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Filling the sustainable infrastructure gap in Asia: AIIB as a catalyst and orchestrator[1]

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Introduction

Asia will require infrastructure investments of USD 1.7 trillion per year, or USD 26 trillion through 2030, to meet its development goals.[2] This massive expansion of infrastructure must be sustainable if countries are to meet the commitments laid out in the 2030 Agenda for Sustainable Development and the Paris Agreement, necessary to preserve long-term economic development. However, investment in sustainable infrastructure is likely to face barriers in the coming years as a slowing global economy, higher cost of capital, geopolitical tension, and other factors limit public investment.[3]

Key points

1. **To increase the volume and sustainability of infrastructure investment in Asia, investors need to rapidly green their portfolios, mainstream ESG standards, and develop and deploy at scale innovative financing.**
2. **Analogous to the Asian economic "miracle," infrastructure investors in Asia follow a "flying geese" pattern, with some progressing through the transition to sustainability and others just beginning.**
3. **The current "regime complex" for sustainable infrastructure investment in Asia risks fragmentation, but AIIB and other organisations can accelerate the transition to sustainability by acting as catalysts and orchestrators.**

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[2] ADB (2017). "Meeting Asia's Infrastructure Need," Asian Development Bank

[3] AIIB (2019) "Asian Infrastructure Finance 2019: Bridging Borders: Infrastructure to Connect Asia and Beyond," Asian Infrastructure Investment Bank.

How can we accelerate sustainable infrastructure investment in Asia even as existing financing models come under strain? This policy brief outlines two macro-strategies to achieve these aims, and highlights the critical role of the Asian Infrastructure Investment Bank (AIIB) in working with a broad range of partners to advance them.

First, infrastructure lenders in Asia must accelerate convergence toward green portfolios and high environmental, social, and governance (ESG) standards. While we see mainstreaming of sustainability across investors in the region, significant variation remains. As with the Asian economic miracle, we observe a "flying geese" pattern with some investors like multilateral development banks (MDBs) moving ahead of others, but all in a common direction (section 2).

Second, because existing funds for sustainable infrastructure are insufficient, financial institutions must find innovative new products and partnerships that can unlock more investment in sustainable infrastructure (section 3). In this context, the role of Chinese investors and companies is becoming more important as their operations grow (section 4).

As a 21st MDB based in Beijing, AIIB has unique capacity to catalyse a region-wide acceleration toward sustainability across the infrastructure investment sector (section 5). Doing so will require strengthening and "orchestrating" the emerging potentially fragmented array of partnerships and frameworks through which investors are working together to meet the sustainable infrastructure investment needs of Asia.

1. The need for sustainable infrastructure in Asia

Sustainable infrastructure is essential to meet the Sustainable Development Goals (SDGs) by enhancing access to basic services, promoting environmental sustainability, and supporting inclusive growth. Among the seventeen SDGs, infrastructure-related goals are particularly lagging behind in Asia (Table 1). Two goals - Sustainable Cities and Communities and Climate Action - have even regressed since 2000. These gaps correspond with financing gaps.

Table 1: SDG Progress by sub-region since 2000 (source: adapted from UNESCAP[4])

Infra-related SDGs	6. Clean Water and Sanitation	7. Affordable and Clean Energy	9. Industry Innovation and Infrastructure	11.Sustainable Cities and Communities	13. Climate Action
East and North-East Asia	Small gap	Large gap	Medium gap	Regressed	Regressed
South-East Asia	Large gap	Medium gap	Small gap	Small gap	Large gap
South and South-West Asia	Large gap	Medium gap	Large gap	Regressed	Regressed
North and Central Asia	Medium gap	Medium gap	Large gap	Small gap	Large gap

Given these needs, what is the current situation of sustainable infrastructure investment in Asia? Currently there are few data sources available to directly measure the finance flow for infrastructure, and it becomes even more challenging to track down how "sustainable" these are, and how they are broken down by region.[5] ADB's (2017) *Meeting Asia's Infrastructure Needs* provides a useful reference, estimating that Asia would need USD 1.5 trillion per year until 2030 to meet the infrastructure gap. This need grows to USD 1.7 trillion if adjusted for climate mitigation and adaptation costs. But only about half of the investment is currently being met, dominantly from public sources, leaving over a gap of USD 800 billion annually.

