

SECTOR ASSESSMENT (SUMMARY): GREEN FINANCE

A. Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. **The People's Republic of China's green finance development.** Green finance is a subcategory of responsible and sustainable finance and deals primarily with improving the environment and climate change resilience (e.g., emission reduction and energy efficiency). Green finance promotes restructuring and modernizing traditionally polluting industries such as steel and cement. It internalizes environment and related social costs in commercial transactions to reflect their true costs and make them more bankable. In the People's Republic of China (PRC), the National Development and Reform Commission (NDRC), People's Bank of China (PBOC) (the central bank), China Banking and Insurance Regulatory Commission (CBIRC), and Ministry of Ecology and Environment are the agencies leading green finance work.¹

2. **The banking sector in the People's Republic of China.** The PRC's financial system has three regulators: the PBOC, which is in charge of monetary policy; the CBIRC, which is the banking and insurance industries regulator; and China Securities Regulatory Commission (CSRC), which is the securities industry regulator. The 21 largest commercial banks (comprising 3 policy banks, 6 state banks, and 12 joint stock banks) account for 58.3% of the total PRC banking sector assets. The 133 city commercial banks, 1,424 rural commercial banks, 782 rural cooperatives, and 1,622 village banks account for 25.9% of total PRC banking sector assets. Currently, the total demand for green finance was estimated to be \$350 billion in 2019.² Among the 21 largest commercial banks in the PRC, green finance reportedly reached an annual average of \$234 billion during 2013–2017.³ This has resulted in a \$116 billion (33.1%) financing gap. With the wide reach to local industries and manufacturers in the PRC, the city and rural commercial banks have unparalleled home market advantages to promote green finance. However, most of the city and rural commercial banks lack of the experience, knowledge, system, and capacity to promote green finance.

3. **Green bond development in the People's Republic of China.** Plans for a green bond market were announced by the government in 2013 as part of meeting the objectives of the 12th Five-Year Plan, 2011–2015 to transition to a low-carbon economy.⁴ Following the promulgation of the country's *Green Bond Endorsed Project Catalogue* in 2015,⁵ the PRC became a major issuer of green bonds, accounting for one-third of all global green bonds.⁶ In 2016, the PRC assumed the G20 presidency and led the first ever communiqué on green finance as a critical measure to support global sustainable growth. The same year, the State Council approved the

¹ In 2007, these four agencies jointly promulgated the first green finance regulation: Implementing Environmental Protection Policy to Reduce Credit Risk. Government of the PRC, Ministry of Ecology and Environment. 2007. *Opinions on Implementing Environmental Protection Policy to Reduce Credit Risk*. Beijing.

² China Association of Circular Economy. 2019. Publishing the 2019 PRC Green Finance Development Research Report. News release. 23 May.

³ Government of the PRC, CBIRC. 2018. *Statistical Report on 21 Banks' Green Finance Volume*. Beijing. The PRC's actual green finance volume is likely to be much lower if adopting an international definition (e.g., from European Union Sustainable Finance Taxonomy or Green Climate Fund) that excludes advanced fossil fuel-based technologies such as clean coal.

⁴ Government of the PRC, State Council. 2015. *The 13th Five-Year Plan for National Economic and Social Development, 2016–2020*. Beijing.

⁵ Green Finance Committee of China Society of Finance and Banking. 2015. *Green Bond Endorsed Project Catalogue*. Beijing.

⁶ Climate Bonds Initiative. 2016. *Bonds and Climate Change: The State of the Market in 2016*. London.

PBOC Guidelines for Establishing the Green Financial System to incentivize and promote green loans, green bonds, green funds, green insurance, and mandatory environmental information disclosure, among others.⁷ In 2017, the PRC launched the national carbon trading scheme, the world's largest carbon market, which accounts for more than one-third of the country's annual total carbon dioxide (CO₂) emissions. In terms of PRC's green bond issues, \$43 billion was raised in 2018, out of which \$31 billion (or 72% of the total issues) were aligned with international green bond definitions.⁸ In terms of the certified green bond issues in 2018, the PRC's \$31 billion (or 14% of total global issues) ranked second behind the United States' \$34 billion (15% of total global issues). The issuance of green bonds is concentrated on a limited number of progressive financial institutions such as Industrial Bank Company Limited, which issued \$10 billion in certified green bonds in 2018.

