Research Paper

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The Role of Investors in Promoting Sustainable Infrastructure Under the Belt and Road Initiative

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Summary

- China is seeking to increase its overseas investments in infrastructure projects, and the Belt and Road Initiative (BRI) is its strategic vehicle to help achieve this. The initiative aims to improve connectivity between China and the world by encouraging investment in transport, energy and communications infrastructure.
- In light of the profound impacts of infrastructure on societies and the environment, the BRI will be crucial in determining whether countries are able to achieve more sustainable development patterns, and whether global emissions can be aligned with a 2°C pathway. One of the intended outcomes of the BRI is that it will help achieve sustainable development in partner countries, but this will depend on the nature of the investment projects.
- The use of sustainable procurement for infrastructure projects is a potentially valuable tool to reduce environmental risks for investors as well as to help drive best practice and innovation in sustainable design, construction and operation.
- Sustainable procurement refers to public procurement (including the purchase of infrastructure projects by governments) and to the procurement of goods and services within projects (supply-chain management) in which social and environmental issues are integrated into the decision-making process.
- Experience with sustainable procurement is growing at the international level, and the multilateral development banks and European development finance institutions are increasingly encouraging its use. This is being achieved through their investment strategies and environmental safeguards and procurement policies, as well as through the provision of capacity-building for their borrowers.
- There is a high level of interest among China's policy banks in increasing the sustainability of their investments, including through encouraging borrowers to implement sustainable procurement in their supply chains. However, awareness of sustainable public procurement and of the potential role of investors in encouraging its use remains limited.
- There are opportunities to strengthen the use of sustainable procurement for China's policy banks and government as well as for international stakeholders in the BRI. This would make a significant contribution towards ensuring that BRI investments support countries in achieving low-carbon sustainable development.

1. Introduction

There is a massive need for infrastructure globally. It is estimated that $49 trillion of investment in infrastructure (in transport, energy, water and telecommunications) will be needed over 2016–30, equivalent to 3.8 per cent of global GDP.[1] The Belt and Road Initiative (BRI), through which China aims to improve its connectivity with the world, will be a key component in financing this.

However, the environmental and social impacts stemming from large-scale infrastructure projects present risks, not just to the environment and affected communities, but also to the economic viability of investments and to international relations. Addressing these will be essential for the success of the BRI. This will also be necessary if the Chinese government is to achieve its aim that the initiative helps to realize sustainable development in partner countries. The types of infrastructure project that are built will be crucial in determining whether partner countries are able to shift to more sustainable development pathways and to respond adequately to climate change. Furthermore, the potential scale of investments under the BRI means that it could make a significant contribution towards aligning global carbon emissions with the internationally agreed goal to limit the rise in global temperatures to 2°C above pre-industrial levels; alternatively, it could render the target unachievable without significant stranding of assets. Since infrastructure projects have such a long lifespan, the investment decisions taken over the next two or three years will determine which of these outcomes prevails.[2]

Investors have a crucial role to play in influencing the sustainability of projects through ensuring that these comply with environmental and social safeguards, and also by supporting and incentivizing best practice and innovation in sustainable practices and business models. This paper identifies opportunities for China's policy banks and policymakers, as well as for international stakeholders in the BRI, to promote more sustainable infrastructure through the procurement practices of borrowers.

Procurement can be a powerful tool to promote sustainability. It includes public procurement (the process by which governments procure infrastructure projects) and procurement within projects (the process by which goods and services are selected for these projects). Both offer opportunities to integrate sustainability into the design, construction and operation of infrastructure.

The paper examines how the multilateral development banks (MDBs) and the European bilateral development finance institutions (DFIs) encourage the use of sustainable procurement by their borrowers, and how China's policy banks approach this issue. On this basis, it makes recommendations for how these different actors could ensure that infrastructure projects being developed under the BRI are sustainable. Furthermore, recommendations are made for the governments of China and those of other countries engaged in the initiative.

The reason for focusing on these institutions is because of their particular roles in financing infrastructure, which means that they can be influential in shaping infrastructure projects, including the sustainability standards that are applied. Although these roles are not identical, there are

[1] Woetzel, J., Garemo, N., Mischke, J., Hjerpe, M. and Palter, R. (2016), *Bridging Global Infrastructure Gaps*, McKinsey & Co., https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/bridging-global-infrastructure-gaps (accessed 17 Jan. 2018).
[2] The New Climate Economy (2016), 'The Sustainable Infrastructure Imperative: Financing for Better Growth and Development', http://newclimateeconomy.report/2016/ (accessed 17 Jan. 2018).

sufficient parallels between them to enable sharing of experiences and learning lessons from their different approaches to sustainable investments and sustainable procurement. All have a remit that is broader than commercial priorities; China's policy banks have a role in implementing government policy and the MDBs and DFIs seek to make a positive contribution to development outcomes. In addition, the policy banks and MDBs are often the largest single investors in infrastructure projects and they tend to be involved in them from an early stage of development. Therefore, they play a key role in setting sustainability standards.

In this paper, sustainable infrastructure is defined with reference to social, economic and environmental aspects, all of which are intertwined. However, the review of investor policies focuses on environmental policies and the examples of sustainable procurement focus on environmental sustainability. This is not meant to imply that other aspects of sustainability are less important. The recommendations refer to the broad definition of sustainability and should be read with this in mind.

2. Context of the Belt and Road Initiative

Infrastructure investment under the Belt and Road Initiative

The concept of the Belt and Road Initiative (BRI) was introduced in 2013 by President Xi Jinping, and it has been evolving since. The broad goal is to improve connectivity between China and the rest of the world by land (the 'belt') and sea (the 'road'). The Silk Road Economic Belt is foreseen as encompassing two routes, the first through Central and West Asia to Europe, and the second through Southeast and South Asia. The 21st Century Maritime Silk Road also has two routes, one through the South China Sea and Indian Ocean to Europe and one through the South China Sea to the South Pacific.[3] Thus, the BRI's geographic scope is very wide. As many as 65 countries could be connected to these routes and China has also highlighted that participation in the initiative is open to all countries; several African countries have expressed an interest[4] and the participation of South American countries has also been touted.[5]

China's goal of improved connectivity has five aspects: policy coordination, infrastructure, trade, financial integration and cultural links. The aim is that the initiative will:

> Help align and coordinate the development strategies of the countries along the Belt and Road, tap market potential in this region, promote investment and consumption, create demands and job opportunities, enhance people-to-people and cultural exchanges, and mutual learning among the peoples of the relevant countries, and enable them to understand, trust and respect each other and live in harmony, peace and prosperity.[6]

Furthermore, the initiative is intended to help 'realize diversified, independent, balanced and sustainable development' in the countries along the Belt and Road.[7]

To date, the BRI has stimulated a large number of initiatives related to the different aspects of connectivity, including the establishment of a Silk Road network of think-tanks, the hosting of regular forums and the initiation of wide-ranging research. However, infrastructure forms the crux of the initiative and it is the potential investment opportunities associated with this that have attracted most international attention. Roads, railways, ports, airports, energy and communications infrastructure have all been highlighted as priority areas under the BRI. A large number of such projects are underway along its routes, including coal-fired power plants in Bangladesh, Pakistan and Bosnia, hydropower projects in Nepal, a railway line from China through Southeast Asia to Singapore, and roads in Pakistan and Tajikistan. However, while many of these are being described as BRI projects, a large number of them began before the initiative was launched and some dormant

[3] National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China (2015), 'Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road', http://en.ndrc.gov.cn/newsrelease/201503/t20150330_669367.html (accessed 17 Jan. 2018).
[4] Mu, C. (2015), 'Belt and Road plan "open" to all nations', China Daily USA, 17 April 2015, http://usa.chinadaily.com.cn/business/2015-04/17/content_20455178.htm (accessed 17 Jan. 2018).
[5] Bousquet, E. (2017), 'A Silk Road to South America?', China.org.cn, 23 May 2017, http://www.china.org.cn/opinion/2017-05/23/content_40870454.htm (accessed 17 Jan. 2018).
[6] The State Council of the People's Republic of China (2015), 'Full text: Action Plan on the Belt and Road Initiative', 30 March 2015, http://english.gov.cn/archive/publications/2015/03/30/content_281475080249035.htm (accessed 17 Jan. 2018).
[7] National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China (2015), 'Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road'.

projects have been revived thanks to it. The BRI is therefore best seen as a framework within which existing projects can be incorporated and new ones developed.

The development of transport and communications infrastructure should facilitate the achievement of China's other goals of increased trade and financial integration, policy coordination and strengthening cultural ties. Of most relevance here is the goal of policy coordination, for which there are significant opportunities in relation to the policy framework for infrastructure. Furthermore, in light of the high priority that is given to sustainable development under the initiative, there is a particular opportunity to contribute to the development of stronger and more effective policies in BRI countries that will ensure infrastructure investments make a positive contribution towards this.

How BRI infrastructure projects are likely to be financed

If successful, the BRI will stimulate a significant increase in infrastructure investment globally; this is certainly the hope of China and of those countries looking for project finance. The Chinese government has pledged over $1 trillion in investment to BRI projects, including the announcement by President Xi at the 2017 Silk Road Summit of $124 billion of investment.[8]

China's funding for the BRI will come from several sources, including its policy banks – principally the China Development Bank (CDB) and the Export-Import Bank of China (EximBank), state-owned commercial banks such as the Industrial and Commercial Bank of China and the China Construction Bank, equity funds such as the Silk Road Fund, the Green Silk Road Fund and the China-Africa Development Fund, and multilateral banks in which China is a major stakeholder, such as the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB). As with other Chinese development funding, this will be disbursed in several ways, including grants or concessional loans through state finances, loans to foreign governments through policy banks, loans to Chinese companies and investment in joint development funds such as the ASEAN Investment Fund. Overall this is likely to see the global role of China in infrastructure financing increase significantly.[9]

But the BRI is not intended as a solely Chinese project. It is hoped that additional investment will come from other multilateral development banks such as the Asian Development Bank (ADB), the World Bank, the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB), from international commercial banks and other private investors, and from BRI partner-country governments.

Some of this investment will take place through co-financing arrangements that provide a means of pooling financial resources and of spreading risk. However, for co-financing ambitions to be realized, there needs to be agreement on the terms and conditions that will be applied, including on procurement and on environmental and social standards. The AIIB has already approved several projects that are to be co-financed with other multilateral banks, including the EBRD, the ADB and the World Bank. The co-financing agreements for these projects clearly spell out which institution's environmental and social policies will apply, which to date have typically been those of the partner bank working with AIIB.[10]

[8] BBC News (2017), 'China invests $124bn in Belt and Road global trade project', 14 May 2017, http://www.bbc.co.uk/news/world-asia-39912671 (accessed 17 Jan. 2018).
[9] Liu, D. et al. (2017), *The 'Belt and Road' Initiative and the London Market – the Next Steps in Renminbi Internationalization*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/files/chathamhouse/publications/research/2017-01-17-belt-road-renminbi-internationalization-liu-gao-oxenford-xu-song-subacchi-li.pdf (17 Jan. 2018).
[10] Asian Infrastructure Investment Bank (2018), 'Approved Projects', https://www.aiib.org/en/projects/approved/index.html (accessed 18 Jan. 2018).

Conversely, failure to delineate rules on environmental protection or public procurement can hinder cooperation, and result in legal disputes and delays. For example, questions have been raised about the viability of the construction of the Hungarian stretch of the planned 350-kilometre high-speed railway between Belgrade and Budapest, 85 per cent of which is to be funded by EximBank, with the EU announcing an investigation into whether the project has violated its rules requiring open tenders for major infrastructure projects.[11]

Many investment agreements under the BRI will likely come about through state-to-state negotiation. According to the official 'Vision and Actions for the BRI', China will 'take full advantage of the existing bilateral and multilateral cooperation mechanisms to push forward the building of the Belt and Road'.[12] China already has cooperation agreements with countries along the BRI routes; for example, in 2015 it agreed with Mongolia and Russia a roadmap for cooperation focused on improving infrastructure links,[13] and in 2017 it signed a joint declaration with Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan to collaborate in 'building the Silk Road Economic Belt'. Similarly, the BRI has also become a major component in China's discussions with regional groupings of countries, such as the 16+1 in Central and Eastern Europe.[14] However, the BRI is meant to be market-led, with the intention that enterprises will be prompted to seek out new opportunities for which they will attract funding from commercial banks.[15]

The global imperative for sustainable infrastructure: reducing environmental risks and driving green growth

Large-scale infrastructure projects can have profound environmental and social impacts. Environmental impacts can include land-use change (including deforestation), soil and water pollution, unsustainable harvesting or extraction of natural resources and other commodities, emissions of greenhouse gases and other air pollutants, and increased noise levels. Social impacts can include the displacement of people, loss of agricultural land and disruption to local culture due to influxes of new people and ways of life, which at times result in social conflict or human-rights violations. The environmental and social impacts are also intertwined because of the importance of natural resources for peoples' livelihoods and wellbeing.

[11] Financial Times (2017), 'EU sets collision course with China over 'Silk Road' rail project', 20 February 2017, https://www.ft.com/content/003bad14-f52f-11e6-95ee-f14e55513608 (accessed 17 Jan. 2018); van Gompel, M. (2017), 'China continues Silk Road rail project in Serbia', Railfreight.com, 18 August 2017, https://www.railfreight.com/corridors/2017/08/18/china-continues-silk-road-rail-project-in-serbia/ (accessed 17 Jan. 2018).
[12] National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China (2015), 'Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road'.
[13] HKTDC Research (2017), 'The Belt and Road Initiative', 13 September 2017, http://china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/The-Belt-and-Road-Initiative/obor/en/1/1X000000/1X0A36B7.htm (accessed 17 Jan. 2018).
[14] XinhuaNet (2017), '16+1 mechanism achieves fruitful results under Belt & Road Initiative: senior CPC official', 18 July 2017, http://news.xinhuanet.com/english/2017-07/18/c_136453795.htm (accessed 17 Jan. 2018).
[15] National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China (2015), 'Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road'.

These impacts occur throughout the lifetime of an infrastructure project, from project preparation and construction through to operation and potentially decommissioning, and they can include direct impacts (e.g. resettlement, land-use change and pollution) and indirect impacts (e.g. those resulting from in-migration and the establishment of economic activities facilitated by the new infrastructure). Furthermore, these impacts reach far beyond the location of the project. This is because of the length of the supply chains linked to such projects and because of their influence on regional and global environmental services. Most notable is the impact on climate processes through the emission of greenhouse gases. For example, infrastructure is estimated to have accounted for 10 per cent of tropical forest loss between 2000 and 2010, a major source of greenhouse gas (GHG) emissions.[16] Furthermore, an estimated 60 per cent of global carbon emissions are from the construction and use of infrastructure.[17]

> Infrastructure is estimated to have accounted for 10 per cent of tropical forest loss between 2000 and 2010, a major source of greenhouse gas (GHG) emissions.

