract investment. To date, approximately USD 50 million in confirmed funding has been mobilized by the initiatives to support their activities under the Decade. Furthermore, based on the projected budgets and ongoing fundraising efforts of the current portfolio, it is estimated that the total resources mobilized by the initiatives will reach approximately USD 200 million over the next three years.

To sustain and expand this momentum, Member States, philanthropic organizations, and the private sector are called upon to increase their support for the Decade's endorsed initiatives. By investing in these decentralized efforts, partners can directly contribute to building scientific capacity, advancing mission-oriented research, and accelerating progress toward the Sustainable Development Goals.

8.7. Build scientific literacy, trust and lasting capacity for sustainability

Strengthening scientific literacy and public understanding of science will also be essential to the Decade's long-term success. Public trust in science depends not only on scientific excellence, but also on education systems, transparent communication, and meaningful opportunities for participation in scientific and evidence-informed decision-making. Building societies that are better equipped to engage with complex scientific issues will therefore remain a foundational component of sustainable development.

The long-term significance of the Decade will ultimately be measured not only by the initiatives launched during its implementation period, but by the institutional, scientific, and societal capacities that remain after 2033. Strengthened science-policy systems, more equitable scientific cooperation, expanded research infrastructure access, improved scientific literacy, and more inclusive global knowledge systems represent potential long-term legacies that could continue shaping sustainable development efforts well beyond the formal duration of the Decade.

Call to action

The United Nations General Assembly, in proclaiming the IDSSD, recognized the indispensable role of science in achieving sustainable development. As the Decade moves into its next phase, this recognition must be translated into concrete political and financial commitments. Member States are urged to take ownership of the Decade at the national level, align their science and innovation strategies with its objectives, and actively participate in the global collaborative framework it provides.

The success of the International Decade of Sciences for Sustainable Development will ultimately depend not only on the advancement of scientific knowledge, but on the ability of the global community to ensure that science is inclusive, trusted, actionable, and meaningfully connected to the realities shaping societies across all regions of the world.

Only through sustained, collective action can the transformative potential of science be fully realized for the benefit of all.

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Annex I – UNGA resolution

United Nations A/RES/77/326

General Assembly

Distr.: General
1 September 2023

Seventy-seventh session
Agenda item 13
Integrated and coordinated implementation of and follow-up to the outcomes of the major United Nations conferences and summits in the economic, social and related fields

Resolution adopted by the General Assembly on 25 August 2023

[*without reference to a Main Committee (A/77/L.100)*]

77/326. International Decade of Sciences for Sustainable Development, 2024–2033

The General Assembly,

Reaffirming its resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", in which it adopted a comprehensive, far-reaching and people-centred set of universal and transformative Sustainable Development Goals and targets, its commitment to working tirelessly for the full implementation of the Agenda by 2030, its recognition that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development, and its commitment to achieving sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner and to building upon the achievements of the Millennium Development Goals and seeking to address their unfinished business,

Reaffirming also its resolution 69/313 of 27 July 2015 on the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, which is an integral part of the 2030 Agenda for Sustainable Development, supports and complements it, helps to contextualize its means of implementation targets with concrete policies and actions, and reaffirms the strong political commitment to address the challenge of financing and creating an enabling environment at all levels for sustainable development in the spirit of global partnership and solidarity,

Taking note of the annual multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals, as a component of the Technology Facilitation Mechanism, in facilitating interaction, networking and the establishment of networks and multi-stakeholder partnerships for the implementation of the Goals,

Reaffirming its resolution 68/220 of 20 December 2013 on science, technology and innovation for development, in which it recognized that full and equal access to and participation in science, technology and innovation for women and men is essential to achieve sustainable development, and its resolution 70/212 of 22 December 2015 on the International Day of Women and Girls in Science, in which it recognized that gender equality and the empowerment of women and girls will make a crucial contribution to progress across all the Goals and targets of the 2030 Agenda for Sustainable Development, and recognizing that women and girls play a critical role in science and technology communities and that their participation should be strengthened,

Recalling its resolutions 65/161 of 20 December 2010, in which it declared the period 2011–2020 the United Nations Decade on Biodiversity, 67/215 of 21 December 2012, in which it declared the period 2014–2024 the United Nations Decade of Sustainable Energy for All, 70/259 of 1 April 2016, in which it proclaimed the period 2016–2025 the United Nations Decade of Action on Nutrition, 71/222 of 21 December 2016, in which it proclaimed the period 2018–2028 the International Decade for Action "Water for Sustainable Development", 72/73 of 5 December 2017, in which it proclaimed the period 2021–2030 as the United Nations Decade of Ocean Science for Sustainable Development, 72/233 of 20 December 2017, in which it proclaimed the period 2018–2027 the Third United Nations Decade for the Eradication of Poverty, 73/284 of 1 March 2019, in which it proclaimed the period 2021–2030 the United Nations Decade on Ecosystem Restoration, 74/135 of 18 December 2019, in which it proclaimed the period 2022–2032 the International Decade of Indigenous Languages, and 75/131 of 14 December 2020, in which it proclaimed the period 2021–2030 the United Nations Decade of Healthy Ageing,

