



# HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

## 2023 HLPF thematic review of SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Summary of the expert group meeting in preparation of the HLPF 2023  
Vienna/hybrid, 22 March 2023<sup>1</sup>

### 1. Introduction

The high-level political forum on sustainable development (HLPF) is the central platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level. The theme of the 2023 HLPF is “Accelerating the recovery from the coronavirus disease (COVID-19) and the full implementation of the 2030 Agenda for Sustainable Development at all levels”.

The 2023 HLPF will conduct an in-depth review of Goals 6 on clean water and sanitation, 7 on affordable and clean energy, 9 on industry, innovation and infrastructure, 11 on sustainable cities and communities, and 17 on partnerships for the Goals.

The forum will take into account the different and particular impacts of the COVID-19 pandemic across these SDGs and the integrated, indivisible and interlinked nature of the Goals. The HLPF in July held under the auspices of the United Nations Economic and Social Council (ECOSOC) will also help prepare for the SDG Summit, the HLPF held every four years under the auspices of the UN General Assembly, from 18 to 19 September 2023.

In preparation of the review of SDG 9 and its role in advancing sustainable development across the 2030 Agenda, the UN Department of Economic and Social Affairs, Division for Sustainable Development Goals (UN-DESA/DSDG) and the United Nations Industrial Development Organization (UNIDO) organized an Expert Group Meeting (EGM) on 22 March 2023 in Vienna, Austria to take stock of where we stand in terms of progress towards SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation). The meeting was organized back-to-back with the UNIDO 2023 Multilateral Industrial Policy Forum (MIPF). The EGM was informed by an [agenda and concept note](#).

Participants in the hybrid meeting included a wide range of experts from academia, industrial associations, think tanks, private sector companies, international organizations, non-governmental organizations as well as major groups and other stakeholders representing youth and children, farmers, and persons with disabilities.

The meeting was designed to consider progress made on SDG 9 and how the Goal can contribute to the full implementation of the 2030 Agenda.

The last time that SDG 9 was reviewed at the HLPF, also the [first thematic review of SDG 9, was in 2017](#), when the SDG indicator framework had just been approved.

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<sup>1</sup> *The recommendations expressed in this report are a summary of the contributions made by experts in the meeting and do not necessarily reflect the views of the United Nations.*

One of the key findings of the 2017 review was that SDG 9, beyond being a goal in itself, also acts as an important enabler of most, if not all, SDGs.

The 2023 thematic assessment of SDG 9 comes at a critical point, that is at the mid-point of the implementation of the 2030 Agenda, which has been severely impacted by several global crises and challenges.

## 2. Stocktaking and challenges

The confluence of several crises, dominated by COVID-19, climate change, value chain disruptions, economic and political uncertainties and conflicts are creating spin-off impacts affecting all the SDGs, including SDG 9. A stock-take of progress on SDG 9 targets highlighted the following findings:

- Industrialization and structural transformation remain critical for sustained growth in developing countries due to their interlinkages across all areas of sustainable development. Industry is a source of job and income creation, a driver of technological advancement and productivity growth.
- There has been some progress towards SDG 9 targets, but this has been so far insufficient to meet the Goal by 2030. Globally, an improvement on industrialization indicators has been registered, but it is limited in perspective of the overall progress yet to be achieved.
- Progress towards SDG 9 targets has been unequal across countries, sectors, firms and population groups. While there are a few cases of rapid industrialization, digitalization and investment in infrastructure, progress in most countries has stalled. In some cases, there is evidence of (premature) de-industrialization.
- While countries in Asia have made considerable progress and are on track, some groups, such as least developed countries (LDCs) in Africa, are at risk of not meeting SDG 9 targets. A widening digital divide across households and firms is also a reason of concern.
- Manufacturing employment in low- and middle-income countries (LMICs) remained stable over the past two decades, but also the transition of industries in LMICs to more technologically complex ones has been limited, with minor changes to the manufacturing structure.
- Evidence of an ongoing decoupling in manufacturing activity has started to emerge: CO<sub>2</sub> emissions from the sector peaked in 2014, while global manufacturing kept growing. But decoupling happens at an unequal pace, and not fast enough to attain climate-related goals.
- While micro-, small- and medium-sized enterprises (MSMEs) are the backbone of manufacturing activity and employment, they remain affected by low productivity, limited access to resources and insufficient policy prioritization. Small firms are vulnerable to shocks and financial risks, but access to finance for small manufacturing firms remains unequal for different groups. Sub-Saharan African countries and LDCs suffer the most from a lack of credit: only 15.4 per cent and 16.9 per cent, respectively, have access to financial services, well below the global average.
- Progress on infrastructure development, including basic transport and digital infrastructure, strongly linked with progress across all SDGs, has stalled. Also the financing gap, both domestic and external, is widening.
- Statistical information on industrial activity and other SDG 9 areas that is sufficiently timely and granular to guide policy remains scarce, especially in low-income economies. Issues not typically accounted for in official statistics, such as innovation and resilience, as well as informal firms and SMEs need to be better captured so that policy can be better targeted and implemented. Additional information, such as from administrative sources and the private sector, may need to be tapped into.

