POLICY BRIEF

MAKING EDUCATION DATA COUNT

Policy Recommendations

Building data literacy among policymakers and education stakeholders

Effective use of education data depends on the capacity of policymakers and education stakeholders to interpret and apply evidence critically. Strengthening data literacy across ministries, political leadership, and education personnel at all levels of schooling (district, school, classroom) is essential to ensure that data informs strategic choices, supports long-term planning, and is not reduced to compliance or reporting exercises.

Strengthening education data systems

Many education data systems must evolve beyond tracking access to measuring learning, skills, and equity in meaningful ways. While systematically tracking access remains vital, an expanded view on the purposes of education and subsequent measures of impact are essential for quality. Investments should focus on robust, interoperable, sustainable systems that capture the full education journey and its links to social and economic outcomes, particularly for marginalized learners.

Improving research and policy pipelines

The need to close the gap between research production and policy use is widely recognized across fields. Stronger institutional links between researchers, publishers, governments, and international agencies are needed to translate evidence into timely, accessible, and policy-relevant insights that can inform, reform, and provoke innovation in education.

Aligning global and local priorities

While global frameworks remain vital for accountability and comparability, education data must be grounded in national and local policy needs. Greater alignment between global indicators and country priorities can enhance ownership, relevance, and sustained use of data in decision-making.

Overview

Over the past decade, the global education sector has witnessed unprecedented growth in the availability and sophistication of data. Yet, gaps remain and the impact of data on educational development deserves critical assessment. Particularly, as the world moves rapidly toward the deadline of the UN's Sustainable Development Goals (SDGs) and looks toward a new post-2030 framework, comes a vital moment to better understand and improve the relationship of data to development.

Launched in 2014, the UN's landmark report, A World That Counts, aimed to advance SDG progress and put data at the center of decision-making. The global data revolution it sparked has since reshaped how education systems are measured and monitored, but its promise has only been partially fulfilled. While the availability, disaggregation, and timeliness of education data have improved since 2014, particularly through expanded learning assessments, education management information systems, and open-access research, significant gaps remain between data production, data use, and effective policy development. Too often, data has served reporting and compliance needs rather than informing strategic, equitable, and impactful education policy.

This policy brief draws on discussions from the 2025 event "Ten Years of A World That Counts: Where Has the Data Revolution Taken Us in Global Education?", convened by the UN Sustainable Development Solutions Network (SDSN) and Springer Nature. The event provided a forward-looking stocktake of progress, challenges, and lessons from the past decade, emphasizing that the next phase of the data revolution must prioritize impact over volume.

The discussion highlighted persistent challenges, including uneven country capacity, continued undermeasurement of learning, skills, and marginalized populations, and weak institutional incentives for evidence-based decision-making. Advances in technology and data systems have not consistently translated into better policy choices or improved learning outcomes, particularly in low-income and fragile contexts. These challenges underscore the importance of strong knowledge ecosystems and partnerships that connect researchers, publishers, policymakers, and practitioners, ensuring that evidence is accessible, trusted, and actionable.

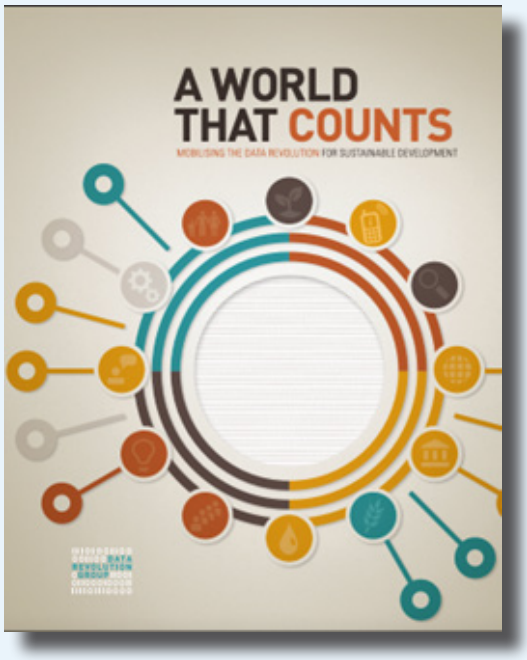
Four interrelated policy priorities (see recommendations) emerged from the discussions. Together, these priorities signal a necessary shift from a focus on data availability to a focus on data impact. The next decade of the data revolution in global education must embed data into policy processes, strengthen institutional capacities, and ensure that data function as a practical tool for improving learning, reducing inequalities, and accelerating progress toward shared global goals.