Recalling also its resolution 76/14 of 2 December 2021, in which it proclaimed the year 2022 the International Year of Basic Sciences for Sustainable Development, which began in July 2022 and will conclude in December 2023,

Noting that one of the flagship events of the International Year of Basic Sciences for Sustainable Development, entitled "A chance for society to build on sciences for sustainability", convened by the President of the General Assembly on 24 May 2023 at United Nations Headquarters, highlighted the need for the proclamation of the International Decade of Sciences for Sustainable Development,

Acknowledging that humanity is exposed to complex challenges, and that the full implementation of the 2030 Agenda for Sustainable Development in all its dimensions requires a more effective and inclusive approach based on synergistic cooperation of all sciences – basic and applied sciences as well as social and human sciences, including traditional knowledge – enabling the development of technology, innovation and education,

Emphasizing that the evidence-based methodologies and the models of operation and collaboration used in research can support policymakers in finding adequate responses to the present and future complex challenges, and that open science can help in promoting and strengthening international cooperation,

Recognizing that developing countries face specific challenges in accessing new sciences and technologies, stressing the need to bridge the divides within and between countries, and highlighting the importance of financing and capacity-building,

1. *Decides* to proclaim the period 2024–2033 the International Decade of Sciences for Sustainable Development, within existing structures and available resources, to represent a unique opportunity for humanity to use the critical role that sciences play in the pursuit of sustainable development in its three dimensions as one

of the key means of implementation as well as in responding to the complex challenges of our time to ensure a safe and prosperous future for all;

2. *Invites* all United Nations Member States, all relevant organizations of the United Nations system and other global, regional and subregional organizations, as well as other relevant stakeholders, including academia, civil society organizations, the private sector and individuals, to observe and raise awareness of the importance of all sciences for sustainable development, and to actively concur, in accordance with national priorities, with the promotion of a coordinated, collaborative, scientific approach providing policymakers with evidence-based analyses and data necessary for establishing and effectively implementing policies in such a way that no one is left behind;

3. *Invites* the United Nations Educational, Scientific and Cultural Organization to lead the implementation of the Decade, in collaboration with other relevant organizations of the United Nations system as well as other stakeholders, including those involved in the International Year of Basic Sciences for Sustainable Development, identifying and developing activities and programmes within their mandates and using existing resources and voluntary contributions, as appropriate;

4. *Invites* the Governments of the United Nations Member States and other relevant stakeholders, including global, regional and subregional organizations, academia, civil society organizations, the private sector and the media, to actively support the implementation of the Decade, including through voluntary contributions, as appropriate;

5. *Invites* the Secretary-General to inform the General Assembly about the implementation of the Decade on the basis of triennial reports to be prepared and compiled by the United Nations Educational, Scientific and Cultural Organization in 2026, 2029 and 2032, in consultation with relevant stakeholders.

96th plenary meeting
25 August 2023

Annex II - Full list of endorsed initiatives

Programmes :

CODATA-RDA Schools of Research Data Science (SoRDS)	Leiden University for CODATA and RDA	Kingdom of the Netherlands
Scaling Up the UNESCO's Remote Access to Laboratory Equipment (UNESRALE) Initiative under IDSSD: Bridging the Gap in research infrastructure	UNESCO	France
Gas hydrates Multiple Effect in the Ocean (GasMEO)	V.I. Il'ichev Pacific Oceanological Institute	Russian Federation
Empowering BRICS+ Countries with Emerging Technologies' Capacity Building for High-Quality and Sustainable Development	Beijing International Exchange Association	China
International Program for Sustainable Development of Aral Sea Region	Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences	China
Belmont Forum Sustainable Development Collaborative Research Actions	Belmont Forum	Panama
Seamless Prediction and Services for Sustainable Natural and Built Environments (SEPRESS)	The Hong Kong University of Science and Technology	China

Thermochronology and Geohazard Risk Analysis of Fault Zones in Timor Leste	College of Earth and Planetary Sciences, University of Chinese Academy of Sciences	China
Global Vegetation Pest and Disease Habitat Monitoring and Risk Forecasting	Aerospace Information Research Institute, Chinese Academy of Sciences	China
Fostering Innovation for Resilience and Sustainable Transformation (FIRST)	City University of Hong Kong	China
High-resolution earth system modeling, analysis and prediction for a society resilient to hydrometeorologic al hazards	Institute of Atmospheric Physics, Chinese Academy of Sciences	China
PlateauPlus: Plateaus' formation and the effects on environmental changes, biodiversity evolution, and human adaptation.	Institute of Tibetan Plateau Research, Chinese Academy of Sciences	China
Global Ratoon Rice Network Initiative: promoting sustainable development of food security, green agriculture, and climate adaptation	Huazhong Agricultural University	China
Connecting Rivers & Oceans for Sustainable Solutions in the Coastal Zone (CROSS Coastz)	East China Normal University, State Key Laboratory of Estuarine and Coastal Research	China
Addressing Global Warming Threats through Marine Observation Systems and AI Customizability	Institute of Oceanography, Chinese Academy of Sciences	China
Science Diplomacy, Neuroscience, Technology & Society for the International Decade of Sciences for Sustainable Development	Institiuto de Investigaciones Biológicas Clemente Estable	Uruguay
Indian Ocean Carbon Cycle and Global Climate Change Research	China University of Geosciences (Wuhan)	China