In terms of financing instruments, Asia's infrastructure financing relies heavily on bank loans due to less-developed capital markets. Moody's estimates that over 90% of infrastructure financing in Asia is raised from commercial bank loans.[6] Credit may be even tighter in the short- to medium-term. Interest rates are rising

[4] UNESCAP (2017) Asia and the Pacific SDG Progress Report, UN Economic Social Commission for Asia and the Pacific

[5] For a discussion see: Fay, Marianne; Han, Sungmin; Lee, Hyoung Il; Mastruzzi, Massimo; Cho, Moonkyoung. 2019. Hitting the Trillion Mark: A Look at How Much Countries Are Spending on Infrastructure. Policy Research Working Paper No. 8730. World Bank.

[6] Moody's Investors Service (2018) Infrastructure & Project Finance - Asia: Growing funding diversity to bridge infrastructure funding gap.

due to policy normalisation by central banks, making lending more expensive. Uncertainty around trade friction, rising geopolitical tensions, and a busy election cycle in Asian countries in 2019 add further strain.[7]

2. Converging on sustainable portfolios and ESG standards: A new "flying geese" model

To achieve the commitments Asian countries have set in the SDGs, the Paris Agreement, and national developments plans, infrastructure investors need to expand the volume of investment while simultaneously making sure that 100 percent of infrastructure becomes sustainable. Speed is of the essence. Delaying this transition risks missing globally agreed targets and generating stranded assets that will burden investors and countries for decades to come. The question is not *whether* to transition to sustainability, but rather *how* to do so rapidly.

The "flying geese" paradigm, a familiar model of the of the Asian growth miracle in the 20th century, provides a useful framework to understand the 21st century transition to sustainability. All infrastructure investors have committed to transition by global instruments like the Paris Agreement and the SDGs. But some are currently further through this process than others, reflecting the different capacities and missions of different organisations. As public organisations committed to global development, the MDBs naturally belong to the leading edge of the "flock."[8] This lead position means that they do not only need to accelerate their own transformation to sustainability, but also to use this position to pave the way for others to follow as quickly and easily as possible.

MDBs generate impact not only through their direct investments and the additional finance the leverage. They also set standards that are often followed by other financial institutions, companies, and governments through the projects they invest in and the policies they apply. Many of the banks also conduct policy research, offer technical assistance, and provide policy-based finance, all of which can have a significant positive impact on the policies, laws, and institutions in the countries where they operate. There is also significant scope for further partnerships and cooperation across different kinds of investors, as discussed below.

[7] AIIB (2019) Asian Infrastructure Finance 2019, Bridging Borders: Infrastructure to Connect Asia and Beyond, Asian Infrastructure Investment Bank

[8] International Institute of Green Finance, "The Role of Multilateral Development Banks in Green Finance," 2019, Central University of Finance and Economics, Beijing.

Achieving the scale needed: Aligning portfolios with sustainability

A first and obvious dimension of the transition to sustainability is shifting infrastructure investments toward green options, either by restricting investment in certain sectors or direct resources towards sustainable sectors. For example, a growing number of investors in Asian infrastructure have decided to stop funding coal power plants in many circumstances, or to impose conditions on financing coal plants. As the circles in Table 2 demonstrates, investors' policies on coal power plants show a clear "flying geese" pattern, with MDBs and internationally focused institutions toward the top-right corner and more commercially focused and domestic institutions toward the lower-left. However, the "flock" is flying quickly toward transition; in the first half of 2019, there has been an accelerated trend of major financial institutions in Asia have signaling a move away from financing coal power plants.[9] With tightened environmental regulations and improved economics for renewables, these and financial institutions are under increasing pressure to decarbonise their portfolios and incorporate considerations of climate risks, and following the examples of MDBs has become a natural choice[10].

