

Comprehensive Transformation to Revitalize the People's Republic of China's Northeast

***Supporting Non-Coal Diversification, SME Development,
Environmental Cleanup from Mining Impact, and
Attractive Green and Clean Cities in Eastern Heilongjiang***

**Report on Background and Objectives of ADB Loan 3613 PRC:
Heilongjiang Green Urban and Economic Revitalization Project**

Lecture at AFDI Shanghai on 7 May 2018

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The Lecture

This lecture will introduce the challenges resource-based cities face and the response by ADB in strategically supporting local governments with much needed transformation and economic, social and environmental recovery of four cities in East Heilongjiang. International best practices will be shown i.e. from the United States, Germany and the United Kingdom to demonstrate that long-term strategic and multidimensional support programs with bold visions for a transformed future can result in positive impacts. However, transformation takes a generation or two and significant financial and personal support by various government agencies, institutions, as well as private sector leaders to show results. Hence mining and heavy industry regions do have a choice of embarking on a bright journey as opposed to suffering symptoms ghost cities in many other rust belts around the world felt. The lecture will show how ADB's holistic approach to supporting the transformation in East Heilongjiang is expected to change cities from dirty coal cities to livable clean and green cities and promote private sector development and jobs in a variety of industries, applying lessons from the international cases.

A Great Recent History: Contributions by the Northeast to the People's Republic of China

- Over the past few decades, the Northeast PRC contributed significantly to the PRC's national economic and industrial development.
- East Heilongjiang particularly contributed to supply of energy nationwide with its large coal reserves; and to food security with its high quality farming products including rice and grains.
- Large State-Owned Enterprises focusing on coal-mining, processing and electricity production and export, were the drivers of local economies and the providers of infrastructure, social services and facilities, and housing.
- They ventured into other businesses diversifying into machine building to supply coal mining and industries, into farming and other activities.

The Great Decline: The Northeast of the People's Republic of China

- The situation looks grim in China's Northeast, especially in cities that heavily depend on coal mining or traditional heavy industries.
- In 2014, the project cities' per capita gross domestic product was 33% lower than Heilongjiang Province's, which was 16% below national average.
- Now, these cities face many challenges simultaneously: serious economic decline, population loss with people moving away, polluted environments from mining and industries, and outdated urban infrastructure.
- They suffer from poverty, unemployment, low wages, broken roads and pipes, polluted rivers, and smoldering black waste-rocks hills. Underground mining resulted in unsafe environments with unstable ground making walls crack and buildings unsafe.
- State-owned-enterprises that once drove local economies and were in charge of running the cities lost their capacity to provide jobs and public services.
- The private sector has been traditionally weak. Tertiary education institutions is either absent or are local and not competitive even within the northeastern provinces. Skills by the local workforce is tailored to mining and industries and are generally weak and salary levels are low.
- Will Northeastern mining and heavy industry cities, along with similar regions in China and in other Asian Countries, experience a similar fate as “rust-belts” or “ghost towns” in other places around the world?

Key Socio-Economic Challenges

- 1. Serious economic decline due to heavy reliance on coal and related industry and severe price-cuts of coal in 2013 - lack of broader economic base - until recently, coal accounted for 60% - 70% of local economies**
- 2. Dominance of coal mining SOEs who became agents of social and local development Resource value mostly realized outside the area (prices and profits), no build up of local wealth**
- 3. Weak private sector and SMEs and little incentive to diversify the economy**
- 4. Environmental pollution and geotechnical risks from mining**
- 5. Poverty and poor living conditions**
- 6. Lack of basic infrastructure and basic urban services**
- 7. Out-migration especially of educated and skilled youth**
- 8. Remote location in PRC, access and linkage challenges**