Association for Trans-Eurasia Exchange and Silk Road Civilization Development	Institute of Tibetan Plateau Research, Chinese Academy of Sciences	China
Flyway University Alliance	Beijing Forestry University	China
Habitability of Subsurface Oceans in Icy Worlds	Institute of Deep- Sea Science and Engineering, Chinese Academy of Sciences	China
Exploring Paleo- Life: The Silk Road Geoscience Expedition Program	China Association for International Science and Technology Cooperation (CAISTC)	China
The dissemination of the best practices in psychological, pedagogical and correctional- developmental support for preschool and school education	LAAAMP (Lightsources for Africa, the Americas, Asia, Middle East and Pacific)	Italy
The GOTTA Project - A Global Open Transient Telescope Array for the Extreme Unive	National Astronomical Observatories, Chinese Academy of Sciences	China
Human Cell Atlas	Human Cell Atlas	USA
Global Call: Science Missions for Sustainability	The International Science Council	France
Digital Sustainable Development Goals Programme (DSP)	the International Research Center of Big Data for Sustainable Development Goals (CBAS)	China
Deep-time Digital Earth Big Science Program	the International Union of Geological Science (IUGS)	
Towards Open Science Infrastructure Sharing Network: Knowledge and Data Sharing Platform from China	Beijing Forestry University	China
Habitability of Subsurface Oceans in Icy Worlds	Zhejiang University	China

Research to Empower (Building Capacity and Youth Networks for Bridging Gaps to the Access of Basic Science and	Research to Empower (ReTE)	USA
2025-2034:Decade of Soil Sciences for Sustainable Development	International Union of Soil Sciences (IUSS)	Italy
Global Cosmos Prize Programme for Science Literacy	University of Amsterdam / Institute of Physics	Kingdom of the Netherlands
Advancing African Scientific Leadership for Sustainable Development: The ARISE 2.0 Programme	African Academy of Sciences (AAS)	Kenya
Promoting Research on Ocean Sustainability: Predictive Ecosystems Resilience	Second Institute of Oceanography, Ministry of Natural Resources	China
ANSO Africa Hub of Science & Innovation	Alliance of National and International Science Organizations for the Belt and Road	China
Biodiversity- Enhanced Ecosystem Solutions for Climate Resilience: Advancing Wild Sorghum Genetic Resources for Sustainable Agriculture in Sub- Saharan Africa and the Arabian Peninsula	Tropical Institute of Development Innovation (TRIDI)	Uganda
BRIDGE-CC: Building Resilient Infrastructure through Design, Governance, and Engineering for Climate Change	University of Padova - Dept. of Civil, Environmental and Architectural Engineering	China
Virtual Laboratory for Molecular Sensing and Environmental Remediation	Taiyuan University of Science and Technology	China
Consolidation of powdery stone cultural heritage	University of Science and Technology of China	China
Building a Sustainable Future with Climate- Resilient and Community-Inclusive Aquaculture in Africa	Kasetsart University	Thailand

Engineering Capacity Building for Africa Programme (ECBAP)	World Federation of Engineering Organizations	France
Habitability of Carbon-Based Life Beyond Earth	Tsinghua University	China
Bioprospection and species improvement by human-controlled modification: widening the base of genetic sources to foster Biotechnology in Latin America and the Caribbean	United Nations University Programme of Biotechnology for Latin America and the Caribbean (UNU- BIOLAC)	Bolivarian Republic of Venezuela
The Karst Biodiversity Conservation and Ecosystem Resilience Enhancement Programme	Institute of Subtropical Agriculture, Chinese Academy of Sciences	China
Arctic and Northern Challenge Program	National Research Council of Canada	Canada
Cryosphere Digital Twin for Climate Action and Sustainable Development	Institute of Mountain Hazards and Environment (IMHE), Chinese Academy of Sciences	China
Supporting Women in Science for Sustainable Development (SWIS)	Institute for Global Health and Development, Aga Khan University	Pakistan
RESTORING GROUNDWATE R-DEPENDENT ECOSYSTEMS FOR BIODIVERSITY, WATER SECURITY, AND CLIMATE RESILIENCE IN SUB-SAHARAN REGIONS	University of the Western Cape (UNESCO Chair on Groundwater/Hydro geology/Geohydrolo gy)	South Africa
Sustainability of Global Infrastructure through Collaborative Corrosion and bio- fouling Control Management Systems	Institute of Oceanology, Chinese Academy of Sciences	China
Water-Food- Energy-Ecology Nexus and Agricultural Development Potential in the Zambezi River Basin: Defining Safe Boundaries	Aerospace Information Research Institute, Chinese Academy of Sciences	China
Global Cooperation for Open Disaster Data & AI Resilience	Aerospace Information Research Institute, Chinese Academy of Sciences (AIRCAS)	China