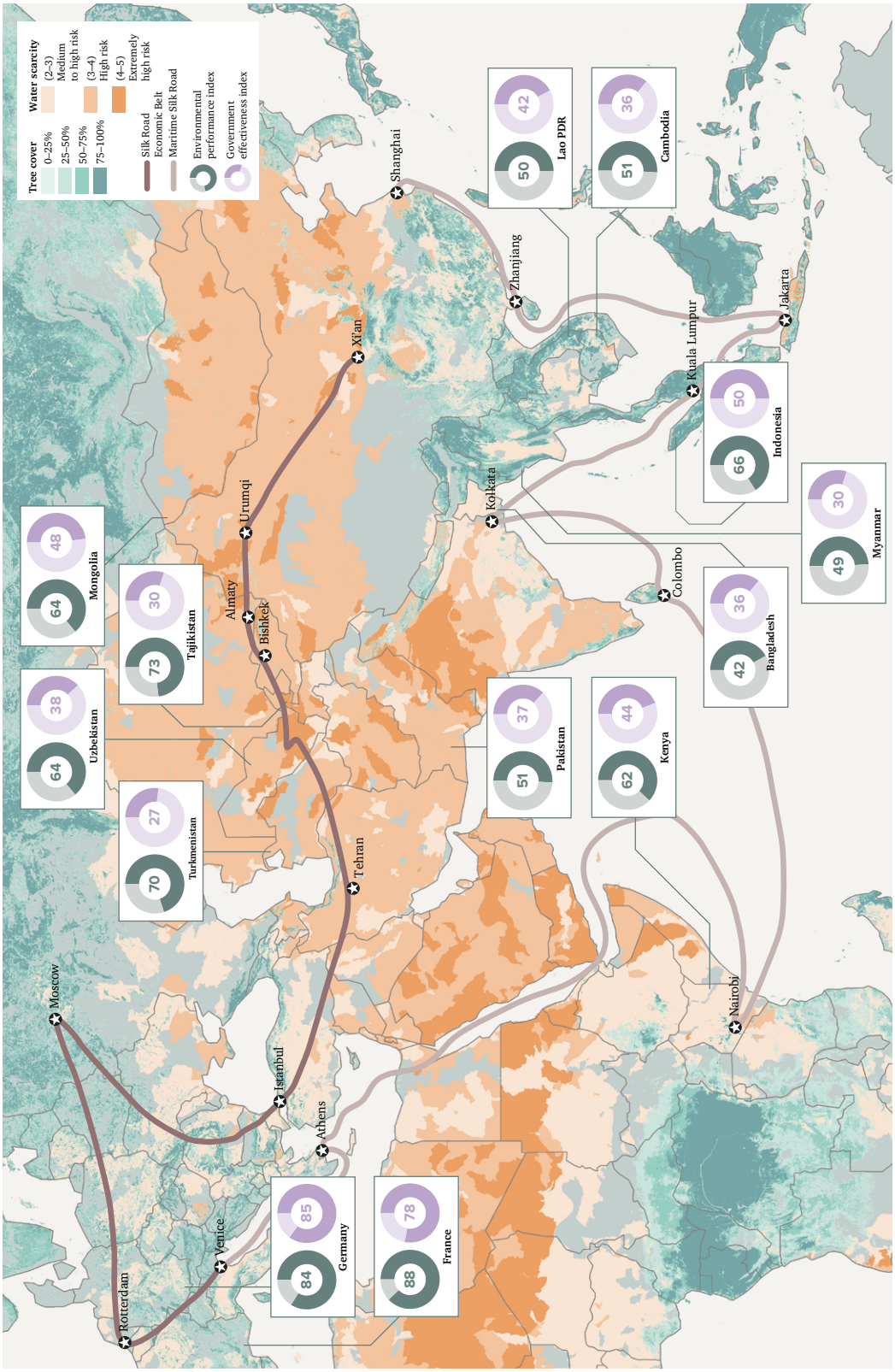
These various impacts bring significant political and financial risks for investors. Local environmental damage and disruption to livelihoods can result in social unrest and legal disputes, leading to delays, fines, the costs of remedial action and the cancellation of projects. Infrastructure projects in which environmental issues are not adequately considered are also at risk of becoming stranded assets, either from regulatory change or from the impacts of climate change itself. Governments around the world increasingly legislate to ensure that development is aligned with global objectives to tackle climate change and achieve the UN Sustainable Development Goals (SDGs), through, for example, tighter regulations on GHG emissions and other environmental impacts. Projects that do not comply with such legislation or with best international practice could be at risk of losing support from the host government or from some investors. In addition, further costs may be incurred if changes need to be made to a project design so that they are in compliance with government policies. Furthermore, if climate change has not been adequately considered in project design, its future impacts could mean that a project incurs serious damage or becomes economically unviable; for example, due to flooding or storms.

The risks associated with infrastructure are particularly pertinent to the BRI, given the environmental vulnerability of many of the countries involved. In Central and South Asia, for example, water stress is endemic, with Afghanistan, India, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan and Uzbekistan categorized as having high or extremely high levels of stress.[18] In Southeast Asia, deforestation is a major issue, with high levels observed in, for example, Cambodia, Indonesia, Laos, Myanmar and Vietnam.[19]

These risks are compounded by the limited governance capacity of many of the BRI countries, which restricts the ability, and sometimes the willingness, of their governments to assess or manage environmental risks from infrastructure projects (see Figure 1).

[16] Hosonuma, N. et al. (2012), 'An assessment of deforestation and forest degradation drivers in developing countries', *Environmental Research Letters*, 7(4): pp. 1–12, doi: 10.1088/1748-9326/7/4/044009 (accessed 17 Jan. 2018).
[17] This statistic refers to energy, buildings and transport infrastructure. See The New Climate Economy (2016), 'The Sustainable Infrastructure Imperative: Financing for Better Growth and Development'.
[18] World Resources Institute (2014), Aqueduct Water Risk Atlas, http://www.wri.org/applications/maps/aqueduct-atlas/ (accessed 17 Jan. 2018).
[19] Global Forest Watch (2018), Countries, http://www.globalforestwatch.org/countries (accessed 17 Jan. 2018).

Figure 1: Government effectiveness and environmental vulnerability along the Belt and Road



Sources: World Bank (2016), Worldwide Governance Indicators, http://info.worldbank.org/governance/wgi/#home (accessed 17 Jan. 2018); Yale University (2014), Environmental Performance Index, http://archive.epi.yale.edu/epi (accessed 17 Jan. 2018); University of Maryland, Global Forest Change 2000–2014, https://earthenginepartners.appspot.com/science-2013-global-forest (accessed 2 Feb. 2018); World Resources Institute (2014), Aqueduct Water Risk Atlas, Global Maps 2.1 Data, http://www.wri.org/applications/maps/aqueduct-atlas/ (accessed 2 Feb. 2018).

Driving green growth through infrastructure

As well as entailing risks, large-scale infrastructure projects present an opportunity to help drive sustainable development and encourage a shift towards more sustainable business practices and modes of life. Because of their scale, they are a major source of contracts and business opportunities. The construction sector uses an estimated 50 per cent of the world's raw-materials production and 80 per cent of mineral raw-materials production.[20] Therefore, if only sustainable products are used to build infrastructure, there would be a huge market for these products and dramatic changes to business practices across the sector. For example, to respond to requirements for supplying sustainable materials, businesses may need to implement traceability systems or to switch their suppliers, and such changes are most easily applied across a business rather than maintaining separate supply chains for different customers. Similarly, if all contractors and service providers are required to implement environmental-management systems, or if sustainable construction methods and technologies are used, significant demand for sustainable businesses will be created. As an illustration of the potential scale of this change, it has been estimated that including sustainability criteria in 30–50 per cent of requests for proposals in public–private partnerships could shift $8–13 billion of private investment to developing capabilities in designing, building and operating sustainable infrastructure.[21]

> The BRI could play a transformative role in helping partner countries to shift their economies towards more sustainable models.

Furthermore, if sustainability is integrated into the design and operation of projects, it can encourage people to adopt more sustainable lifestyles; for example, reducing the need for transport or the consumption of energy or water. Thus, it reduces not only the environmental impacts of new infrastructure in the short term, but also its cumulative impacts in the future, avoiding locking societies and countries into unsustainable patterns of resource use. Sustainable infrastructure can therefore be defined as that which not only avoids or mitigates any social and environmental risks, but that also has a positive impact on these aspects (see Box 1).

Infrastructure can also bring about change in the institutional environment in which it operates; for example, a large-scale sustainable infrastructure project may require new technical expertise and skills within government as well as the private sector. Thus, infrastructure is not only a physical output with resulting impacts on the environment, but it is also an agent of change that can influence the economic, social and political context in which it sits.[22]

This role of infrastructure as an agent of change is in line with the vision of China's government for the BRI to help realize sustainable development. The potential for this is huge, and the BRI could play a transformative role in helping partner countries to shift their economies towards more sustainable models. Doing so would not only reduce the economic risks to investors, but it would also help to place China at the forefront of global efforts to achieve sustainable development and tackle climate change. In particular, it would provide a significant opportunity for China's enterprises to

[20] KfW Group (2014), *Toolbox: Sustainable Procurement, A guide on how to include aspects of sustainability in public procurement procedures for Financial Cooperation projects,* https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Toolbox-zur-Nachhaltigen-Auftragsvergabe-EN.pdf (accessed 17 Jan. 2018).
[21] Bielenberg, A. et al. (2016), *Financing change: How to mobilize private sector financing for sustainable infrastructure*, Detroit: McKinsey & Company, http://www.indiaenvironmentportal.org.in/files/file/Financing_change_How_to_mobilize_private-sector_financing_for_sustainable-_infrastructure.pdf (accessed 17 Jan. 2018).
[22] Schouten, P. and Bachmann, J. (2017), *Roads to Peace? The Role of Infrastructure in Fragile and Conflict-Affected States*, Copenhagen: UNOPS/DIIS, http://roads-to-peace.org/PDF/DIIS%20UNOPS%202017%20Roads%20to%20Peace%20report.pdf (accessed 17 Jan. 2018).

become leaders in implementing sustainable infrastructure. Looking ahead, governments and citizens will increasingly demand infrastructure that is in line with sustainable and low-carbon growth; thus, investing in sustainable infrastructure has been described as 'the growth story of the future'.[23] Therefore, enterprises that have the necessary expertise and skills to implement sustainable projects will be well positioned to compete internationally and to become leaders in the sector.

Box 1: Defining sustainable infrastructure

Sustainable infrastructure is most commonly defined as being sustainable with respect to the society, the economy and the environment, and this is the definition used in this paper. Thus, it has the following features:

- It is inclusive and respects human rights, and contributes to enhanced livelihoods and social wellbeing; for example, through improving energy access, supporting poverty reduction and reducing vulnerability to climate change.
- It helps create jobs and boosts economic growth without burdening governments or users with excessive debts or costs, ensures worker safety, and seeks to build the capabilities of local suppliers and developers.
- It contributes to a low-carbon, resource-efficient economy and is resilient to climate change.
- It addresses local environmental challenges, including minimizing negative impacts on ecosystems.[a]

The political or governance context is an important factor in implementing sustainable infrastructure, and achieving sustainability is challenging without an adequate governance framework. However, large-scale infrastructure is shaped by and has an impact on the governance environment in which it operates. Therefore, governance is not only a critical part of an enabling environment for implementing sustainable infrastructure, it can also be viewed as an aspect of sustainability in its own right, in that sustainable infrastructure projects should contribute to enhancing the governance context to ensure their effective implementation and operation throughout their lifetime.

[a] This definition is drawn from: Bhattacharya, A. et al. (2016), *Delivering on Sustainable Infrastructure for Better Development and Better Climate,* p. 2, Brookings Institution, https://www.brookings.edu/wp-content/uploads/2016/12/global_122316_delivering-on-sustainable-infrastructure.pdf (accessed 17 Jan. 2018).

[23] The New Climate Economy (2016), 'The Sustainable Infrastructure Imperative: Financing for Better Growth and Development'.

3. The Role of Investors in Promoting Sustainable Infrastructure

Sustainable infrastructure and linkages with green finance

Governments hold ultimate responsibility for ensuring that national infrastructure projects are well planned and designed so as to minimize negative environmental and social impacts and to ensure they are in line with national strategies for sustainable development. However, the relevant decision-makers within governments do not always have the capability, resources or desire to fulfil this role.[24] Therefore, responsibility for this also lies with investors.

This is widely recognized within the investment community because it makes good economic sense as well as for ethical reasons. For example, a survey of investors found that over half considered that there is a positive relationship between the environmental, social and governance characteristics of an investment and financial performance. Nearly one-fifth of those asked said that these matters were of equal importance to financial considerations when deciding on investments.[25]

This is increasingly reflected in investment decisions. For example, it is now common practice among banks to undertake a degree of environmental and social due diligence on potential investments in order to minimize exposure to such risks. Furthermore, sustainable investments are increasingly prioritized, with many banks setting targets to increase their funding of sustainable or green projects, and green finance growing rapidly in recent years.

However, managing environmental and social risks, as well as deciding what investments can be defined as sustainable, is challenging. With respect to the former, there are internationally recognized standards of best practice for assessing and managing environmental and social risks, but ensuring that these are followed can be difficult, particularly in contexts of weak governance. Consequently, there has been much debate over the question of how to establish robust but feasible policy frameworks in such contexts. This was a key issue in the recent review of the World Bank's environmental and social policy framework, which sought to resolve it through a more iterative approach and the provision of increased resources for monitoring and capacity-building. This question is also an important one for the new multilateral development banks – the AIIB and the NDB – as they develop their policy frameworks. For example, the AIIB is seeking ways to develop a policy framework that will enable it to deliver on its objective to be 'lean, clean and green'.[26]

As for deciding on investments, there is no internationally accepted definition of sustainable infrastructure, or a sustainable investment, which makes it difficult for investors to identify such projects.[27] Best practices for many aspects of construction and design have been developed,

[24] For example, Weng, X. and Buckley L. (eds.) (2016), *Chinese businesses in Africa: Perspectives on corporate social responsibility and the role of Chinese government policies*, IIED Discussion Paper, London: IIED, http://pubs.iied.org/pdfs/17581IIED.pdf (accessed 17 Jan. 2018).
[25] Eighty-seven institutional investors took part in the survey. See: Blanc-Brude, F. et al. (2016), *Towards Better Infrastructure Investment Products*, Singapore: EDHEC Infrastructure Institute, http://edhec.infrastructure.institute/wp-content/uploads/publications/blanc-brude_2016e.pdf (accessed 17 Jan. 2018).
[26] See for example: AIIB (2017), *Annual Meeting of the Board of Governors: Summary of Proceedings*, Jeju, Korea: AIIB, https://www.aiib.org/en/about-aiib/governance/board-governors/.content/index/_download/Summary-of-Proceedings.pdf (accessed 17 Jan. 2018).
[27] Bielenberg, A. et al. (2016), *Financing change: How to mobilize private sector financing for sustainable infrastructure*, Detroit: McKinsey & Company, http://www.indiaenvironmentportal.org.in/files/file/Financing_change_How_to_mobilize_private-sector_financing_for_sustainable-_infrastructure.pdf (accessed 17 Jan. 2018).

and there is broad consistency among many of the sustainability standards for infrastructure (see Appendix 1 for some examples of rating schemes for infrastructure). However, in practice it can be difficult to decide where the threshold should lie for acceptable environmental and social impacts. The questions of how to establish credible standards and definitions, and of what tools and approaches are most effective to promote sustainable infrastructure, are being widely discussed within banks and in international forums.[28] These questions are also central to discussions about how to expand green finance.