Key Socio-Economic Challenges



Key Challenges

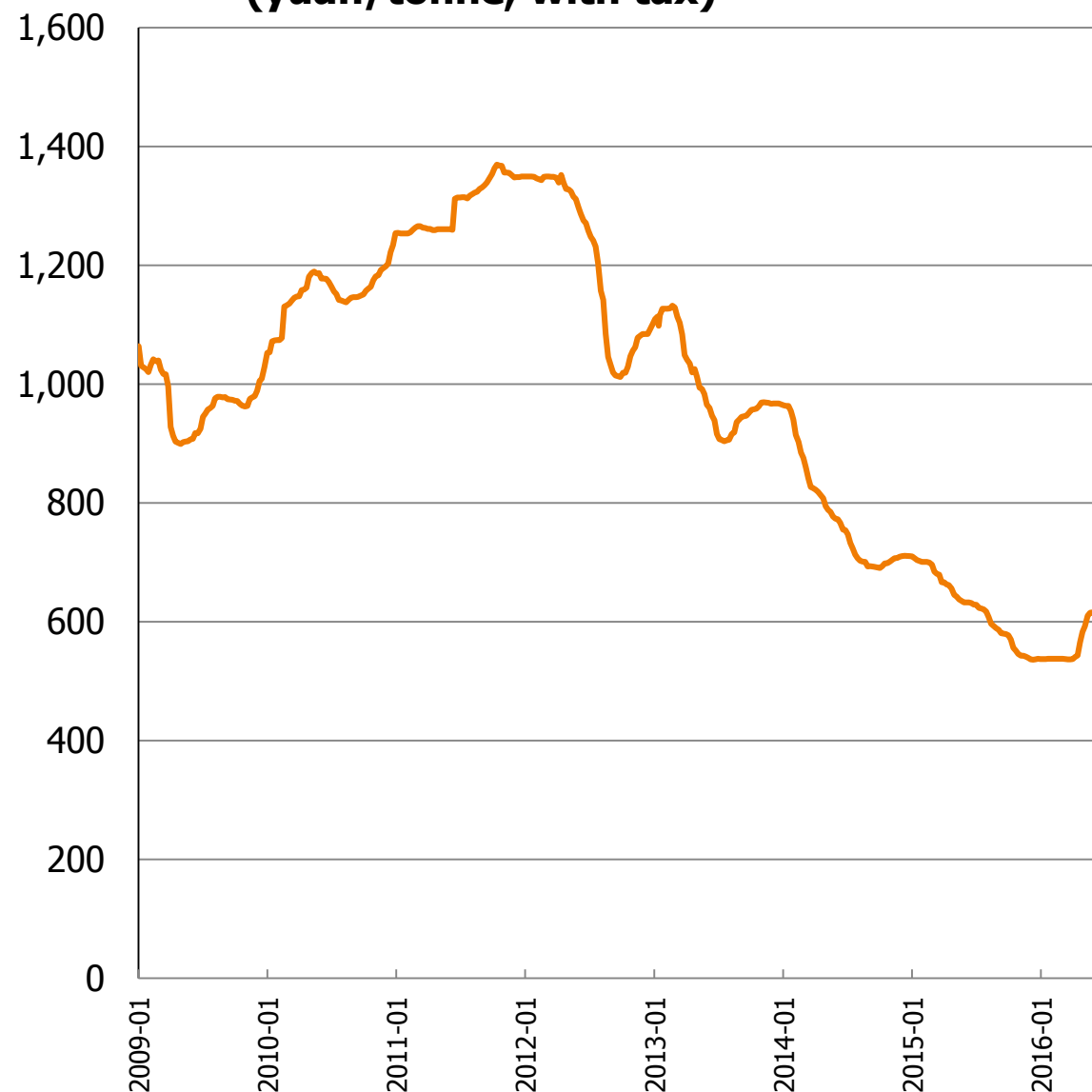


Key Challenges



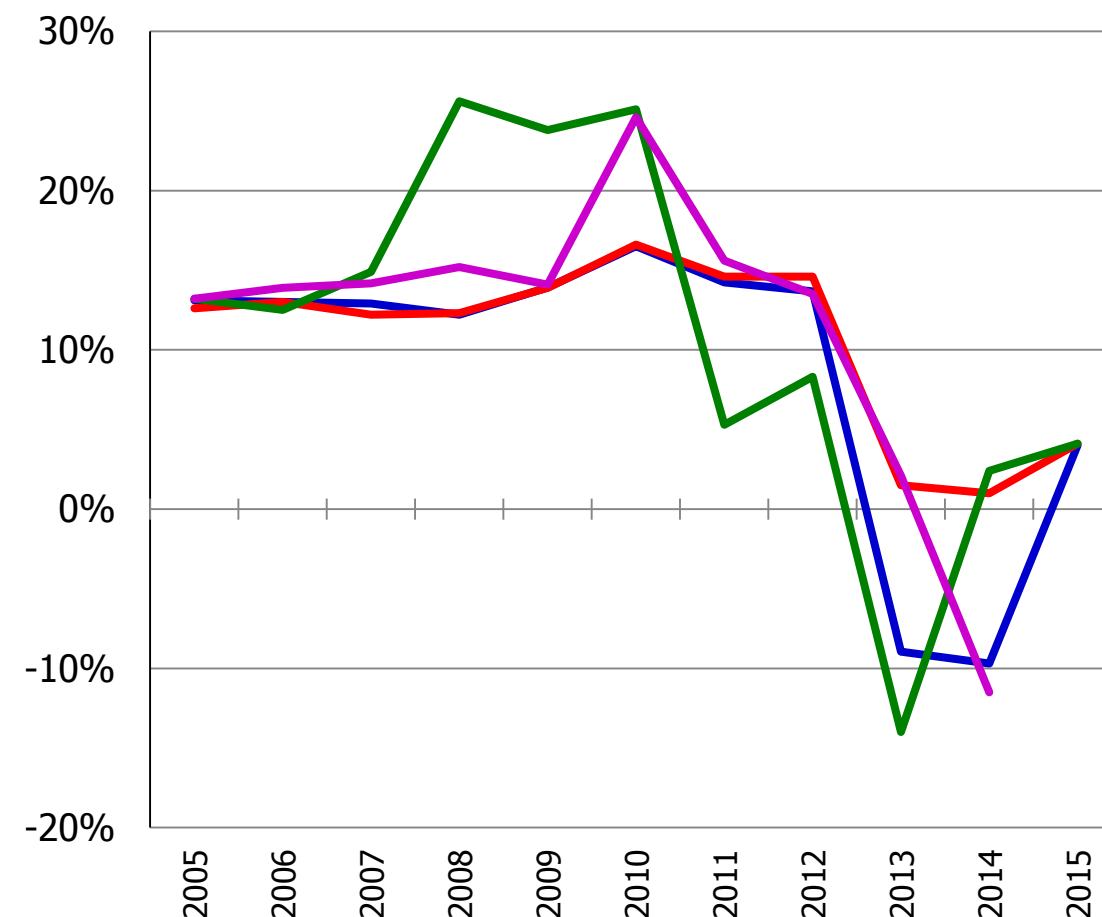
Key Socio-Economic Challenges

**Average Coal Price in China
(yuan/tonne, with tax)**



Note: The coal prices here is an average of the averaged prices of Gas coal, Fat coal, Lean Coal, Coking coal, and 1/3 coal.

Economic Growth for the Four Cities



— Hegang 鹤岗

— Jixi 鸡西

— Qitaihe 七台河

— Shuangyashan 双鸭山

Key Development Challenges

Location

- Peripheral location
- “End of the road” logistics

Small market

- Small local market
- Small East Russia market
- Limited scale to develop capabilities

Climate

- Short growing season
- Short tourism season
- Short construction season
- Double and triple wall construction

Infrastructure

- Old and incomplete
- Not geared for modern economy
- Road, rail, water “last mile” problematic

Key Development Challenges

Costs

- 2x to 3x construction costs / time
- 2x salary to attract high level skills
- High logistics costs, heating costs

Capital

- Banks don't like to lend here
- VCs don't invest here
- Little FDI
- Resource earnings go elsewhere
- Local govts have limited finance

Capabilities

- Local education OK, but
- 10%-20% of youth return after college
- Highly skilled often go to East and South China
- Traditionally talent went into coal industry
- Limited market development, branding

Key Development Challenges

Corporate structure / mindset

- Still an “SOE mindset” in some places
- Limited diversification from large companies with HQ elsewhere
- Limited SME / start-up community
- Limited entrepreneurial history
- Limited knowledge of external markets

Clusters and supply chains

- Limited local supply chains
- Little apparent cluster-type development

Environment

- Coal subsidence areas
- Coal tailings and waste
- Water and water treatment

Economic / financial conditions

- Tough to diversify in a downturn
- Local govt financial limitations

Key Infrastructure and Environmental Challenges



Key Challenges



Key Environmental Challenges and Infrastructure

- 1. Environmental degradation, pollution of soil, water, and air from mining**
- 2. Geotechnical hazard risk of subsidence and water-management related risks from below-grade mining**
- 3. Environmental and health impacts from mining i.e. waste rock dumpsites**
- 4. Pollution and flooding of rivers and lakes, sedimentation from mining, and illegal solid waste dumping**
- 5. Lack of public investment in new infrastructure and services, maintenance, and rehabilitation**

Do Nothing is No Option – and Success Depends on Comprehensive Actions

- Some people may say that expenses and risk of failure are high when public investments are made attempting to revitalize the economy
- They may say that the efficiency and speed to see results may be low.
- But I would argue that doing nothing is a much higher risk.
- A large land area with 5.2 million people in East Heilongjiang need support.
- And the subregion has potential and strength – while it also faces challenges that need to be addressed.
- The risk for the public sector to not invest in jobs creation and support of private sector development in a sustainable way through building capacity, is high.
- If people have no adequate skills companies will not create jobs, and without jobs people will leave.
- A reduced population will need less infrastructure, and apartments. Following the current supply side model will increase the risk of oversupply of infrastructure, residential and industrial land and the cost for operation and maintenance.
- Hence: We believe without proactive support to economic diversification and private sector development and without image change and environmental cleanup such attempts to revitalization are likely to fail.

