SECTOR ASSESSMENT (SUMMARY):
URBAN AND URBAN-RURAL DEVELOPMENT, FINANCE, AND INDUSTRY AND TRADE

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Urbanization has been a key driver of development, and urban economies have been a key driver of the economic growth miracle of the People's Republic of China (PRC) since the country began implementing its reform policy in 1978. The PRC's urbanization ratio increased from 19.4% in 1978 to 56.1% in 2015, and the urban population rose to about 771.6 million in 2015. Hundreds of millions of people have been lifted out of poverty, and urban development has generated well-being for a growing middle class. The PRC's northeast at large, east Heilongjiang, and the project cities (Hegang, Jixi, Qitaihe, and Shuangyashan) with their coal-based economies had for many years benefited from the coal resources and the PRC's demand for energy during the high-growth period of industrialization and urbanization. However, a collapse in coal prices in 2013, and new policies mandating a move toward an ecological civilization and away from coal as an energy source, have made the project cities suffer from their coal dependence and limited alternative sources of income.

2. Heilongjiang Province ranked number 20 of the 31 provinces in the PRC in both gross domestic product (GDP) and per capita GDP (2014), and the economies of the project cities lagged even the provincial averages. Per capita income in Heilongjiang was 16% below the national average, and the project cities accounted for 14.1% of the province's population but for only 9.5% of its GDP (2014). The economies of the project cities grew rapidly before 2012 but experienced a severe slowdown in 2013 and 2014. Hegang had negative GDP growth in 2013 and 2014, Qitaihe in 2013, and Shuangyashan in 2014. Per capita GDP was CNY25,400 in Hegang (2015), CNY28,033 in Jixi (2014), CNY25,123 in Qitaihe (2015), and CNY28,964 in Shuangyashan (2015). This is also the result of an economy based on resource extraction with little value added locally. Such a narrow economic base requires urgent economic diversification. In addition, economic cooperation between the project cities is lacking—they are not taking advantage of possible economic cluster development. Other hurdles to economic development are the lack of access to finance for small- and medium-sized enterprises (SMEs), and cities' peripheral location with end-of-the-road transport infrastructure and 6 months of very cold winter. The economic challenges also contributed to a population loss of 4.7% between 2010 and 2015; in 2015, the population of the project cities totaled 5.2 million, or 14.1% of the population of Heilongjiang Province. Despite an above-average urbanization rate of 66% in the project cities (Heilongjiang: 49%; PRC: 56.1%), the cities are crippled by high unemployment, urban poverty, and the out-migration of younger and more qualified people, which leaves behind an aging society.

3. Urbanization and industrialization in the PRC have also caused massive environmental damage in many areas. This increasingly limits the country's options for sustainable urbanization. Soil, groundwater, surface water, air, and other forms of pollution have reached levels well beyond World Health Organization standards and caused increases in related diseases in many large cities. Environmental pollution and degradation have been significant in the old industrial base of the northeast and in Heilongjiang. The project cities suffer environmental loss, degradation, and pollution caused, in particular, by coal mining and related industries. Their heating supply is inefficient, and buildings sustain energy losses in winter. Because the cost of land in the relatively sparsely populated territories of the project cities is low, land use models have been inefficient

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1 This summary is based on the detailed sector assessment. Available on request.
and awareness of environmental loss has been minimal. This led to land being wasted by dumping waste rock, sludge from coal-washing plants, and other residual waste from coal-related industries. The situation reflects the overall trend of land use inefficiency in the PRC. Since 1978, the urban population has tripled while urban areas have increased in size by more than five times.\(^3\) Much-needed environmental protection across all sectors is difficult because governments are too heavily departmentalized and urban environmental services are generally of poor quality. This is also true of the project cities.

4. The PRC’s achievements in the construction of urban infrastructure were very significant between 2000 and 2012—urban water supply increased from 63.9% to 97.2%, urban wastewater treatment expanded from 34.3% to 87.3%, and the urban per capita road area more than doubled from 6.1 square meters to 14.4 square meters. However, in the lesser-developed northeast and the project cities, the demand for urban infrastructure and services remains high: investment in adequate infrastructure has been lacking since the 1990s, when the large state-owned enterprises were no longer required to provide infrastructure and services to their communities. To provide their current residents with proper infrastructure and services, and to stop and reverse the trend of out-migration and population loss, the cities need to invest heavily—not least in sustainable improvements to the environment. They need a change of image away from “coal-dependent and dirty cities” to “clean, green, and economically and culturally vibrant urban centers.” The project cities need to urgently invest in water supply, wastewater management, sanitation, drainage and stormwater management, flood protection and environmentally sound river rehabilitation, urban transport, public transport, non-motorized transport improvements, and other public services such as higher education.