A representative of the United Nations Regional Commissions New York Office summarized initial findings of the ongoing regional forums on sustainable development:

Africa is a region where an infrastructure financing gap, access to ICT, and the uptake of digital technologies have been identified as challenges. The Arab region is on track on several SDG 9 targets, including on mobile network coverage, CO<sub>2</sub> emission reductions per unit of manufacturing value added,

access to financial services for small-scale industrial enterprises, and government expenditure on research and development. Progress on SDG 9 targets in the Asia Pacific region was found to be insufficient, as only two targets are on track to be achieved by 2030, namely total flows for infrastructure in the LDCs and mobile network coverage. Most Asian countries still devote less than 1 per cent of GDP to research, and the transition from fossil fuels to renewable sources is slow. In the Latin American and Caribbean region, low productivity and high levels of informality are weakening the dynamics of growth and job creation. Harnessing technological change is key to boosting productive growth in the region. The regional forum of the United Nations Economic Commission for Europe at the end of March 2023 will revolve around the green transition, decarbonization, mobility and infrastructure.

The expert discussion revealed the following additional challenges for achieving SDG 9 at the regional level:

- In many regions, the informal sector and SMEs carry out a large share of economic activity and are an important source of employment, dynamism and innovation. These firms, however, often receive limited support and are not sufficiently considered in policy programmes and official statistics.
- At the country-level, macro-level indicators may need to be complemented by micro-level, industry-specific indicators and adapted to realities on the ground. Especially in LDCs, an analysis based on a few key industries and players, could be easier to leverage and provide sufficient evidence on progress with industrialization and transformation and the impact of targeted policies.
- It would also be important to link the “beyond GDP” discussion to SDG 9. Industry should not only be accounted for in terms of economic activity or the number of jobs generated; but also in terms of qualitative aspects, such as circular production models.
- To achieve more sustainable economic models, it would also be important to further link the supply side (industrial production) with the demand side (consumption), pointing to the need to further explore the important interlinkages between SDG 9 and SDG 12.

### 3. Crisis impacts and recovery

#### Challenges

The global crises of the past three years have shown that progress towards the 2030 Agenda, including SDG 9, is fragile and can be easily reversed. Experts highlighted that the COVID-19 pandemic, conflicts and geopolitical tensions resulted in the disruption of supply chains and availability of raw materials and goods, leading to a potentially lasting reshaping of global value chains and trade. The crises pushed the global economy into a recession. Investment into industry, innovation, research and development, and infrastructure decreased significantly. This short-term reprioritization in times of crisis is likely to leave a long-term mark on the development of industrialization, innovation and infrastructure.

The crises also worsened global income inequality, with low-income countries and marginalized groups most affected, posing challenges for an inclusive industrialization. Inflationary pressures led to a cost-of-living crisis, affecting the poor most. The spikes in food and energy prices have driven several additional million people into poverty last year; one in five Africans suffers hunger. Population growth and increasing living standards are expected to further increase the demand for food, water and energy. Inadequate access to these goods and to social protection have resulted in unrest and instabilities. Furthermore, the impact of climate change, extreme weather events, and natural disasters (such as earthquakes) has devastating effects and can lead to humanitarian crises.

The expansion of renewable energy and energy storage systems, due to urgently needed climate change mitigation efforts, is pushing up demand for rare minerals and metals, resulting in further pressures in the near future. There are also questions about how new industrial policies will shift the location of global value chains, for example in chip manufacturing or green technologies.