Successful Economic Revitalization: Comprehensive Transformation Programs Around the World

- International examples such as Pittsburgh in the United States, the Ruhr Valley in Germany, and Newcastle in the United Kingdom demonstrate that revitalization efforts can be successful.
- But it is challenging and requires a comprehensive approach, short-medium and long-term action plans and investment programs.
- It takes the full commitment from many local and national institutions, and cooperation by public and private sectors.
- And it takes a generation to implement in order to see substantive change happen to happen.
- In all three cases holistic approaches simultaneously supported proactively economic development, environmental cleanup and urban transformation from mining or industry cities to attractive and modern places, where the history can still be seen in a positive way.
- Also the PRC's top leaders made revitalization of Northeast top priority and provided policies and funding. The 13th Five-Year Plans of the national, provincial and city governments include programs that aim at revitalizing the economically challenged Heilongjiang, Jilin, and Liaoning provinces.
- ADB aligns and builds on these policies and brings to the table the international experiences.

What is the right approach to Revitalization?

- What do the northeastern mining-dependent and heavy-industry cities need to escape the downward spiral of further economic decline, population loss and environmental pollution?
- Scenario 1: Remain highly dependent on coal – exposed to boom and bust cycles, continued environmental degradation, limited income levels, limited employment opportunities
- Scenario 2: Develop a non-coal based diversified economy – potential for a more stable economy, potential for higher value added activities, potential for higher incomes, potential for a variety of employment opportunities
- A fundamental transformation from being dirty mining places to green and clean and economically diverse and culturally vibrant cities.
- A comprehensive plan and investment program is needed to support economic development, environmental cleanup from mining impact, and improving livability of cities making them attractive for current and future residents and companies.
- Various government agencies need to cooperate across administrative departments and public and private sectors need to work together. “Champions” need to emerge to drive the transformation and implement pilot projects and showcase highlights to catalyze the needed change and attract residents, companies, and jobs.

Overarching Objectives

Economic revitalization and non-coal diversification of project cities.

Change project cities from *black* to *green* and improve livability as basic precondition for retaining residents and attracting new people and businesses

Improve capacity of government, private sector, and finance sector

Key Features of the ADB Project

- 1. Conference on non-coal diversification and roadmap as PPTA phase 1**
- 2. Combining Urban development project with direct support to Economic development – urban infrastructure with FIL**
- 3. Significant cofinancing on urban project and first EIB cofinancing in PRC**
- 4. Mining remediation assessment, strategy, pilots, masterplanning**
- 5. Significant capacity development component as part of urban project**
- 6. Advanced contracting and retroactive financing of goods contract package with ADB review prior to MRM**

Opportunities for Non-Coal Economic Diversification

- Has some successful private companies in non-coal industry sector
- Electronics / media entrepreneur successful in Shenzhen, finds a mkt and not much competition in HLJ
- Wood processing manager returns home and opens factory based on a local model, takes on partners to raise capital
- Government investment promotion person identifies graphite opportunity and investor and eventually manages the business
- Chinese companies from elsewhere are attracted and promoted
- Road construction manager capitalizes on opportunity in soy sauce after a foreign investor pulls out
- Company sees logistics / cost advantage of making pipes for the HLJ and E. Russia mkt from steel rolls
- Ag machinery company develops simple machinery tailored to local terrain
- Chinese Medicine wholesaler on a business trip comes across a small pharma company
- Local employee in SOE furniture factory sees potential of starting up on his own, uses successful private firm as his model
- Rice processing company recognizes value of HLJ green food products nationally and the potential of deep processing
- Capital from retained earnings, outside investors, govt, some from banks
- Managers with experience in the business elsewhere or in a different business locally
- Supportive policies from govt.
- Creative ways to overcome local disadvantages
- Combining specific types of opportunities with local conditions
- Lesson: There are many ways that new companies have already been started in the four cities and many opportunities that can be addressed

Non-Coal Economic Diversification Roadmap for East Heilongjiang: National Government Programs

National Old Industrial Base Adjustment and Renovation Plan (2013-2022)

- A new long-term development plan for old industrial bases in China.

Sustainable Development Plan for Resource-based Cities in China (2013-2020)

- The four cities belong to the 126 prefectures in this plan. Cities will benefit from development funds and capital from national and provincial sources.

Guiding Opinions of the Four Ministerial Departments on Advancing the Development of Private Economy in the Northeast Region of China (2016)

- Focusing on supporting the development of private economy in the Northeast region.

Non-Coal Economic Diversification Roadmap for East Heilongjiang: Heilongjiang Province Programs

Support the four coal cities of Jixi, Shuangyashan, Qitaihe and Hegang to develop both the coal and non-coal industries. Help them speed up the transformation from coal dominated economies into diversified economies and get out of the present predicament.

Improve the market mechanism for coal resources allocation, support cities rich in coal successive resource to speed up the construction of large coal mines. Advance the construction of major projects in coal chemical industry. Promote cities to extend their coal chemical production chain with newly found coal resources and the existing coking coal resources and to develop fine chemical products.

Support Shuangyashan to be one of the national key coal chemical industry base. Major coal chemical industrial projects like coal-based olefins (CTO) will be deployed in Shuangyashan and Hegang. Advance the preliminary work on coal oil projects.

Accelerate the construction of national “urban mineral” demonstration bases in Harbin and Qitaihe.

Non-Coal Economic Diversification Roadmap for East Heilongjiang: 13th FYP's Pillar Industries