However, other areas of the transition to sustainability remain more initial. In red, Table 2 shows investors' policies regarding shifting financing away from upstream oil and gas towards cleaner energy sources. Only a few MDBs have moved in this direction so far.

[9] Tim Buckley, "IEEFA update: Asian banks add to growing number of major financial institutions exiting coal – now 112 and counting", Institute for Energy Economics and Financial Analysis, May 14, 2019.
[10] Moody's (2019) Climate goals, declining costs of renewables signal decreasing reliance on coal power.

Table 2: "Flying geese" model of policies on investment in coal fired power plants (●) and upstream[11] oil and gas (●)[12]

				Finance	No financing, but some exceptions e.g. development level; high development impact	No financing, but few exceptions Specific technology, project scale	No finance
Public	MDBs		WB Group				● ● no substitutes
			ADB	●		● specific technology	
			EBRD				● ● no substitutes
			EIB	●			● emission standards
			AfDB	●	● with strong impact of the development		
			IDB	●		● specific technology	
			AIIB	●		● reduce carbon intensity	
			NDB	●	● try to avoid, but not exclude		
	Bilateral Development Assistance	USA	US Aid	●		●	
		UK	DFID	●		●	
		France	AFD	●		●	
		Germany	KfW	●		●	
		Japan	JICA	● ●			
		Korea	Korea Exim Bank	● ●			
		Australia	AusAid	● ●			
		China	China Dev. Bank	● ●			
	CECD's Coal-Fired Electricity Generation Sector Understanding (CFSU) for official export credits			●		●	
	Export credit agencies	USA	US Exim Bank	●		●	
		UK	UKEF	●	● OECD CFSU		
		France	COFACE	●		●	
		Germany	KfW IPEX Bank Euler Hermes	●	● OECD CFSU		
		Japan	JBIC, NEXI	●	● OECD CFSU		
		Korea	Korea Exim Bank	●	● OECD CFSU		
		Australia	Efic	●	● OECD CFSU		
		China	China Exim Bank (Buyer's credit)	● ●			
Private	Commercial Banks, Insurance	UK	Standard Chartered	●	●		
		UK	HSBC	●	●		
		Japan	Nippon Life	●	●		
		China	Bank of China	● ●			
		China	ICBC	● ●			
		China	China Constr. Bank	● ●			

[11] Upstream is defined as exploration of oil and natural gas fields, as well as drilling and operating wells to produce oil and natural gas.

[12] Authors' estimates based on publicly available information about investors' stated policies on coal, oil, and gas financing. We acknowledge that some organisations operate more restrictively in these sectors than their stated policies. Policies are used as a benchmark to allow for comparison.

In addition to stopping lending to certain categories of projects, some lenders have adopted screening tools to aid project selection at project, sector, country and strategic levels.[13] Shadow-pricing, for example, guides investment decisions by assigning a price to the greenhouse gas emissions associated with a project, and including this cost in the project's overall financial assessment. The WB has committed to using a shadow carbon price in high-emitting sectors, while the EIB, ADB, and EBRD already use this tool.[14] In addition, in 2013 the EBRD has set a minimum emissions performance standard for new energy projects of 550gCO_2/kWh, effectively ruling out normal coal plants; and in January 2019, an EBRD shadow carbon pricing methodology has been introduced. AIIB has included the use of shadow carbon pricing in its Energy Sector Strategy in 2018.

Private sector institutions are supporting the efforts of putting a price on carbon, following the recommendations of the industry-led Task Force on Climate-related Financial Disclosures (TCFD). According to the Carbon Disclosure Project (CDP, 2017), over 500 companies have embedded a shadow carbon price in their business strategies and operations in 2017 and another 700 companies are planning to do so, 23% more than in 2016.[15]

Ensuring the quality of infrastructure investment through environmental and social standards and processes

High standards are essential to make sure that infrastructure investments contribute to, and do not detract from, sustainable development goals. These include environment and social (E&S) safeguards, technical and engineering quality, good governance, and economic and financial sustainability. As with portfolio alignment, infrastructure investors follow a "flying geese" pattern around ESG standards in particular, with more public and internationally oriented institutions leading the "flock."