4. **Key elements of green finance.** ADB has identified four key areas to support green finance development in the PRC, and to specifically improve green finance lending capacities of city and rural commercial banks:

- (i) **Green finance taxonomies.** These provide specific definitions on what is “green” to ensure targeted environmental benefits and prevent greenwashing (i.e., labeling unqualified projects as green). The PRC's taxonomies are complex in light of multiple existing standards from the NDRC, PBOC, and CBIRC (para. 5).
- (ii) **Information disclosure.** The information disclosure requirement would improve regulatory supervision and public monitoring of the intended investments and/or financing and their environment benefits (para. 6).
- (iii) **Incentive structure.** This includes government and public sector support to promote green finance (para. 7).
- (iv) **Green finance products.** Commercial banks need to improve their capacities to develop green finance products to meet the increased market demand (para. 8).

5. **Green finance taxonomies.** There are three domestic green finance standards: (i) NDRC: Green Industry Guidance Catalogue (2019), (ii) PBOC: Green Lending Statistical Method (2019), and (iii) CBIRC: Green Finance Statistical Method (2013). The 2019 NDRC guideline is by far the most comprehensive, including 6 categories, 30 subcategories, and 211 industry sectors. The PBOC Green Lending Statistical Method (2019) has almost identical requirements as the 2019 NDRC guidelines, except in its further detailing of (i) green product trade and commerce, (ii) green consumer credit, and (iii) certain green industries such as new energy vehicles and smart cities. The CBIRC standard includes 12 categories, including recycling, green building, green transportation, and habitat restoration. This is expected to be promulgated in 2020. In addition, there are a number of international standards, including the European Union Sustainable Finance Taxonomy and the Green Climate Fund Investment Framework.⁹ If green bond issues are envisaged, in addition to the PBOC Green Bond Project Catalogue (2015), the International Capital Market Association's Green Bond Principles are a global standard.¹⁰ A major difference between international and domestic standards is the use of fossil fuel-based technologies. International green finance standards exclude fossil fuel technologies, particularly solid fossil fuels, but the NDRC guidelines and the Green Lending Statistical Method still retain

⁷ People's Bank of China. 2016. *Guidelines for Establishing the Green Financial System*. Beijing.

⁸ Climate Bonds Initiative and China Central Depository and Clearing Company. 2019. *China Green Bond Market 2018*. London.

⁹ European Union Technical Expert Group on Sustainable Finance. 2019. *Taxonomy Technical Report*. Brussels. and Green Climate Fund. 2018. *Investment Framework*. Incheon.

¹⁰ Loan Market Association. 2018. *Green Loan Principles: Supporting Environmentally Sustainable Economic Activity*. London; and International Capital Market Association. 2018. *Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds*. Paris.

such items as clean coal as green financing.

6. **Information disclosure.** In 2017, the Ministry of Ecology and Environment began to request all polluting industries and businesses to disclose the details of their emissions and other discharges. Based on the Government of the PRC's Guidance on Building a Green Finance System (2016),¹¹ the PBOC and CSRC gradually enforced publicly listed companies to disclose their environmental compliance information by 2020. Based on the Interim Guidance on Green Bond Certification (2017),¹² the PBOC and CSRC also enforced the requirement for green bond issuers to disclose their environmental compliance information. A number of commercial banks in the PRC, including the Industrial and Commercial Bank of China, Industrial Bank, Bank of Huzhou, and Bank of Jiangsu, have voluntarily begun to disclose all relevant environmental information, such as CO₂ reduction levels, increased green areas, areas of treated rivers and river basins, volumes of recycled materials and wastewater, and/or capacities of public transportation. Any noncompliance are also reported. In addition to these domestic disclosure requirements, the Global Report Initiative describes the international standards.¹³