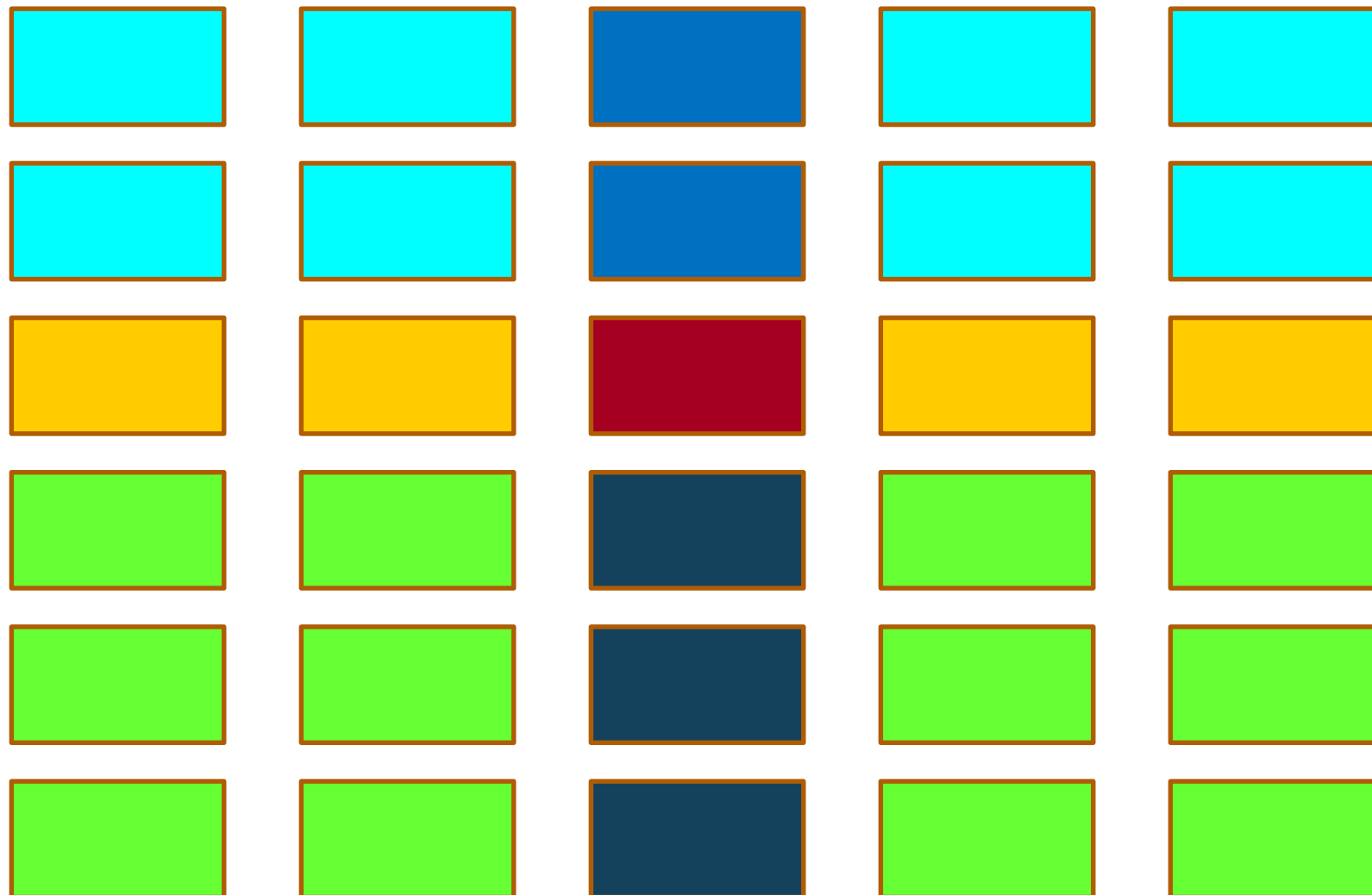
Hegang	Jixi
Coal-Electricity-Chemistry Graphite Green food processing Tourism	Coal Graphite Green food processing Pharmaceutical Industry Tourism
Qitaihe	Shuangyashan
Coal and electricity Wood products Green food Machinery manufacturing Resource recycling	Coal-Electricity-Chemistry Steel Green and organic food Black wetland tourism Foreign trade

Non-Coal Economic Diversification Roadmap for East Heilongjiang: Principles

Related Industries	Vertical (same production chain)	Forward (downstream)
		Backward (upstream)
	Horizontal (other similar industries)	Using the same resource
		Using same skills, channels, etc.
Unrelated Industries	Serving local markets	Import substitution
		Serving new needs
	Serving outside markets	Serving existing needs
		Serving new needs

Source: Michael Enright and Enright, Scott & Associates.

Non-Coal Diversification Roadmap for East Heilongjiang: Product and Industry Clustering



Source: Michael Enright and Enright, Scott & Associates.

Non-Coal Economic Diversification Roadmap for East Heilongjiang

Expand existing non-coal “pillar industries” in scale and scope

Investigate development of “clusters” around the “pillar industries”

Investigate further means of industrial diversification (import substitution, etc.)

Identify and support different types of diversifying companies

Identify opportunities associated with improving transportation

Attract HLJ entrepreneurs that have been successful elsewhere

Non-Coal Economic Diversification Roadmap for East Heilongjiang

Upstream industries

- Resources
- Equipment
- Supplies
- Support services

Downstream industries

- Further processing
- Marketing and selling
- Branding

Horizontally related industries

- That use similar resources
- That have similar customers
- That use similar skills

Further developments

- Horizontally related from upstream and downstream industries
- Vertically related from horizontal industries

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Image Transformation: From Four *Mei-Cities (coal)* to Four *Mei-Cities (beautiful)*



Environmental Cleanup and Safety from Mining Impact



Livable and Attractive Cities with High Level of Infrastructure and Services



ADB Loan 3613 PRC: Heilongjiang Green Urban and Economic Revitalization Project

Impacts

- economy revitalized and diversified, and non-coal industries in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan developed; and
- living environment, safety, and public health in cities of Hegang, Jixi, Qitaihe, and Shuangyashan improve

Outcome

Non-coal economic activities and urban livability in project cities increased

Outputs

Output 1: Inclusive capacity in business development services and integrated project planning and management developed.

Output 2: Sustainable SME investment and access to finance in project cities improved. (FIL)

Output 3: Key infrastructure and SME facilities in non-coal industrial parks in project cities constructed.

Output 4: Remediation and environmental cleanup from mining impacts in project cities improved.

Output 5: Integrated urban infrastructure and services in project cities improved.

SME Business Development Services and Capacity Development

This output will support project management and capacity development to ensure successful diversification and project sustainability in areas of

- project planning, procurement, and financial management;
- BDS for SMEs and local SME bureaus;
- human resources and skills development;
- smart city cluster cooperation;
- mining remediation planning and implementation;
- flood risk management, climate resilience, and sponge city planning;
- water, wastewater, and drainage system design, construction, and operation; and
- sustainable urban and public transport management and road safety..

SME Investment and Access to Finance Improved

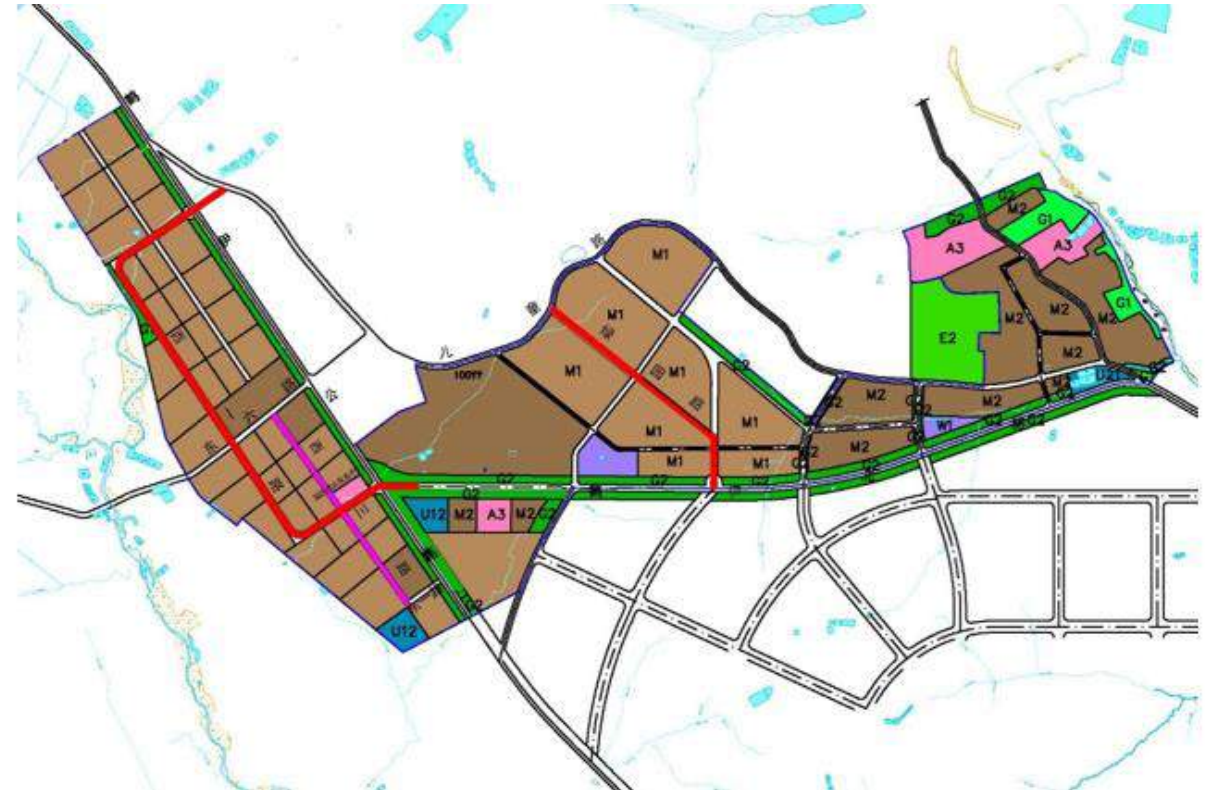
The project will establish an SME financing platform, using the FIC, to mobilize domestic financing. The platform will offer