Problem → Policy Priority

Problem	Policy Priority
Policymakers lack skills to interpret data	Enhancing Data Literacy
Fragmented, incomplete systems	Strengthening Data Systems
Research not translated into action	Improving Research–Policy Pipelines
Misaligned priorities, inefficient collaboration	Aligning Global–Local Priorities

Background: From Vision to Practice

In 2014, A World That Counts set out an ambitious vision for a global data revolution to support sustainable development. Commissioned by the United Nations Secretary-General, the report argued that better data (i.e. more timely, more disaggregated, and more accessible) were essential for effective policymaking, accountability, and inclusion. At its core, the report reframed data as a public good: not merely a technical input, but a foundational element of governance and democratic decision-making. Its recommendations helped catalyze wide-ranging reforms, from the expansion of national statistical systems to the creation of global monitoring frameworks for the Sustainable Development Goals (SDGs).



Source: United Nations. (2014). A World That Counts: Mobilising the Data Revolution for Sustainable Development

Education quickly emerged as a central sector within this data revolution. As both a driver and an outcome of sustainable development, education sits at the intersection of social equity, economic opportunity, and long-term resilience. Measuring progress in education, however, has always posed particular challenges. Traditional indicators focused on access and completion, such was the case with the UN's Millennium Development Goals (MDGs), were insufficient to capture what truly matters: learning, skills, and the distribution of opportunity across diverse populations. The post-2015 period therefore saw education become a ripe testing ground for data innovation, with new efforts to measure learning outcomes, disaggregate

data by gender, income, disability, and geography, and link education data more closely to labor market and social outcomes.

A decade on, the 2025 milestone provided a critical opportunity to take stock of what the data revolution had delivered in practice. While the availability of education data has expanded significantly since 2014/2015, progress has been uneven across countries and contexts, and gaps between data production, data use, and policy development persist. The 10+ year stocktake is therefore not simply retrospective. It is forward-looking: an effort to understand which elements of the original vision have taken root, which have stalled, and what adjustments are needed to ensure that data meaningfully informs education policy in the years leading to 2030 and beyond.

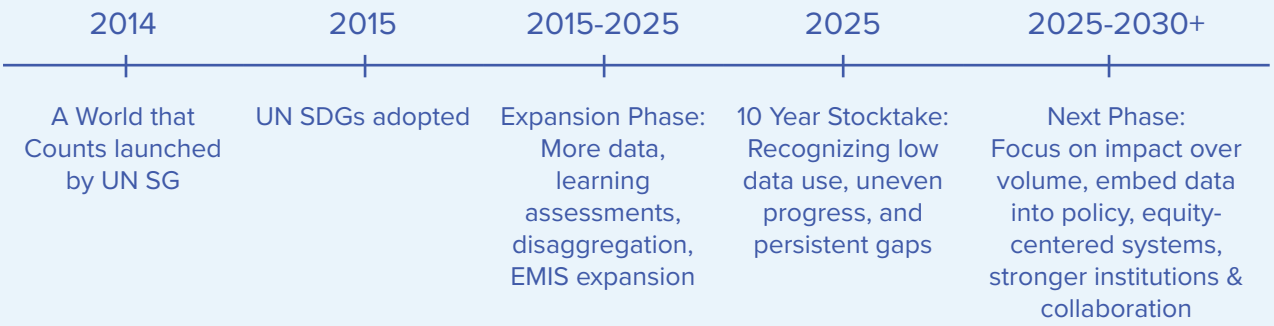
What Has Changed in Global Education Data Since 2015?

Since the adoption of the SDGs and the launch of the global data revolution, education data have undergone significant transformation. One of the most notable shifts has been the move beyond indicators of access, such as enrollment and completion, towards a stronger emphasis on learning outcomes. International data frameworks and regional/national assessments have expanded, making learning more visible within policy debates and highlighting the scale of the global learning crisis.

Disaggregation has also improved. Data are now more frequently broken down by gender, income level, geography, disability status, and migration background, allowing policymakers to better identify who is being left behind. This has strengthened the equity focus of education planning and contributed to a clearer understanding of structural inequalities within and across countries.

