

**Hebei Air Pollution Control Program (P54672)
Environment and Social Systems Assessment (ESSA)**

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Acronyms

AAQM	Ambient Air Quality Monitoring
APPCAP	State Council Air Pollution Prevention and Control Action Plan
AWS	Administration of Work Safety
CEM	Continuous Environmental Monitoring
DHURD	Department of Housing and Urban-Rural Development
DLI	Disbursement – Linked Indicators
DOA	Department of Agriculture
DOC	Department of Commerce
DOF	Department of Finance
DRC	Development and Reform Commission
EIA	Environmental Impact Assessment
EPB	Environmental Protection Bureau
EPL	Environmental Protection Law
ESSA	Environmental and Social System Assessment
GoC	Government of China
HAP	Hebei Air Pollution Prevention and Control Implementation Action Plan
HAWS	Hebei Administration of Work Safety
HPC	Hebei People’s Congress
IPF	Investment Project Financing
JJJ	Beijing- Tianjin-Hebei
JJJAP	Beijing- Tianjin-Hebei Action Plan
LGO	Leading Group Office
MEP	Ministry of Environmental Protection
MOFCOM	Ministry of Commerce
NPC	National People’s Congress
PforR	Program for Result
PSD	Public Security Department
RAP	Resettlement Action Plan
ROC	Regional Operations Committee
SA	Social Assessment
SAWS	State Administration of Work Safety
SC	State Council
SCAP	State Council Air Pollution Prevention and Control Action Plan
VOC	Volatile Organic Compound
YSVLG	Yellow-Sticker Vehicles Leading Group

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EXECUTIVE SUMMARY

Environmental and Social Effects of the Hebei Air Pollution Control Program (Program)

1. This is a Program for Results (PforR) lending operation. Implementation of activities under the Program will rely on the existing national and provincial legal framework and institutional systems that the counterpart uses to manage environmental and social safeguards issues. The purpose of this Environmental and Social System Assessment (ESSA) is to provide a comprehensive review of relevant environmental and social safeguards systems and procedures in China and Hebei Province, identify the extent to which the national and provincial systems are consistent with the PforR Bank Policy¹ and the PforR Bank Directive,² and recommend necessary actions to address eventual gaps as well as opportunities to enhance performance during implementation.
2. The assessment concluded that, in general, China's rules and regulations are consistent with the Bank PforR policy and Bank PforR Directive, but the capacity to effectively enforce certain regulations could be improved at some agencies. Thus, several recommendations are made to address these shortcomings and are included in the Program Action Plan or disbursement linked indicators.
3. The overall environmental and social risk rating of this Program is considered moderate.

Environmental and Social Benefits

4. As an environmental pollution control operation, the Program will positively contribute to reducing air pollution emissions and enhancing environmental monitoring and management capacity in Hebei Province. The activities to be supported under the Program will contribute to the achievement of the objectives in the Hebei Air Pollution Prevention and Control Action Plan (HAP). Therefore, the Program is expected to have significant positive benefits of environmental quality improvement and public health.
5. The Program will contribute to significant social benefits for Hebei through air quality improvement, especially: (i) achieving sustainable socioeconomic development; (ii) enabling residents to breathe fresh and clean air, improving people's health, mitigating risks of diseases due to air pollution deterioration, reducing disease-related expenditures and productivity losses, and improving the quality of life; and (iii) contributing to increasing living standards.

Environmental and Social Risks

6. Some activities supported under the Program may have limited adverse environmental or social impacts if not well-managed. These include: (i) inadequate waste management and vocational health and safety support in the industrial enterprises with installation/operation of desulfurization, denitrification and dust removal facilities; (ii) inadequate licensing of livestock waste management facilities by farmers and lack of skills for using new technologies for rural non-point source pollution management; (iii) elimination of yellow-sticker vehicles used for private business may lead to some loss of income for their owners, and vehicles may be improperly disposed of in dismantling enterprises that do not conform to China's Regulations; and, (iv) potential down-stream environmental and social impacts of new laws, policies and regulations.

¹ OPCS5.04-POL.01

² OPCS5.04-DIR.01

Consultations and Information Disclosure

7. The Bank organized a multi-stakeholder consultation meeting in Shijiazhuang on March 3, 2016 on the draft ESSA report to receive specific feedback on its findings and recommendations. A description of the workshop, list of participants, and main issues raised are provided in Section VII of this ESSA and Annex 6.
8. During the consultation, the Bank team presented the detailed information on the PforR instrument, activities to be supported under the Program, and key findings and recommendations of the ESSA. The participants concur with the findings and recommendations presented in the ESSA and voiced their strong support for implementing the proposed Program in the province, since all recognized air pollution as an urgent issue that needs to be addressed.

