



Collaborations and synergies for sustaining the implementation of SWITCH-Asia Programme for a more impactful #WeSwitch focused on:

SUSTAINABLE HOUSING AND BUILDINGS



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CONTEXT

The housing and building sector is among the most resource-intensive and economically important sectors globally. Drastically reducing the emissions of buildings and construction is a determining factor for achieving the below-2° goal set forth in the Paris Agreement. Adequate housing is a basic human need, and defined by the UN as a human right; it is therefore a key priority for social and development agendas nationally and globally. From an individual's perspective housing is one of the key determinants of perceived quality of life and also shapes numerous other consumption decisions. For all these reasons, the housing and building sector is a keystone topic of SCP.

This is reiterated by the UN Sustainable Development Goals (SDGs) and the New Urban Agenda (NUA), where adequate housing is a key policy goal and commitment. This priority must be met in alignment of other SDGs, particularly SDG 11 on "Sustainable cities and communities", SDG 12 on "Responsible consumption and production", and the Paris Agreement to counter climate change.

Urbanisation in Asia and its impact on housing and buildings

In Asia, the housing and building sector is shaped by the megatrend of urbanization. Since 2019 the majority of Asia's

population lives in cities, with 600 million additional inhabitants since 2000. Housing choices – the type of housing, materials used, resources required for operation and maintenance – influence development for decades to come; built infrastructure, including buildings and roads and the required energy and transport options, can "lock in" decision-making for generations.

The urbanisation trend in Asia consists of diverse dynamics, including a growing middle class in many countries. This trend is fuelled by professional service and manufacturing jobs located in cities, in parallel to rising incomes and economic growth. At the same time, urbanisation is also being driven by poor rural workers seeking better futures in cities. While all urbanites profit from the economic dynamism and social progress that city life brings, they often suffer from the consequences of unplanned growth. Some Asian cities have been declared "unliveable" due to their crowdedness, traffic and environmental pollution. Especially for those living in informal settlements, basic human needs, like adequate housing, clean air, access to energy and water and access to health services and sanitation are oftentimes not fulfilled.

It is urgently necessary that these living circumstances are improved by creating affordable and safe housing options

and the required infrastructure. This is even more important as natural disaster and climate change impacts particularly affect lower income strata, and thereby, the majority of Asia's urban population. Housing options therefore need to be made resilient to natural or climate-related disasters such as flooding or heat waves, as well as longer-term climate change impacts, such as rising sea levels. The 2020 pandemic has demonstrated how important it is to fulfil basic needs, improve public spaces and eliminate crowded inadequate housing and sanitation (UN Habitat, 2020); it has also demonstrated that resilient communities need to be created to face future challenges.

Cities, housing and buildings and sustainability

Cities offer potentially great sustainability benefits due to their density; this allows for infrastructure to be used efficiently and creating economies of scale for the provisioning of services in line with the SDGs, such as health, water and education. Better managed density lowers per capita land use, freeing up space for agriculture and protected areas. At the same time, housing for those at middle and higher income levels in cities can lead to above-average material consumption, resource use and carbon footprints, if they are not optimized for sustainability.

Integrating environmental sustainability into the housing and building sector necessarily includes both construction and renovation processes, as well as the handling of construction and demolition waste. If current trends continue, new construction will result in a doubling of the world's building stock by 2060. At the moment, more than 11% of global annual carbon emissions are generated by construction, renovation and demolition. These "embodied" carbon emissions result from materials and construction processes along building lifecycles (World Green Building Council, 2019). In addition, today's modes of construction determine the sustainability of buildings' use phase, or "operational" carbon emissions. Tackling these at a later point means costly renovation efforts.

It is of high importance to integrate sustainability considerations into regional, national and local and municipal framework

SWITCH-ASIA TECHNICAL ASSISTANCE TO COUNTRIES AND SUPPORT TO GRANTS ON HOUSING AND BUILDING SUSTAINABILITY

The EU SWITCH-Asia Programme provides a platform for partnerships and networks between Europe and Asia, supporting the implementation of national strategies and action plans on SCP practices. With the assistance of the European Commission, Asian countries are supported to transition towards low-carbon, resource-efficient and more circular

setting for housing and buildings, for example in the form of building codes and zoning laws. Stringent legislation and incentivising private actors, including through financing, are of great importance in shaping decision-making.