To further connections between technology, data, and governance, some countries have introduced digital education management information systems (EMIS), and similar platforms. These developments have improved the visibility and timeliness of data and opened new possibilities for monitoring education system performance. In parallel, access to education

Global Education Data 2015 Onward



research has expanded, supported by open-access publishing models and growing links between academic research and global policy processes.

These advances represent meaningful progress towards the vision articulated in A World That Counts. However, rising voices in the field emphasize that progress has been uneven and that improvements in data availability have not always translated into improved decision-making or outcomes.

Persistent Gaps and Uneven Progress

Despite notable advances, significant gaps remain in the global education data landscape. Many low-income, fragile, and conflict-affected contexts continue to face challenges in collecting reliable, timely, and comprehensive education data. Capacity constraints in national statistical offices and education ministries limit the sustainability and use of data systems, particularly when they rely on inadequate funding or technical assistance.

Measurement gaps also persist in areas that matter most for policy. Data on non-formal pathways, skills development, social-emotional learning, transitions to work, social outcomes, and lifelong learning remain limited, constraining the ability of governments to align education systems with labor market and societal needs. Learning data is also often sporadic, non-comparable, and disconnected from classroom practice. It insufficiently accounts for the most marginalized, who still face challenges of access to quality education. While disaggregation has improved, some populations, such as children with disabilities or learners in non-formal education, remain undercounted or invisible.

In some contexts, data is collected primarily for reporting to global frameworks rather than for domestic policy formulation or use within schools for informing classroom practice. Weak incentives for evidence-based decision-making, limited trust in data, and fragmented governance arrangements all contribute to a persistent gap between measurement and action.

Progress vs. Gaps

What has improved	What remains challenging
More data available	Data not used in policy decisions
Better disaggregation	Marginalized groups still underrepresented
Expanded learning assessments	Learning data inconsistent
Growth in EMIS systems	Systems not interoperable
Increased open-access research	Weak research-policy linkages

Looking Ahead: What the Next Phase of the Data Revolution Requires

The stocktake of A World that Counts, has made clear that the next phase of the data revolution in education must focus less on generating new indicators and more on embedding relevant, quality data into policy processes at all levels, including sub-national/ national governance and international goal setting. This requires not only giving attention to relevant, systematic, and quality data production, but also to data use, with an emphasis on building institutional cultures that value evidence, learning, and evolving practice.

Achieving this shift demands stronger governance arrangements that align school-level, local, and national data systems or protocols with international reporting frameworks, while ensuring that data ultimately serve local priorities. Investments must go beyond technical infrastructure to include training for policymakers, analysts, and education stakeholders in interpreting, applying, and acting upon evidence. By embedding data into routine decision-making and planning cycles, education systems can move from reactive to proactive strategies, using evidence to anticipate challenges, allocate resources efficiently, and evaluate the impact of interventions.

Equally important is fostering inclusiveness and equity in data practices. Many populations, such as learners with disabilities, those in non-formal education, and marginalized or displaced communities, remain underrepresented in existing datasets. The next phase must ensure that data systems capture the full diversity of learners and learning experiences, so that policies informed by data actively reduce disparities and support all children in achieving quality education. By combining relevance, rigor, and equity, the data revolution can transition from being a tool for measurement alone to a practical engine for meaningful educational improvement.

Policy Recommendations

To translate the lessons of the past decade into action, the following policy priorities are proposed:

1. Building data literacy among policymakers and education stakeholders

Effective use of education data depends on policymakers' and education stakeholders' ability to interpret, question, and apply evidence, not merely access it. Data literacy enables officials and leaders to understand trends, assess data quality, and connect evidence to strategic choices such as resource allocation or program design. Research shows that without these skills, data often remain underutilized or misinterpreted, limiting its impact on policy decisions.

Structured training programs are one clear way to build these skills. For example, the *Open Data for Policymakers*[1] course offered by the World Bank is designed for government officials and conveys the knowledge and background they need to lead or coordinate multi-agency Open Data initiatives. Related programs are also available, for example, through the UNESCO International Institute of Educational Planning. Evaluations of such initiatives show increased confidence and uptake of data in decision forums after training.

Another example is to embed data advisers within ministries (i.e. technical specialists who work alongside senior policymakers to interpret data during policy cycles). In several African countries, partnerships between ministries of education and research institutions have placed data advisers in planning units, resulting in more frequent use of learning assessment results to adjust teacher training and curriculum priorities.[2] This model helps bridge technical expertise and policy production in real time.