Recommendations for Environmental and Social Actions

9. **Recommendation 1: Upgrading the existing vehicle dismantling enterprises to meet the applicable regulations.** Yellow-sticker or diesel vehicles (and also future yellow-sticker vehicles) shall be disposed of at vehicle dismantling enterprises that are in compliance with applicable Chinese standards/technical specifications. To address this recommendation, the disbursement linked indicators (DLIs) related to replacing diesel buses requires evidence that the buses were disposed of in dismantling enterprises compliant with the latest Chinese environmental assessment (EA) standards/technical specification.
10. **Recommendation 2: Capacity building for environmental supervision in rural areas.** The capacity of agencies to enforce environmental regulations at municipal and county levels shall be strengthened with adequate resources, staff, monitoring equipment, and training to ensure enterprises in rural areas (especially the polluting enterprises such as large livestock farms) are adequately supervised and monitored. To address this recommendation, the Program Action Plan includes relevant training for at least 480 monitoring and enforcement staff at Environmental Protection Bureaus (all levels).
11. **Recommendation 3: Capacity building for work safety supervision on industrial enterprises.** Work safety and health supervision capacity shall be strengthened at all levels to address the challenge of supervision, especially at the municipal/county level Administration of Work Safety offices (AWS). To address this recommendation, the Program Action Plan establishes that at least 60 work safety supervision staff receive relevant training.
12. **Recommendation 4: Establish a social and environmental grievance redress mechanism and a complaint hotline for activities to be supported by the Program.** These mechanisms shall be created at both the provincial and local Environmental Protection Bureaus (EPBs). To address this recommendation, the Program Action Plan establishes that such mechanisms be created.
13. **Recommendation 5: Improve public participation mechanism.** Activities such as policy formulation, public communication and education, and capacity building need to give adequate consideration to the participation of vulnerable groups, including women, the poor and ethnic minorities. To address this recommendation, the Program Action Plan establishes that the draft multi-year plan be available for public consultation through posting in publically accessible web portals or paper-copy distribution at the municipal level.

SECTION I: INTRODUCTION

1.1 Background

A. National Context

14. China faces some of the world's most difficult environmental challenges due to its rapid development and resource-intensive growth model. Air pollution is an increasingly complex problem stemming initially from reliance on coal but increasingly from vehicular emissions, dust and secondary particulates (formed when ammonia from fertilizers and livestock waste interacts with nitrogen oxides [NO_x] and sulfur dioxide [SO₂] from industrial and vehicular emissions). Air quality has improved in general over the past few years but pollution levels remain high. Economic costs from health impacts are rising due, in part, to higher exposure levels in urban areas with higher population densities. The costs of environmental degradation and resource depletion are high, estimated to equal up to 9 percent of gross national income (GNI)³ in 2009, of which air pollution accounts for 3.3 percent. According to the World Health Organization,⁴ an estimated 7.0 million people worldwide died in 2012 from either chronic or acute effects of inhaling atmospheric pollutants. In the Southeast Asia and Western Pacific Regions, a total of 3.3 million deaths were linked to indoor air pollution and 2.6 million deaths were related to outdoor air pollution. Published estimates for China range from 350,000⁵ to more than 1.3 million cases^{6,7} of premature deaths annually related to atmospheric pollutants.
15. The Government of China (GoC) has made great efforts to address environmental consequences of its growth model with its recent declaration of war on air pollution. The 11th Five-year Plan (2006-2010) mandated that SO₂ emissions be reduced by 10 percent nationwide compared to 2005. This target was reinforced by additional standards set by the National Development and Reform Commission (NDRC) and Ministry of Environmental Protection (MEP) for emissions from heavy industry. The 12th Five-year Plan (2011-2015) expanded the list of major air pollutants with binding emissions reduction targets to include ammonia [NH₃] and NO_x (10 percent reductions compared to 2010). It also mandated a further reduction of SO₂ by 8 percent. As a result, China achieved a decline of annual average PM10⁸ concentrations in cities from about 145 µg/m³ to about 80 µg/m³ between 1997 and 2012. While this was a positive trend, the overall level of air pollution was still high.
16. Episodes of severe air pollution in the Beijing-Tianjin-Hebei region (hereafter referred to as the JingJinJi) from January 2013 onwards made air quality the focus of environmental policy concerns. In 2013, the State Council issued the Air Pollution Prevention and Control Action Plan (APPCAP), which set forth ten air pollution prevention and control measures. The measures are organized into three complementary principles: (i) promote market mechanisms for enterprises to decrease emissions and increase efficiency; (ii) increase the coverage and effectiveness of enforcement; and (iii) improve planning and regional coordination.
17. The specific 2017 targets of the APPCAP are to reduce urban ambient concentration of PM2.5 nationwide by 10 percent compared with 2012, to gradually increase the annual number of days with