FORWARD (FORRT for World Development): Fostering Open Research & Reproducibility Worldwide for Accessible Research & Development	Framework for Open and Reproducible Research Training (FORRT)	Germany
Strengthening Scientific Integrity for Sustainability: Communication, Trust, and Scientific Culture in Times of Crisis	FALA impact studio	Brazil
Energy Innovation Program – Advancing Innovative Clean Energy Technologies Towards a Low- Carbon Economy	Natural Resources Canada – Office of Energy Research and Development	Canada
Mysteries of Ocean Cold Seep Interfaces (MOCSI)	Southern Marine Science and Engineering Guangdong Laboratory (Guangzhou)	China
Bioeconomy nexus: Boosting bioeconomy at a global level	RISE Processum AB	Sweden
The Application of Quantum Frontier Technologies in Optical Frequency Standard Time Reference Systems	National Time Service Center, Chinese Academy of Sciences	China
Fish Intelligent Identification and Monitoring System (FIIMS)	Institute of Hydrobiology, Chinese Academy of Sciences	China
Green Carbon: Programme for a set of Scientific Knowledge Dissemination, Scientific Activities and Science Popularization	Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences	China

Projects:

Glacier Protection, Disaster Assessment, and Sustainable Development Pathways in Tajikistan, Central Asia	Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences	China
Sustainable Prefabricated Modular Construction through 3D Concrete Printing	National University of Sciences and Technology (NUST)	Pakistan
Integrated Multi- Data Assessment of Biodiversity Conservation Status in Peruvian Desert Oasis Lomas Ecosystems	South China Botanical Garden, Chinese Academy of Sciences	China
From the Arctic for the Arctic: science diplomacy for sustainable future of the region and its people	Federal Research Centre Kola Science Centre of the Russian Academy of Sciences, International Department	Russian Federation
International Scientific and Educational Events in the Field of Diagnosis and Treatment of Hereditary Orphan Diseases: "Commonwealth without Borders"	Federal State Budgetary Scientific Institution «Research Centre of Medical Genetics»	Russian Federation
iq-volunteering program ambassadors of sustainable development	Sakhalin State University	Russian Federation
Modern Geoculture: Sustainable Development of Indigenous Peoples of Northern Russia and the Global South	M.K. Ammosov North-Eastern Federal University	Russian Federation
Disaster Risk Reduction Knowledge Services for Global South and Cases Sharing	Co-lead: Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences; Co-lead: International Knowledge Centre for Engineering Science and Technology, auspicious of UNESCO	China

Confronting Climate Change Impact: Environmental Digital-twin Prediction Tools for Critical Infrastructure	Central South University	China
AI4Globe - Inclusive and comprehensive AI literacy model that empowers individuals communities worldwide	Business and Technology University (BTU)	Georgia
Data-Driven Ecosystem Restoration: Leveraging AI for Biodiversity Conservation in Pakistan's Peri- Urban Areas	National University of Sciences and Technology (NUST), Islamabad, Pakistan	Pakistan
Title: A continued experiment and toolkit development for SuDS engineers to optimise SuDS efficiency on water quality	The Living Coast UNESCO Biosphere	UK
"Frontier Registry: Advancing Open Science for Climate Resilience and Sustainable Innovation	IoT Logistics, LLC	China
Innovative Constructed Wetland Systems for Sustainable Wastewater Management and Ecosystem Restoration	NED University of Engineering and Technology Karachi, Sindh Pakistan	Pakistan
The impact of air pollution on interspecies interactions	South China Botanical Garden, the Chinese Academy of Sciences	China
Mapping Asia Plants Plus (MAP+)	Biodiversity Committee of the Chinese Academy of SciencesO	China
Coal gangue to combat land degradation and improve agriculture productivity	Northwest Institute of Eco-environment and Resources, Chinese Academy of Sciences	China

Agricultural Engineering S&T for A Sustainable Planet	China Agricultural University	China
Innovative Sustainable Education Guided by Sciences for Sustainable Development as an Entrepreneurial Factor of the Local/Global Ecosystem	Institute of Science, Technology, and Global Sustainable Innovation	Brazil
Global Fungi Partnership: Reconstruction of Fungal Tree of Life based on Mitochondrial Genomes of 10K fungal genera	Germplasm Bank of Wild Species, Kunming Institute of Botany, Chinese Academy of Botany, China	China
Trans-Pacific Biodiversity Conservation Community: Joint Biodiversity Surveys and Conservation by China and Latin America	Beijing Forestry University	China
The trans- Eurasian climate- environmental system as a warranty of sustainable development	Yugra State University	Russian Federation
FERIA EDUCATIVA NACIONAL CREA 2024(CREA National Educational Fair)	Ministry of Education of Ecuador	Ecuador
Sustainable Ice and Snow: A Scientific Blueprint for Carbon Neutrality	Beijing Jiaotong University	China
Symbiosis	Choheno Kontoshche Foundation	Bulgaria
Controlling Global Coastal Harmful Algal Blooms	Institute of Oceanology, Chinese Academy of Sciences	China
Coastal Zones Under Intensifying Human Activities and Changing Climate: A Regional Programme Integrating Science, Management and Society to Support Ocean Sustainability	State Key Laboratory of Marine Environmental Science, Xiamen University	China

