



SDG 9: Industry, innovation and infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



FACTS AND FIGURES

- The share of manufacturing employment in total employment continued to decline worldwide, falling from 14.3% in 2015 to **13.6% in 2021**.
- Despite the slowdown, the global manufacturing value added (MVA) per capita increased from \$1,646 (constant 2015 prices) in 2015 to **\$1,879 in 2022**. Europe and Northern America reached an **all-time high of \$5,093 in 2022**, while the MVA per capita in LDCs reached **\$159**.
- The manufacturing share in LDCs rose from 12.1% in 2015 to **14.0% in 2022**, but rapid progress is needed in **African LDCs** to meet the goal of doubling the share by 2030.
- Global manufacturing employment rebounded to pre-pandemic levels in 2021, but its share in total employment dropped from 14.3% in 2015 to **13.6% in 2021**.
- Global expenditure on research and development (R&D) as a proportion of GDP increased from 1.69% in 2015 to **1.93% in 2020**. The number of researchers per million inhabitants has increased worldwide from 1,022 in 2010 and 1,160 in 2015 to **1,342 in 2020**.
- Global carbon dioxide (CO₂) emissions from energy combustion and industrial processes grew by **0.9%** to a new all-time high of **36.8 billion metric tons**, well below global GDP growth of 3.2%, reverting to a decade-long trend of decoupling emissions and economic growth.
- In 2022, **medium-high and high-technology industries thrived**, driven by automotive sector recovery and robust production in computer, electronics, optical products, and electrical equipment sectors. In 2020, the share of medium-high and high-technology production within total manufacturing remained low in **sub-Saharan Africa and LDCs, at 21.7% and 10.6%**, respectively, compared with **47.7% in Europe and Northern America** and **47.1% in Eastern Asia**.
- In 2022, mobile broadband coverage of 3G or higher was available to **95% of the global population**, a significant increase from 78% in 2015. During this period, 4G network coverage doubled, reaching **88% of the world's population**. Yet, connecting the remaining 5% is challenging, particularly in **sub-Saharan Africa and Oceania**, where the gaps are **18% and 32%**, respectively.

2023



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



To learn more about global progress on the 17 SDGs, [click here to read the latest Sustainable Development Goals Report 2023](#).



WHERE WE STAND

- The manufacturing industry's recovery from COVID-19 remains **incomplete and uneven**. Global manufacturing growth slowed down to **3.3% in 2022**, from 7.4% in 2021.
- However, **medium-high- and high-technology industries** demonstrated robust growth rates, highlighting the importance of **inclusive innovation and technology** driving the achievements of the SDGs.
- As of 2022, **95% of the world's population** was within reach of a mobile broadband network, but some areas remain underserved.

SPOTLIGHT

A GLOBAL DIGITAL COMPACT – AN OPEN, FREE AND SECURE DIGITAL FUTURE FOR ALL

The Secretary-General in his report [Our Common Agenda](#), proposes a **Global Digital Compact** to be agreed at **the Summit of the Future** in September 2024 through a technology track involving all stakeholders: governments, the United Nations system, the private sector (including tech companies), civil society, grass-roots organizations, academia and individuals, including youth.

The Global Digital Compact is expected to “**outline shared principles for an open, free and secure digital future for all**”. The Common Agenda report suggests issues that it might cover, including digital connectivity, avoiding Internet fragmentation, providing people with options as to how their data is used, application of human rights online and promoting a trustworthy Internet by introducing accountability criteria for discrimination and misleading content. [Find out more here.](#)



UN SYSTEM IN ACTION

- The **Partner2Connect Digital Coalition** is a multistakeholder alliance launched by ITU in close cooperation with the **Office of the Secretary-General’s Envoy on Technology, the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Islands Developing States (UN-OHRLLS)**, and in line with the UN Secretary-General’s Roadmap for Digital Cooperation. It fosters meaningful connectivity and digital transformation globally, with a focus on but not limited to hardest-to-connect communities in least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS).
- Through the **Partnership for Action on Green Economy (PAGE)**, **UNIDO** partnered with **ILO, UNDP, UNEP and UNITAR** to support countries and regions in reframing economic policies and practices around sustainability.
- As the custodian agency of six indicators on industry-related targets under SDG 9, **UNIDO** publishes a biennial thematic report “**Statistical Indicators of Inclusive and Sustainable Industrialization**”, which provides an analysis of global trends to track the progress towards achieving SDG 9 targets.
- Through the **Program for Country Partnerships (PCP)**, **UNIDO** supports Member States in achieving its industrial development goals, resting on multi-stakeholder partnerships led by the host governments, leveraging additional investment in selected priority sectors.
- Building on **Digital Innovation Framework**, ITU helps countries, cities and other communities and systems accelerate their digital transformation, stimulate ICT-centric innovative entrepreneurship and foster vibrant small and medium enterprises (SMEs).
- **UNCTAD**, as secretariat of the UN Commission on Science and Technology for Development (CSTD), collaborated with Chinese Academy of Science and implemented a technical assistance project in 12 developing countries, including 4 LDCs.
- **ITU/WHO Focus Group on Artificial Intelligence for Health (FG-AI4H)** aims to establish a standardized assessment framework for the evaluation of AI-based methods for health, diagnosis, triage or treatment decisions.
- **UNIDO** published a set of best practices, smart solutions and policy recommendations in the areas of women’s economic empowerment, entrepreneurship and leadership.
- **ITU’s Smart Villages and Smart Islands** project promotes a whole-of-government approach at the community level strategically aligning the resources of all stakeholders (government, industry, development agencies, civil society, academia among others), and holistic response to SDG-related needs. ITU is collaborating with **UNCDF, FAO, UNESCO, UNICEF, ILO, UNOPS, UNODC, OHCHR, the Joint SDG Fund, Asian Development Bank, Government of Australia - DITRDCA, national governments, the private sector (Huawei), among others.**

For more information about UN system actions to implement the 2030 Agenda and the SDGs, visit



UN SYSTEM SDG
IMPLEMENTATION
DATABASE