

Global Alliance for Buildings and Construction

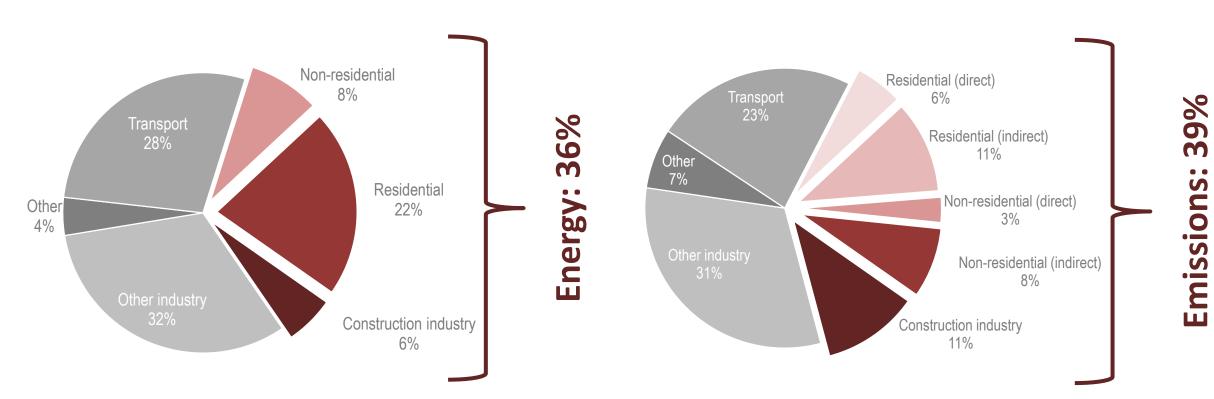


Tools for moving to scale: Regional Roadmaps and MPGCA pathways

Source: GlobalABC/UNEP/IEA, (2019), *Global Status Report for Buildings* and Construction 2019

Why is building sector decarbonization so critical?





We can't reach the Paris Agreement Goals without decarbonising buildings





Thermal comfort

Affordable housing

Health and wellbeing

Renewable energy integration

Clean energy services

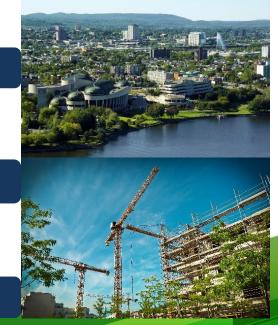
Climate resilience

Embodied carbon of materials

Jobs and economic development

Liveable, equitable cities







Harnessing buildings' potential: Roadmaps for taking solutions to scale





GlobalABC Roadmap for Buildings and Construction

2020-2050

Towards a zero-emission, efficient, and resilient buildings and construction sector





GlobalABC Regional Roadmap for Buildings and Construction in Latin America

2020-2050

Towards a zero-emission, efficient, and resilient buildings and construction sector





GlobalABC Regional Roadmap for Buildings and Construction in Asia

Towards a Zero-Emission, Efficient, and Resilient Buildings and Construction Sector





GlobalABC Regional Roadmap for Buildings and Construction in Africa

Towards a Zero-Emission, Efficient, and Resilient Buildings and Construction Sector





A stakeholder-driven, globally applicable tool



Buildings in NDCs:

- ★ New in 2017
- ★ New in 2018
- ★ New in 2019
- NDC: >75% coverage
- NDC: <75% coverage
- NDC: <50% coverage
- NDC: <25% coverage
- NDC: mentions buildings
- NDC: no explicit mention
- No known NDC



- - Feedback on targets and timelines, submission of best practice case studies, feedback on key actions



8 key areas: A menu of options for country priorities

Current status (2020)

Recommended actions

Urban planning

Lack of integrated urban planning and sustainable development among existing major growth areas

Use planning and development tools to support sustainable development and access to affordable housing, develop collaborative national and local urban plans

Prioritise sustainable urban planning and development

New buildings

Most construction occuring in places with some codes and mandatory minimum energy performance Prioritise new building energy codes and standards

Develop passive and affordable construction strategies, implement mandatory building energy codes, adopt passive designs and reduce cooling need