- cofinancing loans for SME investments by financial intermediaries in which the ADB loan component is subordinated in return for longer-term project loans,
- a first-loss cash collateral facility to mobilize commercial guarantees and ease access to commercial financing for investments and longer-term working capital of up to 3 years, and
- entrusted loans for high-priority projects for local governments.

Also Promoting Inclusive Business

- Project promotes support to Inclusive Businesses - IBs are commercially viable and bankable companies whose core business model is to provide Scaled up Innovative, and Systemic solutions to the relevant problems of poor and low income people (bottom 40% income groups).
- Also support and promotion of women-owned and/or women-managed SMEs

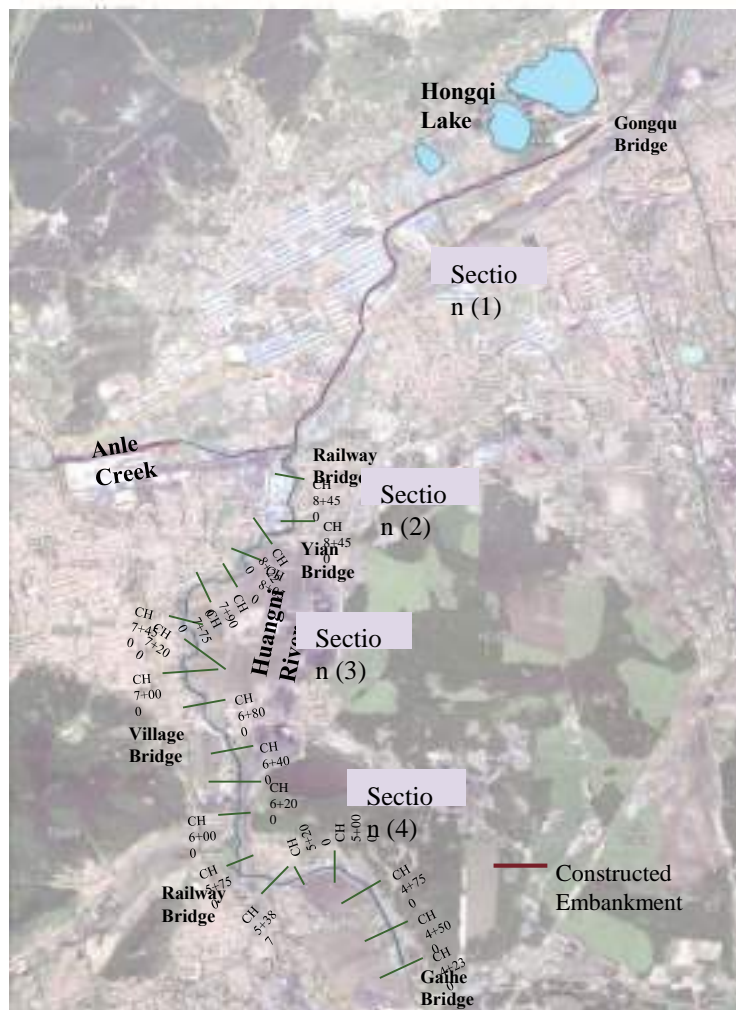
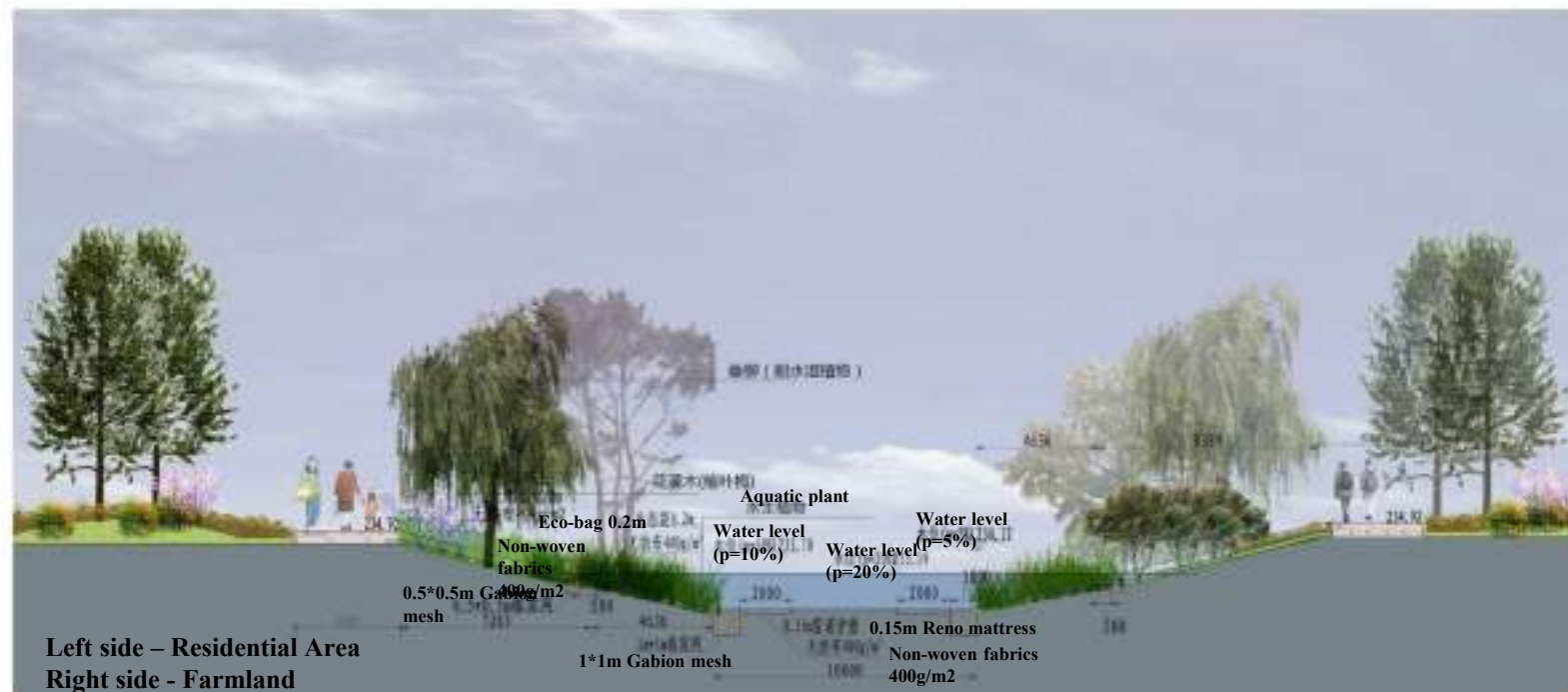
Industrial Parks Key Infrastructure and SME Facilities