Green finance

Green finance can be defined as that which integrates environmental issues into financial decisions with the aim of driving a transition to a green economy. Thus, it entails the processes by which environmental externalities and risks are factored into financial decisions in order to promote green investments and to avoid or reduce environmentally harmful ones.[29]

China has played a huge role in promoting green finance internationally and domestically. During its presidency of the G20 in 2016, this was high on the agenda, one result of which was the establishment of the Green Finance Study Group. In the domestic arena, the establishment of a green financial system was included as an objective in China's 13th Five Year Plan for 2016–20, and a Green Finance Task Force[30] was set up to help achieve this objective.

Green finance has expanded rapidly at the global level, in the last few years largely due to its growth in China.[31] The issuance of green bonds has grown rapidly since a market for them emerged in 2007, reaching $80 billion in 2016.[32] Nearly all of the growth from 2015 to 2016 took place in China, where $36 billion of green bonds were issued in 2016 compared to almost none the previous year,[33] although China defines as green some sectors that are controversial internationally, such as clean coal and high-efficiency transport-fuel production.[34]

However, green investments remain a relatively small proportion of total investments. In 2016, green bonds accounted for less than 0.2 per cent of bonds issued globally and 2 per cent of those in China.[35] In 2015, just under 10 per cent of the outstanding loans of 21 major Chinese banks were 'green'.[36] To achieve a transition to a green economy, there needs to be a much greater shift of finance.

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[28] Egler, H. and Frazao, R. (2016), *Sustainable Infrastructure and Finance: How to Contribute to a Sustainable Future*, Geneva: UNEP Inquiry, http://unepinquiry.org/wp-content/uploads/2016/06/Sustainable_Infrastructure_and_Finance.pdf (accessed 18 Jan. 2018); Forstater, M. and Zhang, N. (2016), *Definitions and Concepts: Background Note*, Geneva: UNEP Inquiry http://unepinquiry.org/wp-content/uploads/2016/09/1_Definitions_and_Concepts.pdf (accessed 18 Jan. 2018). See also: Gilbert, S. and Zhou, L. (2017), *The Knowns and Unknowns of China's Green Finance*, Working Paper, London: New Climate Economy, http://newclimateeconomy.report/workingpapers/wp-content/uploads/sites/5/2017/03/NCE2017_ChinaGreenFinance_corrected.pdf (accessed 17 Jan. 2018); The New Climate Economy (2016), 'The Sustainable Infrastructure Imperative: Financing for Better Growth and Development'; See also: G20 China 2016, 'G20 Leaders' Communique Hangzhou Summit', http://www.g20chn.org/English/Dynamic/201609/t20160906_3396.html (accessed 18 Jan. 2018).

[29] G20 Green Finance Study Group (2017), *G20 Green Finance Synthesis Report 2017*, Geneva: UNEP Inquiry, http://unepinquiry.org/g20greenfinancerepositoryeng/ (accessed 18 Jan. 2018).

[30] The Task Force was set up in 2014 by the People's Bank of China and the UNEP Inquiry into the Design of a Sustainable Financial System.

[31] United Nations Environment Programme (2017), *Green Finance Progress Report*, Geneva: United Nations Environment Programme, http://unepinquiry.org/publication/green-finance-progress-report/ (accessed 17 Jan. 2018).

[32] Climate Bonds Initiative (2014), 'Year 2014 Green Bonds Final Report', London: Climate Bonds Initiative, https://www.climatebonds.net/files/files/Year%20end%20report%202014.pdf (accessed 17 Jan. 2018).

[33] Whiley, A. (2017), 'Beijing-Green Finance Summit: Launch of China Local Government Report-Green Bonds Growth Policies', Climate Bonds Initiative, 18 April 2017, https://www.climatebonds.net/2017/04/beijing-green-finance-summit-launch-china-local-government-report-green-bonds-growth (accessed 17 Jan. 2018).

[34] Kidney, S. (2017), 'Myth buster: why China's green bond market is more orderly than you might think. An Overview from Climate Bonds Initiative', Climate Bonds Initiative, 21 June 2017, https://www.climatebonds.net/2017/06/myth-buster-why-china's-green-bond-market-more-orderly-you-might-think-overview-climate (accessed 17 Jan. 2018).

[35] Climate Bonds Initiative and China Central Depository & Clearing Company (2017), *China Green Bond Market 2016,* London: Climate Bonds Initiative and CCDC, https://www.climatebonds.net/files/files/SotM-2016-Final-WEB-A4.pdf (accessed 17 Jan. 2018).

[36] Gilbert, S. and Zhou, L. (2017), *The Knowns and Unknowns of China's Green Finance*, Working Paper, London: New Climate Economy, http://newclimateeconomy.report/workingpapers/wp-content/uploads/sites/5/2017/03/NCE2017_ChinaGreenFinance_corrected.pdf (accessed 17 Jan. 2018).

One of the challenges to scaling up green finance in China is that the policy framework is highly fragmented, with separate regulations for different types of finance and sectors, and for domestic and overseas investments. It is also lacking in detail, which makes it hard for investors to implement the regulations, while most government regulation is provided only as guidelines or opinions and so there is limited scope to encourage compliance.[37] Thus, with respect to domestic investments, certain sectors or projects are defined as green but standards have not been developed for the accepted levels of environmental performance, such as on energy efficiency or emissions. Consequently, little attention has been given to improving the design, construction or performance of different types of infrastructure. For overseas investments, very broad guidance is provided. Thus, according to the green credit directives, banks should strengthen their environmental and social-risk management for such investments, and ensure that these are in compliance with the environmental legislation of the country where the project is located and that good international practice is followed.[38]

> Green finance from within China and internationally could provide an important source of finance for BRI projects. For this to be realized, however, internationally harmonized standards for sustainability need to be developed.

Green finance from within China and internationally could provide an important source of finance for BRI projects. For this to be realized, however, internationally harmonized standards for sustainability need to be developed. On the part of China, these standards will need to be applied to domestic and overseas investments, and mechanisms to regulate compliance with its regulations will also be needed. Efforts to develop standards are already underway through the work of China's Green Finance Task Force and the G20's Green Finance Study Group. The People's Bank of China and the European Investment Bank have also been working together to strengthen green finance, including through developing more consistent definitions and methodologies.[39]

Procurement as a tool for the deployment of sustainable infrastructure[40]

What is sustainable procurement?

Procurement decisions are undertaken at a multitude of stages and levels within a project. They can be divided into two broad, although overlapping, categories: public procurement for a project and procurement for goods and services to implement the project.

[37] Ibid.; Wang, G. (2015), *Problems and difficulties in the development of China's green finance,* International Institute for Sustainable Development, https://www.iisd.org/sites/default/files/publications/greening-chinas-financial-system-chapter-5.pdf; see also the foreword by Ma Jun to: Green Finance Task Force (2015), *Establishing China's Green Financial System*, London: UNEP Inquiry, pp. x–xv, http://unepinquiry.org/wp-content/uploads/2015/12/Establishing_Chinas_Green_Financial_System_Final_Report.pdf (accessed 17 Jan. 2018).

[38] See, for example, China Banking Regulatory Commission (2012), 'Notice of the CBRC on Issuing the *Green Credit Guidelines*', http://www.cbrc.gov.cn/EngdocView.do?docID=3CE646AB629B46B9B533B1D8D9FF8C4A (accessed 17 Jan. 2018); China Banking Regulatory Commission (2014), 'Notice on the Implementation of Green Finance Directive Key Performance Indicators', http://www.cbrc.gov.cn/chinese/home/docDOC_ReadView/FC5E38D62BE54E3D836E441D6FC2442F.html (accessed 17 Jan. 2018).

[39] Willis, R. (2017), 'New People's Bank of China and EIB initiative to strengthen green finance', European Investment Bank, 22 March 2017, http://www.eib.org/infocentre/press/releases/all/2017/2017-073-new-peoples-bank-of-china-and-eib-initiative-to-strengthen-green-finance.html (accessed 17 Jan. 2018).

[40] This section draws on a background paper prepared by the International Institute for Sustainable Development for this research: Perera, O. et al. (unpublished), 'The role of public procurement in deploying sustainable infrastructure', November 2016.

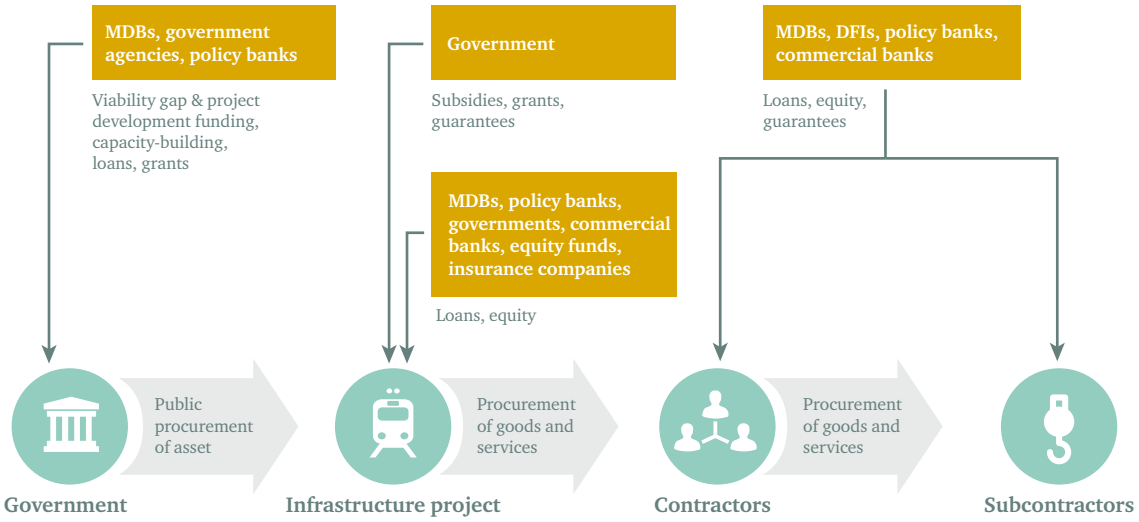
Public procurement refers to the point at which governments issue public tenders for infrastructure projects in order to identify the bid that will provide the best value for money. Sustainable public procurement integrates environmental and social issues into this process. Thus, it uses a holistic definition of value for money, based on an assessment of the social, environmental and economic risks from across the entire life cycle of a project. Ideally, it entails consideration of sustainability from the start of the procurement cycle, allowing for these issues to be integrated into the design of tenders as well as into the evaluation of bids and the monitoring of contractor compliance.

Figure 2: The process of sustainable public procurement of infrastructure

Source: Compiled by the authors.

Sustainable procurement of goods and services within infrastructure projects entails applying environmental and social criteria to the selection process, such as the sourcing of materials that have been harvested or extracted with minimal environmental impacts, or the use of contractors that have environmental management systems in place or are able to implement sustainable design and construction practices. It is linked to public procurement as it provides a tool to achieve any broader sustainability standards that may have been agreed to in a project tender.

Figure 3: Procurement in infrastructure projects and the role of investors



Source: Compiled by the authors.

Procurement is increasingly being recognized as a tool to achieve sustainability objectives. A growing number of countries include sustainability provisions in their public-procurement frameworks.[41] Furthermore, the MDBs are reforming their policies to encourage the use of this approach.

Sustainable procurement is a potentially powerful tool to manage environmental and social risks as well as to promote best practice in the implementation of infrastructure projects. Its impact can also reach beyond a project, serving to drive change in supply chains and across sectors. Such impacts have been well documented for the sustainable public procurement of goods, although not specifically for infrastructure. For example, in the Netherlands, government procurement policies for sustainable and legal timber have been an important factor behind an increase in the market share of certified timber products beyond those being purchased by the state.[42]

Procurement at project level can have an even broader impact, as this can go beyond sourcing of materials to include the sustainability of the design and operation of the infrastructure. The London 2012 Olympics was one project that illustrates how integrating sustainability issues into procurement can bring significant environmental benefits and long-term changes in a sector. The impacts included a reduction in the use of construction materials, an increase in the use of innovative materials and improvements to energy efficiency. For example, targets set for low-carbon concrete meant that 24 per cent embodied carbon was saved, with 22 per cent of aggregates recycled and the transport of materials by lorry reduced by 50 per cent.[43] In addition, implementation of the policy to source 100 per cent legal and sustainable timber resulted in several contractors to the games developing or revising their own chain-of-custody systems and procurement policies, ensuring a legacy into the future.[44]

The London 2012 Olympics was one project that illustrates how integrating sustainability issues into procurement can bring significant environmental benefits and long-term changes in a sector.

Another example comes from the Netherlands, where the government includes sustainability criteria in the tendering process for infrastructure projects as part of its efforts to reduce carbon emissions. It has developed a methodology that enables the carbon emissions of a company and its operations as well as the sustainability of materials used in a design to be assessed; the results are submitted as part of a tender. The use of this approach in tendering for the reconstruction of one motorway resulted in the selection of a design with expected energy consumption and carbon emissions reduced by 50 per cent. This was achieved not only through ensuring the efficient use of construction materials and increasing the recycled content of materials, but also through adopting a design that reduced the forecast vehicle usage of the motorway.[45]

[41] OECD (2017), *Government at a Glance 2017*, Paris: OECD Publishing, http://dx.doi.org/10.1787/gov_glance-2017-en (accessed 17 Jan. 2018).
[42] Oldenburger, J. and Winterink, A. (2013), *Market share of sustainably produced timber doubled in three years: government target exceeded*, Netherlands: Bosberichten and Probos, http://www.probos.nl/images/pdf/bosberichten/bosberichten2013-02English.pdf (accessed 17 Jan. 2018).
[43] UK Department for Environment, Food and Rural Affairs (2013), *London 2012 Olympic and Paralympic Games: The Legacy, Sustainable Procurement for Construction Projects*, London: DEFRA, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224038/pb13977-sustainable-procurement-construction.PDF (accessed 18 Jan. 2018); Construction Products Association (2012), *Learning Legacy: Lessons learned from the London 2012 Games construction project*, London: Construction Products Association, www.strategicforum.org.uk/.../Olympics_Legacy_single_pages_master_online.pdf (accessed 18 Jan. 2018).
[44] Suttie, E. (2011), 'Innovation in timber supply for London 2012', *Learning Legacy: Lessons learned from the London 2012 Games construction project*, London: Olympic Delivery Authority, http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/425009-188-timber-aw.pdf (accessed 17 Jan. 2018).
[45] GPP 2020 (2016), *Reconstruction Motorway A6 Almere*, Rijkswaterstaat, The Netherlands: GPP 2020 and PRIMES, http://www.gpp2020.eu/fileadmin/files/Tender_Models/GPP_2020_Tender_Model_Reconstruction_A6_Almere_RWS_April_2016.pdf (accessed 17 Jan. 2018).