³ China 2030. World Bank & China DRC

⁴ Who. 2014. News Release dated 25 March 2014." Available at: <http://www.who.int/mediacentre/news/releases/2014/air-pollution/en/>

⁵ Chen Z, Wang J-N, Ma G-X, Zhang Y-S (2013) China tackles the health effects of air pollution. *The Lancet* 382:1959–1960. doi: 10.1016/S0140-6736(13)62064-4

⁶ Lim SS, Vos T, Flaxman AD, et al. (2012) A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet* 380:2224–2260. doi: 10.1016/S0140-6736(12)61766-8

⁷ Lelieveld J, Evans JS, Fnais M, et al. (2015) The contribution of outdoor air pollution sources to premature mortality on a global scale. *Nature* 525:367–371. doi: 10.1038/nature15371

⁸ Particles smaller than 10 µm in aerodynamic diameter

fairly good air quality, and to reduce the concentration of ambient PM_{2.5} in the country's three main urban and industrial regions --JingJinJi, Yangtze River Delta and Pearl River Delta-- by 25 percent, 20 percent, and 15 percent, respectively, compared to 2012.

18. In order to achieve the targets of the APPCAP, the JingJinJi region prepared a detailed regional Action Plan. In turn, each province/ municipality further prepared its own detailed Action Plan. In this context, Hebei prepared the Hebei Pollution Prevention and Control Implementation Action Plan (HAP).

B. Technical background

19. Since 2013, the GoC has focused on reducing PM_{2.5}. This is the most critical pollutant for public health in China. PM_{2.5} is a particle matter with an aerodynamic diameter equal to or less than 2.5 microns, which is 20 to 30 times smaller than the width of the human hair. Thus, PM_{2.5} gets deep in the lungs and enters into the bloodstream causing a broad range of health effects, especially to the respiratory and cardiovascular systems⁹.
20. Ambient PM_{2.5} is a good indicator for air quality because it encompasses many pollutants. PM_{2.5} is divided into primary and secondary sources. Primary PM_{2.5} are fine particles directly emitted from a source such as dust from construction sites. Secondary PM_{2.5} are particles produced from chemicals reactions in the atmosphere and include mainly SO₂, NO_x, and NH₃. These substances are emitted from many sources such as fossil fuel combustion, fertilizers, livestock waste, industrial production from certain sectors (e.g. resins, iron/steel, cement), and biomass burning. Recognizing the importance of controlling ambient PM_{2.5} concentrations, the GoC issued strict standards¹⁰ that are comparable with Interim Targets defined by the World Health Organization (WHO). See Table 1

Table 1. Ambient PM_{2.5} (µg/m³) concentration defined by China (GB3095-2012) and WHO

	Annual mean concentration PM _{2.5} (µg/m ³)	24-hour concentrations PM _{2.5} (µg/m ³)
WHO Interim Target 1	35	75
GB3095-2012 Standard II	35	75
WHO Interim Target 2	25	50
WHO Interim Target 3	15	37.5
GB3095-2012 Standard I	15	35
WHO Air Quality Guideline (AQG)	10	25

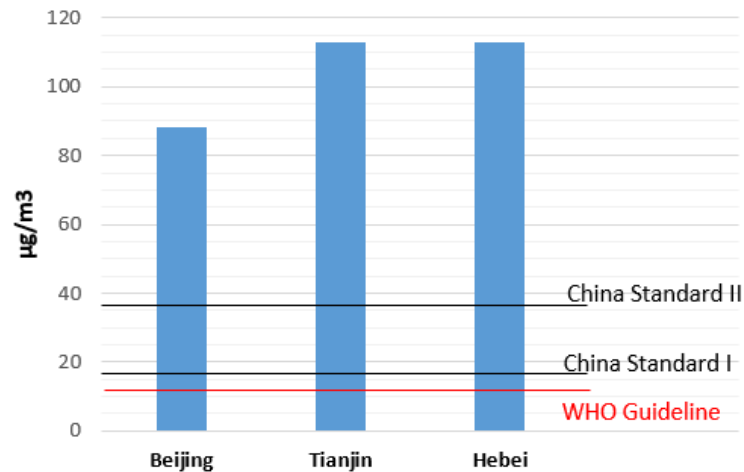
C. Hebei Provincial Context

21. Hebei had the highest annual average ambient PM_{2.5} concentration in the JingJinJi region in 2012 with 112.9 µg/m³, followed by Tianjin with 112.7 µg/m³, and Beijing with 88.3 µg/m³. The annual average ambient PM_{2.5} concentration for the JingJinJi region was three times higher than the new Standard II of 35 µg/m³ set by the GoC (Figure1).