Building capacity for interdisciplinary science communication training at the University of Tsukuba	University of Tsukuba	Japan
Advancing Endoscopic Medical Visualization for Sustainable Healthcare	Peking University	China
International Innovation Consortium for Green Fuel Production and Utilization	Shanghai Jiao Tong University	China
SDG Observatory - Black Sea Region	FEB Foundation	Bulgaria
Belgrade initiative for increasing the visibility of scientific results in the field of sustainable development	Ministry of Science, Technological Development, and Innovation of the Republic of Serbia	Serbia
Empowering Communities and Enhancing Nutrition: A Spirulina-Based Solution for Sustainable Development in Lake Chad area	UNESCO Chair Intangible Cultural Heritage and Sustainable Development	France
International cooperation for WASH (Water, sanitation and hygiene)	University of Science and Technology Beijing	China
The STOPTIGRE activity on the Mediterranean island of Procida: toward a community-based and science-art transdisciplinary approach for the control of insect disease vectors	University of Naples Federico II	Italy
OPEN SCIENCE: A new global open access journal crowdfunded by the Chinese Open Science Network (COSN) to support the global open science initiative	the Chinese Open Science Network (COSN)	China
Reshaping the future of educational science based on Intelligent Social Experiment	UNESCO Chair on Artificial Intelligence in Education	China
Initiative of A New Kind Calendar Used on the Surface of The Moon	National Astronalmical Observatories, Chinese Academy of Sciences	China

Terms of Reference and Operational Definitions for Science Communication in the context of the IDSSD	Universiti Malaya	Malaysia
Jordan Science Decade for Resilient Communities: Women, Climate, and Water Scarcity	Jordanian Humanitarian Resilience Society (JHRS)	Jordan
Research on the Application of Space-borne Lidar Global Greenhouse Gas and Aerosol Data	Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences.	China
Establishing a network on youth sharing knowledge on sustainable cities and transportation with develop-ing countries	Beijing Jiaotong University	China
Development and Dissemination of Advanced Scientific Knowledge for Achievement of Sustainability Goals	University of Bahrain	Bahrain
CPLP Agroecology Nexus (ROOT)	University of Coimbra	Portugal
Artificial Intelligence and Climate Education for Sustainable Futures	Erzincan Binali Yıldırım University	Türkiye
Science Promotes the Sustainable Development of the Cultural Heritage along the Silk Road	China Central Academy of Fine Arts City Design School	China
Digitization of Cultural Heritage and Virtual Tourism for Sustainable Develop-ment	Arkeoloji ve Tarih Araştırmaları Derneği (Archaeology and History Research Association)	Türkiye
BeiDou Assists in Global Disaster Prevention and Mitiga-tion, Jointly Building a Safe and Happy Homeland	National Time Service Center, Chinese Academy of Sciences	China
Meta-Network Hub for Sustainability in Asia Science Mission	Future Earth Asia	Australia

Integrated Water Safety Management and Projection of Extreme Events in international Rivers in China	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences	China
Equipping, capacitating and Developing Curriculum for Digital Technology in inclusive Education.	The Ministry of Education and Vocational Training, Zanzibar.	Bahrain
Valorization of endogenous knowledge to the sustainable management of sacred ecosystems and their biological diversity in Bénin.	General Directorate for Water, Forests	Benin
A municipal plan: 2033 objective	atelier de l'aRue	France
Artificial Intelligence and Climate Education for Sustainable Futures	Erzincan Binali Yıldırım University	Türkiye
Empowering Communities for a Sustainable Future: A Public Engagement Program	Al al-Bayt University	Jordan
Open Science from an African perspective: research and training school	CNRS: Centre Jean- Pepin UMR8230 CNRS/Ecole Normale Superieure	France
Preserving the Kingdom of Bahrain Heritage: A Journey Through Sustainable Heritage	University of Bahrain	Bahrain
PlastenikNET 2.0: Smart Off-Grid Greenhouse System for Climate-Resilient Rural Food Production	Faculty of Electrical Engineering, University of East Sarajevo	Bosnia and Herzegovina
Brunei Muara District as a green city: Plant biodiversity and conservation of Brunei-Muara district	Universiti Brunei Darussalam	Brunei
Quantifying Climate-Driven Urban Fire Risk: A Novel Metric for Fire Risk Responses and Resilience Strategies	University of Science and Technology of China	China

Water-Economy- Ecology Nexus Regulation for Sustainable Development (WEENRSD)	General Institute of Water Resources and Planning and Design (GIWP), Ministry of Water Resources, China	China
On-Demand Smart Agriculture with Collaborative Earth-Observation Infrastructure	Institute of Software, Chinese Academy of Sciences	China
African Microbiome Consortium for Infectious Diseases: A Practical Perspective of One Health	BGI Group	China
China-Uganda Joint Laboratory for CD36 Antigen Deficiency and Precision Transfusion Medicine	Suzhou Institute of Biomedical Engineering and Technology, Chinese Academy of Sciences	China
Supercritical CO_2 Cycle Power Generation: Advancing Clean Energy for Global Sustainability	Institute of Engineering Thermophysics, Chinese Academy of Sciences (IET-CAS)	China
East Africa Water Tower Initiative	Sino-Africa Joint Research Center, Chinese Academy of Sciences (SAJOREC) / Wuhan Botanical Garden, Chinese Academy of Sciences(WBG)	China
Phytomelatonin Biostimulant for Crop Yield Enhancemen	CStAatSe)Key Laboratory of Plant Diversity and Specialty Crops, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, Menglun, Yunnan, China	China
Rethinking Climate-Smart Agriculture: Toward Vulnerable-Smart Agriculture	Sino-Belgian Joint Laboratory for Geo- Information, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences (XIEG,CAS)	China
Developing sustainable energy solutions: piezoelectric, thermoelectric, and multiferroic materials in thin films and ceramics as promising alternatives	Universidad de Antioquia	Colombia