Outlook: EU priorities and EU-Asia cooperation

The EU in general and its SWITCH-Asia programme in particular have recognised the critical importance of this sector to further promote sustainability through SCP, making the construction, housing and buildings cluster a major pillar of their activities. To be at the forefront of innovations and guide and incentivise private sector actors, the EU has put forward legislation including its Construction Products Regulation (CPR, starting in 2014); it also highlights the importance of building and construction for the green transition in its flagship Green Deal (2019). The EU further prioritises this sector in its new Circular Economy Action Plan as adopted in May 2020. As the housing and building stock in Europe is not expected to grow as dynamically as in Asia, one of the focus areas for the EU is the renovation of existing buildings for increased energy efficiency, through its "Renovation Wave" strategy (2020), which prioritises social housing. In addition, to recognise the comprehensiveness of the topic, more holistic approaches for a green transition of "the built environment" in its entirety, rather than focussing on buildings and construction, are being explored (Ecorys, 2019).

For Asian countries to achieve more sustainable consumption and production patterns in the housing and building sector, it is important to make use of diverse experiences and adapt these to local realities. Partnerships between Asian countries and the EU can bring needed mutual inspiration and create shared expertise. By jointly exploring how housing and buildings can play a key part in the transition to circularity and SCP, professionals from Asia and the EU can identify shared visions for the future and their local implementation priorities. This discussion can focus on governance issues as well as technological innovations, and encompass human-centred urban planning, infrastructure and technology.

economies that contribute to poverty reduction. This is done by technical assistance provided by the SCP Facility and the Regional Policy Advocacy Component at government-level, and through the Grants Programme in support of the regions' SCP-relevant entrepreneurs and SMEs.

SWITCH-Asia is currently providing Technical Assistance focused on building / housing to the following countries:

SCOPE	OBJECTIVES
<p>Pakistan (June 2020 – April 2021)</p> <p>Promote SCP implementation in Pakistan including around Pakistan's National Action Plan on SDG 12 ('Green Buildings Code')</p>	<p>Support the development of a detailed roadmap for the development of Pakistan's Green Building Code based on the Policy Guidelines for Pakistan's Green Building Code.</p>
<p>Kyrgyzstan (July 2020 – June 2021)</p> <p>SCP tools and Circular economy approach in building sector with a focus on energy efficiency</p>	<p>Mainstream SCP in the Kyrgyzstan Green Economy Development Programme, enhancing SCP tools and Circular Economy approach in the thematic areas - buildings and agri-food.</p>

SCOPE	OBJECTIVES
Bangladesh (March 2021 – January 2022) under preparation Action Plan on SCP implementation in the housing and building sectors in Bangladesh	Integrating SCP implementation into the housing and building sectors by providing analysis, building capacity, and strengthening networks on green buildings / housing in Bangladesh through development and implementation support of an Action Plan.

Ongoing and recently completed **SWITCH-Asia Grant Projects** of the housing and building sector and their objectives:

CURRENT GRANT PROJECTS	OBJECTIVES
Switch off Air Pollution Mongolia, 2018- 2021 <i>Ongoing</i>	<ul style="list-style-type: none"> Promote sustainable consumption patterns and behaviours in the individual housing sector of Mongolia through energy efficiency advisory and financial intermediation. Reduce pollution in Ulaanbaatar’s Ger areas through improved energy efficiency in housing, awareness raising, technical training and technological support to MSMEs and households.
Kabul Green Homes Afghanistan, 2016-2021 <i>Ongoing</i>	<ul style="list-style-type: none"> Contribute to the Afghanistan National Development Strategy’s main pillars, particularly on poverty reduction through a private sector, market led approach. Improve access to finance, to strengthen the emerging Energy Saving Solutions (ESS) value chain and engage networks of stakeholders.
Recycling Building Materials Mongolia, 2016-2020 <i>Completed</i>	<ul style="list-style-type: none"> Promote SCP in the construction sector, through supporting SMEs to switch to more resource-efficient practices Focus on construction and demolition waste (CDW) practices; product development and policy advisory.
METABUILD Bangladesh, Nepal, Sri Lanka, 2016-2020 <i>Completed</i>	<ul style="list-style-type: none"> Implementing sustainable production processes and practices in 400 SMEs in the metal products supply chain for the building and construction sector. Creating conducive environment for further adoption of sustainable production processes, including access to finance.