Lastly, geopolitical tensions not only reduced global cooperation, but also added costs to developing countries, including in terms of financing and increasing debt levels. Lack of access to long-term financing

is a key constraint for firms, particularly when aiming to invest in innovation. The financial sector tends to have short-term incentives, but many investments that are critical to the growth of enterprises are long-term in nature and require similarly long-term financing. Banks in industrialized countries provide more long-term financing than in LDCs, where the costs of capital can be up to 7 times higher. Improving the domestic enabling environment should help in improving the availability of funding and borrowing conditions, particularly for LDCs.

Overall, the traditional challenges of industrializing seem to become tougher and breaking into global value chains is becoming more difficult.

### Industrial policies

The EGM benefitted from insights of other processes, including the UNIDO Multilateral Industrial Policy Forum (MIPF) 2023 and the Financing for Sustainable Development Report (FSDR) 2023.

The FSDR 2023, officially launched on 5 April, alerted that massive investments are urgently needed to accelerate transformations including in electricity supply, industry, farming, transportation, and buildings. It reported that number of countries adopting industrial policy measures more than doubled between 2009 and 2019, with most of the growth in developed countries. The revival of industrial policies focuses on creating decent jobs and addressing inequality (in response to 2008 global economic crisis), low-carbon transitions (in response to climate change), promoting digitalization (in response to rapid technological change) and enhancing the resilience of economies (in response to the COVID pandemic and war in Ukraine). This coincided with the geographic concentration of manufacturing activities in a few large countries and so-called “premature deindustrialization” in many developing countries.

The MIPF 2023 concluded that large-scale transformations, such as the expansion of green hydrogen, require broad and integrated industrial policy and government interventions in collaboration with the private sector, finance and academia. Effective and purpose-oriented policies, regulatory tools and standards will be necessary. Incentives for investment – for instance for firms to upgrade technologies, increase the skills of their labour force, or to switch to resource-efficient methods – will be key. No significant or just transformations will be achieved without a substantial increase in financing. Furthermore, achieving major transformations will be more easily and more comprehensively accomplished if they entail regional collaboration.

### Opportunities

Opportunities that have emerged during this time of crisis include a deepened role of digital technology, the green transformation, capacity-building in the pharmaceutical sector, and increased value added and employment in low and medium-income countries. There is still a lot to be learned from the impact of COVID-response policy programmes, particularly to identify further successful practices to guide policy in the future. As more complete, detailed data covering the past three years continues to emerge, it would be important for researchers and policy practitioners to study and learn from these experiences.

### Digital transformation

The digital transformation was not only observable in the early stages of the pandemic but is also important in post-pandemic rebuilding and resilience-building. The accelerated adoption of e-commerce, e-learning, telemedicine, and telework are driving development. For several African SMEs, the shift to e-commerce platforms helped with market penetration and growth. Advanced technologies optimize industrial operations and increase efficiencies, with both enhanced productivity and sustainability / resource efficiency. Digital technologies, including AI and blockchain, can optimize supply chains and increase their efficiencies. Smart manufacturing plays a role in development by leveraging advanced technologies and data-driven processes to enhance productivity, efficiency, and innovation within the manufacturing sector through the use of technologies such as the Internet of Things (IoT), artificial intelligence, robotics, and big data analytics.

At the same time, digital technologies can be demanding and require skills, training, capacity and organizational capabilities to be used effectively. The needs of today go beyond traditional education and skills training, and require new institutional models of vocational training, financing skills and adequate skills for the job on the ground. Multi-stakeholder cooperation is needed to establish regulatory frameworks that address potential risks and ethical concerns.

### Green transformation

The green transformation offers opportunities to developing countries by building their industrial capabilities in the green sector, creating jobs, income and global competitiveness. Going beyond energy generation, the entire industrial ecosystem needs to be considered. Significant investments in renewable energy systems have been made over the past decade, particularly concentrated in countries such as Kenya, Morocco, and South Africa. In an evolving context, for instance by investing now in green hydrogen technologies, several countries including in Sub-Saharan Africa could become hubs in attracting substantial investments for upstream industries due to their great potential to generate green renewable energy, which are in turn central to transform the industrial sector downstream.

The interdependence between sectors is of importance in this regard. Critical minerals offer opportunities for diversification in Africa, as some countries on the continent are becoming major hubs for midstream stages of beneficiation from the precursors down potentially to cathodes and cell manufacturing.

