

2022 Buildings-GSR Key Messages

Despite a substantial increase in investment and success at a global level lowering the energy intensity of buildings, the sector's total energy consumption and CO₂ emissions increased in 2021 above pre-pandemic levels.

The buildings and construction sector is not on track to achieve decarbonization by 2050. And the gap between the actual climate performance of the sector and the decarbonization pathway is widening.

Global energy price volatility and rising interest rates are likely to hamper investment in building decarbonization by governments, households, and businesses.

Emissions from buildings and construction hit a new high, leaving the sector off track to decarbonize by 2050

- The buildings sector represents 40 per cent of Europe's energy demand, 80 per cent of it from fossil fuels. This makes the sector an area for immediate action.
- The sector accounted for over 34 per cent of energy demand and around 37 per cent of energy and process-related CO₂ emissions in 2021.
- The global gross floor area increased from 218 billion square metres in 2015 to 242 billion square metres in 2021. This is equivalent to the total area covered in buildings in Germany, France, Italy, and Netherlands.¹

While we see positive progress in some areas, policies and action remains slow

- Investments in building energy efficiency rose by 16 per cent in 2021 over 2020 levels, reaching USD 237 billion.
- The number of countries with building energy codes rose from 62 to 79. However, only 26 per cent of countries have mandatory energy codes for the entire building sector.
- In 2021, 158 countries referenced buildings in their NDCs, up from 135 in 2020.
- In 2021, the number of green building certifications worldwide increased by 19 per cent compared to 2020.

The growing need for housing in Africa represents both challenges and opportunities for the continent

- An estimated 70 per cent of the African building stock expected to exist in 2040 has yet to be built.
- Africa's building and construction sector is worth USD 5.4 billion and is expected to grow at a compound annual rate of 6.4 per cent by 2024.
- Traditional sustainable construction and building practices are a cornerstone of African cultural heritage; used more widely they can make for more affordable housing that is adaptable to climate conditions.
- Africa is rich in renewable energy sources, solar and wind, which countries can use to power their buildings sustainably.

Embodied carbon in buildings need immediate action to avoid undermining the carbon reductions achieved from energy efficiency

- Globally, approximately 100 billion tonnes of waste is caused by construction, renovation and demolition, with about 35 per cent sent to landfills.
- Raw material use is predicted to double by 2060 – with steel, concrete and cement already major contributors to greenhouse gas emissions.
- Materials used in the construction of buildings already account for around nine per cent of overall energy-related CO₂ emissions.
- The sector can reduce its impact by looking at alternative materials and decarbonizing conventional materials such as cement. The use of alternative materials is particularly relevant for Africa.

¹ if it were built on one level, at around 24,000 km²