Creating communities of practice or sustained peer networks where policymakers share experiences and tools, further reinforces data literacy beyond one-off workshops. The *International Network for Government Science Advice*, for instance, supports peer learning on data interpretation and evidence translation across government ministries worldwide, helping normalize evidence use in decision-making bodies.

Lastly, institutionalizing data literacy in professional development pathways also strengthens long-term capacity. Countries like Mexico and South Africa have integrated modules on data interpretation and evidence use into civil service training curricula, ensuring that incoming and mid-career officials build these competencies as part of standard professional progression.[3] Evaluations indicate that when data literacy skills are tied to career development, officials are more likely to use evidence proactively.

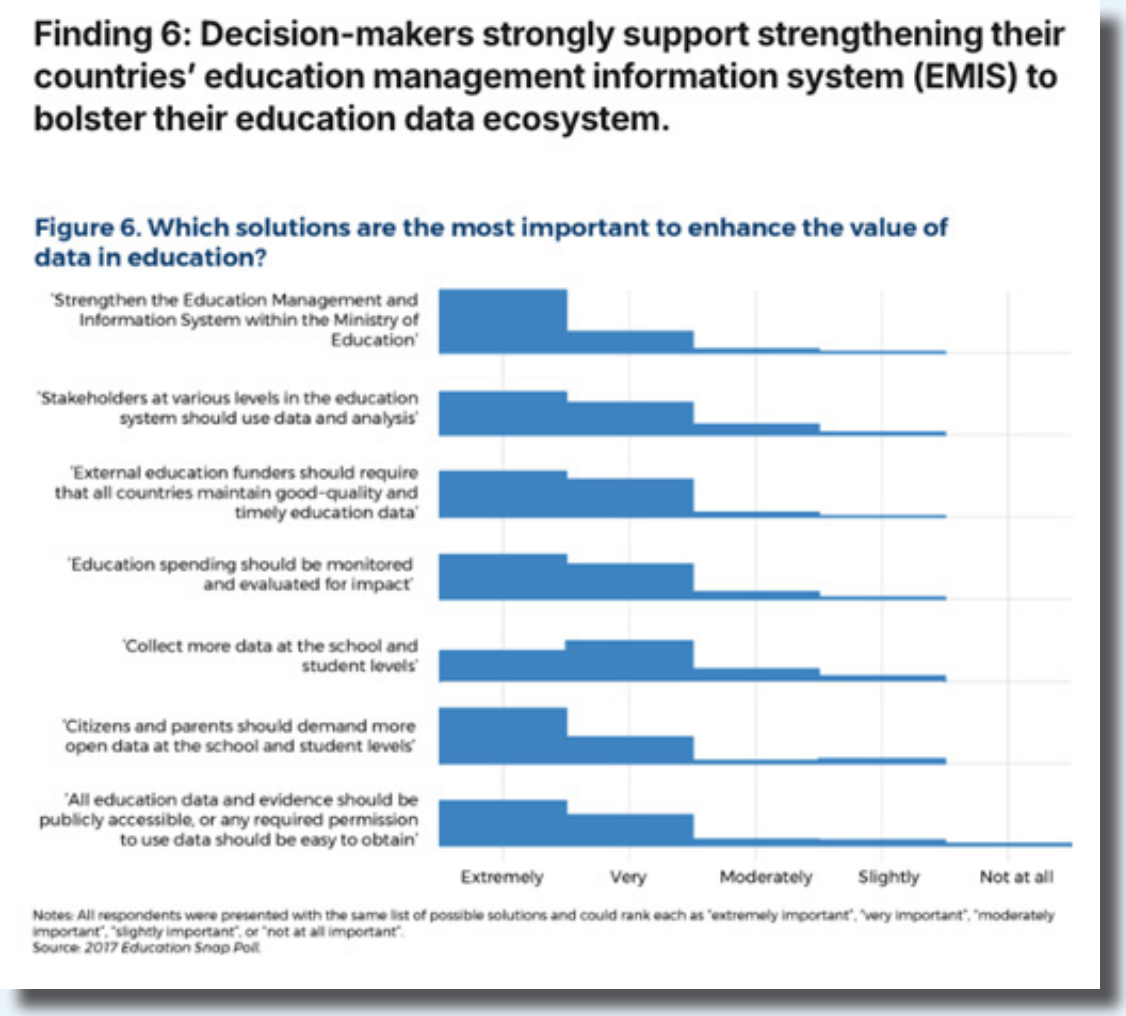
2. Strengthening education data systems

Countries should prioritize sustainable, nationally owned education data systems that measure learning, skills, and equity across the education lifecycle.[4] Although data availability has expanded under SDG 4, fragmentation, uneven quality, and weak institutionalization continue to limit impact. [5]Diagnostics from the World Bank and the UNESCO Institute for Statistics show that systems are most effective when embedded in governance structures, interoperable across sectors, and explicitly designed to inform policy – not just reporting.[6]