As stated in the 2019 Study commissioned by the SCP Facility, **Addressing SCP in the Housing Sector**, there are many initiatives visible in Asia to improve the housing and building sector by integrating sustainability considerations. These include affordable “green” housing programmes, government-level approaches to eco-city development and incentives for improving energy efficiency of urban buildings. On the consumer side, there are awareness-raising campaigns, including for energy and water conservation. The building sector oftentimes figures prominently in Asia’s national commitments to climate change mitigation. But holistic strategies on improving the liveability of cities, through aligning urban planning, affordable housing strategies, and longer-term sustainability goals are still rare. There is also insufficient regulation for the most energy-intensive and polluting sectors, such as cement, and lack of recycling requirements for construction and demolition waste. In addition, where standards exist, enforcement is often lacking and financing still favours conventional unsustainable urban development, including for the housing and building sector (SCP Study, 2019).

The road ahead – finding locally adapted solutions to global challenges

While there have been significant policy and technological breakthroughs across the globe in the sector, it is decisive to acknowledge the fundamental changes needed to improve its environmental sustainability and social impacts. There are evidently no simple challenges and solutions, and locally adapted answers and approaches need to be found, particularly in a region as diverse as Asia. Here, challenges may be entirely different from the ones currently addressed in Western industrialised countries, and need to be prioritized differently.

For example, the building sector (including commercial buildings) in EU countries typically requires more than 40% of final energy use. This is due to the fact that heating, cooling and lighting of buildings are key drivers of energy consumption. In addition, typical building materials such as cement and steel are highly energy-intensive; zoning results, like car-dependent suburbs, also contribute to a nation’s per capita carbon emissions and material footprint. However, Asia’s emerging economies and developing countries are nowhere near the per capita emissions or material use of industrialised economies. For example, the average per capita carbon emissions in Bangladesh are less than 10% of an EU citizen; and housing and buildings make up less than 12% of the per capita carbon footprint. This is due to the fact that large parts of Bangladesh’s population live in inadequate housing conditions, including informal settlements. Improving housing in Bangladesh – as for all Paris Agreement signatories – has to be done in line with the low-emission, post-fossil commitments put forward in its NDC. Low-carbon materials need to be prioritised, and technological as well as architectural low-energy solutions need to be applied. Simultaneously, renewable energy sources need to be strengthened. Car-dependent and commute-inducing urban planning and infrastructure needs to be replaced by more sustainable and human-centred development. This streamlining of environmental sustainability in planning, housing and buildings also creates co-benefits. These include health and social welfare gains through improved air quality as well as local employment; higher energy security and less pressure to expand energy generation capacity and improved resilience to climate change impacts (IPCC Fifth Assessment Report, 2014).

Asia’s growing cities thus need to urgently take up a different development trajectory than the one displayed by Western cities of the 20th century; instead of repeating previous mistakes, a leapfrogging in thinking and implementation is required.

INTERNAL THEMATIC MEETING

As result of the SWITCH-Asia Programme Steering Committee (PSC) Meeting held in December 2020, a series of “**Internal thematic cluster consultative and brainstorming meetings**” is now well inscribed in the programme as part of SWITCH-Asia activities 2021-mid-2022 and through joint efforts with partner countries and key organisations in the region.

Objective

The objective of the consultation meeting on housing and buildings is to strengthen cooperation through the three SWITCH-Asia components (SCP Facility, Grants programme and Regional Policy Advocacy Component (RPAC)), involving the Country EU Delegations (EUDs), the National Focal Points (NFPs) within Ministry of partner countries together with SWITCH-Asia implementing Ministry (if applicable), Grant projects, and selected regional/international partners, to ensure an active exchange of experiences and ideas for creating larger impact.

Output

Hosted by the SCP Facility, the meeting is designed to achieve the following:

- Increased understanding of Asian countries’ diversity and shared priorities in the housing and building sector, including construction and urban planning;
- Exchanging experiences among Asian and European experts on how policy-making and private sector efforts can jointly bring about needed sustainability innovations ;
- Identifying the importance of human-centredness of urban development, housing and buildings, including construction;
- Informing participants of the SWITCH-Asia programme’s learning experiences and achievements and challenges on housing and building and construction materials;
- Flagging of important issues for consideration by the EU for the next programming phase and for potential collaboration with other organisations;
- Analyse potential cooperation opportunities between SWITCH-Asia and participants.