Existing buildings

Energy performance and quality of existing buildings low and few energy-driven retrofits

Accelerate action on building retrofits

Develop and implement affordable low-energy decarbonisation strategies, increase renovation rates among high-density development, and encourage low-energy investment

Building operations

Some use of tools for energy performance, disclosure and management

Develop and adopt operation and maintenance standards

Develop benchmarking and certification tools, and set performance standards for systems energy savings, adopt monitoring and energy management systems



Activate Window

8 key areas: A menu of options for country priorities

Appliances and systems

Efficiency of appliances and systems lower than best available technology

Very-high embodied carbon of materials, limited use of

local materials, little data

Resilience

Materials

Lack of planning strategies for climate events, and limited resilience

Clean energy

Significant use of fossil and biomass fuels. In Asia 43% no access to clean cooking, 6% no access to electricity

Stimulate demand for energy efficient appliances

Strengthen and expand existing minimum energy performance requirements, support greater improvement in low-cost efficient cooling technologies

Promote the use of low carbon materials

Promote adoption of low-carbon materials in high-density development and promote material efficiency, increase energy efficiency in manufacturing to reduce embodied carbon of materials over whole life cycle

Build in resilience for buildings and communities

Develop integrated risk assessment and resilience strategies for major coastal urban centres and integrate resilience into new construction for formal and informal areas

Accelerate access to clean energy

Develop clear regulatory frameworks, provide financial incentives, encourage renewable energy procurement, accelerate use of clean cooking fuels to decarbonise electricity and heat

Activata Window



Key actions for each area: Example new buildings, Asia

Where the activity is today (2020)

Only 44% countries have a mandatory or voluntary code for minimum energy performance requirements of new buildings

Necessary actions towards long-term goal

Increased adoption, implementation and enforcement of mandatory building codes and policies

Long-term goal (2050)

Most new buildings operating at net-zero carbon emissions

Series of key actions:

New buildings

- Develop local roadmap
- Develop and implement mandatory building energy codes
- Strengthen building energy codes
- Avoid need for space cooling
- Have governments lead by example: public procurement
- Reduce embodied carbon
- Increase awareness



Ambition- & data-gaps: Example Asia - new buildings





[data gap] Compliances w/ building energy codes
[data gap] Participation of the informal sector
[data gap] Labelling of building components

[ambition gap] LCA

[ambition gap] Passive design



What do results mean for stakeholder groups?



Example policy makers

Building codes: Develop *performance-based* building codes.

Consider including into **NDCs** elements such as:

- Passive design to reduce cooling demand
- Resilience
- Life cycle approach
- Low-carbon materials

What do results mean for stakeholder groups?

Example designers (e.g. planners, architects, engineers...)

The key to achieving efficient, low-carbon, cost-effective housing lies in the design stage, which in turn can be most influenced by building codes







Implementing regional roadmaps: Next steps





Regional Roadmaps have already started to:

- ✓ Spark regional dialogue and collaboration
- ✓ Lead to concrete actions and national strategies for decarbonisation
- ✓ Raise ambition levels
- ✓ Support filling data gaps







1. Race To Zero – Human Settlement Pathway



>> Decarbonize the built environment

The message on the HS Pathways is clear: to decarbonize the built environment across the whole lifecycle, we need radical collaboration along the entire value-chain of the buildings and construction sector

» A common language, vision and narrative

Driving policy and technological innovation to get the sector to net-zero emission, with appropriate financial incentives and business leadership

By 2030 (to raise ambition levels)

- All new buildings operate at net zero carbon and are resilient
- All new buildings, infrastructure and renovations have at least 40% less embodied carbon
- Renovation rates have increased significantly to at least 3% per year
- Timeline: Final draft ready for HLCC approval; main messages to be published beginning November and used as basis for Race to Zero Dialogues; updated pathways published COP26

#RACETOZERO IS A RADICAL
COLLABORATION BETWEEN CITIES,
BUSINESSES, REGIONS AND INVESTORS
FOR A HEALTHY, RESILIENT,
ZERO CARBON RECOVERY.