In another example, the government of Mexico plans that the country's new international airport will be among the world's most sustainable. The airport design includes a wide range of environmental measures, including the use of green technologies to promote efficient water and energy usage, and the sourcing of all energy from local renewable sources.[46] The airport is still under construction, and so it is too early to document its impact, but this demonstrates that ambitious projects can be implemented in emerging economies.

The challenges and limitations of sustainable procurement

Although it is widely accepted that sustainable procurement is a valuable tool, there are challenges to its implementation. Good governance is a critical factor for procuring infrastructure as well as related goods and services, and even more so if sustainability is integrated into the process. Governments need to have a supportive legal framework and the technical expertise to define procurement criteria and to evaluate tenders against these, as well as systems to enable transparent and accountable decision-making. However, many countries have weak legal and institutional frameworks as well as limited capabilities in procurement; they also often lack a clear policy and institutional framework for infrastructure development.[47] The concept of integrating sustainability into infrastructure procurement is new to many and more advanced approaches such as life-cycle costing are a distant prospect.[48]

Governments and the private sector are often reluctant to pursue sustainable procurement because it is more costly and time-consuming in the short-term. A change in mind-sets and incentives may therefore be needed to enable long-term issues to be included in decision-making. Furthermore, in many countries the private sector has insufficient expertise to meet sustainability requirements. This may overly restrict competition in some contexts or result in the exclusion of certain businesses; for example, small and medium-sized enterprises typically have fewer resources to invest in new technologies or to respond to more complex procurement processes.[49]

These limitations do not mean that sustainable procurement should not be pursued. Rather, they highlight the need to assess the context in which a project is implemented, and to design an approach to procurement that is appropriate to this – one that is not too restrictive but that also provides incentives for innovation and for raising standards. Thus, there needs to be an evaluation of the capabilities of project developers and contractors to design and implement sustainable procurement, and of the market to be able to respond to this.[50]

[46] OECD (2015), *Effective Delivery of Large Infrastructure Projects: The Case of the New International Airport of Mexico City*, Paris: OECD Publishing, http://www.oecd.org/gov/effective-delivery-of-large-infrastructure-projects-9789264248335-en.htm (accessed 17 Jan. 2018).
[47] OECD (2017), *Government at a Glance 2017*, Paris: OECD Publishing, http://dx.doi.org/10.1787/gov_glance-2017-en (accessed 17 Jan. 2018).
[48] OECD (2015), *Going Green: Best Practices for Sustainable Procurement*, Paris: OECD Publishing, https://www.oecd.org/gov/ethics/Going_Green_Best_Practices_for_Sustainable_Procurement.pdf (accessed 17 Jan. 2018).
[49] Ibid.
[50] OECD (2015), *Effective Delivery of Large Infrastructure Projects: The Case of the New International Airport of Mexico City*, p. 101.

4. The Approaches and Experiences of Banks to Promoting Sustainable Procurement

Sustainable procurement and the policy framework of banks

Sustainable procurement sits within a framework of policies that banks can use to improve the sustainability of their investments. These include safeguard policies, investment strategies and procurement. These different elements are interrelated, and all can be used to promote sustainable procurement.

Figure 4: Policy framework of banks for promoting sustainable investments

Source: Compiled by the authors.

Environmental and social (E&S) safeguard policies tend to focus on minimizing negative impacts of investments, although they also provide scope to drive best practice. Typically, they set out any exclusions to the types of project or activity that will be invested in and the process by which banks undertake due diligence on potential investments to assess E&S risks. They also outline any requirements for borrowers to assess and manage these risks, as these usually entail impact assessments and the development of a management plan to address any risks identified. Procurement is often identified as one tool that can be used as part of this management plan. Some banks also have procurement policies that apply to their borrowers, which allow more explicit guidance or requirements to be made on the integration of sustainability issues into procurement.

Investment policies identify priority areas for investment and these may include sustainable or green investments such as in low-carbon energy projects or sustainable transport systems. Alternatively, such policies may set certain targets, including to reduce the environmental footprint

of a bank's portfolio and to enhance their social impacts; for example, through prioritizing job creation or support for small and medium-sized enterprises. Investment policies promote the use of sustainable procurement indirectly because it is a valuable tool to improve the sustainability of a project.

An additional means by which banks encourage sustainable procurement is through providing technical support and capacity-building. This ranges from the provision of advice to governments on planning and procuring infrastructure to technical support and advice for companies that may be developing or implementing such projects.

International development banks: current approaches

The opportunities for influence are different for public and private-sector finance, reflecting the different stakeholders and scales of intervention. The multilateral development banks and European development finance institutions seek to encourage their public-sector borrowers to use sustainable procurement not only by providing finance for infrastructure projects, but also by providing advice to governments on the planning and deployment of infrastructure as well as by supporting legal and institutional reforms. Thus, they can influence the early stages of the design of infrastructure projects, help ensure that sustainability is integrated into procurement and shape implementation.

> Development banks also improve standards in how other financial institutions assess and manage environmental and social risks in their loan portfolio.

Development banks and financial institutions providing private-sector finance are involved in funding the companies developing or implementing infrastructure projects, as well as providing them with technical and financial support for capacity-building. In some cases, they fund other financial institutions that support infrastructure projects or the private sector, also providing advisory and technical support to them. They can influence how companies manage environmental and social risks within their operations, including through procurement. They can also improve standards in how other financial institutions assess and manage environmental and social risks in their loan portfolio.

To understand current practice, bank policies were reviewed and interviews were also conducted with representatives of many of the banks. An overview of the policies of the following banks are included in this section: the multilateral banks – African Development Bank (AfDB), the ADB, the AIIB, the EBRD, the EIB, the International Finance Corporation (IFC), the World Bank; and the bilateral DFIs – the Agence Française de Développement (AFD) and its subsidiary Proparco, the UK's CDC, the Netherlands Development Finance Company (FMO) and Germany's KfW. As noted in the introduction, only policies relating to environmental sustainability were reviewed, and not those on social sustainability, although where the policies cover environmental and social issues, both are referred to.

Table 1: Policy approaches of the MDBs and DFIs

	MDBs	DFIs
Procurement policies for government borrowers	**Provisions include:** • Sustainability can be considered as part of value-for-money assessments by borrowers. • Tender documents should ensure compliance with banks' environmental policies. • Standard bidding documents include sustainability provisions.	• Not applicable – do not provide public-sector finance.
Safeguard policies	**Provisions include:** • Environmental impact assessments (EIAs) required, and development of an E&S management system or action plan. • Borrowers must strive to source legal and sustainable natural resources (in some cases this is limited to those natural resources from high-risk habitats). • E&S requirements must be included in tender documents and contracts by borrowers.	**Provisions include:** • EIAs required, development of an E&S management system or action plan. • Borrowers must strive to source sustainable natural resources where there is a high risk of conversion of natural habitats.
Capacity-building	**Provision of:** • Technical support, training. • Standard bidding documents, guidelines, toolboxes. • Funding for infrastructure project preparation facilities.	**Provision of:** • Technical support, training. • Guidelines, toolboxes.
Investment strategies	**Provisions include:** • Screening of potential investments to assess climate risks, and sometimes other sustainability factors. • Targets for proportion of investment portfolio to be 'sustainable'. • Monitoring of environmental footprint (usually GHG emissions) of certain investments (e.g. 'sustainable' or high-emitting projects).	**Provisions include:** • Screening of potential investments to assess climate risks, and sometimes other sustainability factors. • Targets for: – proportion of investment portfolio to be 'sustainable'. – reducing GHG emissions of entire investment portfolio (FMO only). • Monitoring of environmental footprint (usually GHG emissions) of certain investments (e.g. 'sustainable' or high-emitting projects).

Source: Compiled by the authors.

Procurement policies

For public-sector finance, the multilateral development banks have specific procurement policies that apply to how their borrowers undertake procurement. Many of them have reviewed and reformed their procurement policies in recent years, allowing for much greater consideration of sustainability. This reflects the growing acceptance of the use of procurement to achieve sustainability objectives as well as the efforts by the MDBs to harmonize their policies.[51]

This has been implemented through integrating sustainability into their procurement principles, namely with respect to how value for money and economy can be assessed, and in how procurement that is fit for purpose is defined. For example, the AIIB[52] and ADB[53] policies state that environmental and socio-economic development objectives may be included in an assessment of value for money.

[51] OECD (2017), 'Government at a Glance 2017', http://www.oecd.org/gov/government-at-a-glance-22214399.htm (accessed 18 Jan. 2018). See also: Williams-Elegbe, S. (2017), *Public Procurement and Multilateral Development Banks: Law, Practice and Problems*, Oxford: Hart Publishing.
[52] Asian Infrastructure Investment Bank (2016), *Procurement Policy*, Beijing: AIIB, https://www.aiib.org/en/policies-strategies/_download/procurement-policy/policy_procurement.pdf (accessed 17 Jan. 2018).
[53] Asian Development Bank (2017), *Improving ADB Project Performance through Procurement Reforms,* Philippines: ADB, https://www.adb.org/sites/default/files/institutional-document/295616/policy-paper-procurement-framework.pdf (accessed 17 Jan. 2018).

The ADB policy also notes that 'life-cycle costing is generally a factor in assessing value for money'. Similarly, the World Bank policy notes that non-price attributes or life-cycle costs can be used in this assessment, and that sustainability can be a factor in the principle of economy.[54] The EBRD[55] and EIB[56] policies state that environmental benefits or characteristics may be considered when evaluating which are the most economically advantageous tenders. The AfDB policy also states that environmental and social factors may be considered as part of value for money, and that sustainability may need to be mainstreamed in procurement if it is an important part of a country's development objective as part of 'fit for purpose decision-making'.[57] KfW's procurement guidelines for financial cooperation state that ecological and social aspects should be taken reasonable account of – in addition to economic efficiency – in the design, implementation and operation of projects, and that these aspects 'can be considered in different ways in the selection of firms and/or in the evaluation of tenders'.[58] The policies of a number of these banks (e.g. AIIB, EBRD) also note that tender documents should include provisions to ensure compliance with their environmental policies.

None of the banks actually mandate the use of sustainable procurement, in recognition that it is not always feasible. For the World Bank, for example, the impetus must come from the borrowers and sustainable procurement is only pursued where requested by them. The intention of the banks is to encourage its use and to ensure that this approach is at least considered by borrowers.

With this aim, the World Bank and the ADB note that sustainability issues are to be considered when designing procurement plans for projects. Highlighting sustainability at this stage helps to ensure that adequate consideration is given to whether and how such issues can be addressed through procurement. It also enables the banks to engage with their borrowers in designing an approach to procurement that is appropriate to a particular context and to identify where they may need additional support to effectively implement the process.

Some banks also include provisions on sustainability in their standard procurement documents, which serves to encourage borrowers to adopt these. For example, those of the AFD include provisions that contractors commit to implementing any measures that have been specified in a borrower's environmental and social management plan. Furthermore, the standard contract documents of the World Bank and the ADB include requirements that borrowers show evidence of expertise in environmental and social issues for high-risk projects.[59]

Also with the aim of encouraging consideration of sustainability issues in procurement, the World Bank includes questions on sustainable procurement practice when assessing whether alternative procurement arrangements can be used by borrowers in place of its own procurement policy. The provision of technical support and capacity-building are also important means through which the banks promote sustainable procurement.

[54] World Bank (2016), *Procurement Regulations for IPF Borrowers*, Washington DC: World Bank, https://policies.worldbank.org/sites/ppf3/PPFDocuments/40054005procurement%20regulations_final%20for%20publishing.pdf (accessed 17 Jan. 2018).
[55] The European Bank for Reconstruction and Development (2014), *Procurement Policies and Rules*, London: EBRD, http://www.ebrd.com/news/publications/policies/procurement-policies-and-rules.html (accessed 17 Jan. 2018).
[56] European Investment Bank (2011), *Guide to Procurement for projects financed by the EIB*, Luxemburg: EIB, http://www.eib.org/attachments/strategies/procurement_en.pdf (accessed 17 Jan. 2018).
[57] African Development Bank Group (2015), Methodology For Implementation Of The Procurement Policy Of The African Development Bank, Abidjan, Cote d'Ivoire: AfDB, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Methodology_for_Implementation_of_the_Procurement_Policy_of_the__African_Development_Bank.pdf (accessed 17 Jan. 2018).
[58] KfW Bankengruppe (2016), *Guidelines for Procurement: Guidelines for Procurement of Goods, Works and associated Services in Financial Cooperation with Partner Countries*, Frankfurt: KfW, https://www.kfw-entwicklungsbank.de/Download-Center/PDF-Dokumente-Richtlinien/Vergabe-E.pdf (accessed 17 Jan. 2018).
[59] Agence Française de Développement (2017), *Prequalification Documents for Procurement of Works*, Paris: AFD, http://www.afd.fr/fr/media/download/7568 (accessed 18 Jan. 2018); World Bank (2018), 'New Procurement Framework and Regulations for Projects After July 1, 2016', http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework (accessed 18 Jan. 2018).

Environmental policies

All the international development banks require that their borrowers assess and mitigate any environmental and social risks associated with an investment. For private-sector finance, the IFC's Performance Standards on Environmental and Social Sustainability are the key reference.[60] The IFC is a standard-setter in this area; it is estimated that around $4.5 trillion in investments across emerging markets adhered to IFC's standards, or to principles inspired by them, between 2006 and 2016.[61] The requirements for borrowers typically entail undertaking an environmental and social impact assessment, the subsequent development of an environmental and social management system or action plan (ESMS or ESAP) to address risks identified, and monitoring of the implementation of this plan. Borrowers are also required to monitor the implementation of the measures identified in the plan, something to be undertaken by third parties for high-risk projects. All such requirements are included in the loan documentation.

In general, the measures that need to be adopted by borrowers as part of these plans are not specified by the banks, as the best approach will depend on the particular risks faced and the type and structure of the project or investment. However, some of the banks make explicit references to procurement in their environmental and social policies. For example, the World Bank,[62] the AIIB[63] and the EIB[64] require the inclusion of any relevant environmental and social requirements in tender documents and contracts by borrowers. The ADB policy is less specific in its requirements, stating that borrowers need to work with any third parties that pose a high environmental risk to ensure that they comply with bank requirements to manage these risks.[65]

The policies of many of the banks include provisions on supply chains and the sourcing of natural resources. For example, the AfDB,[66] the World Bank,[67] the EBRD[68] and the EIB[69] require that borrowers strive to source only legal and sustainable living natural resources, and the ADB requires that renewable natural resources are managed in a sustainable manner. Similarly, the IFC standards state that procurement should be limited to sustainable sources for primary supply chains where there is a high risk of conversion of natural habitats. All the banks also require that projects integrate resource-efficiency measures, and that they avoid or reduce GHG emissions and other air pollutants.