While the opportunities exist, the global community needs to do more to engage in a way that is beneficial for these countries. The risk is they do not leverage these opportunities sufficiently for overall growth. We need to design industrial policy to coordinate the transformations around the energy transition and the mineral complex, which is central for many African and Latin American countries, and at the same time make them enablers for development in critical downstream industries.

### Production of medicine and health products

Due to the pandemic, developing countries have started building up own capacities in the pharmaceutical sector and in the manufacturing of health products. This could be an opportunity to step up related capabilities and to build regional hubs for vaccine production, thus to be better prepared for the next pandemic. Support from international organizations, such as WHO and UNIDO, will be required to facilitate local and regional production or to promote joint ventures of multinational corporations. It is not only about creating such industries, but about developing industrial policies and business models to equip countries with the necessary know-how.

### Food security

The current cost-of-living crisis and food price increases highlight the need for African countries to boost their food production and reduce the reliance on imports and related vulnerabilities. Increasing African food production has become a priority. In 2022, the African Development Bank launched a \$1.5 billion initiative to set up an African emergency food production facility. The current focus is on supporting smallholder farmers with seeds and fertilizers, but should also cover other aspects of improving and transforming the food production chain.

## 4. Policies and actions to maximize synergies, mitigate trade-offs and drive transformation

This section summarizes promising actions for progress on SDG 9, including in reversing losses from the socioeconomic impact of the COVID-19 pandemic and other crises, and in view of accelerating the implementation of the 2030 Agenda overall. The findings in this section are presented in the format of the three sessions in which experts discussed the SDG 9 elements industry, innovation and infrastructure.

Already in earlier segments it was highlighted that the linkages between industrialization, innovation and infrastructure cannot be overstated. Innovation, the transfer of technologies, and the promotion of innovation and investments are key to industrial development. Without productive capabilities and development on the ground, there can be no innovation.

## The role of industrial policy and green industrial policy

Experts emphasized the importance of **building industrial capabilities** to enhance resilience, particularly in the face of recurrent crises. Stronger industrial capabilities can help diversify and generate multiple poles of added value within an economy. Countries lacking such capabilities can miss out on the opportunities arising from the green and digital transitions. To increase industrial capabilities, it is necessary to establish long-term relationships between buyers and suppliers, offer credits to producers, adopt better business practices, and diversify production. Moreover, industrial capabilities need to be embedded in organizations so that skills can be deployed effectively, stressing the role of countries' institutional frameworks.

Industrial capabilities can best help in rebuilding after multiple crises by focusing on innovation, value chain upgrading, and industrial diversification. Innovation is key to creating resilient, inclusive, and sustainable industrial development. Value chain upgrading can be done through integration into global value chains, linkages between local and global value chains, and upgrading of traditional sectors. Industrial diversification can be done through exploring untapped sectors and creating synergies among sectors to promote sustainability.

A paradigm shift is taking place, where industrialization is no longer solely focused on productivity but also addresses environmental and social concerns. The process of **green industrialization** requires a restructuring of the entire industrial system. This means industrializing differently in terms of what is produced, how it is produced, and where it is produced. It also requires new technologies that reduce the environmental footprint, which makes access to these green technologies a crucial factor in the industrialization process. Developing countries need to move away from being just consumers of such green technologies and become producers to insert themselves into value chains. Multilateral support, financing and technology transfers mechanisms can provide crucial support for this.

The experts delved deeper into the characteristics that make up **effective green industrial policies**. A combination of taxes and subsidies is needed to create incentives for sustainable practices, while also placing conditionalities on public support to private companies to ensure the widespread use of environmentally and climate-friendly technologies. Furthermore, the implementation of carbon pricing and taxing large corporations is necessary to internalize social costs and offset negative externalities. To avoid policy shocks, it is crucial to establish clear road maps for different industries, which in turn requires long-term planning, coordination, and proactive measures. The green technological revolution presents a significant opportunity for developing countries to boost productivity and achieve industrialization. However, this requires coherent industrial policies that align with national strategies and focus on building the necessary infrastructure and capabilities.

The “green window of opportunity” and the post-crisis recovery both require a regulatory change coming from government, which should be more entrepreneurial and proactive in promoting the green and digital transformation. Beyond policies at the national level, a global industrial policy would be needed to support this dual transition.

