

Train-the-trainers for Building's Energy Efficiency

SHANGHAI,
CHINA

Located in the delta of the Yangtze River, Shanghai is one of the largest and most dynamic cities in Asia. In 2010, it had 14 million registered residents and a floating population of about 9 million, with rapid economic growth and rising prosperity leading to sizeable migration from the rural hinterland. Over the last decade the building stock in Shanghai has tripled, with rapid urbanisation leading to the development of energy inefficient dwellings, prompting environmental concerns.

Project overview

The 'train-the-trainers' scheme is an adult training programme aimed at disseminating knowledge of how to improve energy efficiency in Shanghai's building stock through easy to implement energy saving techniques and technologies. The scheme focuses on creating economies of scale and diffusing knowledge to a large number of people in a short period of time. Instead of looking at expensive and iconic zero-emission buildings, the programme targets the improvement of the city's ordinary, fast-growing building stock – the units responsible for the lion's share of rising energy consumption and CO₂ emissions. By training professionals from the construction industry and policymakers alike, the scheme contributes to realistically improving the levels of energy efficiency. Launched in 2009, the initiative was partly funded by an EU donor scheme (Switch-Asia) and led by the European Union Chamber of Commerce in Shanghai in close partnership with Tongji University and the Swedish Environmental Research Institute.

Results and impact

The programme has trained more than 1200 professionals to date, from SMEs (covering the whole construction value chain), and policymakers across the large Shanghai region with five different tailor-made

Sino-European training modules. Modules combine theory and applications with hands-on practices, a rare feature of Chinese training systems. The scheme has contributed to the setting of higher industry benchmarks and improved the reputation of the companies operating under the scheme. By discussing results in panels, sharing position papers (three annual papers) and publishing research results (for example, materials, policies, standards, etc), policymaking has also influenced the adoption of new construction standards in Shanghai. The scheme is currently being expanded towards a permanent training structure based in Tongji University.

Enablers

The scheme has benefited from close communication between partners and well distributed responsibilities. Four other implementation dimensions stand out. Firstly, a key success factor was the combination of traditional, theoretical knowledge with hands-on practical training, improving the chances that participants gained a proper understanding of the training ('theory-practice sandwich'). Secondly, the scheme illustrates a new nexus of capacity-building schemes within financial aid programmes. Deployed in cities and followed up locally, the scheme strengthened the skills and competence of the individuals that make many small changes every day, contrasting with heavy donor and international investment schemes. Thirdly, the programme benefited from true contextualisation of European policy and the practice of sustainability and green building in China and Shanghai. Beyond training, the scheme involved locally applied research to that effect. Lastly, the involvement of Tongji University was pivotal as a multiplier and a driving force for change. The scheme illustrates the potential of involving universities and research institutes for urban development programmes in large cities, particularly in emerging economies. Besides the knowledge dimension, institutions act as respected players with the capacity to influence policymaking. This was instrumental in designing new regulations of building energy efficiency, which could not be influenced by foreign or western organisations alone.