[60] IFC (2012), 'Environmental and Social Performance Standards', http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards (accessed 29 Jan. 2018).
[61] International Finance Corporation (2016), 'Sustainability is opportunity: how IFC has changed finance', November 2016, http://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/impact-stories/how-ifc-has-changed-finance (accessed 17 Jan. 2016).
[62] World Bank (2017), 'The Environmental and Social Framework', http://www.worldbank.org/en/programs/environmental-and-social-policies-for-projects/brief/the-environmental-and-social-framework-esf (accessed 17 Jan. 2018).
[63] Asian Infrastructure Investment Bank (2016), *Environmental and Social Framework*, Beijing: AIIB, https://www.aiib.org/en/policies-strategies/_download/environment-framework/20160226043633542.pdf (accessed 17 Jan. 2018).
[64] European Investment Bank (2013), *Environmental and Social Handbook*, Luxemburg: EIB, http://www.eib.org/attachments/strategies/environmental_and_social_practices_handbook_en.pdf (accessed 17 Jan. 2018).
[65] Asian Development Bank (2009), *Safeguard Policy Statement*, Philippines: ADB, https://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf (accessed 17 Jan. 2018).
[66] African Development Bank Group (2013), *Integrated Safeguards System: Policy Statement and Operational Safeguards,* Tunis: AfDB Group, http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/December_2013_-_AfDB%E2%80%99S_Integrated_Safeguards_System__-_Policy_Statement_and_Operational_Safeguards.pdf (accessed 17 Jan. 2018).
[67] World Bank (2017), 'The Environmental and Social Framework', http://www.worldbank.org/en/programs/environmental-and-social-policies-for-projects/brief/the-environmental-and-social-framework-esf (accessed 17 Jan. 2018).
[68] European Bank for Reconstruction and Development (2014), *Environmental and Social Policy (ESP)*, London: EBRD, http://www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html (accessed 17 Jan. 2018).
[69] European Investment Bank (2013), *Environmental and Social Handbook*, Luxemburg: EIB, http://www.eib.org/attachments/strategies/environmental_and_social_practices_handbook_en.pdf (accessed 17 Jan. 2018).

As well as ensuring that environmental and social impacts are minimized, these policies provide an opportunity for the banks to engage with their borrowers to identify any capacity-building needs. The AIIB makes an explicit reference to capacity-building in its environmental and social policy, noting that if there is insufficient capacity to carry out the ESMS, then the borrower should include activities to strengthen this in the project. Similarly, FMO specifies that it may contractually agree with its clients to support them in making improvements towards the standards required in its sustainability policy.[70] The IFC standards also highlight the need for adequate organizational capacity and competency to implement the required management systems; accompanying guidelines highlight the importance of different departments for achieving this, and that of procurement to manage contracts and contractor performance.

Capacity-building

The provision of advice, training and technical support is an important aspect of how the development banks engage with their borrowers to ensure that the projects they invest in are in compliance with their own policies and strategies and also as a means to raise standards more broadly. The scope and nature of this may be identified during the process of developing projects, negotiating their financing, undertaking environmental and social governance assessments, and developing procurement plans.

> Capacity-building is not only part of the mandate of the development banks to strengthen governance and to improve development outcomes, it is also part of their strategy to reduce financial risk.

In the public sector, the MDBs have invested heavily in this area, providing technical support and training as well as financial support to strengthen the capacity of government institutions and officials; for example, through legal reform and training.[71] Even in public-sector projects, this support may extend beyond government; for example, the AfDB notes that capacity development for procurement may entail not only supporting government procurement systems, but also assisting the private sector in participating and enabling civil society to provide oversight.[72] Similarly, all the development banks working with the private sector provide technical support and financing to help companies and other financial institutions improve their environmental management systems.[73] The AFD also encourages successful international bidders on projects to work with and provide capacity-building for local companies, including on environmental issues, so that they will have the expertise to qualify for future projects.

[70] FMO Entrepreneurial Development Bank (2016*), Implementing FMOs Sustainability Policy – Considerations for FMO*, The Netherlands: FMO, https://www.banktrack.org/download/implementing_fmo_s_sustainability_policy/implementing_fmos_sustainability_policy.pdf (accessed 17 Jan. 2018).
[71] Multilateral Development Banks (2015), *Partnering To Build A Better World: MDBs' Common Approaches To Supporting Infrastructure Development*, MDBs, http://g20.org.tr/wp-content/uploads/2015/11/Paper-on-MDB-Common-Approaches-to-Supporting-Infrastucture-Development.pdf (accessed 17 Jan. 2018).
[72] African Development Bank Group (2015), Procurement Policy for Bank Group Funded Operations, Abidjan, Cote d'Ivoire: AfDB, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Procurement_policy_for_bank_group_funded_operations.pdf (accessed 17 Jan. 2018).
[73] See for example: International Finance Corporation (2017), 'Advice', http://www.ifc.org/wps/wcm/connect/CORP_EXT_Content/IFC_External_Corporate_Site/Solutions/Products+and+Services/Advisory (accessed 17 Jan. 2018); Proparco Groupe Agence Française de Développement (2018), 'Entreprendre en commun', http://www.proparco.fr/Accueil_PROPARCO/notre-offre/assistance-technique/Facilite-FRCG (accessed 17 Jan. 2018); FMO Entrepreneurial Development Bank (2015), Results and Reports, '2015 FMO Annual Report', https://www.fmo.nl/about-us/reports (accessed 17 Jan. 2018).

Capacity-building is not only part of the mandate of the development banks to strengthen governance and to improve development outcomes, it is also part of their strategy to reduce financial risk. For example, the EBRD has noted that the provision of training and support to improve procurement performance forms part of its approach to mitigating risks to investments.[74]

Another means of providing support to stakeholders, and of encouraging the use of sustainable procurement, is providing access to information and practical tools that have been developed to facilitate this. For example, the World Bank has guidelines on sustainable procurement and for developing project procurement plans,[75] and KfW has published a toolbox.[76] In addition, the provision of standard documents provides a means to encourage the use of sustainable procurement by borrowers. The World Bank has also committed to providing further training to its borrowers on sustainable procurement to support the effective implementation of its new procurement framework.

Beyond these, the MDBs have developed online tools supporting the establishment of infrastructure projects (for example, SOURCE)[77] and of public–private partnerships (for example, the PPP resource centre[78] and the PPP Knowledge Lab).[79] Complementary to these, the G20 established the Global Infrastructure Hub with the aim of driving investment in quality infrastructure projects. It is working to facilitate knowledge sharing and to promote reform through improving access to data as well as to analysis and guidance on best practice.[80] Another initiative that the MDBs are part of is the Public-Private Infrastructure Advisory Forum, which aims to strengthen the policy, regulatory and institutional environment for private infrastructure investment.[81] The remits of these various initiatives are very broad, but they do provide materials on sustainable procurement and sustainable infrastructure, even if these are fairly limited to date.

Infrastructure project preparation facilities (IPPFs)

In response to the difficulties many countries face in developing bankable infrastructure projects, a large number of IPPFs have been established in recent years and investment in existing institutions has also increased. There are now over 60 such facilities, including the World Bank's Global Infrastructure Facility, the EBRD's IPPF, the ADB's Asia-Pacific PPF and the NEPAD-IPPF of the AfDB, as well as country-specific facilities.[82]

They play an important role in supporting governments in spending the necessary time and resources to develop infrastructure projects, doing so through providing grants, concessional finance and technical support. The EBRD's facility includes a financing window specifically for sustainable

[74] European Bank for Reconstruction and Development (2018), 'Capacity Building Assessment', http://www.ebrd.com/work-with-us/procurement/capacity-building-assessment.html (accessed 17 Jan. 2018).
[75] World Bank (2018), 'New Procurement Framework and Regulations for Projects After July 1, 2016', http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework (accessed 17 Jan. 2018).
[76] KfW Group (2014), *Toolbox: Sustainable Procurement, A guide on how to include aspects of sustainability in public procurement procedures for Financial Cooperation projects,* https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Toolbox-zur-Nachhaltigen-Auftragsvergabe-EN.pdf (accessed 17 Jan. 2018).
[77] Sustainable Infrastructure Foundation (2018), 'SIF-Source News', https://public.sif-source.org (accessed 17 Jan. 2018).
[78] World Bank (2018), 'PPPIRC: Public-Private-Partnership in Infrastructure Resource Center', https://ppp.worldbank.org/public-private-partnership/ (accessed 17 Jan. 2018).
[79] PPP Knowledge Lab (2018), https://pppknowledgelab.org (accessed 17 Jan. 2018).
[80] Global Infrastructure Hub (2018), http://globalinfrastructurehub.org (accessed 17 Jan. 2018).
[81] PPIAF: Public-Private Infrastructure Advisory Facility (2018), https://ppiaf.org (accessed 17 Jan. 2018).
[82] Moser, H. and Nealer, E. (2016), *Barriers to Bankable Infrastructure: Incentivizing Private Investment to Fill the Global Infrastructure Gap*, Washington DC: Center for Strategic and International Studies, https://csis-prod.s3.amazonaws.com/s3fs-public/publication/160308_Moser_BarriersBankableInfrastructure_Web.pdf (accessed 18 Jan. 2018). See also Multilateral Development Banks (2015), *Partnering To Build A Better World: MDBs' Common Approaches To Supporting Infrastructure Development*, MDBs, http://g20.org.tr/wp-content/uploads/2015/11/Paper-on-MDB-Common-Approaches-to-Supporting-Infrastucture-Development.pdf (accessed 17 Jan. 2018).

infrastructure projects. However, the majority of these facilities currently give relatively little attention to sustainability.

Investment criteria

Many of the banks have sustainable or green investment strategies. These focus primarily on environmental issues; for example, they aim to contribute to low-carbon development, to tackle climate change, to ensure alignment with national climate strategies, to promote sustainable development, to protect the natural environment and to contribute to sustainable natural-resource management. To achieve these objectives, these strategies often set out targets, either to support a certain proportion of green or sustainable investments, or to reduce the environmental impact of their portfolio, most commonly through reducing GHG emissions.

For example, in 2013 the ADB set the target that half of all its operations should have 'environmental sustainability as a theme'; these include urban environmental-improvement projects (for example, including improving air quality through transport planning) and eco-efficiency activities (for example, increased energy efficiency and improved environmental management in energy operations).[83] The EBRD seeks to increase its volume of green financing from a current level of 33 per cent of annual business investment to 40 per cent by 2020. Such financing includes investments in projects that mitigate or build resilience to climate change as well as other forms of environmental degradation; for example, projects that promote energy efficiency, renewable energy, and water and materials efficiency.[84] The EIB has committed to allocating more than 25 per cent of its lending to climate-action projects, and up to 35 per cent by 2020 in developing countries. Such projects include those in energy efficiency and renewable energy, transport projects that result in GHG emission reductions, and urban development projects that increase energy efficiency and minimize waste.[85] The ADB also aims to reduce the GHG emissions of its investment portfolio as part of its climate change strategy,[86] while FMO has set the target of doubling the amount of GHG emissions avoided through its investments by 2020.[87]

To achieve these targets, screening of potential investments and monitoring of the impact of a bank's portfolio are essential tools. Many of the banks screen all potential investments for their climate change risks and opportunities, i.e. the potential to reduce GHG emissions, and some also assess other criteria such as water efficiency (e.g. the CDC) and local air pollution and noise (e.g. the EIB assesses these externalities mainly for energy and transport projects).

With respect to monitoring, many of the MDBs and DFIs monitor the GHG emissions, or the avoidance of such emissions, in their investments, although this is often limited to those classified as sustainable or green, or to those with significant emissions, rather than across the portfolio.[88]

[83] Asian Development Bank (2013), *Environment Operational Directions 2013–2020: Promoting Transitions to Green Growth in Asia and the Pacific*, Manila: ADB, https://www.adb.org/sites/default/files/institutional-document/33869/environment-operational-directions-2013-2020.pdf (accessed 17 Jan. 2018).
[84] European Bank for Reconstruction and Development (2015), Green Economy Transition, 'Green Economy Transition Approach in Full', http://www.ebrd.com/what-we-do/get.html (accessed 17 Jan. 2018).
[85] European Investment Bank (2015), *EIB Climate Strategy: Mobilising finance for the transition to a low-carbon and climate resilient economy*, Luxemburg: EIB, http://www.eib.org/attachments/strategies/eib_climate_strategy_en.pdf (accessed 17 Jan. 2018); European Investment Bank (2018), 'Climate and Environment', http://www.eib.org/projects/priorities/climate-and-environment/index.htm (accessed 17 Jan. 2018).
[86] Asian Development Bank (2017), *Climate Change Operational Framework: 2017–2030*, Manila: ADB, https://www.adb.org/sites/default/files/institutional-document/358881/ccof-2017-2030.pdf (accessed 17 Jan. 2018).
[87] FMO Entrepreneurial Development Bank (2016), Investment Philosophy: Sustainability, 'FMO Sustainability Policy', https://www.fmo-im.nl/en/sustainability (accessed 17 Jan. 2018).
[88] Wright, H. (2017), 'Which development bank is leading the way on emissions reporting?', E3G Third Generation Environmentalism, 14 November 2017, https://www.e3g.org/library/which-development-bank-is-leading-the-way-on-emissions-reporting (accessed 17 Jan. 2018).

Some banks monitor other environmental impacts; for example, the EBRD also monitors energy savings, renewable energy production, water savings, material savings and waste reductions for its sustainable investments.[89]

Approaches to monitoring are evolving fast, however, because of growing concern about the environmental impacts of investments and of increased capabilities due to improvements in information technology.[90] Consequently, many banks are exploring how to develop and expand the scope of their frameworks; for example, FMO tracks and reports on the contribution of its investments to the SDGs.[91] Work is also underway within many of the MDBs to develop harmonized approaches for assessing and reporting on environmental impacts and development effectiveness.[92]

Lessons learned from bank experiences

Reflecting on their experiences with promoting the use of sustainable procurement, a key point highlighted by the banks is the need for their respective policies and tools to be coherent. This helps to ensure that these policies are mutually reinforcing. Thus, including provisions on procurement in environmental-safeguard policies raises awareness of this approach as a tool to manage environmental risks; conversely, including references to environmental policies within the procurement framework encourages consideration of environmental issues by those engaged in procurement. The need for coordination of policies between the banks is also emphasized in order to facilitate co-financing, and this has been reflected in the recent policy reforms of the MDBs, while the European DFIs have chosen to use the IFC standards for this reason.

> While it is important for banks to be realistic, it was also said by many that banks should be ambitious and seek to push progress. Balancing the needs to be realistic and to be ambitious can be achieved by adopting more iterative approaches.

A second point that was emphasized is that there are no easy options for promoting more sustainable business practices and infrastructure projects. This is particularly the case in countries with weak governance, where reaching a balance between short-term imperatives (such as the need for jobs) and longer-term priorities (including the need to avoid locking a country into unsustainable patterns of development) can be extremely challenging. In such contexts, there is often limited incentive for implementing environmental safeguards, let alone for exploring more sustainable options for project design or construction.