Mining Remediation

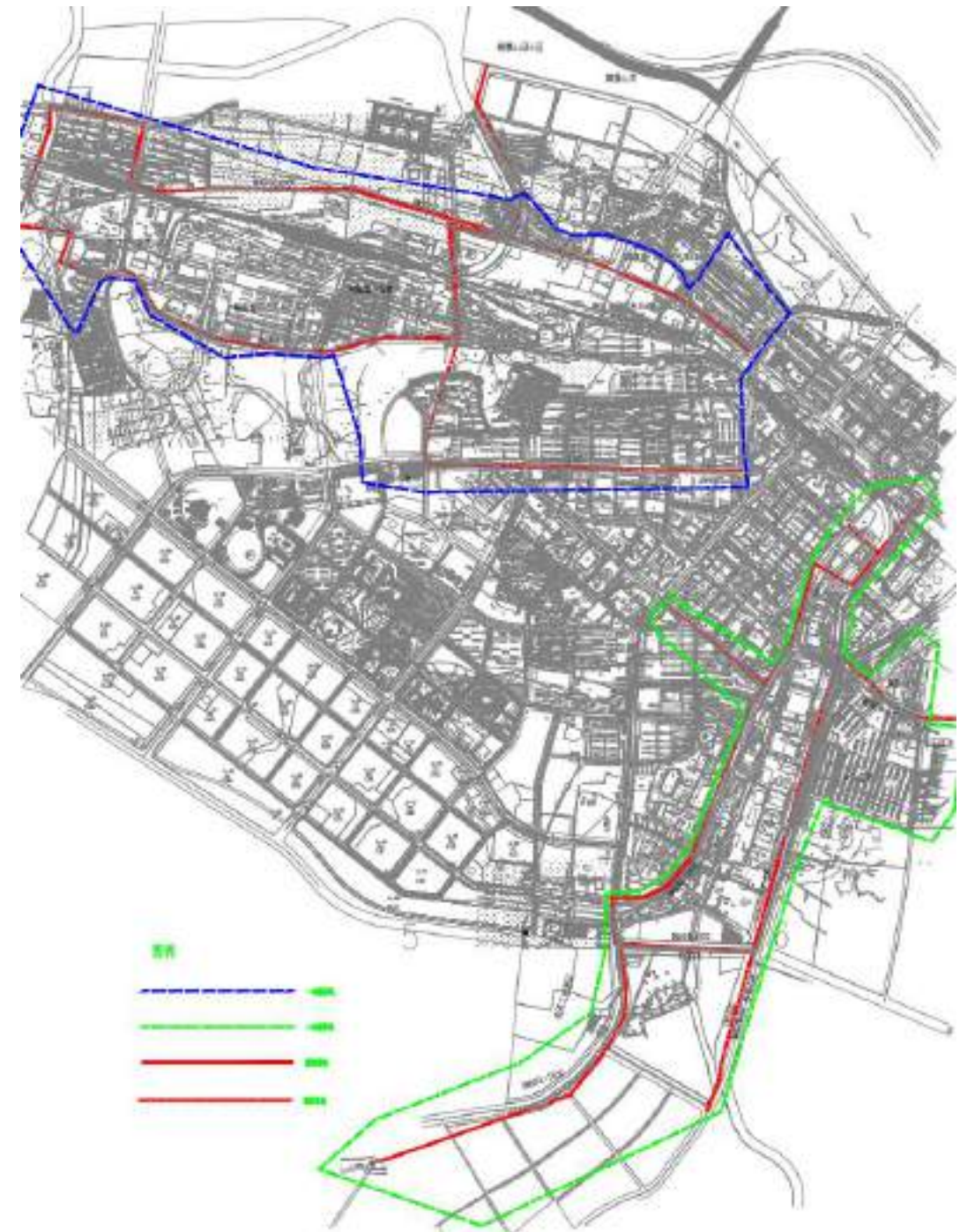


Rivers and Lake Rehabilitation and Climate Resilience

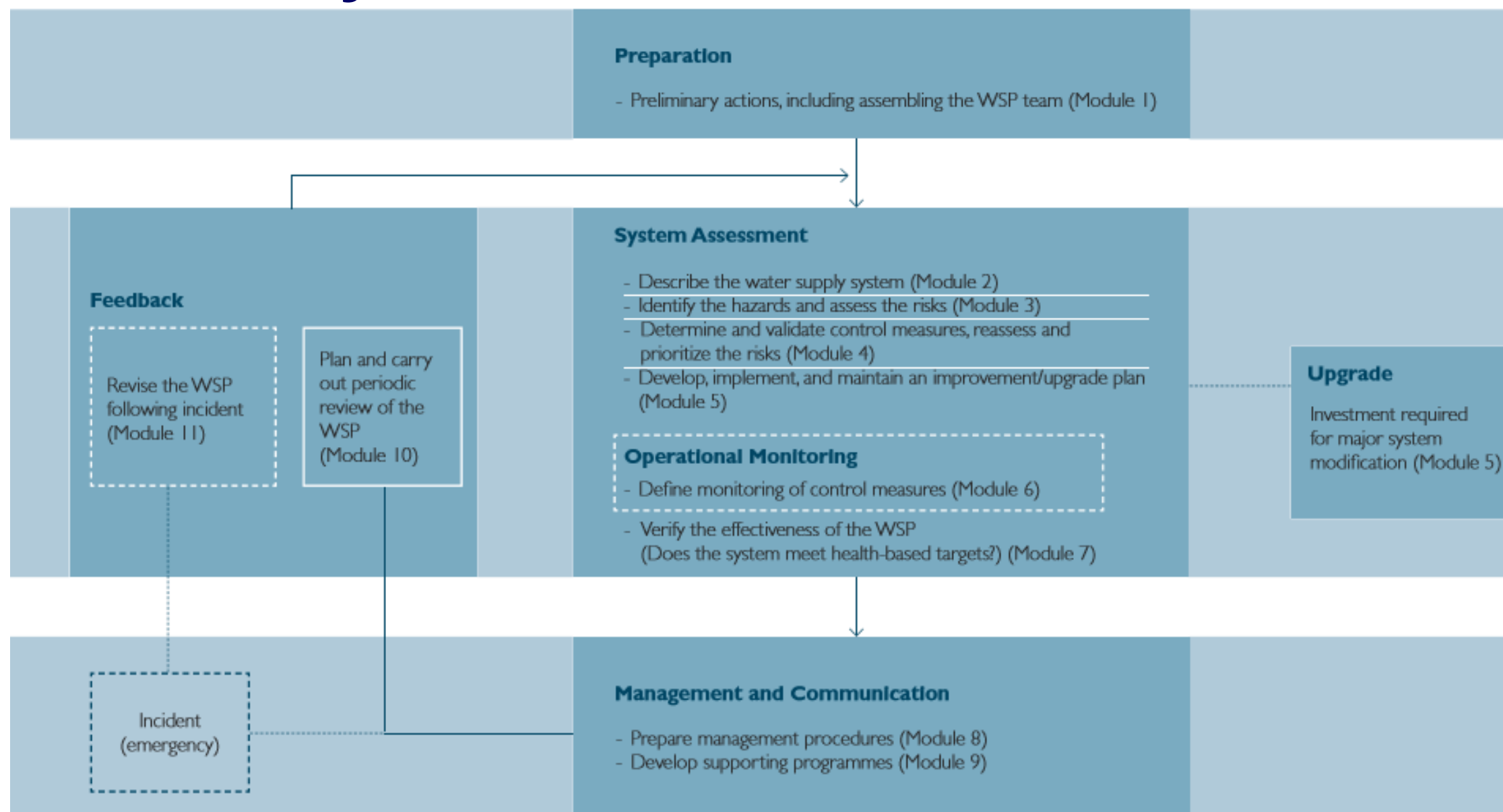


