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Policy brief

China's leadership on sustainable infrastructure: lessons for the world



Headline issues

- China is taking an active leadership role in a new global agenda that has sustainable infrastructure at its heart.
- This agenda, which includes the Paris Climate Agreement, is starting to address severe structural and environmental stresses.
- China is transitioning to slower economic growth while committing to environmental and climate actions, with lessons for the rest of the world.

Summary

China recognises that to delay action on climate change would be deeply dangerous. Its 13th Five-Year Plan and nationally determined contribution to the Paris Agreement targets commit China to act. It is transitioning from coal to domestic renewable energy, and becoming a leader in manufacturing renewable energy components.

China's growing influence in multilateral institutions, and its actions to help create new development banks, will help disseminate the lessons from its rapid growth and the role sustainable infrastructure can play in leading future growth. China's involvement in the new banks has great potential to lead the transformation of the world's infrastructure.

China shows leadership beyond financial investment. It has begun to lead on climate through its actions at home and its key role in creating, enforcing and carrying forward the Paris Agreement.

Policy briefs provide analysis on topical issues. Drawing on the Grantham Research Institute's expertise, they either summarise our research findings or the state of knowledge about a particular issue.

This policy brief has been written by **Nicholas Stern, Isabella Neuweg** and **Patrick Curran**.

Global achievements, fragilities and an emerging new agenda

Since the mid-1940s the world has seen unprecedented advances on key dimensions of income, life expectancy and education. But severe structural and environmental issues are threatening these achievements. For further progress on economic growth, development, poverty and inequality to happen, global and local environmental challenges must be tackled at the same time.

The recognition that these objectives are interwoven and complementary (Fankhauser and Stern, 2016) has been a driving force behind the new global agenda agreed in the last three years, including the Sustainable Development Goals (SDGs) and the Paris Climate Change Agreement – in which China is taking an active leadership role. Sustainable infrastructure lies at the heart of this agenda. It will drive both growth and the low-carbon transition, while being essential for achieving almost all of the SDGs.

Change has to occur rapidly and across all sectors, including the design and organisation of cities, the structure of energy systems, increasing energy productivity and the management of land and oceans. There is an uncomfortably narrow window of opportunity for making the choices that will bring strong and sustainable growth and a cleaner, more socially cohesive living environment,

because investment, particularly in infrastructure, can lock in capital, technology and patterns of pollution and emissions for decades.

Lessons from China

Economic advances in China over the last 40 years have been truly remarkable but at the expense of its own environment and the global climate.

China's strategy has been changing radically as it moves into a different phase of growth and change. The country is reaching a Lewis turning point (Green and Stern, 2016), at which cheap labour supplied from the agricultural to the manufacturing sector dwindles and wages begin to rise; its productivity continues to move closer to that seen in rich countries; and the service sector is growing while manufacturing is declining proportionally. As this occurs, China's ambition is to steer its development in a much more sustainable direction.

Managing this transition will require the scaling-back of investments in polluting industrial sectors, along with the ramp-up of China's low-carbon industry, including decarbonisation of its power network through investment in sustainable infrastructure and support for private sector investment. A strong commitment to climate and environmental actions form fundamental principles of China's 13th Five-Year Plan. China is dedicating substantial resources to the transition out of coal and towards

“The lessons learned from China can be communicated and shared through its growing influence in existing multilateral institutions and its actions to foster new development banks”



domestic renewable energy, and is becoming a leader in the manufacture of renewable energy components. New technologies and better design, including of cities, will enable China in the future to reduce congestion, waste, pollution, greenhouse gas emissions, and other negative environmental impacts from production and consumption.

The lessons learned from these past and current experiences can be communicated and shared through China's growing influence in existing multilateral institutions, and its actions to foster new development banks, with the aim of helping fellow developing countries to avoid the same path of severe environmental stresses. The lessons reach developed countries, too, which face the urgent tasks of having to replace old, polluting and inefficient capital with new, clean and efficient capital, ensuring new investment is smart and at the frontiers of technology, and pushing out that frontier – problems that China is tackling.

Fostering growth through sustainable infrastructure

Over the last few years, China's investment in infrastructure has been at the rate of about 12 per cent of GDP, more than all developed countries, and all other developing countries, put together. China also builds and finances more infrastructure in other developing countries than all multilateral development banks and countries of the Organisation for Economic Co-Operation and Development (OECD) combined (Bhattacharya et al., 2016). Its actions provide the opportunity to foster sustainable infrastructure and low-carbon development across the world.

The delivery of sustainable infrastructure requires a clear, stable and credible policy direction for its investors, and the harnessing of development finance and private capital. China has extensive experience in these fields. It has the entrepreneurial capacity and financial strength to become the largest capital exporter globally

China has shown the world the value of trying out policies in a few places before rolling out nationwide. Recently, for example, the economy of the megacity Chongqing (pictured) has grown faster than the rest of China through strong investment in infrastructure combined with the effective management of dislocation in its move away from old technologies, and heavy investment in new sectors and modern technologies (Rithmire, 2013). Managing local distortions resulting from the reform agenda while investing in new opportunities will be central to social and political sustainability in China and elsewhere over the low-carbon transition.

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and has been building and financing infrastructure across the world on an unmatched scale. And it has created new multilateral development banks (MDBs) with great potential to lead the transformation of the world's infrastructure.

MDBs can and should play a central role on the finance side through risk reduction and risk management. Providing help to long-term institutional investors in getting through the early stages effectively can produce assets that are very attractive. Good development banking is profitable – and such banks help with policy. China's participation is strong in new banks including the Asian Infrastructure Investment Bank, New Development Bank and other vehicles such as the Silk Road Fund, which can offer real leadership and increasing scale. China can also play a crucial role in guiding existing MDBs to deliver on and scale up investment in sustainable infrastructure – an urgent requirement for achieving the necessary pace and scale of the economic transformation.

China shows leadership beyond financial investment

China has the potential to mobilise large sums of capital for a new global growth model, within China and around the world. And it showed its leadership in 2016 in the G20, especially around green finance. This story is about more than capital, investment and finance, however.

China has joined, adhered to, benefited from and become an advocate for the World Trade Organization and is a champion of international trade and openness. And China has begun to lead the world on climate not only through its actions at home but also in playing a key role in creating, bringing into force and carrying forward the Paris Agreement. Its announcements in November 2014 in Beijing of its Paris targets alongside the US, and the ratification of the agreement at its G20 summit in 2016, again alongside the US, were vital in creating and maintaining momentum and commitment across the world.

President Xi Jinping's speech in Davos on 17 January 2017 set out a vision of an integrated, open and collaborative world, finally making China's global leadership role explicit and recognised.

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