[89] European Bank for Reconstruction and Development (2015), Green Economy Transition, 'Green Economy Transition Approach in Full', http://www.ebrd.com/what-we-do/get.html (accessed 17 Jan. 2018).
[90] Bielek, I. (2016), *Impact monitoring: ICT-based methods create new opportunities*, Frankfurt: KfW Development Research, https://www.kfw-entwicklungsbank.de/PDF/Download-Center/2016-11-17-Mobile-Technologie-Wirkungsmonitoring_EN-final.pdf (accessed 17 Jan. 2018).
[91] FMO Entrepreneurial Development Bank (2017), *FMO Impact Model: Methodology*, The Netherlands: FMO, https://www.fmo.nl/l/library/download/urn:uuid:d85800f8-607a-4118-bb7a-059392b8c869/fmo+impact+model+%26+methodology.pdf (accessed 17 Jan. 2018). See also: FMO Entrepreneurial Development Bank (2016), Results and Reports, '2016 FMO Annual Report', https://www.fmo.nl/about-us/reports (accessed on 17 Jan. 2018).
[92] European Bank for Reconstruction and Development (2018), 'Measuring the impact of the EBRD's Green Economy Transition', http://www.ebrd.com/what-we-do/get/measuring-impact.html (accessed 17 Jan. 2018); Multilateral Development Banks (2015), *Partnering To Build A Better World: MDBs' Common Approaches To Supporting Infrastructure Development*, MDBs, http://g20.org.tr/wp-content/uploads/2015/11/Paper-on-MDB-Common-Approaches-to-Supporting-Infrastucture-Development.pdf (accessed 17 Jan. 2018).

However, while it is important for banks to be realistic, it was also said by many that banks should be ambitious and seek to push progress. Balancing the needs to be realistic and to be ambitious can be achieved by adopting more iterative approaches. For example, banks may be able to reduce initial compliance requirements through integrating evaluations and systems for feedback into the environmental management plans of projects. This is the approach that the World Bank and the ADB seek to take following the reviews of their environmental and procurement policies. Thus, they intend to become more directly involved in contract management, through placing greater emphasis on monitoring and evaluation; this also enables approaches to be adapted throughout the course of a project.

The IPPFs provide another route through which the banks can push for high levels of ambition on sustainability.[93] It has been suggested that these facilities could prioritize transformational projects, meaning those that could catalyse a shift to more sustainable markets and business practices as well as provide models that could be replicated elsewhere.[94]

Within many banks, the importance of monitoring and evaluation was highlighted – as a tool to support borrowers as well as to enable the banks to learn lessons and improve the effectiveness of their support. While monitoring of climate-related impacts are well developed, monitoring of broader environmental impacts and the contribution of investments to sustainable development is at an earlier stage. Many of the banks are looking at ways to broaden the scope of their monitoring efforts. In particular, the importance of linking these efforts to the SDGs was highlighted – to mitigate the financial and reputational risks of investments not being in alignment with these goals as well as for the banks to track their own contributions towards them.

Increased investment in capacity-building was also considered crucial by stakeholders to help drive more sustainable investments, reflecting a finding of the World Bank policy review. Significant financial support is needed, for example, to help borrowers increase their capacity and expertise in implementing procurement and in establishing environmental management systems. The provision of tools and information that can be used by those seeking to develop and implement sustainable procurement is equally important.[95]

Thus, the elements considered crucial to drive progress are the need for the banks to have coherent policy frameworks, to work closely with borrowers and to engage long term. However, it was also noted that the banks have limited resources and capacity. Several of them have highlighted the need to increase their own skills and knowledge of sustainable procurement, so that they can provide the necessary support to promoting this approach.[96]

Furthermore, all the banks emphasized the importance of sharing expertise and coordinating efforts. This already takes place through various formal and informal forums. For example, the MDBs

[93] Nassiry, D. et al. (2016), *Finding the pipeline: Project preparation for sustainable infrastructure*, London: Overseas Development Institute, https://www.odi.org/sites/odi.org.uk/files/resource-documents/11075.pdf (accessed 17 Jan. 2018); Schneider-Roos, K. et al. (2014), Unleashing Private Capital Investments for Sustainable Infrastructure Greenfield Projects, Basel, Switzerland: Global Infrastructure Basel Foundation, http://www.gib-foundation.org/content/uploads/2014/05/Scoping-Study-for-the-Early-Phase-Project-Preparation-Phase_.pdf (accessed 17 Jan. 2017).
[94] Multilateral Development Banks (2015), *Partnering To Build A Better World: MDBs' Common Approaches To Supporting Infrastructure Development*, MDBs, http://g20.org.tr/wp-content/uploads/2015/11/Paper-on-MDB-Common-Approaches-to-Supporting-Infrastucture-Development.pdf (accessed 17 Jan. 2018).
[95] Runde, D. (2017), *Quality Infrastructure: Ensuring Sustainable Economic Growth*, Washington DC: Center for Strategic and International Studies, https://csis-prod.s3.amazonaws.com/s3fs-public/publication/170109_Runde_QualityInfranstructure_Web.pdf (accessed 17 Jan. 2018).
[96] Asian Development Bank (2017), *Improving ADB Project Performance through Procurement Reforms,* Manila: ADB, https://www.adb.org/sites/default/files/institutional-document/295616/policy-paper-procurement-framework.pdf (accessed 17 Jan. 2018); World Bank (2016), 'Review and Update of the World Bank Safeguard Policies', https://consultations.worldbank.org/consultation/review-and-update-world-bank-safeguard-policies (accessed 17 Jan. 2018).

have regular joint meetings on cross-cutting issues, such as procurement and environment safeguards. These provide opportunities to share experiences and knowledge, as well as to harmonize their policies and requirements for borrowers. The Finance Initiative of the United Nations Environment Programme (UNEP) has established a network of over 120 banks from around the world, which undertakes research, offers training and guidance, and provides a platform for dialogue among members.[97] In addition, there is an association of those banks that have adopted the Equator Principles (a risk-management framework for determining, assessing and managing environmental and social risk in projects), providing a forum for the exchange of knowledge and to develop best practice.[98] The Association of European Development Finance Institutions seeks to facilitate the exchange of information and cooperation among its 15 members. For example, they have cooperated on evaluations and monitoring of projects.[99]

China's policy banks: current approaches

A review was undertaken of the policies related to overseas investments of the China Development Bank (CDB) and the China Export-Import Bank (EximBank) – the two policy banks likely to be most involved in the BRI. Their financing for infrastructure includes concessional loans to foreign governments, loans and export credits to Chinese companies operating overseas, and investments in private equity funds. These provide a number of opportunities to influence procurement. In fact, the two banks' government loans are often linked to an agreement that Chinese contractors will play a key role in implementing the project, which raises opportunities and challenges for implementing sustainable procurement. For the private sector, the banks provide financial and technical support to their borrowers. Thus, as with the international development banks, they are able to influence how companies manage environmental risks and undertake procurement. The two banks are also working increasingly with international financial institutions on BRI projects, and so are seeking to harmonize their policies.

The policies of the CDB and EximBank were reviewed with a focus on those related to the environment. However, their policies on the sustainability of their investments are, in many cases, not public. The review of their policies therefore may not provide a comprehensive picture of how the banks apply these policies and how these feed into the procurement process of borrowers (if at all). It does, though, illustrate the approaches that they can take.

Table 2: Summary of the policy approaches of the CDB and EximBank

	Policy banks
Procurement policies for project/infrastructure loans	**Provisions include:** • Borrowers should include the bank in the procurement process (CDB).
Safeguard policies	**Provisions include:** • EIAs required, development of an environmental and social management system or action plan. • Screening of potential overseas investments to assess supply and demand of resources.
Capacity-building	**Provision of:** • Technical support, training. • Guidelines.
Investment strategies	**Provisions include:** • Aim to increase the provision of green finance.

Source: Compiled by the authors.

[97] UNEP Finance Initiative (2018), 'Banking', http://www.unepfi.org/banking/banking/ (accessed 17 Jan. 2018).
[98] Equator Principles (2018), http://www.equator-principles.com (accessed 17 Jan. 2018).
[99] European Development Finance Institutions (2018), http://www.edfi.be (accessed 17 Jan. 2018).

Procurement policies

Neither the CDB nor EximBank make specific reference to sustainability in their procurement policies. For example, these do not mention that environmental issues can be, or should be, considered as part of value-for-money assessments. However, the CDB will not proceed with a loan if procurement under a project is determined to result in serious environmental impacts, and therefore the project would not meet national regulations.

The CDB is closely involved in the procurement process of its borrowers, though, and therefore has significant scope for influencing it. It requires that borrowers include the bank in the procurement bidding process and that successful bidders file relevant contracts with it within a deadline. The bank's Rules for Project Loan Management state that the 'CDB shall participate in the borrower's procurement and bidding work', and that it has the right to supervise implementation of the loan, with borrowers required to 'regularly submit to CDB reports regarding loan use, construction, procurement and bidding'.[100] Furthermore, the bank's Guiding Opinions on Signing Credit Contracts and its Infrastructure Loan Approach state that the 'CDB should be informed of and participate in any bidding or tendering activities related to CDB loans'.[101] These requirements apply to domestic and overseas loans.

When it comes to procurement of goods and services, the CDB's Opinions on Green Procurement Implementation state that 'procurement documents should list the requirements that products should be environmentally-friendly and energy-efficient', and that 'procurement should give preferential treatment to products with energy-saving and environmental protection certifications, on the condition that they meet procurement needs.'[102]

Environmental policies

The CDB and EximBank require environmental impact assessments for all loan applications. These should be based on host-country policies and standards, and require host-government approval. Where the host country does not have a policy framework in place, Chinese standards or international practices are referred to.[103]

The extent to which links are made between the environmental assessments and the application of any conditions on the loan, including requirements for the use of procurement, is unclear. However, EximBank's Environmental Policy allows for the use of procurement as a tool to mitigate any risks identified, stating that environmental standards and costs can be written into loan contracts.[104] Furthermore, its Environmental Impact Assessment Framework for China's Energy Efficiency Programme notes that the bank will review project documents, including tender-verification documents and contracts, to determine whether any obligations set out in the environmental management plan are being fulfilled. EximBank also requires monitoring during construction and operation to check compliance with any conditions placed on the project.

[100] China Development Bank (1997), *China Development Bank Measures on Capital Construction Loans* (国家开发银行基本建设贷款办法); articles 24 and 25 respectively.
[101] China Development Bank (2000), *Guidance on signing a credit contract (1)* (签订信贷合同的指导意见); article 4.11.
[102] China Development Bank (2008), *Advice on Green Procurement Implementation* (绿色采购实施意见).
[103] Friends of the Earth US (2016), *Emerging Sustainability Frameworks: China Development Bank and China Export-Import Bank,* Washington DC: Friends of the Earth US, http://webiva-downton.s3.amazonaws.com/877/00/5/7226/2/emerging-sustainability-frameworks-CDB-ChinaExim.pdf (accessed 17 Jan. 2018); Export-Import Bank of China (2007), *Guidelines for the Environmental and Social Impact Assessment of China Export and Import Bank's Loan Projects.*
[104] Friends of the Earth US (2016), *Emerging Sustainability Frameworks: China Development Bank and China Export-Import Bank.*

As part of loan assessments, consideration is given to the natural-resource use of a project, though whether this includes reviewing procurement policies relating to relevant supply chains is not clear. According to EximBank's Regulations on Foreign Government Transfer Loan Project Review Implementation (Interim), the loan assessment is based among other things on the project having a 'balanced supply and demand of resources, raw materials, fuel and power', while the China Import-Export Bank Management Measures for Foreign Government Loan Transfer Operations includes in its conditions for loan transfer projects that the 'water supply, energy, transportation, raw materials supply, product market and environmental protection issues should be arranged and implemented.' In addition, for projects with high environmental risks, EximBank requires that borrowers provide evidence that they have the necessary technical capacity to implement such projects and manage the risks. According to the Guidelines for Environmental and Social Impact Assessments of the China Export and Import Bank's Loan Projects, it also monitors the environmental and social impacts of a project during construction and operation.[105]

The CDB requires that project feasibility studies include resource and environmental feasibility assessments, and that construction plans must include energy and water-saving measures and environmental-protection management plans. The bank monitors the implementation of measures set out in feasibility studies within the broader environmental management plans, including, presumably, procurement criteria where these have been included.[106]

Capacity-building

The CDB and EximBank provide training and capacity-building to their borrowers, although there is little detailed information available on the nature of this. One example comes from EximBank, which in 2007 signed an agreement with the IFC to support Chinese companies' investment projects in emerging markets and in Africa by offering them advice on how to operate in an environmentally friendly manner.[107] The CDB assists its clients to reduce pollution emissions and to implement measures to protect the environment.[108]

One reason for the limited amount of publicly available information may be that, while funding comes through development banks, overall project agreements are often made as part of broader state-to-state arrangements, which may include separately organized capacity-building, as it has in the case of Africa.[109] Elements of the Chinese government-industry complex may therefore take on some of the responsibilities shouldered in other contexts by banks. For example, the Ministry of Commerce directed the China International Contractors Association to develop the Guide on Social Responsibility for Chinese International Contractors.[110] Similarly, the China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters published the Guidelines for Social Responsibility in Outbound Mining Investments.[111]

[105] Global Witness (2007), *Guidelines for Environmental and Social Impact Assessments of the China Export and Import Bank's Loan Projects*, London: Global Witness, https://www.globalwitness.org/sites/default/files/library/Chinese guidelines EN.pdf (accessed 17 Jan. 2018).
[106] China Development Bank (1996) *Announcement on Compiling China Development Bank Loan Project Implementation Reports* (关于编报国家开发银行贷款项目执行报告的通知); China Development Bank (1997) *China Development Bank Rules for Project Loan Management* (家开发银行贷款项目管理规定).
[107] United Nations Development Programme China (2015), *Report on the Sustainable Development of Chinese Enterprises Overseas,* https://issuu.com/undp-china/docs/2015_report_on_the_sustainable_deve (accessed 17 Jan. 2018).
[108] China Development Bank (2016), 'Sustainability Report 2016', http://www.cdb.com.cn/English/shzr/kcxfzbg/shzr_2016/ (accessed 17 Jan. 2018).
[109] Brautigam, D. (2009), *The Dragon's Gift: The Real Story of China in Africa*, New York: Oxford University Press, chapter 5.
[110] China International Contractors Association (2010), 'Guide on Social Responsibility for Chinese International Contractors', https://www.emm-network.org/case_study/chinca-developing-the-guide-on-social-responsibility-for-chinese-international-contractors/ (accessed 17 Jan. 2018).
[111] China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (2014), *Guidelines for Social Responsibility in Outbound Mining Investments*, London: Global Witness, https://www.globalwitness.org/sites/default/files/library/CCCMC%20Guidelines%20for%20Social%20Resposibility%20in%20Outbound%20Mining%20Investments%20Oct%202014%20CH-EN_1.pdf (accessed 18 Jan. 2018).

Investment criteria

The CDB and EximBank aim to increase their provision of green finance, in support of the government's objectives to establish a green financial system and to promote sustainable development in China and internationally.