As industrialization in low and middle-income countries starts from grassroots entrepreneurs, particular focus needs to be given to supporting **small and medium-sized enterprises**. Infrastructure, affordable broadband access, loans, and capacity building are important in this regard. Women are represented with only around 25 per cent of the work force in the industrial sector. The **empowerment of women**, their participation in higher paid and more secure jobs, the growing of their own businesses, and their inclusion in decision-making are required to reduce inequality and poverty, increasing the wealth of societies.

The experience of the COVID-19 response showed the power of **partnerships and lasting relationships**. With a similar sense of urgency, partnerships are needed to accelerate the green and digital transformation, to strengthen supplier-buyer relations, to promote innovation and technology exchange,

and to share sustainable and innovative manufacturing practices. Partnerships between academia and industry, or with technical vocational training centers can add value.

In terms of **global partnerships**, and to address global challenges, institutions and states are critical in building productive capabilities at scale and in shaping the direction of industries and technological change. Developing countries need guidance and coordination from the state level, as they cannot move fast enough by themselves to catch up in the green and digital transition. Therefore, international organizations must provide a platform for countries to discuss these challenges and build a global industrial governance that coordinates activities. Experts also emphasized the need to support developing countries in building domestic financing capabilities such as national development banks to reduce dependence on international financing.

**Competition law and policy** play an important role in promoting fair and competitive markets, curbing monopolization, maximizing innovation, and ensuring a level playing field for MSMEs. By reducing entry barriers and allowing more players to participate in the market, competition policies prevent the takeover of monopolistic powers. The effective enforcement of competition policies and controlling of mergers and acquisitions is essential to avoid the preference of national champions and market concentration. To achieve proper competition policies, developing countries need resources and institutions to support local competition authorities, particularly in countries where state capture is prevalent.

#### Infrastructure and financing for resilience and sustainability

The **financing gaps** for sustainable and resilient infrastructure are large, and innovative mechanisms will be required to fill these. A long-term perspective is required to capture the true costs and benefits. Financing for sustainable infrastructure should take into account long-term fiscal sustainability, support the selection of technologies that best achieve value for money, leverage public finance to mobilize private finance, and should be transparent. However, finance is only one side of the equation: it is equally important to build capacities of governments (and other project proponents) to plan and develop sustainable and resilient projects.

**Infrastructure planning and development** should take a needs-based, integrated approach that recognizes the built, natural, and enabling environments and interlinked components of infrastructure systems. We need infrastructure for resilience not just resilient infrastructure. In many cases, this will involve rethinking what infrastructure is, considering all the different ways that infrastructure services can be delivered, including by natural infrastructure. In addition to putting emphasis on the climate/carbon dimension of sustainable infrastructure, the impact on nature is important and should not be overlooked. The triple planetary crises of climate, environment, biodiversity are interlinked and must be dealt with in an integrated manner.

We need to **focus on people**, not only hardware, and bring on board the various stakeholders and take their roles duly into consideration. It is important to look at the role of local communities, of the private sector, taking SMEs into consideration. For instance, smart city transportation requires promoting collaboration, fostering dialogue and a cross-cutting vision. Capacity-building for the use and maintenance of digital infrastructure is often missing. Social life cycle assessment of products is also an important methodology for decision-makers. The ten International Good Practice Principles for Sustainable Infrastructure were identified as helpful for policymakers to take needs-based, systems-level, integrated approaches to planning and delivering sustainable infrastructure. It is also critical to address gender biases in everything related to infrastructure and digital economy in order to build a new resilient community. Women often carry the biggest risk and suffer the greatest damage.

Among key actions discussed by the experts, infrastructure and investment in support for **climate change adaptation and mitigation** were emphasized. Recommendations include to: support development of climate change adaptation and mitigation related tools, metrics, and analyses; assess the capabilities of internal and external investment managers to incorporate climate change adaptation and mitigation

issues; request investment service providers (such as financial analysts, consultants, brokers, research firms, or rating agencies) to integrate climate change adaptation and mitigation factors into evolving research and analysis; encourage academic and other research on this theme; and advocate for climate change adaptation and mitigation training for investment professionals.

Support for infrastructure is particularly needed in **low-income and developing countries**, for climate adaptation, with a particular attention in African and Asian countries where the ability to attract investment is limited. Financial constraints in small island development States make climate action and adaptation difficult to implement. Yet, developing countries offer great opportunities for the installation of new renewable energy capacities. Investment aimed at overcoming hurdles in a local context is critical, particularly for progress in the energy, building and construction sectors.