International standards have the potential to catalyse more investment by mitigating risks that may lead to project failure. For example, projects often fail due to mismanagement of environment and social aspects, including labor standards, land acquisition and its impacts, local pollution, biodiversity, etc. Adherence to genuine demand and economic sustainability over short-termed political considerations would help avoid "white elephants" and failed projects. Good governance is also essential in providing reassurance that a project will be delivered. Investors are concerned with transparency in procurement, contracting, and supply chain management.

[13] For an overview, see: Germanwatch & NewClimate Institute (2018). Aligning investments with the Paris Agreement Temperature Goal – Challenges and Opportunities for Multilateral Development Banks.
[14] Hawkins and Wright (2018) How are development banks performing on shadow carbon pricing? E3G Blog, 24 January 2018
[15] Carbon Disclosure Project (CDP) (2017) Internal Carbon Pricing: Trends and Benefits, April 6, 2017.

Established MDBs have developed standards over the last decades, often in consultation and contestation with civil society groups. Beyond the MDBs, a wide range of international standards have been developed in recent years, in the form of principles, guidelines, frameworks and quantitative tools, among others, and more are under development. One study found 40 existing initiatives for sustainable infrastructure[16]. There are also global investment standards including the UN Principles for Responsible Investment and the IFC Equator Principles, and private sector-led efforts including on ESG and impact investing, such as the Impact Management Project[17].

To be effective, standards must be implemented. An example with wider demonstration effect is the joint venture set up by China Three Gorges International (CTGI) and the IFC in 2015, where IFC has facilitated a gradual process to build up the capacities of the joint venture and to implement IFC Performance Standards[18]. The outcome of the collaboration has not been confined to projects under the joint venture. Rather, the experience has profoundly enhanced CTGI's ESG management capacity, international branding, and access to international capital market, which is worthwhile as compared with the increased workload and associated cost for meeting higher ESG standards[19]. Meanwhile for IFC, the collaboration allows it to tap into CTGI's technical strength in development of renewable energy, as well as the company's deep-rooted market knowledge and operational capacity.

Although there has been broad convergence in terms of principles over time through peer-to-peer learning, differences in specific rules and policies remain. A China Development Bank and UNDP joint analysis (2019 forthcoming) found that less than half of the 90 indicators of ESG standards are common amongst major international organisations (WB, AIIB, IADB, EBRD, UNDP and UNEP). In other words, most are not universally used. This creates implementation challenges when a borrower engages several MDB lenders on the same project. Progress also varies between environmental, social, and governance standards, as the latter two tend to be more context-specific.

A single, unified standard may not be feasible given the specificity of each institution and its related governance requirements. Nevertheless, harmonisation should strive to ensure that fundamental principles of high standards, such as those needed to meet global goals, are applied in all cases. Commonly agreed principles include transparency (e.g. open procurement, anti-corruption, and anti-money laundering), environmental

[16] Bhattacharya and Jeong (2018), *Driving the Sustainable Infrastructure Agenda in Emerging Markets*, Global Economy and Development at Brookings, June 2018.

[17] For more information, see: https://impactmanagementproject.com/

[18] For further information, see: http://ctgsail.com/csail

[19] Authors' online internet research and compilation of notes based on meetings with CTGI and IFC.

sustainability (e.g. GHG and local pollution reduction), social sustainability (e.g. stakeholder consultation and protection of legal rights), and debt or economic sustainability. These four aspects of metrics are reflected in the G20 Principles for Quality Infrastructure Investment adopted in June 2019. Joint MDB working groups such on climate change, gender, and results management also add to these efforts, in harmonising methodologies and measurements.