EximBank developed guidelines on green credit in 2015 and published a White Paper on Green Finance in 2016. The guidelines set out the process by which the bank assesses potential borrowers and investments, and the process for the compliance review of approved projects. Overseas projects are required to comply with the environmental laws of the host country, or where these are not adequate with Chinese standards or international norms.[112]

For both banks, green finance primarily entails investing in renewable energy or environmental protection. The CDB's 2015 Sustainability Report defines the bank's objective as facilitating green development and ecological civilization, stating that it will, 'focus support on air, water and soil pollution prevention and control, stimulate the development of new energy, renewable energy sources, energy conservation and environmental protection'.[113] The bank has also published credit guidelines for projects aimed at environmental protection, energy saving and emission reduction, and renewable energy.[114]

EximBank's White Paper on Green Finance notes the goal of 'actively supporting the development of green and environment-friendly industries and low-carbon and circular economy; supporting the "go-global" enterprises to engage in green and environment-friendly projects; performing environmental protection obligations; and promoting global green growth.'[115] Types of green credit provided by the CDB include loans for energy saving and environmental protection, loans for the upgrade of traditional industries and emerging strategic industries, and supporting enterprises operating overseas to fulfil their social and environmental responsibilities. Under the latter category, the bank has reportedly 'supported a large number of projects featuring low energy consumption and high value added in areas of new energy development and utilization and the circular economy'.[116]

Under the green credit guidelines, the banks are also required by the China Banking Regulatory Commission to submit semi-annual reports showing their lending to projects in energy conservation, emissions reduction and environmental protection. However, as noted above, there are no detailed guidelines for how the banks can assess the environmental credentials of their investments, and thus determine whether projects should be classified as green.[117]

Lessons learned from bank experiences

The policy frameworks of the CDB and EximBank are complex and somewhat piecemeal, with many rules and guidelines having been developed for particular sectors and initiatives. Furthermore, as noted above, several of the policies are either not publicly available or are difficult to access. While the available policies do indicate recognition of the significance of environmental risks to investors, the

[112] Export-Import Bank of China (2016), *White Paper on Green Finance*, Beijing: Export-Import Bank of China, http://cms.eximbank.gov.cn/upload/accessory/20172/20172201624516937087.pdf (accessed 17 Jan. 2018).
[113] China Development Bank (2015), *Sustainability Report 2015*, http://www.cdb.com.cn/English/shzr/kcxfzbg/shzr_2015/ (accessed 17 Jan. 2018).
[114] Friends of the Earth US (2016), *Emerging Sustainability Frameworks: China Development Bank and China Export-Import Bank*.
[115] Export-Import Bank of China (2016), *White Paper on Green Finance*, Beijing: Export-Import Bank of China, p. 13.
[116] Ibid. p. 27.
[117] China Banking Regulatory Commission (2014), 'Notice of the China Banking Regulatory Commission on Key Performance Indicators of Green Credit Implementation', http://www.cbrc.gov.cn/EngdocView.do?docID=C5EAF470E0B34E56B2546476132CCC56 (accessed 17 Jan. 2018).

lack of clarity potentially limits their effectiveness. Thus, it makes it more difficult for borrowers to plan for and respond to any sustainability requirements when developing projects, and for civil society to monitor the banks' efforts and the borrowers' compliance.

Environmental impact assessments are considered standard practice. However, the banks rely heavily on their borrowers' systems and so are dependent on the quality of these. The potential of procurement as a tool by which to manage risks is given some recognition. For example, references are made to the use of procurement for particular supply chains, although these focus primarily on products such as energy saving equipment rather than on sustainably sourced natural resources. Further, where sustainability criteria are included in contracts, compliance is supposed to be monitored by the banks.

> While the available policies do indicate recognition of the significance of environmental risks to investors, the lack of clarity potentially limits their effectiveness.

With respect to procurement at the project level, there are no requirements or guidance for borrowers to consider sustainability issues. However, the fact that the CDB makes it a condition for it to be engaged in the procurement process of its borrowers means that there is scope for the bank to influence this.

More broadly, China's particular approach to development finance has several implications for options to promote sustainable procurement. The model championed by the World Bank and other MDBs is based on the principle of open tenders, through which bidders are assessed in a competitive process, the criteria for which can include environmental and social sustainability. This is not the approach taken in much of Chinese policy-bank financing; rather, either Chinese companies are directly nominated as part of the investment agreement or there is a clause in the agreement obliging the borrowers to use them.

On the other hand, the Chinese model for investment presents alternative levers for influence that may be used in supporting sustainable procurement. For example, overseas investment by Chinese enterprises is subject to regulations whereby investments must be approved by or filed with one or more of the National Development and Reform Commission, the Ministry of Commerce, the State-owned Assets Supervision Commission of the State Council (SASAC) and the China Securities Regulatory Commission. Through this approval process, the government has significant scope to influence investment decisions. Stricter controls for state-owned enterprises were in fact introduced in August 2017, with requirements that they provide evidence of the financial viability and an assessment of the political risks for their overseas investments.[118]

Beyond this approval process, the Ministry of Commerce also plays a central role in delivering large-scale overseas projects, including through coordinating relevant ministries, the policy banks and the involvement of state-owned enterprises. Furthermore, for projects funded by grants and concessional loans, the ministry oversees the system of tendering and bidding, procurement, evaluation and training.[119] As such, it has a central role to play in procurement decisions in overseas investments.

[118] Feng, E. (2017), 'China tightens rules on state groups' foreign investments', *Financial Times*, 3 August 2017, https://www.ft.com/content/3251987c-7806-11e7-90c0-90a9d1bc9691 (accessed 17 Jan. 2018).
[119] Brautigam, D. (2009), *The Dragon's Gift: The Real Story of China in Africa*.

For these reasons, the application of the sustainable procurement concept to Chinese-financed BRI projects will need to reflect the way in which procurement decisions are made, and is likely to require policy coordination between government agencies and financing institutions. At the same time, as China looks to increase cooperation with international investors, it will need to adapt its own approach to procurement. In order to engage in co-financing arrangements with international banks, Chinese ones will need to adopt the principles of open and transparent procurement.

International cooperation and harmonization of approaches is already being pursued, in part as a consequence of the increasing number of jointly funded projects. For example, banks involved in projects along the China–Pakistan economic corridor reportedly have established a network to facilitate communications, while discussions have been held between banks to explore how to improve financial cooperation on BRI projects.[120]

[120] Huiman, Y. (2017), 'Belt and Road Financial Cooperation to Be Normalized', ICBC News, 20 May 2017, http://www.icbc.com.cn/icbc/en/newsupdates/icbc%20news/YiHuimanBeltandRoadFinancialCooperationtoBeNormalized.htm (accessed 17 Jan. 2018).

5. Opportunities to Promote Sustainable Procurement for BRI Infrastructure Projects

The Belt and Road Initiative could mobilize billions of dollars towards the infrastructure sector, with impacts across Asia and beyond. The scale of these investments means that they represent a huge opportunity as well as a huge risk. BRI investments could support countries in achieving low-carbon sustainable development, and so make a massive contribution towards addressing the global challenges of climate change and enable progress towards the SDGs. Alternatively, they could contribute to locking countries into unsustainable development pathways.

Investors have a critical role to play in helping to ensure that the former path is taken and China has the opportunity to establish itself at the forefront of these efforts and to show global leadership in investor practices. The country has already transformed many parts of its economy as part of its efforts to establish an 'ecological civilization', and this has been driven in part by creating the right incentives for investors to take action, as is apparent from the huge growth in green finance. A similar transformation could be achieved in the infrastructure sector.

Sustainable procurement is one potentially powerful tool through which investors can improve the sustainability of their investments. It also provides a huge opportunity to establish and grow a sustainable business sector in China and in all BRI countries. However, it remains under-utilized, particularly by China's policy banks (see Table 3).

Table 3: Comparison of bank policies related to sustainable procurement

	MDBs	DFIs	China's policy banks
Procurement policies	• Seek to encourage sustainable procurement by government borrowers.	• Not applicable.	• Oversee procurement process, but no provisions on sustainability.
Safeguard policies	• EIAs and environmental management plans required – sustainable procurement often part of risk mitigation. • Sustainable natural resources required for high-risk supply chains.	• EIAs and environmental management plans required – sustainable procurement often part of risk mitigation. • Sustainable natural resources required for high-risk supply chains.	• EIAs and environmental management plans required. • No specific sourcing requirements for supply chains of high-risk natural resources.
Capacity-building	• Extensive resources allocated.	• Extensive resources allocated.	• Some resources allocated.
Investment strategies	• Targets to increase sustainable investments. • Targets to reduce GHG emissions across the portfolio. • Monitoring focused on GHG emissions.	• Targets to increase sustainable investments. • Targets to reduce GHG emissions across the portfolio. • Monitoring focused on GHG emissions.	• Targets to increase green finance. • No targets to reduce GHG emissions across the portfolio. • Monitoring focused on allocation of finance, rather than impacts of investments.

Source: Compiled by the authors.

Reflecting on the experiences of the international and Chinese banks highlights a number of opportunities as well as challenges to ensuring that sustainable procurement is adopted more widely. Considering opportunities, there is already a high level of recognition internationally and in China of the risks that environmental impacts present to investors, particularly in light of climate change. There is also growing awareness of the potential role of sustainable procurement in mitigating these risks through helping to minimize the environmental impacts of projects and to ensure that projects are in line with national and global commitments on sustainable development and climate change.

In China, for example, promoting green supply chains is one of the priority areas included in the Ministry of Environmental Protection's Belt and Road Ecological and Environmental Collaboration Plan.[121] Furthermore, the Green Finance Committee of the Chinese Society for Finance and Banking included green supply-chain management as one of 12 recommendations for Chinese investors and enterprises to improve the environmental risk management of their overseas investments, stating, 'Green supply chain management should be adopted in project design and initiation, project bidding, and in the procurement of raw materials and equipment procurement for large overseas infrastructure projects.'[122]

With respect to the challenges, one of the largest is the lack of incentives within many governments to consider the long-term economic benefits of sustainable infrastructure. Another significant challenge is the limited capacity to implement sustainable procurement within the financial community, government agencies responsible for infrastructure and procurement and the private sector. This is particularly acute in many BRI countries. A further challenge is the lack of internationally recognized standards and definitions for sustainable infrastructure and sustainable investments. This makes it difficult for investors to identify sustainable projects. Differences in the standards used by investors also hinders co-financing of projects. The lack of principles and standards for green finance has been identified by the UK-China Green Finance Taskforce as one of the key obstacles to financing sustainable infrastructure within BRI countries.[123]

These challenges are not insurmountable and work is already underway to address many of them. More rapid progress is needed, however, if the BRI is to succeed in driving sustainable development. This will require a step change from the Chinese banks to strengthen their policy frameworks and approaches to investment. Similarly, the international banks will also need to do much more to prioritize sustainability. Equally important will be to strengthen cooperative relationships between all investors in the BRI, to harmonize approaches and standards and to share best practice in the development and implementation of policies. Recommendations to help achieve this are set out below, with proposed actions for China's policy banks, its government and all international stakeholders in the BRI.

[121] Ministry of Environmental Protection of the People's Republic of China (2017), 'Plan for Eco-Environmental Protection Cooperation under the Belt and Road Initiative', http://www.mep.gov.cn/gkml/hbb/bwj/201705/W020170516330272025970.pdf (accessed 17 Jan. 2018).
[122] Green Finance Committee (GFC) of the Chinese Society for Finance and Banking et al. (2017), *Environmental Risk Management Initiative for China's Overseas Investment*, Geneva: UNEP Inquiry, http://unepinquiry.org/wp-content/uploads/2017/09/Environmental-Risk-Management-Initiative-for-China---s-Overseas-Investment.pdf (accessed 17 Jan. 2018).
[123] UK-China Green Finance Taskforce (2017), *Globalising Green Finance: Turning Green Momentum into Actions*, Interim Report, London: Green Finance Initiative, http://greenfinanceinitiative.org/wp-content/uploads/2017/09/Turning-Green-Momentum-into-Actions-reduced-PDF.pdf (accessed 17 Jan. 2018).

Recommendations

Recommendations for China's policy banks

Encourage government borrowers to adopt sustainable public procurement

China's policy banks should make it explicit that sustainability criteria can be considered by government borrowers as part of value-for-money assessments for the procurement of infrastructure projects. While it may not be feasible to require that this approach be adopted in all cases, referring to such criteria in bank procurement policies raises awareness among borrowers that these can be an important factor in determining the economic performance of a project. It also provides assurance that this approach is supported by the banks.

To reinforce this, the banks should also develop standard bidding documents in which sustainability requirements are included. With limited capacity for procurement in many governments, providing such documents is a simple means to encourage the adoption of sustainable procurement.

Furthermore, the banks should require their borrowers to consider the sustainability risks and objectives of a project when preparing a procurement plan. The CDB and EximBank could assess whether borrowers have done so as part of their reviews of project implementation and documentation. Encouraging consideration of these issues when planning and designing procurement ensures that they can be integrated into a project at an early stage and that there is an opportunity to identify any resource or training needs to support implementation.

To provide the support required by many borrowers to implement sustainable procurement, however, investment is needed to increase the banks' own capabilities in this area.

The approach of encouraging or requiring sustainable procurement is applicable to the model of state financing often used by China, in which funding is linked to the use of Chinese contractors. This model indicates China's ability to influence procurement decisions of governments. However, for it to be effectively implemented, Chinese enterprises would need sufficient capability in sustainability; for example, in environmental-management systems including sustainable procurement and construction practices. (See also the recommendation for the Ministry of Commerce or SASAC.)

Require all borrowers to adopt sustainable procurement within projects

China's policy banks should require the use of sustainable procurement as a tool for their borrowers to manage and avoid environmental and social risks in their projects and business activities, where possible. As noted earlier, this was one of the recommendations of China's Green Finance Committee, which suggested that investors adopt green supply-chain management as a means to reduce environmental risks in investments.[124] While this requirement may not be universally applicable – for example, for supply chains where no certification schemes or standards have been established – this approach should at least be requested where feasible.

The banks should also require that any requirements placed on borrowers as part of the banks' environmental policies should be included in the tender documents and contracts of borrowers; for example, to manage particular supply chain risks. Furthermore, borrowers should be required to use sustainable procurement to ensure that their contractors are in compliance with any

[124] Green Finance Committee of the Chinese Society for Finance and Banking et al. (2017), *Environmental Risk Management Initiative for China's Overseas Investment*, Geneva: UNEP Inquiry, http://unepinquiry.org/wp-content/uploads/2017/09/Environmental-Risk-Management-Initiative-for-China---s-Overseas-Investment.pdf (accessed 17 Jan. 2018).

environmental requirements. The CDB and EximBank have such provisions for certain categories of project within China and for particular supply chains; these should be adopted for all project types and in all sectors.

As noted earlier, the banks will need to increase their own capacity and expertise in this area to encourage and support the adoption of this approach by their borrowers.

Strengthen bank targets for sustainable or green investments

China's policy banks should introduce targets for the proportion of sustainable investments and for the environmental footprint of their entire portfolio; and these should be ratcheted up over time. This approach would send a message that sustainability is an important issue for the banks and so encourage borrowers to develop projects with higher sustainability standards.

In support of this, the banks need to develop clear and rigorous criteria to monitor the environmental impacts of their investments, and strengthen reporting on these. Currently most attention is given to GHG emissions and climate risks, in China and internationally. In the context of the SDGs, several international and European banks have begun to assess a broader range of environmental and development impacts. Sharing of lessons between banks and developing a coordinated approach will be important to support progress in this area. Greater transparency in this area is also needed to improve investor confidence in green assets and so to promote international financial flows.[125] In addition, further work is needed to develop common international standards for sustainable or green investments and for sustainable infrastructure, as set out below.