5. Integrated river rehabilitation and flood risk management. Rivers and lakes in the project cities are prone to flooding and suffer point source and non-point source pollution from coal-washing plants, other industrial, domestic wastewater, and agriculture-related pollution. Some of the domestic wastewater comes from discharge of sewage into the combined sewer and drainage networks and some end-of-pipe discharges. Impacts from mining and related activities, such as waste-rock dumping are creating environmental hazards in the river systems and changing hydraulic flow characteristics.

6. Water supply. Water supply in the project cities is hampered by poor quality and quantity, most notably in Jixi, Qitaihe, and Shuangyashan. Their per capita water supply volume is less than the provincial and PRC averages. Some residents use groundwater wells to supplement water supply, which may put their health at risk because mining activities can affect the quality of the groundwater source. This health hazard is particularly pronounced in Jixi, where 40% of coal-mining activities occur in areas that suffer water shortages and which therefore resort to groundwater for additional water supply.

7. Wastewater management. The sewerage networks in Hegang, Jixi, and Shuangyashan are in urgent need of expansion, as is the treatment of industrial wastewater, especially in Hegang and Jixi. Hengshan District in Jixi has a wastewater collection rate of less than 40% because of pipe damage and subsidence from underground mining activities. The wastewater treatment plant currently does not work at capacity due to lack of wastewater delivered to the plant.

8. District heating. The project cities are exposed to severe winters and require district heating systems that can cope with the changing conditions, whereas the current systems suffer from corrosion and leakage, leading to inefficient heat transfer. In Hegang, the situation is

\(^3\) From 2000 to 2011, the built-up urban area increased by 76.4% while the urban population grew by 50.5%, and land use change from farmland to urban land rose from 66,000 square kilometers to 89,000 square kilometers.
compounded by deteriorating distribution stations and monitoring wells.

9. **Sustainable urban transport and roads.** The public transport service in the project cities is inadequate and inconvenient, and the bus shelters are not suited to the cold winter weather. Buses have no priority lanes and are delayed by traffic congestion, and bus stops are unsafe for passengers and pedestrians. The diesel bus fleet is aging, especially in Qitaihe. Pedestrian sidewalks often are too narrow, pedestrian crossings are often lacking, and people with disabilities have no access at all. Many roads in the project cities need upgrades and rehabilitation, and some key road links are missing. Many intersections are inefficient and unsafe. Traffic management and signal control is dated. In addition, key roads and associated infrastructure in non-coal industrial parks are missing, making non-coal diversification very difficult.

2. **Government’s Sector Strategy**

10. Recent PRC policies are promoting a fundamental shift from GDP-growth-oriented development to development centered on quality. The PRC’s Thirteenth Five-Year Plan (2016–2020) and the National New-Type Urbanization Plan (2014–2020) emphasize that continued urbanization along with industrialization, development of information and communication technology, and agricultural modernization will be the PRC’s main pillars for economic and social progress. Both documents call for (i) environmental protection and management, building an “ecological civilization” to promote sustainable development and reduce costs from resource depletion and environmental damage; (ii) increased energy conservation, emission reduction, and low-carbon development to help mitigate climate change; (iii) socially inclusive urban and urban-rural development to reduce income inequality, strengthen social protection, and improve rural incomes; (iv) reform of the hukou system and an increase in the number of urban hukou holders from 36% in 2013 to 45% by 2020; (v) institutional reform, fiscal and tax reform, and private sector participation; and (vi) strengthening SMEs and their access to finance. The plans also aim at significant investments in infrastructure and services and greater environmental protection. They further promote coordinated city cluster development, and four main functional zones ranging from prohibited activity no-build zone to intense urban development zone. Many of these policies are very relevant to the project cities and were considered in project planning and design.

11. The central government’s plans for the economic revitalization of the northeast demonstrate the importance of substantial national support for the northeast and the project cities. The northeast is planned to become a manufacturing base for advanced equipment, strategic base for technological equipment, and national base for new raw materials, modern agriculture, technological innovation, and research and development. The central government will increase transfer payments and provide fiscal support for social security, education, employment, and government-subsidized housing. It will set up investment funds for northeast industrial

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5 The new Environmental Protection Law (2014) also supports this, calling for rigorous environmental planning, management, education, pollution reduction, and enforcement.

6 The National Main Function Area Plan includes (i) intensive urban development regions, (ii) balanced urban and environment areas, (iii) protected sensitive areas and farmland (food security), and (iv) protected natural and cultural areas.

revitalization. The project cities are among the 126 prefectures in the plan for sustainable development of resource-based cities that will supply funds from national and provincial sources. The central government will support reform of state-owned enterprises; development of the private sector; exploration of the Russian Federation’s far east and infrastructure for cross-border cooperation; development of industry clusters dedicated to agricultural value chains, traditional Chinese medicine, high performance fibers, and high-end graphite deep processing; construction of industrial parks; manufacturing services; tourism; upgrade and expansion of railways, waterways, and international joint rail–water transport; reconstruction of shantytowns and isolated industrial and mining areas; and sustainable development of resource cities.