There are attempts to make the process more efficient, notably by the new MDBs. AIIB's Environmental and Social Policy allows the application of the environmental and social policies and procedures of other multilateral development banks and bilateral development organisations who are co-financing the project, hence reducing the transaction cost and time required for additional due diligence. The requirement for public information disclosure varies for public- or private-sector projects, to cater for different speed and confidentiality required for private-sector operations. New Development Bank, as primarily investing in five countries with strong domestic systems, uses the national regulatory system as the standard.

3. Innovative sustainable finance

Ultimately, all infrastructure and all investment will need to become sustainable in order to achieve the SDGs and to meet the goals of the Paris Agreement. However, we also know that current sustainable investment streams are too small compared with the trillions of dollars needed to achieve the objectives. For instance, data in 2016 showed that the size of the global bond market has been estimated as a total of $90 trillion, with $694 billion climate-aligned bonds, of which $118 billion are labeled as green bonds[20].

New ways to mobilise private capital are needed. To unlock this kind of potential, many investors and financiers are adapting existing tools or creating new kinds of financial mechanisms that advance sustainability. In the past few years, climate-aligned bonds (including green bonds) have been rapidly increasing, with the global market growing to US$1.45 trillion in 2018, with $400 billion in the Asia-Pacific region.[21] China represents the single largest market for green bonds (USD 189 billion by 2018), with both commercial banks and policy banks issuing these instruments. Among the MDBs, EIB and the World Bank Group issued the first green bonds in 2007-8, joined by EBRD (in 2010), and ADB (2015). SDG and other labelled bonds are also increasing, although the take-up is yet limited in Asia. World Bank issued an SDG equity-linked bond in 2017[22]. Commercial banks including HSBC and ANZ have also followed this trend by introducing their SDG

[20] IFC, Green Finance: A Bottom up approach to track existing flows, 2017

[21] https://www.climatebonds.net/files/reports/cbi_sotm_2018_final_01d-web.pdf

[22] IISD. World Bank Launches SDG-Lined Bonds. http://sdg.iisd.org/news/world-bank-launches-sdg-linked-bonds/

Bond Framework in 2017 and 2018.[23] Inter-American Development Bank is working on a gender bond. Although the labelled bond market yet represents only a tiny fraction of the USD 90 trillion global bond market, there are positive signs of systemic change and harmonisation with emergence of various standards and third party evaluators, such as Climate Bond Standards by the Climate Bonds Initiative, Green Bond Principles by ICMA, various standards for ESG integrated/enhanced/filtered products in various forms (bonds, funds, ETFs) and third-party ESG evaluators.

In these cases, MDBs can play an anchoring role and have been helping to develop, test, and scale these models. MDBs were pioneers in the green bond market, and S&P research[24] suggested that MDBs will continue to be an attractive asset class ESG investors given their crucial role in the development and issuance of specialised green and social bonds, as well as their ESG-compatibility based on their unique public policy mandates. AIIB's Asia ESG Enhanced Credit Managed Portfolio approved in 2018 is a good example, by making investments to show track records as a proof of concepts. AIIB established the Portfolio with an initial commitment of USD 500 million, where an asset manager will be assigned to invest in corporate bonds and green bonds in core infrastructure sectors and infrastructure-related productive sectors. The Portfolio aims to serve as a proof of concept that promote sustainable infrastructure as an asset class, so over time mobilise other like-minded investors to join in and create a sustainable debt capital market in Asia.

Meanwhile, blended finance seeks to address the scale problem from "billions to trillions" by developing private sector markets, fostering innovation, and crowding in private finance in some of the most challenging settings. MDBs and DFIs are important actors both as facilitators and using their own finance. In 2017, they financed over USD 8.8 billion, which included USD 1.2 billion concessional financing, USD 3.9 billion of MDB/DFI's own resources, and USD 3.3 billion private sector finance[25]. Infrastructure represented the largest destination of these funds, especially for climate-related projects. Dedicated blended facilities for sustainable infrastructure are also emerging in Asia. for example, ADB has launched the Green Finance Catalysing Facility, a USD 1 billion facility, to catalyse blend of financing, generate a pipeline of bankable green infrastructure projects, and providing project development and structuring support.[26]