7. **Incentive structure.** In 2016, the PBOC began to use macro-prudential assessments to measure commercial banking sector's performance and systemic risks, based on 17 indicators in 7 areas: leverage, assets and liabilities, asset quality, pricing, liquidity, external debt risk, and credit policy. In the credit policy component, the PBOC measures commercial banks' policy lending quality, such as the development of targeted lending program in microcredit to farmers so as to address the government's lending priorities. To promote green finance, the PBOC also includes qualified green finance assets in the credit policy component of macro-prudential assessment, thereby incentivizing commercial banks to further expand green finance. In addition, the PBOC's medium-term lending facility provides commercial banks with low-cost funds with terms from 3 months to 1 year to help ease their liquidity. To obtain such funds, commercial banks need to provide high-quality collateral, including treasury bonds and notes and other high-quality commercial bonds. Currently, the PBOC is considering including qualified green finance assets in the medium-term lending facility framework. The PBOC's standing lending facility, pledged supplementary lending, and credit policy refinancing support may also include qualified green assets. Finally, the PBOC is considering a proposal to include green finance assets in (i) the calculation of commercial banks' capital risk weights, and (ii) structured securitization to unlock additional value tied up in them to further expand green lending.

8. **Green finance products.** In addition to loans to qualified green subprojects, green finance products include green bonds, asset-backed securities, exchange traded funds, insurance, and carbon finance. Guarantee products can also be developed to enhance the attractiveness of green finance projects.

9. **Green finance pilot zone development.** In June 2017, the State Council selected Guangdong province, Guizhou province, Jiangxi province, Xinjiang Uygur Autonomous Region, and Zhejiang province as the PRC's five green finance reform and innovation pilot zones. To deepen the green finance reform process, in December 2019, the State Council selected an additional three provinces (Fujian province, Gansu province, and Zhejiang province) and four areas (Longyan city and Ningde city of Fujian province, Lanzhou New Area of Gansu province,

¹¹ The State Council. 2017. *Guidance on Building a Green Finance System*. Beijing.

¹² People's Bank of China and China Securities Regulatory Commission. 2017. *Guidelines on Green Bond Certification*. Beijing.

¹³ The GRI helps businesses and governments worldwide understand and communicate their impact on critical sustainability issues through its sustainability reporting standards, which represent global best practice for reporting on economic, environmental, and social issues. Available: <https://www.globalreporting.org>.

and Ningbo city of Zhejiang province) as the new green finance reform pilot zones. The Lanzhou New Area is the PRC's fifth new area and is modeled after the preceding four: Shanghai Pudong New Area, Tianjin Binhai New Area, Chongqing Jiangxin New Area, and Zhejiang Zhoushan Archipelago New Area. Since the green finance pilot zones started in 2017, local banks in these pilot zones have scaled up their green lending. The PBOC concluded that the total green finance volume in the first five pilot zones was CNY260 billion (\$37 billion) as of March 2018.

2. Government's Sector Strategy

10. In the 13th Five-Year Plan, 2016–2020 (footnote 4), on a national level, the Government of the PRC promotes a paradigm shift from gross domestic product-oriented development to a development model centered on the quality of growth. To support this shift and the massive investments required, the Government of the PRC has launched several strategic initiatives on environmental protection and climate change to build a foundation for strong supporting policies and regulatory frameworks. The State Council enacted a work plan for controlling greenhouse gas emissions under the 13th Five-Year Plan that sets tasks and measurable and binding greenhouse gas emissions control goals by 2020.¹⁴ The associated policy, the National Plan on Climate Change, 2014–2020 makes addressing climate change a major national strategy and demands integrating the requirements for mitigation and adaptation into the country's economic and social development.¹⁵ In 2015, the Government of the PRC announced new CO₂ emissions reduction targets, demonstrating leadership before signing the Paris Agreement at the 21st Annual Conference of Parties.¹⁶ The Nationally Determined Contributions provide details on the PRC's commitment to climate change actions by 2030.¹⁷