⁹ WHO. 2005. Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide

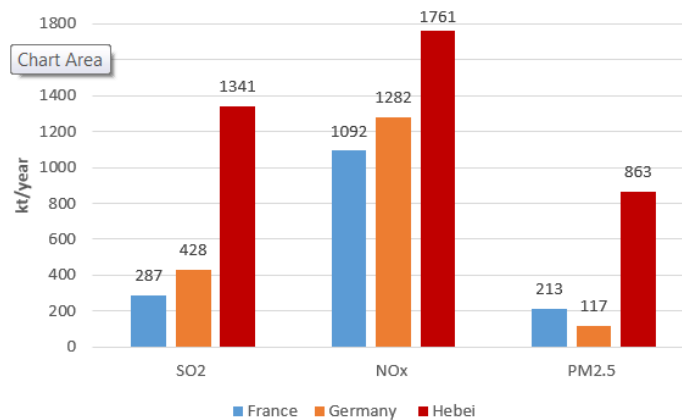
¹⁰ GB3095-2012, in effect since January 1, 2016

Figure 1. Annual ambient PM2.5 concentration by province in 2012¹¹



22. Hebei is the largest contributor to ambient PM2.5 concentrations in the JingJinJi region. It is responsible for about 70 percent of the emissions because of its concentration of highly polluting industries, number of vehicles, and large agricultural sector. Hebei is the largest iron and steel producer in China accounting for about one-quarter of national output. The power sector is almost entirely fueled by coal and nearly one-third of total installed capacity (15 out of 49 gigawatts) has been added in the past five years. Hebei is also an important cement producer. It 21 plants have a total production capacity of 58.3 Mt/year, which is nearly ten times the combined production capacity of Beijing and Tianjin (6.3 Mt/year). In addition, Hebei province accounts for 17 percent of national flat glass production.
23. The high level of economic activity only partially explains the high level of emissions. Hebei has much higher emissions of NO_x, SO₂, and PM2.5 per unit than industrialized countries such as Germany and France (Figure 2). In fact, Hebei's total PM2.5 emissions in 2012 (863 kt) was more than twice the total PM2.5 emissions of Germany and France combined in 2010 (330 kt).

Figure 2. Annual SO₂, NO_x, PM2.5 emissions (Hebei 2012, Germany and France 2010)



¹¹CAAC Policy Report 2014; Can Beijing, Tianjin and Hebei Achieve Their PM2.5 Targets by 2017?

24. The emissions per unit of GDP for Hebei, France and Germany (Figure 3a) and annual emissions per capita (Figure 3b) clearly indicate that it should be possible to decouple emissions from economic growth. Hebei's emissions per unit of GDP is much higher than Germany and France ranging from 10 times higher than France for NO_x to 50 times higher than Germany for PM2.5.

Figure 3a. SO₂, NO_x, PM2.5 emissions per unit on GDP (nominal)

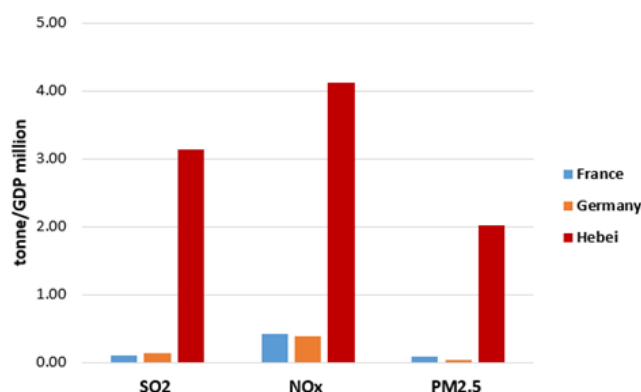
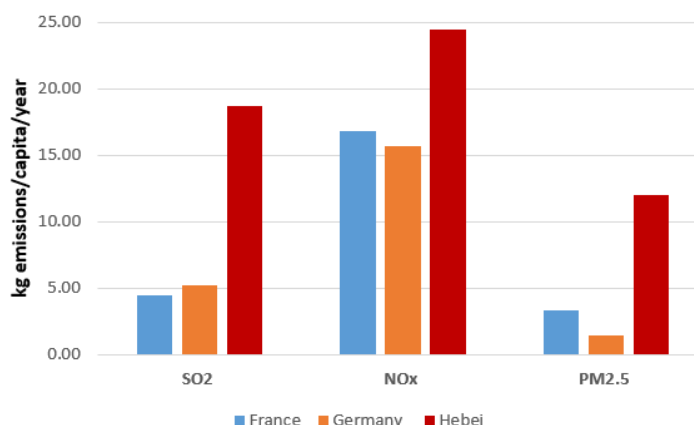