Strengthening governance is a first priority. Clear legal mandates, data-sharing protocols, and integration with national statistical strategies reduce duplication and build trust. Formal coordination between education, labor, and finance ministries can enable better tracking of student progression and alignment with workforce needs.[7]

Another priority is improving interoperability and system integration. In many countries, administrative records, assessment results, and survey data remain siloed, limiting their analytical value.[89] Establishing more collaborative data standards and interoperable digital platforms enable more comprehensive analysis of learning trajectories and system

performance. Experience from middle-income countries suggests that integrated data systems improve the identification of at-risk students and support more efficient resource allocation, particularly when paired with strong data protection safeguards.[10]



Source: Brookings (2018), 6 key insights into the data and information education leaders want most.

Systems must also expand measurement beyond enrollment and completion to include learning outcomes, skills development, and transitions to further education and employment. Despite progress in learning assessment, significant gaps remain in early childhood, social-emotional skills, technical and vocational education, and non-formal learning.

3. Improving research and policy pipelines

Effective education policy depends not only on data collection but also on the ability to translate research findings into actionable insights. Strengthening research-to-policy

pipelines requires deliberate mechanisms that bridge the gap between knowledge production and policy application. Open-access publishing is one critical element, ensuring that policymakers, practitioners, and researchers, particularly in low- and middle-income countries, can access high-quality evidence without financial barriers. Studies have shown that when research is freely available and tailored for decision-making contexts, the likelihood of its uptake in policy design and program implementation increases significantly.[11] It is also important that there is greater visibility and use of research by scholars based in low- and lower-middle income countries. The African Education Research Database is one example of enhancing this.[12]

Another key mechanism is policy-oriented research synthesis, including systematic reviews, meta-analyses, and evidence briefs that condense complex research findings into digestible recommendations. Such synthesis enables policymakers to identify trends, assess interventions across contexts, and avoid redundant or conflicting approaches. A concrete example is the Education Endowment Foundation Teaching and Learning Toolkit, which translates findings from numerous meta-analyses and rigorous impact evaluations into accessible summaries for decision-makers.[13] The Toolkit presents comparative evidence on the cost, impact, and strength of evidence for different pedagogical approaches, enabling policymakers and practitioners to make informed choices grounded in synthesized research rather than isolated studies. This model illustrates how structured evidence synthesis can serve as a bridge between academic research and real-world policy formulation, strengthening the coherence, efficiency, and effectiveness of education reform efforts.

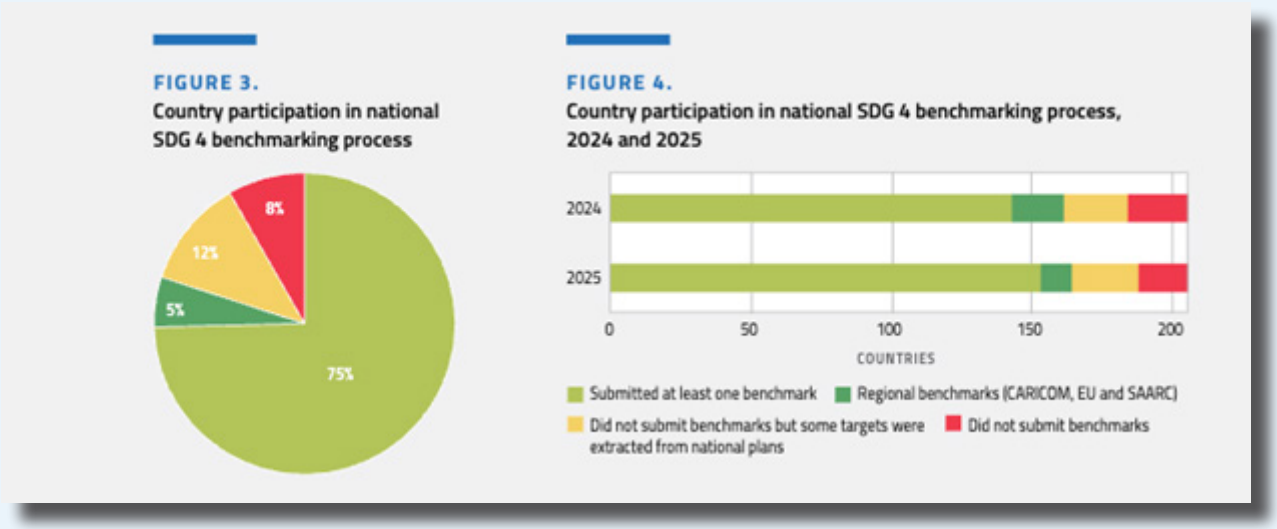
Finally, institutional partnerships and embedded advisory roles are vital for making research actionable. Universities, think tanks, and research institutes can collaborate with ministries of education to place data and policy advisors within decision-making units, ensuring evidence is interpreted in real-time during policy cycles. These partnerships foster trust between researchers and policymakers, promote iterative feedback, and increase the relevance of studies to local priorities. By combining access, synthesis, and embedded expertise, research and policy pipelines can evolve from sporadic reports into sustainable engines of informed, evidence-driven education reform.