Harmonisation of investment standards become critical as the scale and frequency of sustainable finance flow grows at both national and international levels. For example, the People's Bank of China and other ministries

[23] For more information, see: HSBC SDG Bond Framework at https://www.hsbc.com/-/media/hsbc-com/investorrelationsassets/fixedincomesecurities/green-bond-reports/pdfs/171115-hsbc-sdg-bond-framework.pdf. ANZ SDG Bond Framework at: http://debtinvestors.anz.com/file/2617/download?token=KR2Ellg3
ANZ SDG Bond is a five-year fixed rate bond distributed mainly to European institutional investors.
[24] S&P (2018) Can Multilateral Lending Institutions Support Rising Demand In The Green And Social Bond Markets
[25] DFI Working Group on Blended Concessional Finance for Private Sector Projects, Joint Report, October 2018 Update
[26] For more information, see: https://www.adb.org/publications/green-finance-catalyzing-facility

and commissions have been jointly working on green finance standards under Financial Industry Standardisation System Construction Development Plan (2016–2020), to develop product standards, information disclosure standards and green credit rating standards for financial institutions. This will enable comparison across products/institutions and better accounting. An example at the global level is Climate Bond Initiative's work on harmonising green bond standards and taxonomies to make easier cross-border investment on green bonds.

4. Chinese companies' role in sustainable infrastructure finance

In the infrastructure field, there is growing trend that technically competent and financially strong construction companies from emerging economies such as China, Korea, Malaysia, Turkey, and others are moving up the value chain from Engineering Procurement Construction (EPC) contractors to investors, or vice-versa, investors are moving downstream as operators.

Chinese companies are the largest players in this trend, in line with the Belt and Road Initiative, and so merit particular attention. Chinese companies' businesses grew rapidly in terms of both EPC and outward foreign direct investing (OFDI). In 2008 China's OFDI (excluding financial sectors) exceeded USD 50 billion for the first time, and it nearly quadrupled by 2016 to USD 196 billion. In 2017 China's OFDI declined for the first time in 15 years (down to USD 125 billion) as a result of restrictive policies in reaction to significant capital outflows during 2015-2016, but still ranked third globally after the US and Japan.[27] In 2016, Chinese contractors signed new contracts worth of USD 244 billion - which was a quarter of the total new contract value of global infrastructure projects that year (USD 1.05 trillion).[28] According to the ENR statistics for 2018, 69 Chinese companies have been on the list of top 250 international contractors and accounting for almost 31% of infrastructure construction projects in Asia.[29]

Chinese companies' growing role in infrastructure financing gives them a decisive opportunity to accelerate the transition to sustainability, though many are only at the beginning of this transition. However, emerging policy frameworks around the BRI are creating a growing imperative to rapidly converge on higher sustainability standards.

[27] UNCTAD (2018) World Investment Report 2018, United Nations Conference on Trade and Development
[28] DBS (2017) One Belt, One Road, Moving Faster Than Expected, DBS Asian Insights, No. 49, September 2017
[29] Engineering News-Record (ENR) Top 250 international contractors in 2018. Asian market here refers to both Asia and Middle East as per the ENR definition. The Chinese companies refer to the Chinese international contractors. Data source is ENR top 250 international contractors in 2018.

Over the years, the Chinese government has promulgated a host of regulations, guidelines, and frameworks. Domestically, *Green Credit Guidelines*, introduced in 2012, set out how banks should integrate environmental and social considerations in their organisational structures and through the lending cycle. In 2014, the China Banking Regulatory Commission issued *Key Performance Indicators for Implementing Green Credit* and began requiring banks to submit self-assessments of their performance against these KPIs. While these reports are not public, independent studies have found challenges in implementation. For overseas investment, an array of regulations governing China-based lenders overseas investments have been largely voluntary, encouraging best practices. There are signs of change. For example, the Green Investment Principles launched at the 2019 Belt and Road Forum could provide a framework for more specific operational requirements.[30]

Standards aside, the extent to which individual institutions and regulators are guided by these policies in practice has not been systematically documented. China-based policy banks and commercial banks also have policies and procedures around environmental and social safeguards. However, the details of these rules and mechanisms are not publicly available.