- Existing Villages
- Farmland
- Existing Trees
- Green Space
- Abandoned Land

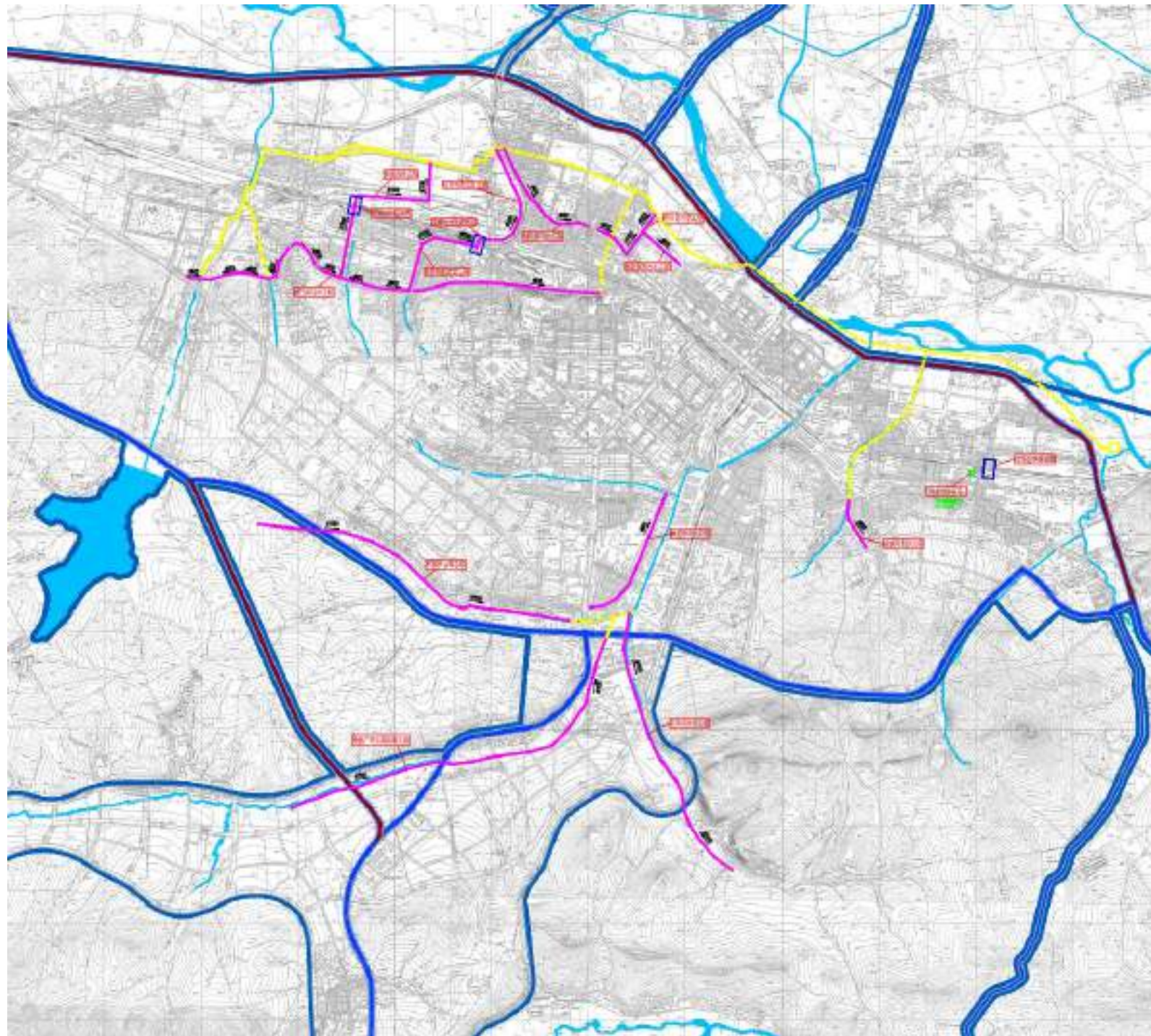
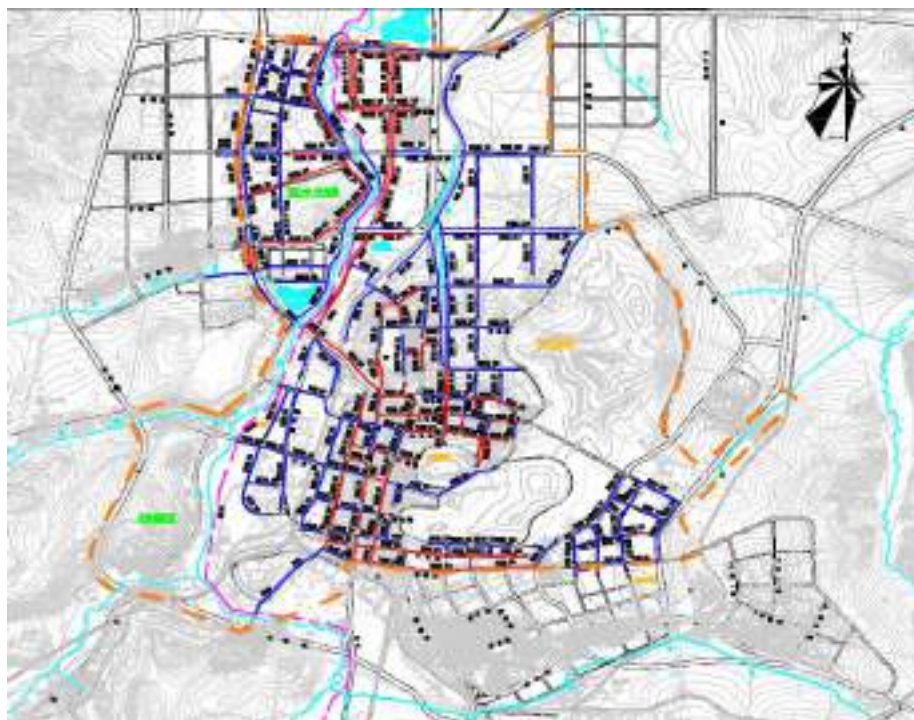
Water Supply



