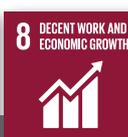


IMPACT SHEET: SUSBUILD – Up-scaling and mainstreaming sustainable building practices in Western China

SUSBUILD



Up-scaling and mainstreaming sustainable building practices in Western China



CHALLENGE

China's unprecedented socio-economic growth has driven the expansion of the building sector, which has added about 2 billion m² annually over the last decades. The building sector accounts for about 30% of the final energy consumption in the country and offers tremendous opportunities for China to pursue a resource efficient and low carbon development. Thus, tremendous efforts have been made to make China's building stock more sustainable. However, most areas in western China are still lagging behind. The SusBuild project aimed to address the following barriers for sustainable building development in western China: MSMEs in the building sector generally lack capacity for sustainable building practice; MSMEs have limited access to finance for sustainable practice; local banks lack trust in MSMEs, information about and understanding of sustainable building practices, and technical capacity to evaluate projects; local construction authorities lack capacity in creating a supportive policy framework for MSMEs to uptake sustainable production and sustainable building practices.

PROJECT BACKGROUND

The EU SWITCH-Asia funded project WESTERN CHINA SUSBUILD was implemented from 2016 to 2019 to scale up sustainable building practices in western China, more specifically, in Chongqing City and Yunnan Province. The project was led by the Wuppertal Institute, in partnership with the University of Civil Engineering and Architecture of Beijing (BUCEA), China Association of Building Energy Efficiency (CABEE), Chongqing Association of Building Energy Efficiency (CQBEEA), Chongqing Economic Promotional Centre for Building Material Industry (CEPCBM), Yunnan Development Centre for Building Technology (YNBTD), Yunnan Provincial Engineering Quality Supervision and Management Station (YNEQS), and the Bank of Chongqing (BOCQ).

PROJECT OBJECTIVES

The overall objectives of the SusBuild China project were to: scale up sustainable building practices in less developed western China, reduce climate and resource impacts of the building sector and contribute to sustainable socio-economic growth. More specifically, the project aimed to foster sustainable building practices among MSMEs in Chongqing City and Yunnan province with a replication potential for western China during the period of 2016-2019.

TARGET GROUPS

- **Local MSMEs of building material and component producers;**
- **Local interior installation MSMEs;**
- **Local energy service MSMEs;**
- **Local developers;**
- **Local construction SMEs;**
- **Local MSME users (shop owners) in large commercial buildings;**
- **Local banks;**
- **Local construction authorities;**
- **The Ministry of Housing and Urban & Rural Development (MoHURD);**
- **Local bank association;**
- **Local associations in the building sector.**

PROJECT ACTIVITIES

The project offered training and technical support for MSMEs throughout the value chain, policy recommendations for both national and local governments, green financing facilitating for sustainable buildings, and network build-up among key organisations in western China. Specific activities included:

Enhancing capacity of various MSMEs along the building supply chain: hosted trainings on sustainable building practices for building materials manufacturers, building designers, construction companies, and energy service companies. The project team also provided technical support to MSMEs in implementing sustainable building pilots.

Raising MSME users' awareness about energy saving and enhancing facility managers' capacity of energy management in commercial buildings: organised a series of information campaigns to raise building owners' awareness on energy saving and developed a handbook for facility managers on energy management in building based on good practices from Europe and China.

Facilitate the access to finance for MSMEs producing building materials/components and energy service MSMEs: hosted a number of match-making events to improve mutual understanding between MSMEs and banks. The project also developed a local guideline of green financing for sustainable buildings, which led to a significant increase of MSMEs that received green loans. International experience of financing sustainable buildings was collected and targeted recommendations for local and national stakeholders were provided.

Supporting the development of policy instruments fostering the uptake of sustainable building practices:

Developed a set of policy action plans to promote sustainable buildings for local governments of the two target regions. In addition, regular dialogues were conducted with the national government to provide inputs to national sustainable building policies.

Improving business network fostering sustainable buildings:

The Western China Sustainable Building Alliance was formed to facilitate exchange on sustainable building practices between practitioners across different provinces in western China.

Disseminating key lessons of sustainable building practices:

hosted and participated in several events in China and in Asia to share lessons learned from the project.

PROJECT ACHIEVEMENTS

- 1,827 participants from local building SMEs in the two target regions were trained;
- Supported sustainable building pilots, including a total area of 7.5 million m² of new buildings and 1.39 million m² of existing buildings;
- Supported local governments in developing four local action plans for sustainable buildings;
- Increase of 39% and 22% of MSMEs receiving green loan in the two target regions, respectively;
- The Western China Sustainable Building Alliance was established;
- Facilitated exchange on sustainable building technologies between MSMEs, intermediary organizations, and think tanks from EU and China.