Figure 3b. Annual SO₂, NO_x, PM2.5 emissions per capita



25. Tsinghua University and the China Council for International Cooperation (CCICED) conducted studies in 2014 to evaluate the capacity of the Beijing, Tianjin and Hebei Action Plans to reach their respective 2017 targets. The findings of the studies indicate that the full implementation of the action plans would deliver significant improvements in the air quality in the region by 2017; however, there are risks in meeting the targets. For Hebei, the studies estimated that the HAP would achieve a decrease of annual average ambient PM2.5 concentrations from 112.9 $\mu\text{g}/\text{m}^3$ to 96.3 $\mu\text{g}/\text{m}^3$, a 14.7 percent decrease which is significantly less than the 25 percent reduction target.

26. Source apportionment for JingJinJi indicates that industrial processes are the main source of primary PM2.5 (54 percent of emissions) as well as the precursor of secondary PM2.5 from NO_x (43 percent of emissions) and SO₂ (63 percent of emissions). Residential emissions from stalk burning, and the burning of coal mainly to fuel stoves is the second largest source of primary PM2.5 (33 percent of emissions). The power sector is an important source of NO_x and SO₂ (27 and 20 percent, respectively) while transport is an important source of NO_x (26 percent).

Figure 4. Primary PM_{2.5} source apportionment in JingJinJi¹²

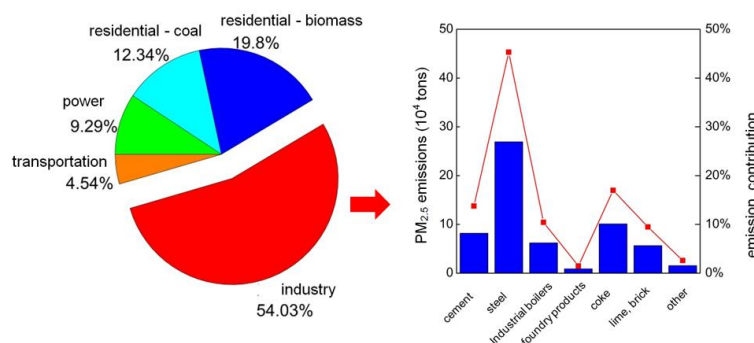
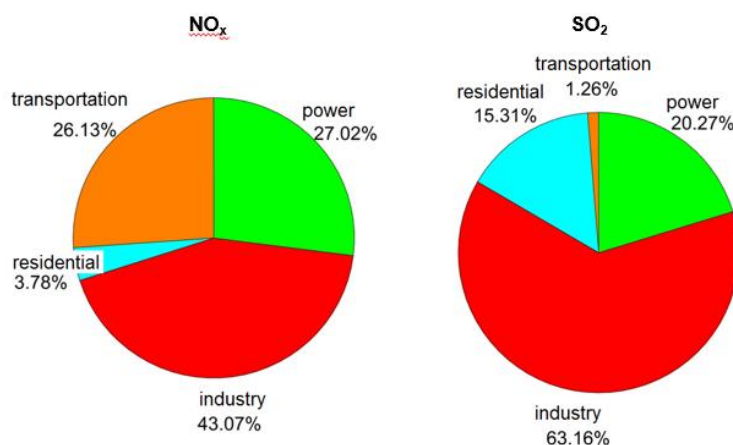


Figure 5. NO_x and SO₂ source apportionment in JingJinJi¹²



27. This analysis validates the focus of the HAP and this Program on curbing emissions from the industrial and power sectors and from transport and heating stoves. This analysis did not cover NH₃, but other studies¹³ by the same group concluded that China's NH₃ emissions increased 16 percent from 2006 to 2015. At this pace, further increases in NH₃ would offset the benefit to air quality from the reduction of SO₂ achieved due to the 12th Five-year Plan. This corroborates the focus on agriculture and livestock as these are the sources of NH₃.
28. Hebei Province covers an area of 188,880 km² and has 11 prefecture-level cities under its jurisdiction: Shijiazhuang, Tangshan, Handan, Qinhuangdao, Baoding, Zhangjiakou, Chengde, Langfang, Cangzhou, Hengshui, and Xingtai. These cities administer 18 county-level cities, 106 counties, 39 districts, and 6 autonomous counties. The province has a total of 1,970 towns and townships and 50,201 village communities. In 2014, the province had a total resident population of 73.8 million; people who did not live in their residence registration places amounted to 8.4 million, including 6.7 million migrants.