Establish or strengthen sustainability teams

An essential step to achieve all of the recommendations above is that China's policy banks increase their own capacity on sustainability issues. A 'sustainability team' is needed within each bank, with the expertise and skills to assess risks, to support borrowers to implement sustainable procurement, and to monitor them and the environmental impact of the bank's portfolio. This will require significant investment to increase the number of people dedicated to addressing these issues and to provide them with the necessary expertise. In particular, training is needed on sustainable public procurement, which is a new approach for many.

Strengthening links with the international development banks is one approach to support this, including through co-financing of projects, which will inevitably entail the exchange of expertise and knowledge. In addition, the policy banks should draw on expertise within China as many universities, think-tanks and non-governmental organizations have extensive knowledge of environmental-risk management and sustainable technologies. Furthermore, several government agencies and financial institutes are engaged in research related to green finance and have considerable expertise in this area.

Increase transparency about bank policies

China's policy banks should increase transparency about their sustainability policies, particularly regarding the way that sustainability criteria are applied when assessing loan applications and the ways in which these feed into the procurement process for infrastructure projects (or could do so).

Improved clarity regarding the banks' policies would help borrowers to respond to any sustainability requirements, and so enable them to integrate these issues at an early stage of developing a project.

[125] UK-China Green Finance Taskforce (2017), *Globalising Green Finance: Turning Green Momentum into Actions*.

It would also raise awareness more broadly of the efforts that the banks are making in this area. In addition, it would enable civil society to play a greater role in supporting efforts to monitor the compliance of borrowers with these policies.

Recommendations for China's government

Increase the provision of training for banks on sustainable procurement

The China Banking Regulatory Commission and the Ministry of Environmental Protection should provide training on sustainable procurement to bank officials. This would help to raise awareness of its potential as a tool to reduce environmental and financial risks in investments. It would also improve understanding of how it can best be used and implemented by borrowers, as well as the role of the banks in supporting this.

The training should draw on international expertise on environmental issues as well as that available within China's universities, think-tanks and non-governmental organizations. It should also take advantage of the tools and guidelines that have been developed internationally on sustainable procurement. A useful and low-cost first step would be to translate into Chinese some of these materials, such as KfW's toolkit on sustainable procurement and the standard bidding documents of some of the MDBs.

Extend the reporting requirements for banks on green investments and the environmental footprint of all their investments

The China Banking Regulatory Commission should develop more comprehensive and detailed reporting requirements for banks on their green investments. This work should be coordinated with international discussions about how to define green or sustainable investments and green finance.

Current definitions of green investments should be amended to also include infrastructure projects with high standards of sustainability. In parallel, detailed guidelines for how banks should assess the green credentials of their investments should be developed. These could include criteria for measuring the environmental footprint of investments (for example, carbon footprint, water efficiency or material usage) as well as the use of policy tools within projects, including sustainable procurement.

Introduce sustainability requirements for Chinese enterprises to operate overseas

The Ministry of Commerce or SASAC should require companies to have adequate environmental-management systems in place (including the ability to implement sustainable procurement) if they are to be approved for taking part in overseas projects, and particularly if they are to be included within state-to-state financing agreements. This could be linked to a green rating system for enterprises, an approach that has also been proposed by China's Task Force on Green Finance.[126] There are also an increasing number of guidelines that have been developed to encourage companies operating overseas to improve their business practices and these could provide a basis on which to assess companies. For example, most recently these include the China International Contractors Association's Guidelines on Sustainable Infrastructure for Chinese International Contractors[127]

[126] Green Finance Task Force (2015), *Establishing China's Green Financial System*, London: UNEP Inquiry, pp. 19–20, http://unepinquiry.org/wp-content/uploads/2015/12/Establishing_Chinas_Green_Financial_System_Final_Report.pdf (accessed 17 Jan. 2018); UK-China Green Finance Taskforce (2017), *Globalising Green Finance: Turning Green Momentum into Actions.*
[127] Published in 2017.

and the China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters' Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains.[128]

There is growing expertise on sustainability within Chinese enterprises, and many are investing in environmental and social-management systems and improving their business practices. However, there remain many more that are not, particularly smaller companies. Therefore, the Ministry of Commerce and SASAC should develop guidelines for the infrastructure sector and provide capacity training. This would support companies in improving their systems so that they could comply with any sustainability requirements to operate overseas. It would also help establish a more sustainable business sector that would be better able to develop and implement sustainable projects in future, and that would be well placed to compete internationally to carry out such projects.

Recommendations for the MDBs and bilateral DFIs

Require borrowers to adopt sustainable procurement for all high-risk supply chains within projects

Several MDBs and DFIs require the use of sustainable procurement for certain supply chains, such as for living natural resources or where there is a high risk of conversion of natural habitats. Thus, many commodities and products are excluded, some of which can have significant environmental impacts. Sustainable procurement should be required for all supply chains that could have significant environmental impacts – not just including impacts on natural habitats, but also, for example, on GHG emissions, pollution, and water usage.

As noted earlier for China's policy banks, while this requirement may not be universally applicable, the use of sustainable procurement should be requested where feasible.

Increase the scale of capacity-building for governments

As noted above, there is a need for a significant increase in the scale of technical support provided for governments and their procurement officials, including support for policy and institutional reform, training of personnel, and the provision of practical tools and information. This has been recognized by many MDBs; for example, the World Bank will be allocating more resources to support governments in implementing sustainable procurement. Furthermore, such assistance is likely to increase as the new MDBs (the AIIB and the NDB) become established. However, given the severely limited capacity in many countries to implement sustainable procurement this needs to be scaled up.

Increase resources for IPPFs and give greater priority to sustainability within them

Continued investment in IPPFs is needed to support countries in developing bankable and sustainable infrastructure projects. However, these facilities should give much greater attention to sustainability. They should ensure that they support transformative projects in order to raise the standards and expertise on sustainability. This is needed to ensure that projects are in line with the BRI's objectives to 'realize diversified, independent, balanced and sustainable development'.[129] This will require the IPPFs to provide the tools and support to enable project developers to integrate sustainability issues throughout the process of planning, developing and financing infrastructure projects, including the process of procurement.

[128] China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (2016), Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains, Beijing: CCCMC, http://www.cccmc.org.cn/docs/2016-05/20160503161408153738.pdf (accessed 17 Jan. 2018).
[129] The State Council of the People's Republic of China (2015), 'Full text: Action plan on the Belt and Road Initiative, 30 March 2015, http://english.gov.cn/archive/publications/2015/03/30/content_281475080249035.htm (accessed 17 Jan. 2018).

Strengthen monitoring of the environmental footprint of banks' investment portfolios

While many of the banks have established monitoring frameworks for the environmental impact of their portfolio, in most cases these only apply to certain sectors or types of project; for example, those classified as green or those in the energy sector. In addition, monitoring is often limited to GHG emissions and does not consider other impacts.

More comprehensive monitoring frameworks need to be developed. In the short term, monitoring of GHG emissions should be implemented across the portfolio of banks – as also recommended by the Task Force on Climate-Related Financial Disclosures[130] – and in the longer term a wider range of environmental issues should also be assessed. This should draw from international best practices and standardized methodologies.

International coordination and networking

Enhance cooperation between investors in BRI projects

All investors in BRI projects should work closely together to share their expertise and experiences. This will be particularly important for banks in the host countries of projects, as in many of these the capacity of banks to assess and manage environmental risks is relatively low. There are increasing efforts to improve coordination between banks involved in BRI projects, such as the project initiated by the Industrial and Commercial Bank of China. The issue of sustainable procurement needs particular attention so as to facilitate the exchange of experiences and best practice. The MDBs should play a significant role here, given that they have the most expertise in this.

The BRI investor alliance that is to be established by the UK-China Green Finance Taskforce[131] could be valuable in facilitating this. Its stated aim is to develop standards for sustainable investment and green finance, and also to explore the need for a monitoring body for BRI investments. However, it could also play a broader role in enabling the exchange of expertise and provision of training. This role also could be taken by an existing network, such as the UNEP Finance Initiative or the Equator Principle banks, which have large global memberships and undertake training for their members.

The development of standards for sustainable investment must continue to be prioritized. These will need to be of a sufficiently high quality so that they drive best practice and innovation in the sector, and ensure that infrastructure investments are transformative. The use of sustainable procurement should be included as part of these standards.

Improve information exchange for BRI projects

Those developing and implementing BRI infrastructure projects should work to improve the availability and exchange of information, expertise and tools related to sustainable infrastructure. Improved information is needed across all aspects of infrastructure deployment, but sustainability issues need to be given particular priority. This includes information on the governance, environmental and social context in BRI countries, as well as tools and guidance for improving the sustainability of projects (including through procurement).

[130] Task Force on Climate-Related Financial Disclosures (2016), *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures*, https://www.fsb-tcfd.org/wp-content/uploads/2016/12/17_0106_TCFD-Annex-Letter.pdf (accessed 17 Jan. 2018).
[131] UK-China Green Finance Taskforce (2017), *Globalising Green Finance: Turning Green Momentum into Actions*.

This could be facilitated by establishing a knowledge-sharing platform; one such innovation is being developed under the BRI to provide environmental protection data on partner countries and could play a valuable role in this.[132] The Global Infrastructure Connectivity Alliance or the Global Infrastructure Hub could also contribute in this area. The former has the remit to 'work across regions and disciplines to promote cooperation, knowledge exchange, and meaningful progress in the field of global inter-connectivity'[133] while the latter aims to promote the development and financing of quality infrastructure projects through facilitating knowledge sharing and highlighting best practice.[134] The EU–China Connectivity Platform also provides a possible mechanism to achieve this goal. The platform is focused on policy exchange and alignment on the priorities for fostering connectivity between these two jurisdictions, and also on cooperation on projects and investments, including strategic planning.[135]

Increase cooperation for joint research and training

All BRI governments should increase cooperation for research and training on sustainable procurement and construction practices so as to improve project development and implementation internationally. This is in line with the objective of the BRI, which not only aims to improve infrastructure connectivity but also to promote policy coordination and enhance mutual learning.

A particular priority should be for research and training to support countries in developing national strategies for infrastructure that will enable achievement of national and global commitments to climate change and the SDGs. In support of this, there is also a need for national and regional assessments of the implications of proposed projects for national or global commitments on climate change and sustainable development. This would be a valuable source of information to help governments and investors make decisions as to which projects should be prioritized, and so ensuring the most effective use of the available finance.[136] Another potential area for research would be into the types of contracts and agreements that host-country governments can make with overseas investors and contractors; for example, to ensure the adoption of rigorous standards and appropriate risk sharing.

This could take place on a bilateral basis. Alternatively, triangular cooperation models could be adopted between China, another donor country and the host country for infrastructure so as to benefit from the different skills, expertise and priorities of partner countries. For example, it has been proposed there could be such an initiative between China, the UK and a BRI country.[137]

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[132] Ministry of Environmental Protection (2017), *The Belt and Road Ecological and Environmental Cooperation Plan*, https://www.yidaiyilu.gov.cn/wcm.files/upload/CMSydylgw/201705/201705140543014.pdf (accessed 22 Jan. 2018).
[133] World Bank (2017), 'Global Infrastructure Connectivity Alliance', http://www.worldbank.org/en/topic/transport/brief/global-infrastructure-connectivity-alliance (accessed 17 Jan. 2018).
[134] Global Infrastructure Hub (2018), http://globalinfrastructurehub.org (accessed 17 Jan. 2018).
[135] European Commission (2017), *Joint Agreed Minutes of the Second Chairs' Meeting of EU-China Connectivity Platform*, Brussels: European Commission, https://ec.europa.eu/transport/sites/transport/files/2017-06-01-joint-agreed-minutes-second-chairs-meeting-eu-china-connectivity-platform.pdf (accessed 17 Jan. 2018).
[136] World Bank (2015), *From Billions to Trillions: MDB Contributions to Financing for Development*, Washington DC: World Bank, http://pubdocs.worldbank.org/en/692914365543030 71/dfi-idea-action-booklet.pdf (accessed 17 Jan. 2018); Nassiry, D. and Nakhooda, S. (2016), *The AIIB and investment in action on climate change*, Working Paper, London: Overseas Development Institute, https://www.odi.org/sites/odi.org.uk/files/resource-documents/10441.pdf (accessed 17 Jan. 2018); Nassiry, D. et al. (2016), *Finding the Pipeline: Project preparation for sustainable infrastructure*, London: Overseas Development Institute, http://newclimateeconomy.report/workingpapers/wp-content/uploads/sites/5/2016/11/Finding-the-Pipeline.pdf (accessed 18 Jan. 2018).
[137] Liu, D. et al. (2017), *The 'Belt and Road' Initiative and the London Market – the Next Steps in Renminbi Internationalization*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/files/chathamhouse/publications/research/2017-01-17-belt-road-renminbi-internationalization-liu-gao-xu-li-song.pdf (17 Jan. 2018).

Appendix: Examples of Rating Schemes and Standards Tools for Infrastructure Projects

There are a variety of schemes and standards to assess the sustainability of infrastructure projects, a selection of which is presented below. This is intended to illustrate the types of schemes available, and is by no means comprehensive. Details of many of the initiatives and tools aimed at supporting sustainable infrastructure have also been compiled by Mercer and the Inter-American Development Bank.[138]

Standards and decision-making tools

Name	Organization	Description
Aspire	Engineers Against Poverty and Arup	Integrated planning, monitoring and evaluation tool for appraising the sustainability and poverty-reduction performance of infrastructure projects.
BREEAM	BRE	Sustainability assessment method for project planning, infrastructure and buildings.
CEEQUAL	BRE	Sustainability assessment and rating scheme for civil engineering and infrastructure projects.
Envision	Institute for Sustainable Infrastructure	Framework for evaluating and rating the community, environmental and economic benefits of all types and sizes of infrastructure projects.
Hydropower Sustainability Assessment Tool	International Hydropower Association	Tool to assess the performance of a hydropower project across more than 20 sustainability topics.
SuRe® – The Standard for Sustainable and Resilient Infrastructure	GIB Foundation	Global voluntary standard that integrates key criteria of sustainability and resilience into infrastructure development and upgrade.
Sustainable Asset Valuation (SAVi)	International Institute for Sustainable Development	Decision-making tool to assess the environmental, social and economic performance of infrastructure projects.

Source: Drawn from Mercer and Inter-American Development Bank (2017), with additions from the authors.

[138] Mercer and Inter-American Development Bank (2017), 30 Global Initiatives Driving Investment in Sustainable Infrastructure, 'Building a Bridge to Sustainable Infrastructure: Mapping the Global Initiatives that are Paving the Way', https://www.mercer.com/our-thinking/building-a-bridge-to-sustainable-infrastructure.html (accessed 18 Jan. 2018).

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Cover image: The Golden Bridge of the Silk Road sculpture built at Chang'an Street, Beijing, to celebrate National Day in 2016.

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