LESSONS LEARNED

In Yunnan Province, there was generally low awareness of sustainable buildings and green financing schemes among key stakeholders. Several multi-stakeholder dialogues and training workshops have been conducted to strengthen the capacity and knowledge of MSMEs on sustainable building practices. Instead of taking a systematic approach, most sustainable building pilots implemented by MSMEs merely focused on the deployment of renewable energy. In addition, banks in Yunnan were still at the early stage of developing green financing products and procedures for sustainable buildings.

The project consortium included both national and local intermediary organisations as partners. This was key for scaling up outcomes and ensuring the sustainability of the

project. Furthermore, in order to facilitate MSMEs' access to finance, one of the first key steps was to enhance mutual understanding between banks and MSMEs. During the project, this was made possible through the organisation of a series of match-making events. From the outset of the project, both national and local governmental agencies were involved in different activities, this has notably strengthened their sense of ownership of project results and has helped create an enabling policy framework for MSMEs.





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In China, the building and construction sector offers tremendous opportunities for the country to pursue resource efficient and low carbon development. For SusBuild, this means supporting an integrated multi-stakeholder approach by an effective combination of capacity building facilitating SMEs' access to finance, enhancing business networks, and working with the government on an enabling policy framework.



Long-term project sustainability

To ensure the sustainability of project outcomes, SusBuild supported local governments in developing middle-term strategies to promote sustainable buildings. It also implemented a “train-the-trainer” approach and developed training materials to be used also during other capacity building programmes at the national and local levels. The established Western China Alliance of Sustainable Buildings will continue to serve as an exchange platform even after the project completion. Financing products tailored to sustainable buildings have been developed and dialogue between SMEs from Europe and China has been enhanced in order to share good practices and lessons learnt.

Project contributions to Climate Change Mitigation and SDGs



By promoting sustainable and affordable building practices in Chongqing City and Yunnan Province, the project primarily contributed to the achievement of **SDG 11**: Sustainable cities and communities. Contribution to **SDG 12**: Responsible consumption and production was enabled through supporting MSMEs in cleaner production of building materials, design and construction of sustainable buildings, building energy management during the use phase, and awareness-raising of energy consumption among end users. At the same time, promoting energy efficiency and sustainable buildings are associated with multiple benefits and thus contribute also to **SDG 3**: Good health and well-being, **SDG 8**: Decent work and economic growth, and **SDG 9**: Industry innovation infrastructure.

In contributing to Climate Change Mitigation and the **SDG 12**, the SusBuild project contributed on building capacity and awareness on the shift to resource and energy efficiency in the building and construction sector. The project achieved annual energy savings of 41 PJ and annual CO₂ emission reduction of 4.07 million tonne, compared to 2014.

Impacts at a Glance

Economic Impact	<ul style="list-style-type: none"> • 134 SMEs obtained national certificates of cleaner production of building materials, which puts them in a competitive position in the market. • Two catalogues of local certified green building materials and components were produced, helping SMEs identify qualified products for constructing sustainable buildings.
Environmental Impact	<ul style="list-style-type: none"> • The adoption of cleaner production by targeted SMEs can result in an annual reduction of emission (COD, heavy metals, wastes, SO₂) per product by 42.1%(COD) and by 48.3%(SO₂) as compared to 2014.
Social Impact	<ul style="list-style-type: none"> • 184 SMEs obtained certificates of cleaner production, which also leads to a healthy working environment. • The Green Construction training conducted by the project enhanced knowledge of construction companies about mitigating negative environmental, health, and safety impacts of construction activities.
Climate Benefits	<ul style="list-style-type: none"> • 41 PJ total energy consumption reduction. • 28.7% energy consumption reduction per product. • 4.07 Mt final CO₂ emission reduction. • Cleaner production of building materials. Design, construction, renovation, and operation of sustainable buildings.
Green Finance	<ul style="list-style-type: none"> • The total number of building MSMEs that received green loans increased almost 40% in Chongqing and 23% in Yunnan Province, as compared to 2014. • 38 Match-making meetings were organised to improve mutual understanding between building SMEs and the local bank, and to explore green financing opportunities. • The project hosted the “International Forum of Financing Sustainable Buildings” which created opportunities for exchange between building SMEs in the two regions and different domestic banks.
Target Group Engagement	<ul style="list-style-type: none"> • SMEs engaged in project activities: 1,827 • Stakeholders involved: 42 SMEs, business associations, governmental think tanks, government, media, research institutes, banks, enterprises and other organisations from Europe. • 10 outreach activities organised. • SusBuild targeted SMEs along the whole value chain of the building sector to stimulate sustainable building development in the two regions.
Policy Development	<ul style="list-style-type: none"> • 24 events were organised where policymakers were engaged (annual meetings, training, study tours). • Contributed to 4 new action plans for promoting sustainable building materials and components used in green buildings in both target regions.
Europe-Asia Cooperation	<ul style="list-style-type: none"> • Three Good Practice Tours to Europe • Three SUSBUILD EU-China SME Dialogue on Building Energy Efficiency Technologies • One international Forum of Financing Sustainable Buildings



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DURATION

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PARTNERS



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China Association of Building
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Chongqing Association of Building
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