11. Under the 13th Five-Year Plan, 2016–2020 (footnote 4), at a regional level, the State Council also issued the Beijing–Tianjin–Hebei (BTH) Coordinated Development Plan in 2015 to address air quality concerns in the greater BTH region. The Xingtai City Master Plan, 2016–2030 promotes business transformation and technology upgrading of major industries in Xingtai city and surrounding areas by developing, for example, energy efficient replacement capacities to existing polluting production lines.¹⁸ In 2018, Hebei province also developed its 3-year “Winning the Battle for Blue Sky” plan to significantly strengthen the enforcement of compliance with environmental laws and regulations in the province.¹⁹

B. Major Development Partners: Strategic Foci and Key Activities

12. Development partners' support to green finance in the PRC is still at an initial stage. The Asian Development Bank (ADB) has provided an innovative program in 2019 to establish the Shandong Green Development Fund to promote green investments. The project will leverage ADB's \$100 million to attract cofinancing and market finance to improve the environmental conditions in Shandong Province.²⁰ The cofinance includes €70 million from Agence Française de Développement and €100 million from German Development Cooperation through KfW. An

¹⁴ Government of the PRC, State Council. 2018. *Three Years' Action Plan to Winning the Battle for Blue Sky* (Chinese language). Beijing.

¹⁵ Government of the PRC, NDRC. 2014. *National Plan on Climate Change, 2014–2020* (in Chinese). Beijing.

¹⁶ United Nations. 2015. *The Twenty-First Session of the Conference of the Parties (UNFCCC)*. Paris.

¹⁷ Intended Nationally Determined Contribution. 2014. *People's Republic of China*. Bonn.

¹⁸ Xingtai City Government. 2020. *Xingtai City Master Plan, 2016–2030* (Chinese language). Xingtai.

¹⁹ Hebei Provincial Government. 2018. *Three Years' Action Plan to Winning the Battle for Blue Sky* (Chinese language). Shijiazhuang.

²⁰ ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Shandong Green Development Fund Project*. Manila.

additional finance of \$100 million from the Green Climate Fund is expected to be approved in 2020-2021. In addition, the ADB has developed a comprehensive assistance program to improve the air quality in the greater BTH region (also see para. 14).²¹ Additional green finance projects from the ADB and other development partners are provided in Table 1.

Table 1: Major Development Partners

Development Partner	Project Name	Year of Approval	Amount (million)
ADB	Shandong Green Development Fund Project (Additional Financing from GCF)	2020/2021	\$100
	Shandong Green Development Fund Project	2019	\$100
	Air Quality Improvement in the Greater Beijing-Tianjin-Hebei Region-Henan Cleaner Fuel Switch Investment Program	2019	\$300
	Air Quality Improvement in the Greater Beijing-Tianjin-Hebei Region-Regional Emission Reduction and Pollution-Control Facility	2017	€428
	Air Quality Improvement in the Greater Beijing-Tianjin-Hebei Region-China National Investment and Guaranty Corporation's Green Financing Platform Project	2016	€458
	Shaanxi Accelerated Energy Efficiency and Environment Improvement Financing Project	2016	\$150
	Shandong Green Development Fund Project	2019	€70
AFD	Green Credit Line with Bank of Nanjing	2018	€100
	Green Credit Line II	2009	€120
	Green Credit Line I	2006	€60
EIB	China Climate Eximbank Framework Loan	2017	€300
	China Climate Change Framework Loan II	2010	€500
	China Climate Change Framework Loan	2006	€500
IFC	Jiangsu Financial Leasing Co., Ltd. Green Financing Package	2019	\$225
	China Utility-Based Energy Efficiency Finance Small and Medium Enterprise Program	2011–2014	\$558
	China Utility-Based Energy Efficiency Finance Program II	2007	\$170
German Development Cooperation through KfW	Shandong Green Development Fund Project	2019	€100
World Bank	Green Urban Financing and Innovation Project	2019	€150
	China Renewable Energy and Battery Storage Promotion Project	2019	\$300
	Green Urban Financing and Innovation Project	2019	\$200
	Innovative Financing for Air Pollution Control in Jing-Jin-Ji	2016	\$500

ADB = Asian Development Bank, AFD = Agence Française de Développement, EIB = European Investment Bank, GCF = Green Climate Fund, IFC = International Finance Corporation.

