

Sino-German Dialogue Forum on Sustainable Urban Development Infrastructure Solutions in Key Urban Sectors

22 September 2015, Beijing, China

Background Note

Sustainable urban development is one of the key global challenges of our time. Today, more than half of the earth's population lives in cities; this is expected to grow to 75% by the middle of the century. At the same time, cities and their hinterland are also inextricably linked and should be considered as such to allow for sustainable solutions. Providing adequate urban infrastructure to meet growing demand while addressing issues such as resource efficiency, climate change mitigation, environmental protection and social inclusion are essential to capitalise on cities' potential for economic growth and to improve overall social welfare. Therefore, politicians and stakeholders around the world are striving to find and develop innovative and integrated approaches and solutions to sustainable urban development.

In this context of unprecedented urbanisation and major challenges for sustainable urban development, the bilateral exchange of experiences, knowledge, and best practices has become crucial to mutual learning and innovation. As long as two and a half decades ago, Germany and China had already recognised the potential in bilateral exchange and cooperation and have been engaging in sustainable urban development ever since. More recently, the Chinese State Council called for deepened international cooperation in the urbanisation plan for 2014-2020. Moreover, in 2013 the German and Chinese governments expressed their interest in expanding and deepening their cooperation under the framework of the Sino-German urbanisation partnership, with special emphasis being placed on infrastructure development, environmental protection, and transport. The Chinese government has also repeatedly stated its interest in German concepts, know-how, and technology in these fields in order to assist their urbanisation strategy.

The 5th Sino-German Dialogue Forum on Sustainable Urban Development will contribute to these collaborative activities by bringing together prominent Chinese and German policymakers with professionals, researchers, and financial experts to share and discuss the innovative concepts, programmes and solutions currently emerging from Sino-German cooperation on sustainable urban development. Major themes to be addressed include the opportunities and challenges associated with sustainable urban development, public transportation, wastewater and solid waste management in cities. Furthermore, the conference will explore financing options for sustainable urban infrastructure, and examples of Chinese and German best practice will provide detailed case studies throughout. Based on these discussions, the conference will facilitate the identification of priority areas for urban planning in both countries, and examine the possibilities of intensifying, enhancing and expanding Sino-German cooperation for mutual benefit. The conference will also provide opportunities to situate Sino-German cooperation on sustainable urban development in the broader international context and identify how this cooperation can contribute to the implementation of internationally agreed targets and goals, with the upcoming United Nations summit for the adoption of the post-2015 development agenda (September 2015) and the Habitat III conference (October 2016) providing guidelines for sustainable urban development in the coming two decades.



Sustainable Urban Development

Urban growth, coupled with social, environmental and societal problems, can pose challenges for sustainable urban development. Cities around the world are increasingly working with integrated urban planning approaches that not only allow for consideration of a wide range of priorities in urban planning, but also promote stakeholder involvement and coordinated planning, both between different levels of administration and between different sectors.

In recent decades, China has experienced rapid urbanisation. While China's cities have become drivers of innovation and economic growth, these urbanisation processes have also created enormous challenges. In this context, China's National New-type Urbanisation Plan (2014) was put in place to coordinate urban development. It provides an ambitious programme to help drive economic development and innovation in cities, and develop more sustainable, well-financed cities with improved urban infrastructure.

As Germany is already highly urbanised, it faces different challenges with respect to urban planning and development, such as addressing demographic change in cities. The focus of Germany's national urban development policy is on promoting well-designed, inclusive, innovative, climate-friendly cities with strong links to the surrounding regions. In order to address the various economic, environmental and societal challenges facing cities, Germany is focusing on integrated urban development approaches.

The first session of the Sino-German Dialogue Forum examines the challenges and opportunities of sustainable urban planning in China and Germany in detail, and examines existing policies and strategies to foster sustainable urban development both at the local and national level. Against this background, it will also identify where there is further potential for cooperation between cities, governments and other actors in this context.

Infrastructure for Sustainable Urban Development

Infrastructure development and the provision of basic services often lag behind urban expansion. However, technological solutions and innovative infrastructure design can provide significant opportunities to further sustainable urban development. Thus, the conference will also examine infrastructure solutions for sustainable development in two key sectors: public transportation, and wastewater and solid waste disposal. Recognising that a lack of financing often stifles investments in infrastructure projects, a dedicated conference session will examine opportunities for financing sustainable urban infrastructure.



