

ASIA LOW CARBON BUILDINGS TRANSITION

Life Cycle Assessment for Transitioning to a Low-Carbon Economy | PROJECT IN INDONESIA



Project Location:	Asia / Indonesia
Project Period:	August 2023 - August 2028
Project Funding:	EUR 19.3 million (Indonesia: EUR 3.65 million)
Theme:	Green Buildings, Green Investment, Climate Action and Sustainable Energy
Project Code:	ROA035 (Indonesia)

Project Summary

The Asia Low Carbon Buildings Transition (ALCBT) Project seeks to significantly reduce GHG emissions by catalyzing nationwide transitions towards low carbon buildings in Cambodia, India, Indonesia, Thailand, and Vietnam.

In Indonesia, the project focuses on the building sector, which consumes 30% of the country's total energy and is projected to rise to 40% by 2030¹. Residential buildings contribute to 95% of this energy use, yet there is no mandatory framework for energy efficiency or decarbonization in residential buildings. The project will support policy recommendations and technical measures to enhance energy efficiency and decarbonize buildings, helping Indonesia meet its goal of reducing GHG emissions by 27.78 million tons of CO₂² under the energy sector target. The project is being implemented in collaboration with the Ministry of Public Works and Housing and the Ministry of Energy and Mineral Resources.

Project Goal and Objectives

The ALCBT project aims to significantly reduce GHG emissions by catalyzing a nationwide transition towards low-carbon buildings. The project addresses regulatory, capacity, and financing gaps that prevent large-scale adoption of low-carbon buildings. In Indonesia, the project will intervene in the policies and framework for energy efficiency or decarbonization measures in residential buildings, which account for 95% of the country's building energy use.



Standardized tools and systems for managing building carbon emissions



Enhanced capacity of key stakeholders to deliver low carbon buildings



Financial pathways established for low carbon buildings transition



Knowledge products produced to facilitate **replication and scaling up**

Implementing Partners

Lead:



Government Partners in Indonesia



Resource Partners

Supported by:



on the basis of a decision by the German Bundestag



Context and Background

GHG emissions from buildings are a key driver for national emissions, with increased cooling demand driving GHG. In Asia, buildings' operational energy accounts for 23% in the Southeast Asian region³ due to its countries' rapid economic growth.

The projected growth in construction also drives the emissions embodied from construction materials. Embodied carbon accounts for 10% of global energy-related GHG emission⁴ and 20-25% of building life-cycle emissions.

According to the Ministry of Public Works and Housing's (MoPWH) Green Building Implementation and Development Roadmap 2024, energy use in the building sector accounted for 33% of Indonesia's total GHG emissions from 2011 to 2021. However, the Government is committed to implementing mandatory energy management in all sectors in accordance with Government Regulation No. 33 of 2023 on Energy Conservation. The ALCBT project is expected to be a key solution in significantly reducing these emissions by 2028.

Diana Kusumastuti,

Director General of Human Settlements, Ministry of Public Works and Housing, Indonesia

"The building sector is one of the major contributors to greenhouse gas emissions in Indonesia. Through energy efficiency in the implementation of green buildings, we are targeting a reduction of 1.91 million tons of CO₂e from the commercial building sub-sector via energy efficiency, in line with the National Medium-Term Development Plan (RPJMN) 2025-2029, which focuses on low-carbon development."

Buildings Registry

- **1,200** buildings assessed
- **30** key public and private sector stakeholders engaged



- **10** projects validated using one-stop-shop features
- **200** building professionals find the Best Available Technology Guidelines for efficient cooling appliances relevant

¹International Finance Corporation, 2019

²Scenario CM1, Peta Jalan Implementasi NDC Mitigasi Indonesia/Indonesia's NDC Implementation Roadmap on Mitigation, 2019

³UNEP (2021), Global Status Report for Buildings and Construction

⁴UNEP (2021), Global Status Report for Buildings and Construction



Learn more at www.alcbt.gggi.org

Project Outcomes in Indonesia

By 2028, technical, planning, and institutional tools for LCB will be developed and successfully implemented by key public and private sector stakeholders in Indonesia.

1.67 MtCO₂eq
GHG emission reductions



7 government entities
incorporating LCB tools, training programs



2 policy recommendations
will be adopted by the government



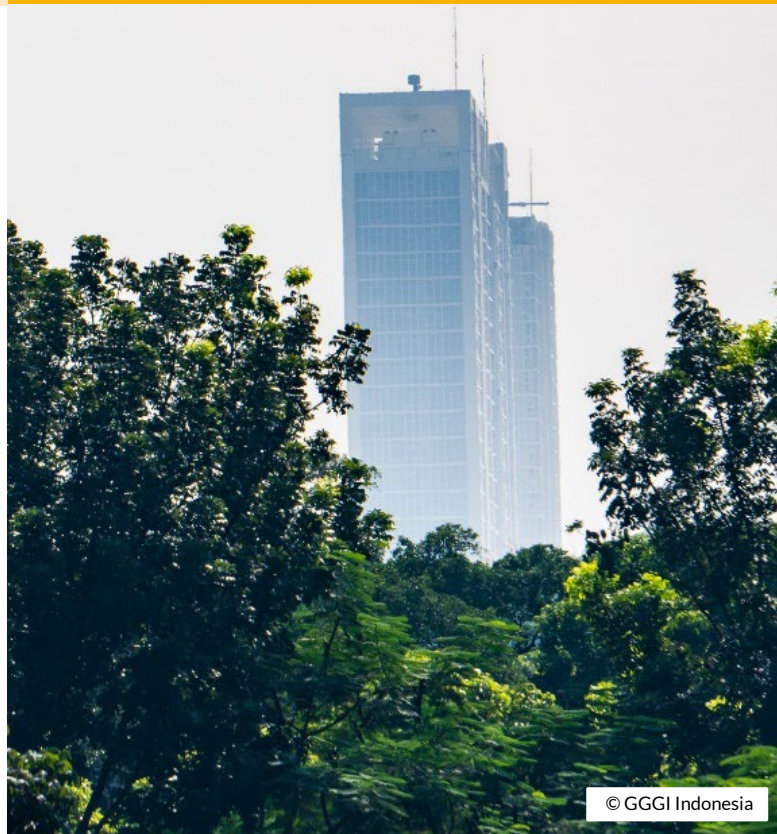
EUR 20 million
investment will be mobilized



1,200 buildings
will be assessed, registered,
piloted with natural-based air-conditioners



4,000 individuals
with increased knowledge, low carbon skills



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