¹² He Kebin. Source and Control of PM_{2.5} in Beijing-Tianjin-Hebei (JingJinJi) Region. At Innovation Workshop on Air Quality and Energy Efficiency, November 25, 2014. Beijing

¹³ Wang, Y., et al. 2013. Sulfate-nitrate-ammonium aerosols over China: response to 2000–2015 emission changes of sulfur dioxide, nitrogen oxides, and ammonia, Atmos. Chem. Phys., 13, 2635–2652

29. In 2012, Hebei had 39 national-level and 17 provincial-level priority counties for poverty alleviation and development. In September 2012, the State Council approved the inclusion of 1,630 villages in Hebei in the 12th Five-year Plan for Village-level Poverty Alleviation and Development. These counties are located in the cities of Hengshui, Handan, Cangzhou, Shijiazhuang, Chengde, Baoding, Zhangjiakou and Qinhuangdao. In Hebei, 2.83 million (780,000 urban residents and 2.05 million rural residents) are entitled to minimum living standards protection.
30. In 2013, earmarked poverty alleviation funds invested in national- and provincial-level priority poor villages were 30 percent higher than the national average. Earmarked poverty alleviation funds allocated from the city-level budget were up to 50% of the provincial investments; and at the county level and below, earmarked poverty alleviation investments from various departments, self-financing of villagers and microfinance were up to RMB 3 million for each village. In addition, in 2012 the province provided about RMB 4.5 billion as minimum living standards protection to poor villagers.
31. Hebei's total 2014 resident population included 36.3 million women (49.2 percent of total). Significant improvements have been achieved for women in terms of education, employment and entrepreneurship, and political participation as a result of recent socioeconomic development. In 2011, the provincial government issued the Hebei Women Development Plan (2011-2020). The Plan incorporates gender awareness into the legal system and public policies. It aims to promote women's development, harmonious development of men and women, and synergized development of women and the economy and society. Additionally, it safeguards women's rights and benefits in terms of healthcare, education, employment, and political participation. Annual and midterm review systems monitor the implementation status of the Plan.
32. There are 55 ethnic minorities in the province, including the Manchu, Hui, Mongol, Zhuang, Korean, Miao, Tujia, Buyi, Yi, Yao, Bai, and Dong. The Manchu, Hui, Mongol and Korean minorities have been living in the province for generations. In 2014, 2.96 million ethnic minorities lived in the province and accounted for 4.27% of the total population. Manchu are the largest group with 2.13 million people followed by Hui with 609,600, and Mongol with 176,400. The province has six autonomous counties, three ethnic minority counties, 53 ethnic minority townships, and 1,394 ethnic minority villages. The six autonomous counties and three ethnic minority counties include 1.74 million ethnic minorities, or 54 percent of the province's total ethnic minority population.
33. Ethnic minorities in Hebei are scattered throughout the province and live together in small numbers. The majority (83 percent) live in rural areas often in remote mountainous regions with poor natural conditions and low agricultural productivity.

1.2 Objectives and Scope of the ESSA

34. This is a PforR lending operation. The implementation of the activities under the PforR (Program) will rely on the existing national and provincial legal framework and institutional systems that the counterpart uses to manage environmental and social safeguards issues. The purpose of this ESSA is to provide a comprehensive review of relevant environmental and social safeguards systems and procedures in China and in Hebei Province, identify the extent to which the country/local systems are consistent with the PforR Bank Policy¹⁴ and the Directive¹⁵, and recommend necessary actions to address eventual gaps as well as opportunities to enhance performance during implementation.
35. Specifically, the main tasks of the ESSA are to:

¹⁴ OPCS5.04-POL.01

¹⁵ OPCS5.04-DIR.01

- Review the national and provincial legal policy framework related to environmental and social safeguards applicable to the Program;
- Review management and implementation procedures of environmental and social safeguards systems in Hebei province, especially those relevant to the activities supported under the Program;
- Review and assess the institutional capacity of various relevant agencies involved in the environmental and social impacts management during implementation; and
- Recommend actions to improve the performance of existing systems in line with the core principles of the PforR instrument.

