

TRANSFORMATION OF THE CONSTRUCTION SECTOR TO PROMOTE ENERGY EFFICIENCY IN BUILDINGS IN PAKISTAN

“Initial steps have been taken towards creating a sustainable construction sector in Pakistan.”

Background

Pakistan has the highest rate of urbanization in Asia. In 1998, around 42 million people out of 132 million – approximately 32% of the population – lived in urban areas. This percentage increased to 37%, approximately 81 million out of 220 million, by 2020.

This rapid urbanization has resulted in a significant demand for new housing, especially in cities and urban regions. Currently, there is a requirement for around 700,000 housing units annually, but only about half of that demand is being met. Consequently, Pakistan's current housing deficit is estimated to be around 10 million units.

Globally, nearly 40% of energy-related greenhouse gas (GHG) emissions can be attributed to the construction sector. Among these emissions, around 28% occur during the operational lifetime of buildings, primarily due to energy-intensive processes such as air conditioning (i.e., heating, cooling, dehumidifying). The production of building materials (such as concrete, steel, aluminium, insulation materials, and glass), their raw material extraction, transportation, disposal, and the building process itself, account for approximately 11% of these emissions: this is known as "grey energy." Additionally, the construction sector consumes approximately 50% of the world's extracted resources.

Our Approach

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), is assisting the Pakistani government and private sector stakeholders to achieve a transformation in the construction sector. The project, named 'Transformation of the

Project name	Transformation of the Construction Sector to Promote Energy Efficiency in Buildings in Pakistan
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Lead executing agency	National Energy Efficiency and Conservation Authority (NEECA)
Financial volume	EUR 3.009 million
Duration	10/2022 to 12/2024

Construction Sector to Promote Energy Efficiency in Buildings in Pakistan (Bauwende)', focuses on developing environmentally friendly solutions for the construction industry, pertaining to material and energy flows, supply chains, emission data, building stock, useful life of buildings, and planned construction projects.

This initiative aligns with 'Pakistan Vision 2025: One Nation - One Vision' and supports the Strategic Plan 2020-2023 of the National Energy Efficiency and Conservation Authority (NEECA), emphasizing the importance of climate and resource friendly building methods for relevant actors in the energy and construction sectors. Bauwende provides support in the following aspects:

- Political instruments include aspects of sustainable construction in the sector.
- Stakeholders are enabled to access evidence-based data for sustainable building.
- A pilot scheme shows the feasibility of selected measures to transform Pakistan's construction sector.



Pg. 1, Left: NEECA Building, G-5/2, Islamabad.

Right: CDA Secretariat, G-7/4, Islamabad.



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Pg. 2, Left: Ministry of Planning Development & Special Initiatives, Block-P, Pak Secretariat, Islamabad.

Right: Ministry of Interior, R-Block, Pak Secretariat, Islamabad.

Policy instruments include aspects of sustainable construction in the sector.

The project aims to include sustainability in the construction sector throughout the value chain of buildings. This integration will be reflected in political, legal, and regulatory documents. The results hypothesize that policymakers at the national and provincial levels will create necessary political and regulatory conditions. These conditions will enable the implementation of a transformation in the construction sector. A roadmap for the sustainable construction of new buildings will be developed. The roadmap will be coordinated with relevant partners from the private sector and civil society

Stakeholders are enabled to access evidence-based data for sustainable building.

Bauwende's goal is to gather reliable digital data and information regarding the sustainable construction of new buildings. They aim to share this valuable information with government officials, private sector entities, and civil society stakeholders. By improving data accessibility and fostering structured national discussions, which include international expertise regarding the transformation of the construction sector, Bauwende aims to bridge knowledge gaps. Their

objective is to ensure that decisions related to the transformation of the national construction sector are made based on facts.

A pilot scheme shows the feasibility of selected measures to transform Pakistan's construction sector.

Private sector stakeholders such as housing companies recognize that adopting climate and resource friendly construction methods is both practical and economically viable. These methods also serve as an incentive for future investment choices within the broader context of transforming the construction sector.

Gender and Diversity

The project utilizes its influence on political, business, and societal decision-makers to actively support gender equality. It does so by providing guidance to partners on creating a construction sector that is more inclusive for women. This goal is pursued through various approaches, including targeted awareness campaigns, fostering networks of women experts (e.g., through conference engagements and short-term technical assignments), and ensuring a work environment that is sensitive to gender issues.

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