4. Aligning global and local priorities

Global education monitoring frameworks, such as the SDG 4 indicators, provide a standardized basis for comparing progress across countries and regions. Yet, their primary focus on comparability can sometimes limit immediate relevance for national and subnational policymakers. Countries differ in education system structures, priorities, and capacity for data collection, meaning that rigid global frameworks may not fully capture context-specific challenges, such as marginalized populations, non-formal education, or early childhood development needs. To address this, international monitoring mechanisms should allow flexibility for countries to adapt and supplement indicators in ways that reflect local policy questions and operational realities.

Greater alignment between global indicators and domestic priorities strengthens ownership and increases the likelihood that data informs policy decisions. For example, several

countries have developed national SDG 4 monitoring dashboards that integrate both global metrics and locally relevant indicators, enabling ministries to track access, learning, equity, and transition outcomes while maintaining comparability with international standards. Similarly, the UNESCO Institute for Statistics' SDG 4 Data Digest[14] encourages countries to adapt reporting templates to reflect national contexts, such as disaggregating learning outcomes by language of instruction or socio-economic background. These approaches illustrate how flexible frameworks can enhance policy relevance without undermining international comparability.



Source: SDG4 Scorecard: Progress report on national benchmarks: focus on the out-of school rate.

Policy recommendations emerging from practice include:

1. Establishing national indicator compacts, where global metrics are mapped onto local priorities to identify gaps and actionable targets (e.g. UNESCO's national SDG 4 benchmarking process)
2. Promoting co-production of data between national statistical offices, ministries, and research institutions to ensure both technical rigor and policy relevance
3. Embedding feedback mechanisms so that the outputs of global monitoring inform iterative planning and resource allocation at the subnational level

Conclusion

Ten years after A World That Counts, the data revolution in global education has delivered important gains, but its transformative potential remains only partially realized. The recent stocktake underscored that better, more relevant data is necessary, but further actions in how data are used are needed for improved education outcomes. Moreover, such outcomes should translate into better futures for all children and young people, regardless of their background. Thus, the next decade must focus on strengthening institutions, partnerships, and capacities that enable data to inform action. By investing in data literacy, robust data systems, strong research–policy linkages, and better alignment between global and local priorities, policymakers and partners can ensure that education data serves its ultimate purpose: improving learning, reducing inequalities, and accelerating progress toward quality education for all.

Acknowledgements

SDSN would like to extend its gratitude to the speakers in the 2025 Springer Nature x SDSN event, "Ten Years of A World That Counts: Where Has the Data Revolution Taken Us in Global Education?", which included Manos Antoninis, Marcos Delprato, Clara Fontdevila, and Suzanne Grant Lewis. Their expert insights gave crucial direction to this policy brief. SDSN also appreciates the valuable peer reviews provided by Pauline Rose and Huijia Teh. Project managers at the SDG Academy including Jessica Crist, Dawn Adrian, and Helen Perham supported with coordination, review, and layout. The brief was prepared by Amber Webb, UN Sustainable Development Solutions Network.

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Contact:
UN Sustainable Development Solutions Network
SDG Academy
475 Riverside Drive
New York, NY 10115 USA
sdgacademy@unsdsn.org