1.3 Methodology

36. The ESSA is a World Bank document prepared by Bank staff and consultants through a combination of reviews of existing HAP materials and available documents related to activities to be supported under the Program, interviews with government staff, and consultations with key stakeholders and experts. In developing the ESSA, the Bank undertook the following tasks:

- Reviewed existing laws, policies, regulations, frameworks, and guidelines with regards to environmental and social safeguards;
- Conducted meetings and interviews with different stakeholders ranging from provincial-level agencies to district/county-level agencies, particularly those involved in the environmental and social assessment as well as planning, implementation and monitoring of activities to be supported under the Program, and visited a sample of enterprises;
- Assessed the environmental and social management system in place relative to the Bank PforR Policy and Bank Directive;
- Assessed the capacity and performance of involved government stakeholders;
- Recommended measures to enhance environmental and social management capacity and performance during implementation.

37. Initial consultations were carried out in Hebei between July and December 2015 to better understand the environmental and social concerns of stakeholders and to seek feedback on the findings and recommendations of the ESSA team. Consultation workshops to receive feedback on the draft ESSA involving key provincial and local stakeholders took place in Shijiazhuang on March 3, 2016.

SECTION II: PROGRAM DESCRIPTION

2.1 Program Contents

38. The objective of the proposed Hebei Pollution Prevention and Control Program (the “Program”) is to support China’s Hebei Provincial Government to reduce emissions of specific air pollutants in key sectors. This will be done by supporting key sub-plans of Hebei Province’s Air Pollution Prevention and Control Action Plan.

A. Hebei Pollution Prevention and Control Implementation Action Plan (HAP)

39. To address severe environmental challenges and reduce emission of air pollutants, the Government of China (GoC) launched a nationwide air quality management campaign. In 2013, the State Council issued the APPCAP, which contains air pollution control measures and ambient concentration targets for the country with more stringent targets for key regions. Hebei, one of the largest industrial provinces and emitters, prepared the Hebei Pollution Prevention and Control Implementation Action Plan (HAP) in September 2013. The HAP was prepared within a very short period of time as a matter

of emergency response and consists of an extensive list of measures and actions across all sectors in line with each leading agencies' existing agenda. This list of measures is not prioritized and some of the measures include quantified targets, while others do not. The HAP includes seven main sub-plans detailed below:

1. Comprehensive control of industrial enterprises and reduced emission of multi-pollutants. Specific activities include: control end-of-pipe emissions of SO₂, NO_x and particulate matter with aerodynamic diameter equal or smaller than 2.5 microns (PM_{2.5}) in key industries, and volatile organic compound (VOC) control in petrochemical and organic chemical industrial sectors.
2. Area pollution control and dust control. Specific activities include: (i) strengthen the non-point source pollution control in rural areas (e.g. from fertilizer, burning of crop residues, inadequate animal waste management); (ii) promote the adoption of clean and efficient stoves in households for heating and cooking preferably using processed fuel (e.g. biomass briquettes or coal briquettes); and (iii) control the dust in construction sites.
3. Prevention and control of emissions from mobile sources. Specific activities include: (i) improve fuel quality (gasoline and diesel with lower sulfur concentrations); (ii) eliminate old, high emission vehicles (known as yellow-sticker vehicles¹⁶); promote new energy¹⁷ vehicles; and (iii) strengthen environment management of vehicles (e.g. require taxis to replace exhaust purification devices annually).
4. Establishment of monitoring and warning systems and planning tools. Specific activities include: (i) strengthen the cooperation of the environmental protection departments with the meteorological departments to set up heavy pollution weather monitoring early warning and high resolution weather-aerosol impact modeling systems; (ii) accelerate the revision of the Regulations on Environmental Protection in Hebei Province and the Regulations on Air Pollution Prevention and Control in Hebei Province to focus on total emission control, as well as the emission permit, emergency and warning, and legal responsibility systems; (iii) increase the capacity on environment monitoring, information, emergency plan, supervision, research, publicity and instruction; (iv) carry out various forms of communication and education to spread scientific knowledge of prevention and control of PM_{2.5}; and (v) strengthen professional training on air quality management.
5. Elimination of overcapacity and promotion of industrial transformation and upgrade. Specific activities include: reduce excessive capacity of high polluting industries, and control the expansion of high polluting industries (e.g., iron and steel industry, cement, electrolytic aluminum, flat glass, and ship-building).
6. Adjustment of the energy structure and increase the clean energy supply. Specific activities include: (i) implement coal consumption cap; (ii) increase the supply of natural gas, LPG, SNG, hydropower, and other clean fuels; (ii) increase the use of clean coal; (iii) develop green buildings; and (iv) control small coal-fired boilers.
7. Supporting measures. Specific activities to study and build capacity to improve and manage air quality in terms of PM_{2.5} in the key cities in the province include: (i) circular renovation

¹⁶ According to the "Implementation Plan on Phasing Out Yellow Sticker and Old Vehicles" published by MEP in 2014, "yellow sticker vehicles" are gasoline vehicles that do not meet State Grade I standards and diesel vehicles that do not meet State Grade III. State Grade I for gasoline vehicles: CO emission does not exceed 3.16g/km, hydrocarbon emission does not exceed 1.13g/km; State Grade III for diesel vehicles: CO emission does not exceed 2.1g/km, hydrocarbon emission does not exceed 0.66g/km, particulate matters does not exceed 0.1g/km and NO_x does not exceed 5g/km.