One of the greatest challenges lies in securing adequate financing for transformative changes to **energy infrastructure**. Infrastructure development usually involves large investments in assets that are designed to operate over the long term, such as geothermal power plants, hydroelectric dams, and transmission lines. Traditional energy infrastructure development has generally assumed climatic conditions that reflect the recent past. This is no longer a reliable assumption. Climate change will affect the energy sector in terms of both energy production (renewable and non-renewable) and supply conditions. Risks from climate impacts include reduced efficiency rates of all types of power generation facilities as well as damages to energy infrastructure caused by extreme weather events.

In the case of **digital infrastructure**, funded largely by the private sector including private equity, creating a business case for the last mile remains necessary. Innovative financing mechanisms, such as the Giga initiative, are available, but more such initiatives are needed. Efforts to cover the last mile can include creating local demand, predictive policy environment for long-term investment, especially regarding taxation and investment in digital public goods, for instance payment systems.

**Challenges** identified by experts include insufficient investment levels, limited or inadequate focus areas, lack of mechanisms to ensure that lending by public institutions is aligned with the SDGs and Paris Agreement, the need for collaborative frameworks for public and private institutions to work together, and a failure of wealthier nations to help developing countries in adapting to climate change. The **solutions** suggested involve public and private finance, national and local budgets, public borrowing and debt, private equity and debt financing, and the intermediation of savings and investment by public and private institutions. Public policies can play a role at all these levels. Also the need for a major reform of financial system was discussed, including the new COP27 Loss and Damage Fund, where not only the amount of investment needs to be determined but also means of channeling funding to the nations most in need: low-income countries.

#### [Ensuring inclusive, fair and sustainable research & development and innovation](#)

Experts agreed that **science, technology and innovation (STI)** is the foundation for solving the wicked problems of our times, for weathering back-to-back crises, and for ensuring continued progress in terms of human lives and wellbeing. While science and technical knowledge can provide the foundation on which a more prosperous and secure future is built, the experience for many countries is that they are being left behind by the fast-changing world. Scientific advances are often concentrated in a few centers of knowledge. The countries and people who can benefit most from the latest advances in medicine, agriculture, or climate technology, such as least developed countries, face multiple barriers in accessing innovations and technologies in these areas. A case in point is the stark contrast in the roll-out and access to COVID-19 vaccines and therapeutics, which were accessible much easier and faster in rich countries while the pandemic still ravaged many developing countries.

Experts recognized that **open science** and the free flow of knowledge to communities beyond the knowledge centres in the developed world, has the potential to bridge the STI gap between developed and developing countries. The barriers are usually intellectual property and copyright issues, so



multilateral approaches to resolving these issues are essential. For example, public funds made available for research could require that the resulting research and data be open access. Profit-based publishing could also be a barrier to knowledge-sharing, so alternatives must be explored for researchers from all countries to publish and advance their research, towards advancing on the SDGs.

The importance of asking the right questions and funding the right initiatives was highlighted. In many developing countries, a lot of innovation is happening, but questions remain whether it ultimately results in improved lives of people, or whether the investments in STI are the right ones. For example, expenditure on education is not counted as investment but probably has the highest returns. The importance of vision, the right scale, “line of sight”, and innovation ecosystems was pointed out as key. Many promising initiatives fail to take off for lack of funding and the right innovation ecosystem.

Regarding inclusion, the need to shift decision-making power from traditional power centres, including in finance, was highlighted. It is critically important to tap on the potential of women and girls, youth, and other groups who traditionally do not participate in innovation. Community-based and frugal innovations must not be overlooked, as these can be the most impactful in local contexts. People with disabilities are often unintentionally excluded, sometimes by the latest innovation and technological advancements, and they must have a voice and a seat at the table.

## 5. Means of implementation: Mechanisms and partnerships to accelerate progress

For the SDG Summit in September 2023, and at mid-point of the 2030 Agenda, the Secretary-General called for urgent action to “rescue the SDGs”. He urged Heads of State and Government to recommit to seven years of accelerated, sustained and transformative action, both nationally and internationally, to accelerate the achievement of the SDGs.

In this context, it is also a time to recommit to SDG 9, particularly as it is a critical enabler for the achievement of other SDGs.

The 2023 HLPF thematic review of SDG 9 expert meeting emphasized the role of international coordination and cooperation, supporting developing countries in building domestic productive capabilities, financing and policies to promote fair and competitive markets. These measures are critical for achieving the imperatives of sustainable production and consumption, decarbonization, and the reduction of poverty and inequality, all of which are key components of the 2030 Agenda.

