

Introduction

Carlos de LOS LLANOS

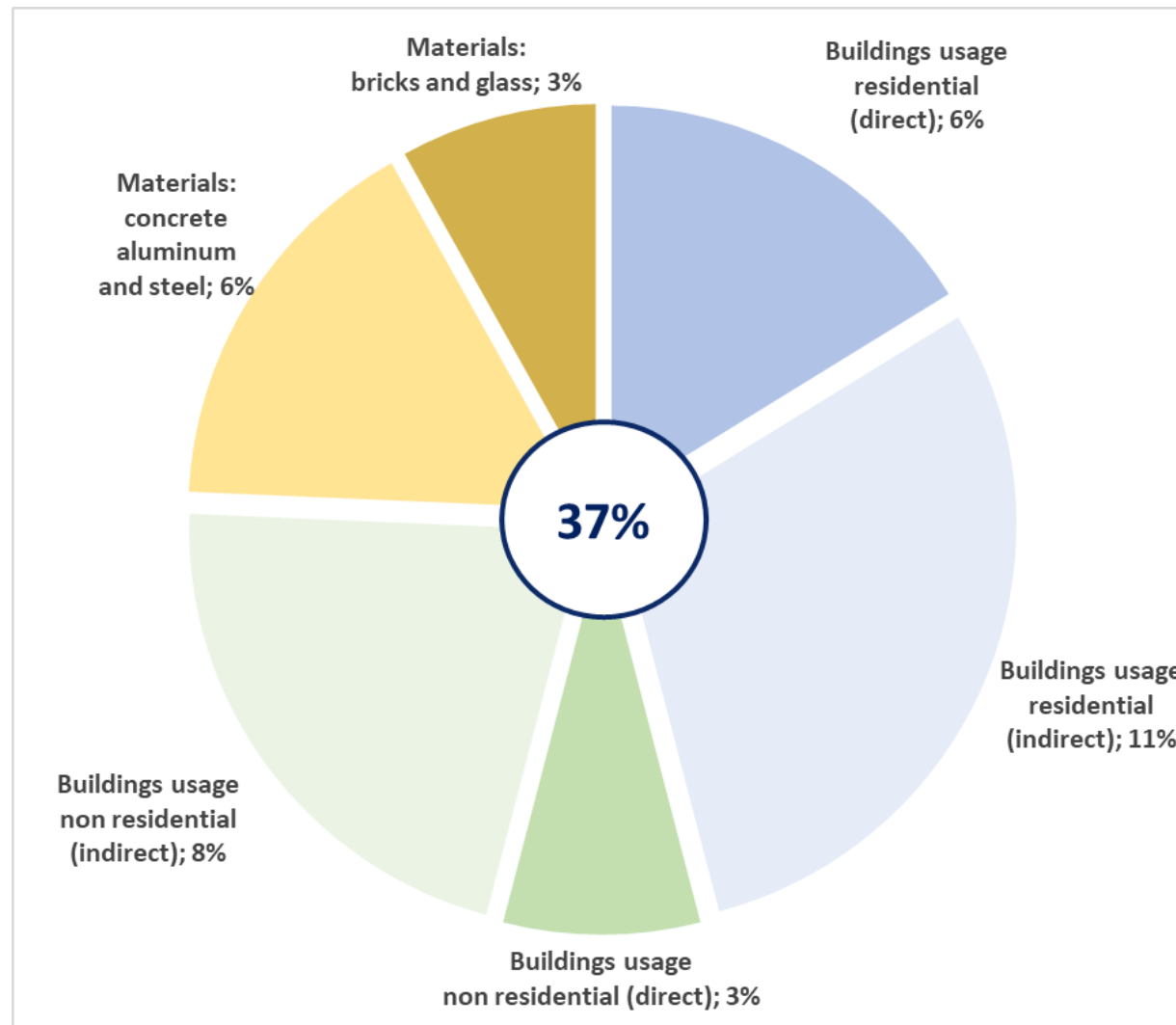
# Plenary Session : building and construction materials



*In total, buildings represented around **13,6 Gt CO<sub>2</sub>** worldwide in 2021.*

- ❖ *Embedded CO<sub>2</sub> emissions from producing buildings materials are around **3.6 Gt CO<sub>2</sub>***
- ❖ *CO<sub>2</sub> emissions from buildings operations have reached an all-time high of around **10 Gt CO<sub>2</sub>**.*