Guideline for Discussion

1. How can the diversity of Asia as a region and its shared SCP goals on housing and buildings be best considered in the discussion?
2. What can the SWITCH-Asia programme components do to fully reflect the regions’ diversity and priorities?
3. How can the SWITCH-Asia programme contribute to advancing the sustainability of the construction, housing and buildings sectors?
4. What are the main challenges and opportunities for replicating and scaling-up SCP practices through the Grant Projects focusing on housing and buildings, at national and regional levels?
5. How can potential synergies/partnerships be formed to mutually support and provide greater impact focused on housing and buildings through SCP?
6. What are good practices to overcome challenges of the housing and building sector? How does the pandemic and resulting economic impacts contribute to the challenges?

What can grant projects, EU Delegations or the SCP Facility contribute?

Identification of important issues and possible areas for learning and cooperation:

Governance issues

- Housing and building trends relevant to SCP and respective challenges in the context of urbanisation – local, national and regional issues and problem-solving strategies;
- Role of government in shaping housing and building sectors; importance of holistic strategies that integrate long-term social and environmental considerations;
- Role of private sector and how market-based instruments and financing can support achievement of national social / environmental goals, and those set forth in SDGs, NUA, and Paris Agreement;
- Ensuring that financing instruments are available that favour SCP in housing and building sectors.

“Technical” sustainability issues:

- Material use for housing and building and demolition waste / recycling; innovations and their local adaptability;
- Design of buildings, construction and usage; optimising for sustainability and human-centredness;
- Interconnectedness of technical issues of housing and buildings and built environment / urban and infrastructure planning.

Challenges

- Difficulty of “solving” SCP of the housing and building sector, as it is closely connected to and resulting from numerous issues, including governance structures and governmental priorities, e.g., economic growth / employment; private / corporate actors and lobbying; financing; etc.
- Need to rethink objectives of construction, housing and building policies; and take holistic, human-centred view on cities and the “built environment”, actively shaped by policy-making on various levels (local and municipal, and national) e.g., public spaces public spaces and “walkability” of neighbourhoods vs. favouring of cars; informal settlements and slums as enabling factors for rural-urban migration and livelihood creation; information and data requirements for informed decision-making; inclusion of marginalised groups; creation of green spaces and biodiversity areas; etc.
- The impact of the COVID-19 pandemic on SCP in the housing and building sector and its aftermath.

Opportunities for collaboration and shared experience to guide the discussions

- The rising attention to “liveability” and human-centredness of the urban environment, as well as sustainability and inclusiveness of poor and marginalized groups, with a focus on what this means for housing and buildings sector;
- Trends on technological innovation and eco-design of buildings to switch to renewable or sustainable materials; including the role of the housing and buildings sector in delivering on climate mitigation over the life cycle of the construction and use process;

- Trends on social innovation, and how housing and building can contribute to inclusive and resilient local communities;
- How the aim to achieve a “green recovery” and counter economic impacts due to the pandemic can be integrated into the aim of adequate housing, e.g., through improved housing and building planning and implementation;
- Scalability of good practices and importance of access to finance.

The meeting will focus on the SWITCH-Asia achievements in promoting SCP in the housing and building sector through SME-focused grants and technical assistance provided to countries. The discussion will be on the role of stakeholders on how to scale up success stories from grants and support initiatives to foster innovative solutions and to address challenges that the sector is facing including the current COVID-19 pandemic.

PROGRAMME

15:00 (CET+6)	• Welcome Remarks
15:05	• Challenges and opportunities of integrating SCP in the housing and building sector (SWITCH-Asia and EU) • Presentation of major challenges in Asia and opportunities for action in the context of the climate agenda (Speaker TBC)
15:25	• Sharing of Experiences from Country Technical Assistance and Grant Projects (Selected 3-4 speakers)
16:10	• <i>Moderated Roundtable</i> Building on speakers’ presentations, discussion topics as mentioned and participants’ inputs.
16:55	• Event Closes

Important policies / commitments on improving SCP in the building / housing sector include:

- UN Fact Sheet No.21, The Human Right to Adequate Housing
- Habitat III / New Urban Agenda
- The Global Alliance for Buildings and Construction
- SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- SDG 12: Ensure sustainable consumption and production patterns

EU Policies

- EU Green Deal
- EU Circular Economy Action Plan
- Renovation Wave Strategy

Literature

- Ecorys – Trend paper: From construction to built environment policies (2019)
- SWITCH-Asia SCP Facility (2019): Addressing SCP in the Housing Sector
- IPCC (2014): Fifth Assessment Report, Chapter 9, “Buildings”
- UN Habitat (2020): World Cities Report 2020 The Value of Sustainable Urbanization – Key Messages
- World Green Building Council (2019): Bringing embodied carbon upfront
- GlobalABC: Regional Roadmap for Building and Construction in Asia

Proposed Attendees of the Meeting:

Project Managers of Country EU Delegations (EUDs), EU INTPA, National Focal Points (NFPs) within Ministry of partner countries together with SWITCH-Asia implementing Ministry in case different, SCPF and its consortium members, RPAC, concerned Grant projects, and selected potential partners.