Circular Science and Community Innovation for Food Transformation	Universidad Politécnica Salesiana	Ecuado
SmartAgriGuard – AI-Driven Climate-Resilient Farming for Food Security and Ecosystem Sustainability	Agricultural Research Center	Egypt
Smart Coral Reef Preservation and Rehabilitation in the Egyptian Red Sea	Marine Hazards Mitigation Center (MHMC)	Egypt
Wireless High- Performance Monitoring System for Aquaculture	National Institute of Oceanography and Fisheries (NIOF)	Egypt
Piloting the UNESCO - CODATA Toolkit Contributions on 'Data Policies for Times of Crisis Facilitated by Open Science'	CODATA (Committee on Data of the International Science Council [ISC])	France
GREEPHON - GREENing quantum optics and integrated nanoPHOtoNics	Humboldt- Universität zu Berlin	Germany
Building Capacity Through Education: Developing Human Capital for the Islamic Republic of Iran's Transition to a Sustainable Circular Bioeconomy	National Institute of Genetic Engineering and Biotechnology (NIGEB) in collaboration with the University of TehranYunnan, China	The Islamic Republic of Iran
"PEACE – Psychometric Evaluation for Awareness and Connection with the Environment in the UNESCO Biosphere Reserve of Monte Peglia"	UNESCO Biosphere Reserve of Monte Peglia	Italy
Utilization of Science in Strengthening Community-Led Biodiversity and Agricultural Innovative practices for sustainable livelihoods of Baringo People (SCoBA-Baringo).	Baringo County Conservancies Association	Kenya
Deployment of QR Informational Wellness Bonds (BbilQoS) to Foster Circular Economy Models and Inclusive Development in the State of Mexico	Universidad Autonoma Metropolitana Unidad Lerma	Mexico

AI-powered accessibility: Reimagining the 15-minute city in a hybrid digital-physical world	The University of Hong Kong	China
The Human Genome Project II (HGP2): Delivering Precision Public Health for Humanity	CODATA,Committee on Data of the International Science Council (ISC)	France
Women at the Core: Digital Community Centers for Inclusive Innovation	New Sun Road Guatemala	Guatemala
Rooted Wisdom, Future Guardians: Transforming Amazonian Education through Intercultural Science	Preuniversitario Prometeo	Ecuador
Diploma in Renewable Energies: Empowering Communities Through Hands- On Education for Sustainable Development	Chascomus Institute of Technology (INTECH, UNSAM, CONICET)	China
Radon Awareness and Innovation for Science Education	Ghana Atomic Energy Commission	Ghana
Foresight-Driven Policy Ecosystems for Addressing the Triple Planetary Crisis: A Social Epistemology Approach to Energy and Environmental Governance in the Islamic Republic of Iran and Iraq	Niroo Research Institute (NRI)	The Islamic Republic of Iran
Invasive plant species in the Horn of Africa: Synthesis and Database Establishment	Wroclaw University of Environmental and Life Sciences	Poland
Therarium - VR and AI-based psycho-physical therapy	HolisticTech	Romania
From the Arctic for the Arctic: science diplomacy for sustainable future of the region and its people. Educating a new generation.	Federal Research Centre Kola Science Centre of the Russian Academy of Sciences (International Department)	Russian Federation
Sustainable wastewater management and resource recovery for environmental protection in Rwanda	University of Rwanda	Rwanda

Autonomous Monitoring of Algal Blooms in Hydropower Reservoirs	Blisc Dynamics d.o.o.	Slovenia
Women-led Climate-Smart Farming Innovation in Displaced Communities of South Sudan	Lim Nguen Foundation	South Sudan
Seagrass blue economy concept for sustainability of small scale fisheries in Sri Lanka.	National Aquatic Resources Research and Development Agency	Sri Lanka
Integrating Advanced Nuclear Technology and Energy Efficiency for Climate Resilient in African Cities	Sudan Academy of Sciences	Sudan
Low-Cost Biorefining of Waste Substrates Using Edible Filamentous Fungi for Global Production of Proteins and Bioactive Compounds.	The Swedish Centre for Resource Recovery (SCRR), UNIVERSITY OF BORÅS, sweden	Sweden
Citizen Responses to Local Air Pollution Information	ETH Zurich	Switzerland
Impacts of Extreme Flows on Hydropower Generation in the upper Amu Darya River, Tajikistan	ICenter for Research of Glaciers of the National Academy of Sciences of the Tajikistan	Tajikistan
Investigation of Dengue-infected cells treated with antibody- nanoparticles: Host and Viral views	The National Science and Technology Development Agency (NSTDA)	Thailand
Teaming for self- evaluation in research assessment across scales: from researchers to institutions (SE4RA)	TOBB University of Economics and Technology (TOBB ETÜ), Ankara, Türkiye	Türkiye
Snowdrop Bloom: Empowering Roma Women through Science- Driven Health Equity	BUHASDER (Infectious Diseases Prevention Association)	Türkiye
Development of a transdisciplinary platform with component architecture of cognitive services for analyzing large amounts of information, ensuring consolidated interaction and decision-making	Institute of Applied Control Systems of the National Academy of Sciences of Ukraine	Ukraine