The private sector plays a pivotal role for the 2030 Agenda, not only in terms of financing but also in creating jobs, driving innovation, sharing information and technologies, enabling data collection, promoting the development of standards, facilitating joint training initiatives, and fostering institutional cooperation.

We need to foster public-private partnerships to drive industrial development and innovation, leveraging the expertise, resources, and networks of both public and private sector entities. These partnerships focus on areas such as infrastructure development, technology transfer, research and development, and capacity-building to accelerate progress towards SDG 9.

As an example for a large-scale industrial development programme, in the framework of the UNIDO Programme for Country Partnership, a participant highlighted the multi-stakeholder approach for the establishment of four integrated agro-industrial parks in Ethiopia. Within a radius of 150 to 200 kilometres, one agro-industrial park of 250 hectares can provide a market outlet for over one million smallholder farmers, offering employment and reducing poverty in rural areas.

For effective progress on SDG 9, it is vital to forge ahead in collaboration with all key stakeholders, including governments, the private sector, youth organizations, academia and technology leaders.

Within the private sector, SMEs were identified as a key partner. SMEs are vital for industry and the entire economy as the main providers of employment and innovation. Their challenges are low productivity and

limited resources. By prioritizing policies that support SMEs and quality infrastructure, we can promote job creation, innovation and a more resilient economic development: we need to support the development of clusters and special economic zones. We need to enhance cooperation and knowledge exchanges among SMEs and between SMEs and larger firms.

In view of the complex nature of inclusive and sustainable industrial development, especially in a globalized world, technological advancements and digital technologies have sparked a revolution in the production, distribution and disposal of goods with effects on global supply chains and access to new markets. We need to continue raising awareness of the need for enhanced international industrial cooperation and in the fields of science, technology and innovation to create opportunities, synergies and minimize risks. This can catalyze the collaborative efforts of United Nations system entities and international financial institutions to mobilize public and private resources, particularly for the achievement of industry-related SDGs, with a specific focus on advancing the Third Industrial Development Decade for Africa and supporting the countries most in need. This objective can be realized through active support for the facilitation of international and multi-stakeholder platforms.

For a sustainable future, we need to decouple growth from resource consumption. Industrial progress is possible without hurting environment and climate. Recent evidence from high-income economies and the Asia-Pacific region shows the environmental benefits of innovation-based industrial activities. For a profound global impact on climate change, it is necessary to support low-income, resource-dependent economies: we need to accelerate their structural transformation towards higher technologies, which are also less energy- and resource-intensive. Investments in renewable forms of energy is also needed to meet their growing energy demand.

Accelerating progress on SDG 9 also means addressing data gaps in monitoring this Goal. We must explore mechanisms to enhance data availability, including through collaborative approaches involving academia, private sector and communities. This entails going beyond quantitative indicators such as value added figures and incorporating industry-quality indicators. For instance, the indicators for SDG target 9.1 were found to be inadequate, measuring infrastructure development in only one sector (transport), omitting sustainability or resilience considerations. At the meeting, the United Nations Environment Programme offered to convene a dialogue among relevant parties to address this gap, including through the development of a sustainable infrastructure progress measurement framework.

Participants in the meeting further identified several good practices that have been adopted and scaled up through collaboration among stakeholders and sectors. These include Coalition for Disaster Resilient Infrastructure (CDRI), the Coalition for Climate Resilient Investment, the COP27 LOTUS initiative, the SURGe initiative, Zero Emissions Vehicle Transition Council. The CDRI and the USAID ADVANCE Indonesia programme, were identified as successful examples of promoting the resilience of infrastructure. We need to build on ongoing and relevant examples such as these, and messaging of the India-based CDRI could feed into India's G20 Presidency.

The expert group meeting also helped shape new partnerships on the spot. The World Farmers Organization presented perspectives on bottom-up innovation, including the example of a solar water pump that irrigated farmland with high efficacy. Participants gladly offered advice and mentorship to connect this initiative with innovation and financing networks, including the African Development Bank. Technovation — an AI based coding, training and entrepreneurship organization for women — offered collaboration with other participants to pilot an accelerator for 30 to 50 young women entrepreneurs. Emerging new collaborations like these are exemplary for partnerships that can help accelerate SDG 9.