Potential Supporting Partners for future activities on buildings / housing:

Global Alliance for Housing and building, Habitat for Humanity (Asia Pacific Forum on Housing), ICLEI, UN-Habitat, UNFCCC, World Green Buildings Council, 10 Year Framework Programme on Sustainable Buildings and Construction



ANNEX:

The following completed SWITCH-Asia Grant Projects have also contributed to SCP in the housing and buildings sector:

GRANT PROJECTS	SELECTED IMPACT ASSESSMENTS
Sheep Wool for Building Material (SWBM) (Mongolia)	<ol style="list-style-type: none"> 1. Manufacturing technology needed to make sheep wool insulation was perfected and certified according to European standards. 2. Sheep wool insulation installed in up to 175 Mongolian large family houses (average of 300 sqm). 3. Insulation as new sustainable usage for otherwise low-priced coarse sheep wool – enabling higher income for shepherds.
Vertical Shaft Brick Kilns and Sustainable Construction Practice (Nepal)	<ol style="list-style-type: none"> 1. Increased the market share of green brick/VSBK technology from 3% to 5% 2. Reduction of CO₂ by 78%, from 40 tonnes to 9 tonnes 3. Increased income for workers nearly doubled, from NPR 3,000 – 4,000 (EUR 23 – 33) per day to NPR 7,000–8,000 (EUR 55 – 65) per day.
Train the Trainers (China)	<ol style="list-style-type: none"> 1. Small-sized companies expanded their business to middle-sized; 200 new jobs created 2. Reduced usage of low-quality raw materials which are toxic and/or generate more CO₂ emissions in their lifecycle 3. Safety equipment was included as a mandatory component of each of the training sessions
SUBUMA (Malaysia)	<ol style="list-style-type: none"> 1. 30 local companies adopted international best practices to remain competitive 2. SMEs learned to implement measures to address climate change and resource scarcity issues 3. Carbon footprint labelling will motivate manufacturers to address 'carbon hot spots' in their products
SUS BIRD (China)	<ol style="list-style-type: none"> 1. 500 SMEs have more business opportunities due to life-cycle sustainable designs 2. More than 70% of the consumers will consider to buy affordable environmentally friendly decoration products 3. Proper and safe decoration procedures is implemented - accidents and health hazards are reduced
Low Energy Housing (China)	<ol style="list-style-type: none"> 1. More than 700 SMEs involved; 64 SME investors engaged 2. Increased the share of sustainable buildings in Sichuan from 4.2% in 2010 to 16.6% in 2014 3. Reduced GHG emissions by 420,000 tonnes
Greener Construction Project (Mongolia)	<ol style="list-style-type: none"> 1. Increased competitiveness of Mongolian SMEs, allowing them to expand their businesses 2. Increased technical capacity of all stakeholders 3. Pollution from construction is reduced – health benefits achieved
Promoting Sustainable Housing (Nepal)	<ol style="list-style-type: none"> 1. Create enabling policy environment to promote sustainable housing 2. Strengthen supply chain for sustainable housing and build capacity of SMEs 3. Stimulating demand for sustainable housing
Eco-Friendly Bamboo Production (China)	<ol style="list-style-type: none"> 1. 10% increase in market sales for Sichuan bamboo SMEs 2. Improved in waste reduction by 10-15% 3. 20,000 farmers through eight cooperatives gained new revenue streams
Western China SUSBUILD	<ol style="list-style-type: none"> 1. 134 SMEs of the building/construction value chain obtained national certificates of cleaner production 2. Energy consumption reduction for construction products 3. Green loans increased almost 40% in Chongqing and 23% in Yunnan Province
SUSBUILD Bangladesh	<ol style="list-style-type: none"> 1. Identified 3 feasible business models for 3 types of sustainable bricks 2. 15 targeted MSMEs extracted 10% more clay from river basin 3. 90% of the population in the target areas has increased awareness regarding the quality, efficiency, and sustainability of alternative bricks