Regarding finance, Chinese policy banks like CDB and CHEXIM, and major commercial banks, have also not published aggregated statistics on their overall international sustainability lending, including in sub-categories like climate finance or renewable energy. An independent analysis calculated that CDB and CHEXIM invested 5.8% of overall power generation financing in non-hydro renewables over the period 2005-2017, compared to 35.6% for the WB. This figure rises to 43.9% if hydropower is included as well.[31]

MDBs have an important role to play as partners to emerging infrastructure investors from China and other emerging economies.[32] Chinese companies with EPC capabilities and financial prowess now have greater demand for, and will benefit from, the partnership with global financiers, especially with MDBs to apply higher standards and direct the financing towards sustainable industries. Meanwhile MDBs should see them with potential to be crowded in for additional financing and explore new modalities of collaboration.

There are also challenges. AIIB conducted interviews with major Chinese construction companies with active OFDI and found that most of these companies are not fully aware of the comparative advantages and value addition of working with MDBs. According to a joint report (2015) published by UNDP and Chinese Ministry

[30] For more information on the Principles, see: http://www.greenfinance.org.cn/displaynews.php?id=2535

[31] Lihuan Zhou, Sean Gilbert, Ye Wang, Miquel Muñoz Cabré, and Kevin P. Gallagher. "Moving the Green Belt and Road Initiative: from Words to Actions." World Resources Institute, November 2018.

[32] The official report on the BRI issued at the April 2019 Belt and Road Forum noted, "In fulfilling its own purposes and missions, the bank has become one of the key multilateral platforms for building the Belt and Road, along with other multilateral development banks." See: http://global.chinadaily.com.cn/a/201904/23/WS5cbe5761a3104842260b7a41_4.html

of Commerce, only 25 percent of the 300 companies studied have experience in working with international financier institutions including the foreign commercial banks. While companies recognise MDBs' high environment and social standards, they are less clear in how to implement these standards from sponsors' perspective and the associated cost increase. Companies also hope that MDBs could better communicate their value addition in terms of political risk mitigation, E&S issue consultation and project financing advisory. In addition, few companies have realised that implementing high E&S standards could help facilitate access to international financing resources.

Efforts are emerging to address the challenge. Center for International Knowledge on Development (CIKD), the government's main think tank established to promote sustainable development, has been mobilising Chinese institutions, international organisations, and BRI countries to hold open dialogue on rules and standards. The International Coalition on Greening the BRI, launched at the April 2019 Belt and Road Forum, provides an additional platform for learning and collaboration. Industry-level mobilisers play a critical role in translating principles into concrete actions applicable in implementation, raising the awareness, developing industry-wide performance standards, and building a pool of expertise through capacity building (Box 1).

Box 1. China International Contractors Association (*CHINCA*)
Implementing standards through industry-level coordination

Many Chinese construction companies with high-quality technical and engineering capacities have been moving upstream and become themselves investors in large infrastructure projects. As they invest internationally, they are also increasingly interested in and willing to adopt high ESG standards to complement their traditional technical and engineering strengths.

The China International Contractors Association (CHINCA) has been at the forefront of the effort to promote sustainability concept to Chinese companies. CHINCA has more than 1,500 members including infrastructure investors, contractors, and other service providers engaged in international infrastructure and construction projects.

In 2017, CHINCA issued *Guidelines of Sustainable Infrastructure for Chinese International Contractors* to guide companies to fund, design, build and operate infrastructure projects sustainably. The Guidelines incorporated concepts and views from recognised international standards, such as Envision, SuRe, IFC Performance Standards, as well as domestic laws and rules on environmental protection and corporate social responsibility in China.