PhD iqtibos.uz – Digital Library of Scientific Quotations	Uzbek State Institute of Arts and Culture	Uzbekistan
Recycling Polyethylene Terephthalate (PET) Plastic Waste into Functional Photocatalyst Materials for Solar Energy Harvesting, Solar Cells, and Green Hydrogen Production	National Research Institute of Astronomy and Geophysics (NRIAG), Egypt	Egypt
Soundscape China	tInstitute of Zoology, Chinese Academy of Sciences	China
Agroecology farm in Cambodia (NGO free schools for girls)	Toutes à l'école	Cambodia
Towards a Romanian Unified Citizen Science Network for Transformative Citizen Participation and Engaged National Collaborative Effort	Babes-Bolyai University - Office for Open Science	Romania
Zoonosis and cultural evolution: Mapping the past, present, and future of wildlife consumption and trading in Mongolia and the Philippines	Eberswalde University for Sustainable Development	Germany
Citizen Science on Microplastics for the Advocacy of National Quality Standards	ECOTON Foundation	Indonesia
Citizen science to enhance science literacy on urban butterflies	Research Center for Climate Change - Universitas Indonesia	Indonesia
D'Young Green: Promoting Science Literacy on Renewable Energy and Climate Change among Indonesian Youth	University of Surabaya – Center for Environmental and Renewable Energy Studies (PuSLET)	Indonesia
Touch2Read: Public Showcase of STEM Literacy through Braille and Tactile Innovation	International Islamic University Malaysia	Malaysia
Filipino Youth Against Plastic Pollution	De La Salle University	The Philippines

Activities:

I DO. BE PART OF THE CHANGE!	FONDAZIONE IDIS - CITTA' DELLA SCIENZA	Italy
Sustainable Solutions Winter School 2024 - 2025	UNU CRIS and University of Massachusetts Amherst	Belgium
Frontiers of Quanta to Cosmos Physics Series Actives	International Centre for Theoretical Physics Asia-Pacific	China
iPolytech Conference: Water Challenges Workshop	Irkutsk National Research Technical University	Russian Federation
Science communication capacity building for Latinos	Ciencia Sí	Mexico
Ivannikov Memorial Workshops on System Programming and its Applications	Ivannikov Institute for System Programming of the Russian Academy of Sciences (ISP RAS)	Russian Federatio
International Conference "Problems of Artificial Intelligence Security in Education for Sustainable Development"	Saint Petertsburg State University of Aerospace Instrumentation	Russian Federation
The International Psychological Forum "Child in a Digital World"	Federal Scientific Center for Psychological and Interdisciplinary Research	Russian Federation
Baikal Conference. 1996- 2026 UNESCO World Heritage 30th annivesary	Irkutsk State University	Russian Federation
International Scientific and Practical Conference “Paradiplomacy and Sustainable Development”	Tyumen State University	Russian Federation
Brand management of spaces: Challenges, Technologies, Sustainable Development	University of Tyumen	Russian Federation

International Youth Summer School on "Blue Economy and Sustainable Development of Coastal Zones"	A.O. Kovalevsky Institute of Biology of the Southern Seas of RAS	Russian Federation
Zhongguancun Forum- International Forum on Sciences for Sustainable Development	Chinese Academy of Sciences(CAS)	China
III International Forum of Associations and Consortia of the Northern Territories (FACNT 2025)	National Research Tomsk State University	Russian Federation
Trends in Applied Neuroscience and Clinical Practice for Global South	Faculty of Biomedical Sciences, Austral University (Buenos Aires, Argentina).	Argentina
International scientific conference "Semiotics of Culture for Sustainable Development"	International Center for Semiotics and Intercultural Dialogue of the State Academic University for the Humanities	Russian Federation
Science,Technology and Innovation of outer space for societies - International Training Workshop for Space Science and	Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences	China
UThtielizFaifttiohn International Training Course on Industrial Synthetic Biotechnology	Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences	China
HIGH-LEVEL PANEL DISCUSSION: ADVANCING SCIENTIFIC LITERACY IN AFRICA THROUGH THE INTERNATIONA L DECADE OF SCIENCES FOR SUSTAINABLE DEVELOPMENT	Department of Science, Technology and Innovation (of South Africa)	South Africa
International Summer School on Sustainable Mobility	Kharkiv National Automobile and Highway University (KhNAHU)	Ukraine
Sustainable Aeroponics for Africa: Integrating Renewable Energy and Circular Agriculture Solutions	Higher Institute of Technology Studies of Sfax	Tunisia
Bringing Minds, Building Futures - MCAA Central European Initiative – 2025	Marie Curie Alumni Association (MCAA)	Belgium