12. The Thirteenth Five-Year plans of the Heilongjiang Provincial Government and the project cities include mining remediation and environmental cleanup. Across the project cities, coal mining and related activities such as coal washing and waste-rock disposal resulted in impacts on the environment and the safety and health of people, and made land use planning challenging because of the proximity to urban and residential areas. The project cities have been implementing relocation and compensation programs for residents exposed to subsidence from mining. More than 60,000 households have already relocated, and another 22,000 are designated for relocation. Relocation has significantly improved the standard of living of these residents, removing risks to safety and properties from subsidence. Besides relocation, other efforts are needed to reduce potential risks associated with former mining sites. However, the cities have not recognized all pollution and other problems, and have no mining remediation plans in place.

3. ADB Sector Experience and Assistance Program

13. The Asian Development Bank (ADB) started lending to the PRC’s urban development activities in 1992. In recent years the focus has been on developing livable, green, and socially inclusive small- and medium-sized cities in the less-developed central, western, and northeastern regions of the PRC. By December 2016, ADB had approved 57 loans amounting to $6.8 billion, and 92 technical assistance projects totaling $61.4 million. The loans financed infrastructure and capacity development within urban master plans for water supply, wastewater management, solid waste management, central heating, urban transport, river and lake rehabilitation and flood risk management, wetlands, and open space protection. Technical assistance projects contributed to knowledge and policies on urban poverty reduction, urbanization strategies, industrial relocation, small-city and town development, land use efficiency, urban–rural environmental protection, urban environment indicators, stormwater management, water and wastewater tariffs, sludge treatment, solid waste management, and public participation. ADB implemented good practices that can be replicated. Examples include significant reduction of flood risk and pollution in the Songhua River Basin in Heilongjiang and Jilin.

14. Lessons from previous urban development projects were considered in project planning and design, including sustainable urban and economic development, integrated urban infrastructure planning, sustainable urban transport, integrated river rehabilitation, and flood risk management applying sponge-city principles. Innovative project features include the integration of private sector development, SME-finance, capacity development for SMEs, mining remediation planning, and pilot demonstration projects.

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9 Support of the western and central regions has been aligned with State Council of the PRC. 2000/2011. The National Strategy to Develop the Western Region. Beijing.
10 Includes urban development sector loans and technical assistance projects by ADB’s East Asia Department.
Problem Tree for Urban and Urban-Rural Development, Finance, and Industry and Trade

E F F E C T S

- Continued limits to access to sustainable urban mobility options, and to adequate urban infrastructure and services
- Continued population decline, loss of skilled labor, and continued loss of highly qualified college graduates
- Further reduced success in attracting and enabling finance for non-coal companies to add value and create jobs
- Reduced human and environmental health and safety, reduced urban livability and attractiveness of the project cities
- Increased environmental pollution and degradation and loss of biodiversity in the project cities

CORE DEVELOPMENT PROBLEM

- Decline of local economies that depend on coal mining and related industries; lack of diverse non-coal industries, competitive SMEs, and educated and skilled labor; coal mining took heavy toll on environmental and human health and safety; and poor living conditions with lack of basic infrastructure and services hinder sustainable urban development in Hegang, Jixi, Qitaihe, and Shuangyashan cities in East Heilongjiang subregion

C A U S E S

- Incomplete coverage and lack of basic municipal infrastructure and services, including utilities and sustainable and safe urban transport, are hindering urban and economic development
- Lack of capacity to effectively plan and implement programs on economic revitalization, industrial transformation, private sector finance and capacity to promote SME development, inclusive job creation, regional, and intercity economic cooperation
- Lack of integrated, adequate structural and non-structural measures for mining remediation and management, environmental infrastructure, and river and lake ecology and flood protection

- Lack of convenient public transport, bus lanes, and bus shelters, especially in winter
- Lack of adequate basic urban services, water supply, wastewater management, drainage, district heating
- Lack of access to finance, private investments in new industries, and SME capacity
- Polluted rivers from household waste, untreated wastewater, mining sediments, and farming chemicals
- Weak skills in environmental and mining remediation and management

- Inadequate road infrastructure, missing links, lack of proper maintenance, unsafe pedestrian sidewalks
- Unsanitary living conditions in some urban areas and risk of waterborne diseases
- Lack of alternative income sources and non-coal jobs, lack of SME competitiveness, capacity, and skills
- Damage from flooding rivers and increased risk of more severe flood events due to climate change
- Unsafe environment, heavy pollutants from coal mining and related industries, and subsidence

- Economy based on coal mining and related industries, loss of jobs and population, lack of infrastructure planning and investment, and environmental degradation and pollution from coal mining and heavy industry; unsafe and degraded environment, lack of public awareness for environmental protection and public health in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan

SMEs = small- and medium-sized enterprises.