

Building for a Circular Future: Policies and Partnerships for the Construction Sector



WHERE WE ARE

The buildings and construction sector plays an important role in enabling sustainable living within planetary boundaries. Construction relies on vast amounts of resources, making the sector a primary driver of raw material extraction and processing. It also consumes a significant portion of global energy, often derived from non-renewable sources.

In 2022, emissions from building-related energy demand represented around 27 percent of total global CO₂ emissions (or 21 percent of global GHG emissions). An additional 7 to 9 percent is estimated to result from the manufacturing of building materials such as concrete, steel, aluminum, glass, and bricks, bringing the global estimate of energy and process-related emissions from the sector to approximately 37 percent of total global operational energy and process-related CO₂ emissions. If other materials, such as plastics, foams, and fabrics used in buildings, are included, the proportion of emissions would be even greater (Source: Global Status Report for Buildings and Construction 2023, page 29 by Global Alliance for Buildings and Construction - GlobalABC).

Decarbonizing the sector by targeting spatial and structural planning, construction materials production, construction processes, occupation/use, and demolition phases is a critical component of global efforts to combat the climate crisis. Its importance is becoming increasingly recognized in national climate strategies, including Nationally Determined Contributions (NDCs). Simultaneously, construction and urban planning must find ways to keep housing and infrastructure accessible and affordable for growing urban populations.

By incorporating material- and energy-efficient, circularity-oriented building designs and renewable energy systems, buildings can significantly reduce greenhouse gas emissions and pollutants. Optimising both material production and usage minimizes the materials footprint and extends the lifespan of buildings, thereby reducing the frequency of resource-intensive construction cycles and enhancing affordability. Well-designed, sustainable multi-unit buildings can also provide spaces that prioritize communal activities and shared services, enabling a high quality of life with less material use.

By addressing both the technical aspects (materials, processes, and energy) and social considerations (lifestyle/consumption, community), the building sector can accelerate the transition towards a more sustainable future. Integrating sustainable practices in the sector ensures that the planet's safe operating space is respected while establishing an inclusive environment where people can thrive.

Governments catalyse this change through legislation, setting in motion a market transformation in the building sector that necessitates dynamic interactions between governmental and private sector stakeholders. The private sector's adaptability and drive are instrumental in determining how construction is carried out and how buildings are managed. When government actors, financiers, companies, and developers align their objectives—whether in energy efficiency, sustainable materials, or innovative design—the sector will transition from its current linear paradigm to one of circularity.

WHERE WE WISH TO BE

Governments require a solid foundation for drafting and implementing policies, strategies, and standards for the buildings and construction sector that align with their international commitments and national socio-economic development goals. The objective of this SWITCH-Asia Policy Support Component technical advisory project is to build momentum for transforming sustainable consumption and production (SCP) and circular economy principles into concrete, actionable approaches that can be adopted by key stakeholders, particularly governments, in the buildings and construction sector.

WHAT WE ARE DOING







The project teams in each country (tentatively, **Bangladesh, China, Kazakhstan, Mongolia, Nepal, Pakistan, and Uzbekistan**) are reviewing six stages of the construction lifecycle to identify promising targets (materials, processes, and consumption patterns) for aligning the practices of the construction sector with the principles of the circular economy. Pilot programs will be developed for further exploration and validation with input from governments, businesses, and citizens.

During the initial collaborative pilot work, the SWITCH-Asia Policy Support Component (PSC) experts will provide advisory support to national authorities to aid in the development, rollout, and continuous improvement of policies that advance sustainable consumption and production (SCP) and circular economy practices in the construction and buildings sector. These experts will analyse successful cases that demonstrate the feasibility and benefits of circular economy practices. Targeted pilot interventions will foster the broader adoption and integration of SCP within the buildings and construction sector.

Project Approach:

Mapping out key challenges, opportunities, and strategic priorities for sustainable consumption and production (SCP) and the circular economy (CE) *across the building sector value chain* in each country ensures that all aspects of the sector's sustainable transformation are systematically examined. This approach allows experts to identify the most impactful "niches" to focus on for each country and to develop targeted interventions. These interventions could include policy advisory, program development, or recommendations for international partnerships or engagements. Actionable recommendations tailored to the specific national challenges and opportunities are developed for each country.

Stages of the Building Sector Value Chain:

-  Urban and Rural Planning and Zoning (why, what, and where)
-  Planning and Design of engineered structures
-  Materials (structural and operational)
-  Construction works, including logistics
-  Maintenance and Facility Management
-  Deconstruction and Demolition

Given the complexity of the sector, its critical role as a socio-economic pillar of the national economy, and the industry's slow innovation cycle, stakeholder engagement is essential for proposing realistic solutions, actions, and policies through respectful dialogue.

This will be ensured by the project's "sector leaders" from various stakeholder groups, including the private sector (developers, builders, materials companies, maintenance, and demolition/recycling), quality infrastructure players (standardization, testing, etc.), professional associations covering the different stages, and financial institutions such as insurance companies and mortgage lenders. These sector leaders will be invited to contribute their expertise and mobilize their networks around the selected topics.

The project will move beyond mere networking and promotion into pilot concept development and the initial stages of action. For each selected issue, recommendations will be developed for national governments and sectoral stakeholders. These recommendations will address specific national challenges and opportunities, including potential connections to climate finance. The goal is to provide clear, actionable guidance that can be readily adopted and implemented.

In the next step, pilot project concepts will be outlined. The involvement of sector leaders is crucial here, as their expertise and insights will help ensure the practicality and feasibility of the project designs. These pilot projects will be unique to each country and identified "niche" and could include activities such as identifying standards for building materials or process descriptions, designing required capacity-building interventions for sector actors, or developing monitoring mechanisms for NDC integration. The pilot concepts and initial actions will demonstrate the viability and benefits of further implementation.

Other Key Aspects of the Project Approach:

Flexibility and Scalability: These are key features of the project design, allowing for adjustments beyond the initially identified "niche" topics. This flexibility ensures that the project remains relevant and applicable as new insights emerge from technical work within the participating countries.

Integration with Existing Frameworks: The project approach is designed to align with and enhance existing SCP-relevant frameworks within the target countries. This alignment ensures that new initiatives complement and build upon established efforts, facilitating a more cohesive and comprehensive approach to SCP in the buildings and construction sector. This integration includes climate commitments through Nationally Determined Contributions (NDCs) as well as strategies for achieving Green Public Procurement (GPP). Additionally, the broad range of topics related to the built environment offers ample opportunities to introduce, discuss, and potentially adapt models, techniques, and communication tools originating from European institutions, researchers, and businesses.



Bangladesh, China, Kazakhstan, Mongolia, Nepal, Pakistan, Uzbekistan (tentative)

WHO WE ARE

switchasia



Funded by
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SWITCH-Asia is a programme funded by the European Union (EU). Active since 2007, it seeks to promote Sustainable Consumption and Production (SCP) in the region. Through its 2019 EU Green Deal and Global Gateway, the EU has further committed to supporting the transition of countries to a low-carbon, resource-efficient and circular economy.

The SWITCH-Asia Policy Support Component provides direct support to regional organisations, national governments and related implementing agencies in charge of policies and regulatory frameworks relevant to SCP. This is done in the form of on-demand advisory on scaling up SCP policy and implementation as well as through creating a platform for knowledge exchange, and building capacities of regional institutions. All activities rely on the strong engagement of partner countries and organisations in co-creating the requested policies, processes and other deliverables.

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