International Training Course on Biological Data Integration, Sharing and Application	China National Center for Bioinformation（C NCB）	China
3rd International Training Workshop for Space Science and Utilization- Science, Technology and Innovation of Space Exploration for Global Sustainable Development	Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences	China
SynBio Challenges	1) Shenzhen University of Advanced Technology (SUAT); 2) Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences	China
EMYSD" — Empowering Minya Youth for Sustainable Development	Deraya University	Egypt
Advancing Marine Hazard Mitigation: A Capacity Building Workshop for Africa and the Middle East	Marine Hazards Mitigation Center (MHMC)	Egypt
Advancing Sustainable Development in Africa: A Training on Climate Change Science and Adaptation Strategies	National Institute of Oceanography and Fisheries (NIOF)	Egypt
Establishing a Nationwide Open Science-Based Virtual Labs Initiative in Ethiopia	Ministry of Innovation and Technology	Ethiopia
6th Virtual Conference for Women Archaeologists and Paleontologists	Association for early career Women Archaeologists and Paleontologists (AWAP)	France
SPI-SIRA: Integrating Soil Innovation for Regenerative Agriculture into the SPI Conference	University of Miskolc	Hungary
K4C-4-Kids: a junior researcher training programme for 11- 13 year-olds	University of Limerick	Ireland
Stop Climate Change (and Biodiversity loss)! Workshop on sustainable solutions	Maiella National Park / Maiella UNESCO Global Geopark	Italy

Blended Intensive Programme on Environmental Sustainability (kid+) II	Riga Technical University	Latvia
Kotor International Maritime Conference towards Open Science, Technology and Innovation	University of Montenegro, Faculty of Maritime Studies Kotor	Montenegro
Empowering Women and Youth in Rwanda through Science for Sustainable Development: Advancing Climate Resilience, Food Security, and	Rwandan Association for women in science and Engineering (RAWISE)	Rwanda
Computational Materials Science for Energy – Rwanda Training School	ICTP-East African Institute for Fundamental Research (EAIFR)	Rwanda
Science Climate Open Hub	Faculty of Contemporary Arts, Belgrade	Serbia
"Wings of Sustainable Development: STEAM Laboratory for Scientific Literacy" A training course on popularizing science and forming scientific literacy for adolescents	Institute of Gifted Child of the National Academy of Educational Sciences of Ukraine	Ukraine
SDGPolicyGPT: Leveraging Generative AI Multimodal Models For Intelligent Sustainable Development Policymaking	Imperial College London	UK
Science Basics for Journalists: Bridging the gap between papers and mass media	UNU-BIOLAC	Bolivarian Republic of Venezuela

Annex III - Acronyms

AAS	African Academy of Science
AI	Artificial Intelligence
CoARA	Coalition for Advancing Research Assessment
COP	United Nations Conference of Parties
COPE	Committee of Publication Ethics
DESA	Department of economic and social affairs of the United Nations
DORA	San Francisco Declaration on Research Assessment
ECBAP	Engineering Capacity Building for Africa Programme
EHC	First Earth-Humanity Coalition
FAO	United Nations Food and Agriculture Organization
GDP	Gross domestic product

HLPF	United Nations High Level Political Forum
IDSSD	International Decade of Science for Sustainable Development
INGSA	International Network for Governmental Science Advice
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
ISC	International Science Council
IYQ	2025 International Year of Quantum Science and Technology
OECD	Organisation for Economic Co-operation and Development
R&D	Research & Development
SDGs	Sustainable Development Goals
SDSN	Sustainable Development Solutions Network
UIS	UNESCO Institute for Statistics
UN	United nations
UNDP	United Nations Development Programme
UNESRALE	UNESCO's Remote Access to Lab Equipment Initiative
UNU	United Nations University
USD	United States Dollar

WEF	World Economic Forum
WFEO	World Federation of Engineering Organizations
WIPO	World Intellectual Property Organization

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2024 • 2033
International Decade of Sciences for Sustainable Development

Science at a Turning Point

International Decade of Sciences for Sustainable Development

GLOBAL REPORT

Science is central to building a more sustainable future, but its benefits cannot remain concentrated among a few. The first two years of the International Decade of Sciences for Sustainable Development (IDSSD 2024–2033) demonstrated the scale of global ambition, with hundreds of initiatives across countries and communities mobilizing science in support of all Sustainable Development Goals. At the same time, they revealed persistent inequalities in access to scientific knowledge, infrastructure, skills, and participation.

This Global Report examines both the progress achieved and the challenges that remain. It highlights the need to bridge the growing science divide and to rethink how science systems are organized, funded, and connected to policy and society. Drawing on lessons and evidence from the Decade's first years, the report outlines pathways to strengthen collaboration, build shared capacities, and advance responsible governance, ensuring that science becomes a driver of inclusive and sustainable development for all.

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