## Building & construction sector accounts for 37 % of world CO<sub>2</sub> emissions



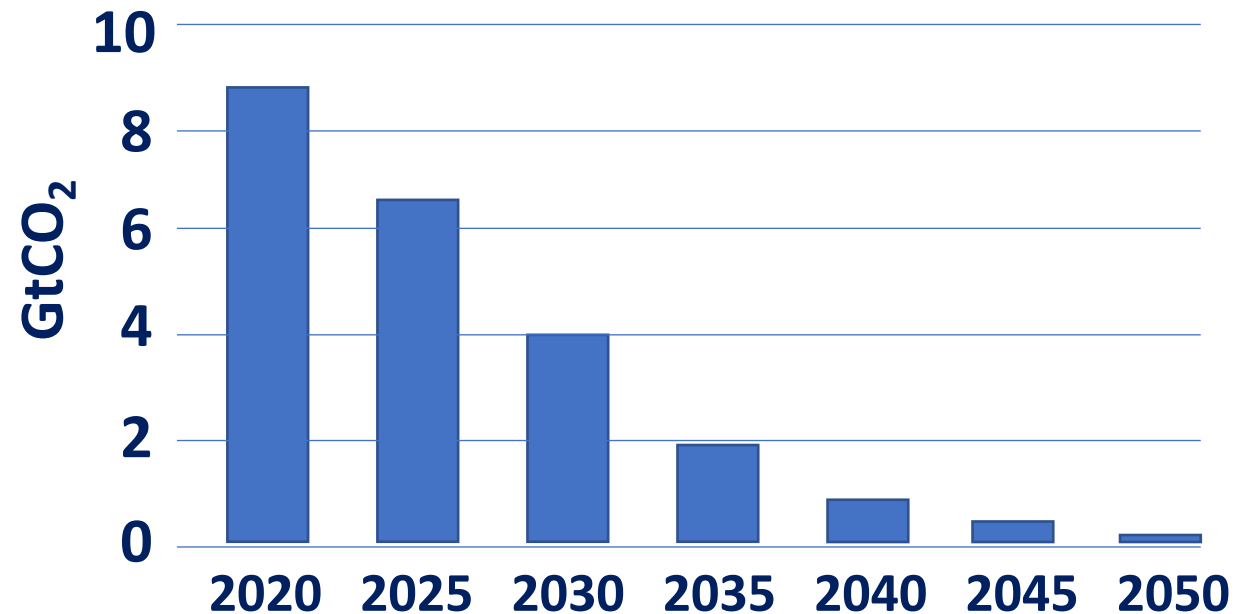
*Source: Data from UNEP Global Status Report for Building and Construction, 2022. All rights reserved. Adapted from "Tracking Clean Energy Progress" (IEA 2022f).*

## Strong growing perspective with stringent constraints in terms of CO<sub>2</sub> emissions and energy consumption

### *Demand forecast to rise sharply ...*

- ❖ *Floor area in the buildings sector worldwide is expected to increase 75% between 2020 and 2050.*
- ❖ *Globally, floor area equivalent to the surface of the city of Paris is added every week through to 2050.*
- ❖ *Achieving decarbonization (...) requires almost all existing buildings to undergo a single in-depth retrofit*

*... at the same time, buildings' operational emissions will need to drop by more than 95 per cent compared to current levels (IPCC)*









*From: Net Zero by 2050, A Roadmap for the Global Energy Sector – IEA, 2021, and UNEP Global Status Report for Building and Construction, 2022.*

*How can polymers, steel, aluminium, concrete, roof tiles, etc. contribute to the decarbonisation of the building and construction sector?*

*What is the trend for other materials: wood, bio-sourced, reused and recycled materials, etc.?*

*How does architectural design respond to the new requirements?*

## Speakers

	<p><b>Thierry Le Henaff,</b> CEO Arkema (France), Co-chair</p>		<p><b>Hembert Penaranda,</b> Architect (Colombia/Italy)</p>
	<p><b>Olivier Vassart,</b> CEO Steligence at ArcelorMittal (Luxembourg)</p>		<p><b>Laurent Musy,</b> CEO Terreal (France)</p>
	<p><b>Philippe Hoffmann</b> President automotive and industry Constellium (France)</p>		<p><b>Guy Sidos,</b> CEO Vicat (France), Co-chair .</p>



**Carlos de Los Llanos,**  
Moderator