Source: Asian Development Bank.

²¹ The greater BTH region includes Beijing and Tianjin municipalities; Hebei, Henan, Liaoning, Shandong, and Shanxi provinces; and Inner Mongolia Autonomous Region.

C. Institutional Arrangements and Processes for Development Coordination

13. The project team has leveraged ADB's prior involvements in the BTH program (see para. 14) and Shandong Green Development Fund Project to identify key opportunities and challenges in the PRC's green finance area. The project team also conducted consultations with key development partners in green finance development in the PRC, including Agence Française de Développement and German development cooperation through KfW, to identify areas of cooperation. The project team further consulted the PBOC, the CBIRC, the Tsinghua University's Research Center for Green Finance Development, local governments in Lanzhou New Area (a green finance pilot zone), and leading green finance commercial banks such as Bank of Huzhou to gauge green finance development in the PRC. The interactions with the Tsinghua University's Research Center for Green Finance Development, led by Dr. Jun Ma who is a leading green finance figure in the PRC, has greatly helped the project design.

D. ADB Experience and Assistance Program

14. ADB has provided support to BTH air quality improvement through a series of programs and projects. The first policy based loan, approved in 2015 for \$300 million, strengthened policy reforms and regulatory capacities in Hebei province.²² The second loan, approved in 2016 for \$500 million, facilitates climate finance through small- and medium-sized enterprises.²³ The third loan, approved in 2017 for \$499 million, deploys advanced technologies to reduce air pollution from large emitters in the energy, transport, and urban sectors.²⁴ The fourth project, approved in 2018 for \$400 million, helps Shandong province (adjacent to Hebei) shift to cleaner and more energy efficient heating and cooling systems.²⁵ The fifth project, approved in 2019 for \$300 million, helps Henan Province (also adjacent to Hebei) convert its primary energy source from coal to natural gas.²⁶ Of the \$3.1 billion ADB financing package planned during 2015–2021, these projects contribute to \$2.0 billion (64% of the total). The remaining \$1.1 billion will be programmed complementarily during 2020–2021. In 2019, the Shandong Green Development Fund Project in the amount of \$100 million piloted an innovative investment funds' approach by leveraging mechanism to catalyze private, institutional, and commercial capital for the development of climate-positive infrastructure and business in Shandong province.²⁷ The official cofinancing included €70 million from Agence Française de Développement and €100 million from German Development Cooperation through KfW. The additional financing of \$100 million funded by the Green Climate Fund²⁸ is expected to be approved by the ADB in 2020.

²² ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Policy-Based Loan to the People's Republic of China for the Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program*. Manila.

²³ ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—China National Investment and Guaranty Corporation's Green Financing Platform Project*. Manila.

²⁴ ADB. 2017. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Regional Emission Reduction and Pollution-Control Facility*. Manila.