5. Driving sustainability across the "regime complex" for infrastructure in Asia: AIIB as catalyst and orchestrator

As more and more MDBs, policy banks, commercial banks, contractors, and governments, both inside and outside the region, work on sustainable infrastructure in Asia, a large number of partnerships and frameworks have emerged to promote collaboration. These include regional frameworks like the International Coalition on Greening BRI or Green Investment Principles, mentioned above, as well as global standards like the UN Principles for Responsible Investment, the Equator Principles, UNEP Finance Initiative, or the International Development Finance Club. Many of these initiatives have complementary or overlapping goals and memberships. In addition, many institutions have created bilateral partnerships and MoUs on a range of issues, principally co-lending. The MDBs have been particularly active in this area.

International relations scholars describe dense webs of overlapping rules and institutions as a "regime complex." When rules and standards diverge, or when efforts are redundant, regime complexes can lead to inefficient fragmentation. Projects aim at different outcomes, different standards reduce opportunities for collaboration and economies of scale, and actors compete for the same resources. Under such circumstances, the array of overlapping and conflicting institutions and actors reduces overall effectiveness.

However, regime complexes need not lead to inefficient fragmentation. When actors follow common frameworks and interact efficiently, the proliferation of actors and institutions can enhance effectiveness by bringing additional resources to bear on governance challenges. Indeed, looking at the emerging collaborations, experts have called for stronger principles and frameworks around infrastructure in Asia.[33]

A key question for sustainable infrastructure investment in Asia is therefore: how can we make collaboration more efficient, effective, and ambitious?

One strategy the academic literature highlights as a solution to governance complexity is "orchestration."[34] Within a regime complex, orchestrators seek to mobilise a wide range of actors toward a shared objective. Orchestrators tend to be focal institutions. Their convening power, legitimacy, and technical expertise or resources allow them to help set the agenda and influence the strategies and behavior or a wide range of

[33] Simon Zadek, "The critical frontier: Reducing emissions from China's Belt and Road," Brookings Institution. April 25 2019.
[34] Abbott, Kenneth Wayne and Snidal, Duncan, International Regulation Without International Government: Improving International Organization Performance Through Orchestration (June 1, 2010). Available at SSRN: https://ssrn.com/abstract=1487129 or http://dx.doi.org/10.2139/ssrn.1487129

actors across an issue area. MDBs have often played this role, with the World Bank serving as one of the most active orchestrators in the international system.[35]

As a new MDB focused on infrastructure, based in Beijing and with an expansive member across Asia, Europe, and beyond, AIIB has unique characteristics that make the organisation well positioned to serve as a catalyst and "orchestrator" of the transition to sustainability in Asian infrastructure. If infrastructure investors currently follow a 'flying geese' pattern in their transition to sustainability, some of the leading "geese" can make it easier for others to follow.

Such a strategy could be developed through various channels, e.g. developing joint standards, convening cross-sector expert networks to diffuse best practices, or developing multi-stakeholder cooperative initiatives on key challenges. Moreover, orchestration need not occur only at the transnational or regional level. Developing national-level platforms that bring together key players in the infrastructure can help foment national coherence.

While AIIB is still a relatively new actor, its growing track record has already led it to effectively increase its engagement with other partners with respect to co-financing, development and implementation of ESG standards, and the development of innovative financial products. Moreover, the AIIB has become the secretariat of the Multilateral Cooperation Center for Development Finance, a coalition of MDBs along the BRI that will collaborate on information sharing, capacity building, and project preparation.[36] As the AIIB considers its strategic role going forward, AIIB has an opportunity to build on this trend to leverage its unique attributes.

[35] Abbott, Kenneth Wayne and Hale, Thomas, Orchestrating Global Solution Networks: A Guide for Organizational Entrepreneurs (April 4, 2014). Available at SSRN: https://ssrn.com/abstract=2431956 or http://dx.doi.org/10.2139/ssrn.2431956

[36] The MoU establishing the center is available here: https://www.aiib.org/en/about-aiib/who-we-are/partnership/_download/collaboration-on-matters.pdf