Financing Infrastructure for Sustainable Urban Development

While sustainable urban infrastructure offers many opportunities for creating liveable, environmentally friendly, inclusive cities that drive economic growth, cities often face difficulties with respect to financing infrastructure projects. Cities can benefit from support and innovative finance mechanisms to invest in sustainable urban infrastructure.

Both China and Germany face challenges with respect to financing infrastructure. For example, while there are national programmes for sustainable urban transportation in China, there is a lack of finance for implementing respective policies, particularly in small Chinese cities. Germany also experiences difficulties in developing a sustainable financial basis for cities, and public sources of finance are often insufficient to implement large infrastructure projects. Examining new forms and sources of financing, including private sector investments, is necessary to meet infrastructure projects' financing needs.

Reshaping Mobility Patterns through Innovative Transport Planning

While the increasing urbanisation of China brings greater personal mobility for many, the continuous growth of transport and traffic volumes simultaneously causes extreme challenges such as increased air pollution, GHG emissions, traffic congestions and accidents, resulting in adverse impacts on the environment and posing significant health risks to the population. Consequently, China has placed investment in sustainable public transport high on the agenda.

Innovative concepts to better coordinate transport and urban development and to reshape mobility patterns in cities include, for example, the promotion of walking and cycling, car sharing, intelligent management, and transit and land use integration, where dense mixed-use areas are designed around mass-transit systems to increase access to public transport. Both Germany and China emphasise the development of sustainable public transport and successfully cooperate in this area. The third conference session on public transport will therefore examine ways to promote sustainable transportation and mobility in megacities. It will furthermore examine the possibilities for car sharing in China, and how this could contribute to addressing problems such as traffic congestion and air pollution in Chinese cities. The session will also look at the urban intelligent transportation system planned for the city of Huainan to tackle the problems emerging from urban growth and increased traffic volumes. A further example of sustainable transportation that will be discussed is the German S-Bahn system, which combines urban and suburban public transport. Opportunities and challenges of implementing a similar system in Chinese cities will be considered.

Promoting Sustainable Wastewater and Solid Waste Management

Rapid urbanisation and economic growth can lead to steep increases in the generation of wastewater and solid waste. Indeed, the amount of waste generated by cities is expected to double in the coming 15 years. To address these challenges, cities must develop functional solid waste disposal, recycling and wastewater treatment systems, and encourage more sustainable consumption, reuse, and a change of waste disposal practices among urban residents.

China's rapid economic and population growth and its accelerated urbanisation process have led to enormous challenges with respect to wastewater and solid waste management. Water quality remains an issue and demand is projected to keep growing. With almost 20 percent of the world's



population but only five percent of the world's renewable freshwater supplies, China's government has made improving water resource management a high priority. Sustainable solid waste and wastewater systems are therefore of crucial importance for both environmental protection and economic development in Chinese cities.

The fourth conference session will describe the situation as regards urban wastewater, municipal sludge treatment and recycling in China. It will take stock of Sino-German cooperation in this field, discussing opportunities for knowledge exchange, technology transfer and financing. Innovative water and waste management concepts from Germany and China, such as the underground wastewater treatment plant in Kunming or a solid waste incineration plant in Hefei, will be presented, and a particular focus will be put on challenges and opportunities related to wastewater infrastructure development in fast-growing areas.

Meeting Current and Future Challenges of Sustainable Urban Development

Sino-German cooperation offers many opportunities to meet the challenges of urbanisation and harness the benefits of sustainable urban development. Reflecting on the detailed case studies discussed in the sessions on sustainable urban development, finance for infrastructure, transport, wastewater and solid waste, the final session of the conference will take a broader perspective and explore the possibilities for future Sino-German cooperation. The session will also discuss how environmentally friendly technologies emerging in the field of urban development can be promoted by Sino-German cooperation to make cities more liveable. It will also provide an opportunity to discuss the enabling conditions, capacities and policy frameworks that can help municipalities, the private sector and other actors make effective contributions in this area.

The session will furthermore examine global platforms and processes dealing with urban development issues, such as the post-2015 development agenda and the outcomes of the Habitat III conference, and how Sino-German cooperation on sustainable urban development can contribute to their implementation. These processes will moreover offer various additional opportunities for mutual learning and the exchange of best practices.