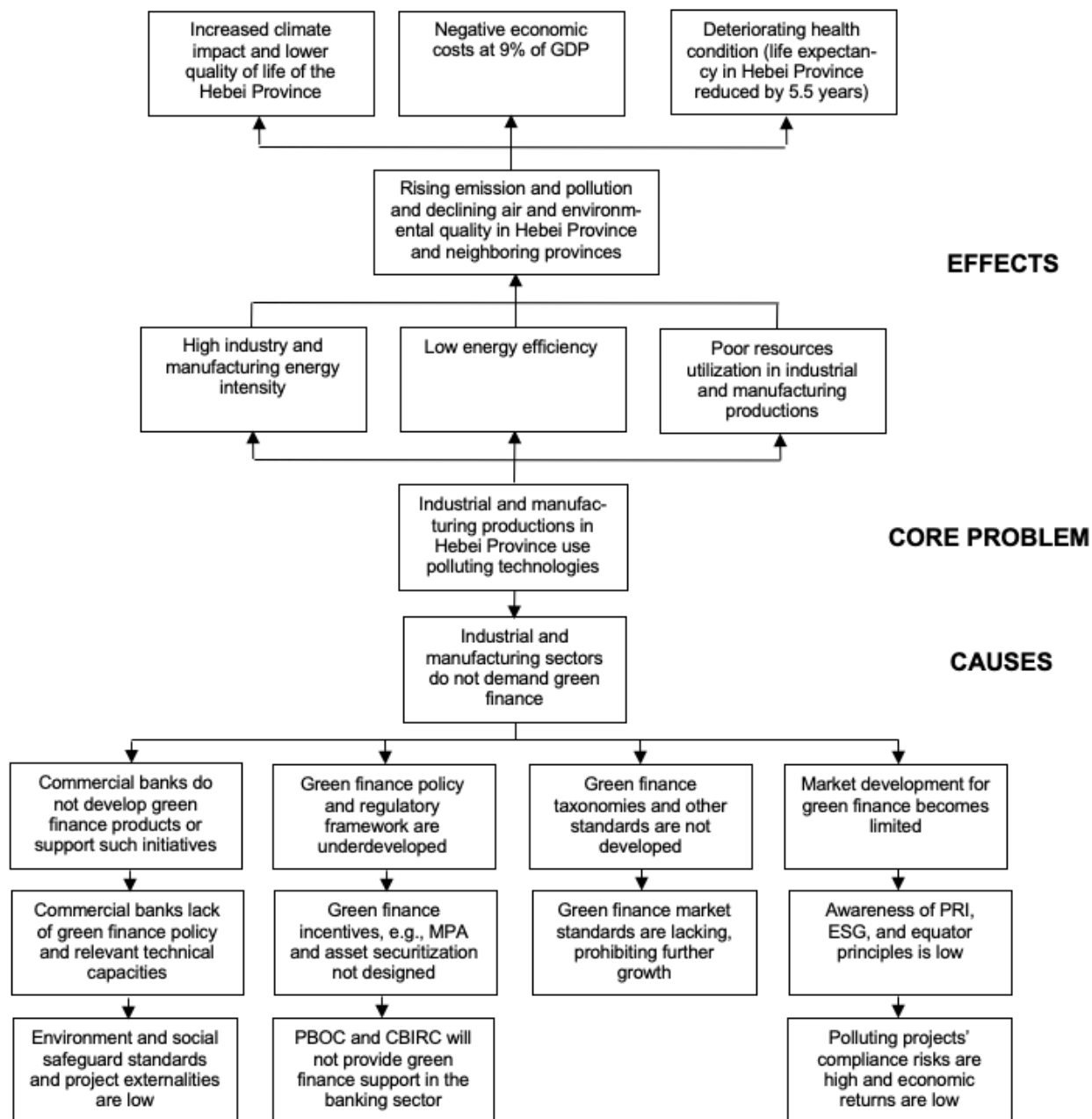
²⁵ ADB. 2018. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Technical Assistance Grant to the People's Republic of China for the Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Shandong Clean Heating and Cooling Project*. Manila.

²⁶ ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Proposed Results-Based Loan to the People's Republic of China for the Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Henan Cleaner Fuel Switch Investment Program*. Manila.

²⁷ ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Shandong Green Development Fund Project*. Manila.

²⁸ Administered by ADB.

Problem Tree for Green Finance



CBIRC = China Banking and Insurance Regulatory Commission; ESG = environment, social, and governance; GDP = gross domestic product; MPA = macro-prudential assessment; PBOC = People's Bank of China (Central Bank); PRC = People's Republic of China; PRI = principles of responsible investment.