Water Safety Plan



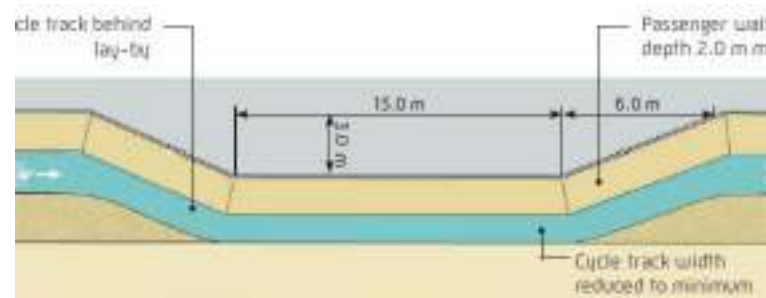
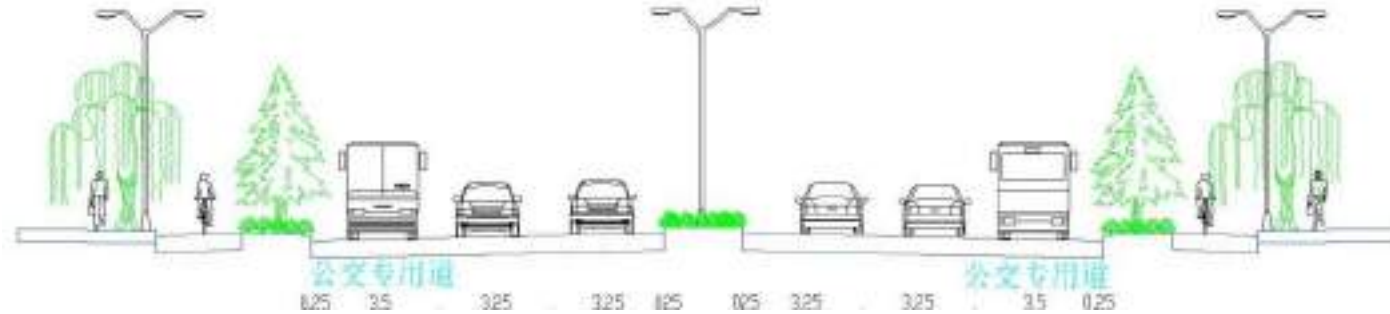
Wastewater and Drainage Management



District Heating Rehabilitation



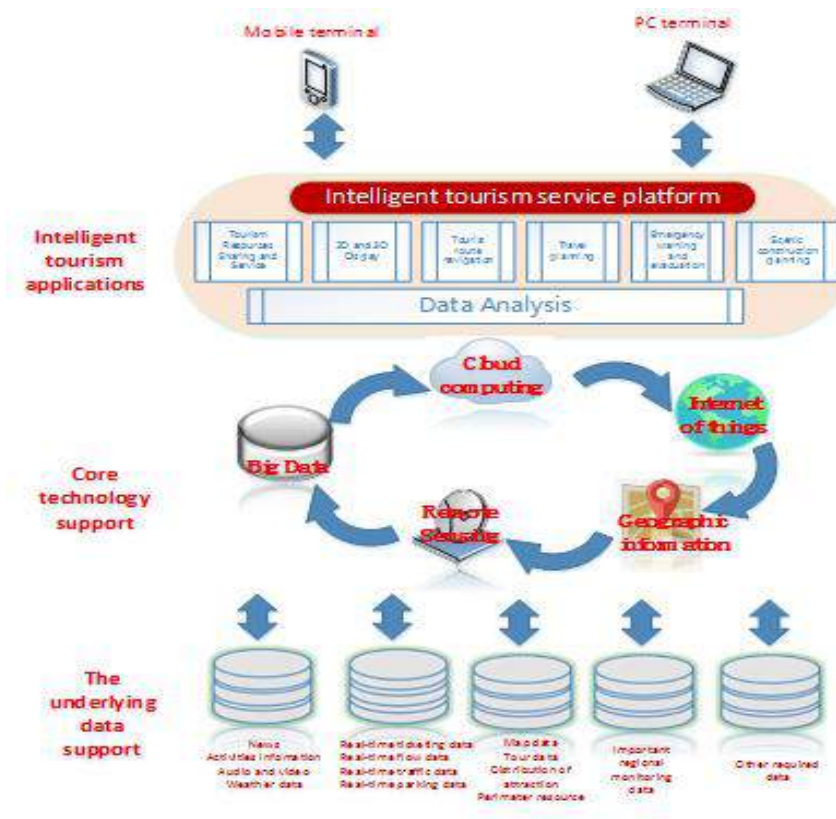
Sustainable Urban Transport and Road Rehabilitation



Sustainable Urban Transport and Road Rehabilitation



City Cluster Cooperation in East Heilongjiang Using Smart City Applications



East Heilongjiang SME Services & Supply Chain Partnerships Platform

East Heilongjiang TVET Programs Coordination Program

East Heilongjiang Intelligent Tourism Services Platform

Success Factors for Revitalization through Comprehensive Transformation

1. Strong political will at provincial and local levels to develop and implement a long-term vision, strategy, and roadmap for economic diversification
2. Prioritized investment program for economic, social, environmental and cultural transformation, including SOE reform and SME development, with achievable milestones
3. Creation of jobs and inclusive business strategy to benefit local people.
4. Workforce development including programs for education, training and re-training through partnerships between institutions and companies, and placement management.
5. Need for improved and expanded urban livability, housing choices, educational options, culture, a green, clean and safe environment, and enhanced urban services.
6. Effective mining remediation and environmental cleanup programs are needed for the transformation of such places to make environment safe and clean, and to also demonstrate the effort to change the image.
7. Cooperation across administrative boundaries and benefit from industry and labor market clustering within an economic corridor or city cluster including on place branding and marketing; linking supply chains and shared investments in institutions.

Comprehensive Transformation to Revitalize the PRC's Northeast:

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Guiding Questions for Discussion:

Your Experiences with such places in decline?

Your Experiences with transformation programs in such places?

Your suggestions on how to conceptualize and implement revitalization?

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