¹⁷ For the purpose of the HAP new energy vehicles are electric or plug-in hybrid vehicles.

- of industrial zones and parks; (ii) waste-exchange utilization; (iii) land and water conservation and efficient farmland use from improved crop and input management practices and nutrient use efficiency improvements from reduced fertilizer inputs; (iv) recycling of crop residues and animal manure; (v) development of emerging strategic industries, such as energy saving and environmental protection industries, and new energy industries; and (v) enhancing the use of environmental protection and energy saving indicators.
40. The HAP program receives earmarked resources of about RMB 4 billion/year and RMB 800 million/year from the National and provincial governments, respectively. In 2014, these earmarked funds leveraged an additional RMB 25 billion from private sector and other government funds in support of the HAP. The HAP program's funding allocation is assigned each year according to the annual work plan.

B. Hebei Pollution Prevention and Control PforR (the “Program”)

41. The World Bank Program will support the original geographic coverage (the entire province), existing timeline (2017), and most of the Air Pollution Prevention and Control Action Plan with the exception of two sub-plans as summarized in Table 2. The HAP sub-plan 5, “Elimination of overcapacity and promotion of industrial transformation and upgrade,” was excluded from the Program because, according to the environmental and social screening, it presents complex social, economic and environmental challenges not well suited to be addressed through a PforR. The HAP sub-plan 6, “Adjustment of the energy structure and increase the clean energy supply,” was excluded because it will be supported through another PforR for the entire JingJinJi¹⁸ region (P154669- Innovative financing for Air Pollution Control in Jing-Jin-Ji), as part of World Bank's integrated approach to support China to combat air pollution in JingJinJi.

Table 2 Activities of the Hebei Air Pollution Prevention and Control Action Plan- HAP- included in this PforR.

HAP plan	Sub-plan	HAP Activities	Included in the PforR	Comments
1. Comprehensive control of industrial enterprises and reduce emission of multi-pollutants		i. Control end-of-pipe emissions (SO ₂ , NO _x , PM) in key industries. Enterprise installation of desulfurization equipment (end of pipe) in coal-fired power plants, sintering machines and pellet production equipment of iron-steel enterprises, and catalytic cracking units in oil refineries; enterprise installation of denitrification equipment (end of pipe) in coal-fired units and in cement kilns; enterprise installation of dust removal equipment (end of pipe) in coal-fired power plants, iron and steel enterprises, and cement work. Upgrade the protocols for continuous emission monitoring (CEM) system. Install EPB/county office CEM system. Upgrade/ install computer systems in cities and EPB. Train staff to use the monitoring system and conduct modeling.	Yes	
		ii. Strengthen VOCs control in petrochemical and organic chemical industrial sectors and gas stations.		

¹⁸ For that PforR operation JingJinJi region refers to Beijing-Tianjin-Hebei and its neighbors, including Shandong and Shanxi provinces, and Inner Mongolia Autonomous Region.

HAP Sub-plan	HAP Activities	Included in the PforR	Comments
2. Area pollution control and dust control	iii. Strengthen the control of non-point and area source pollution in rural areas. Increase availability of fertilizer with low NH ₃ emission; provide extension to farmers to adopt more efficient and effective fertilizer application; provide access to livestock farmers with modern manure/waste management practices; provide extensions to farmers to adopt more effective and efficient manure management practices; promote adoption of alternatives to use biomass, including biogas production; increase the capacity to enforce waste management and emission standards in rural activities; monitor the open burning of stalk using remote sensing technology.	Yes	
	iv. Promote the adoption of cleaner stoves. Promote the use of clean stoves and use of fuel bricks made of biomass residue.		
	v. Control the dust in construction sites.		
	vi. Control the dust in mining sites.		
	vii. Control oil and smoke treatment in catering services.		
	viii. Increase the green area.		
3. Prevention and control of emissions from mobile sources	ix. Improve fuel quality. Develop policies to promote technical upgrading of enterprises, inspection of retail gas stations, and strengthened quality supervision.	Yes	
	x. Eliminate yellow-sticker vehicles. Remove all yellow-sticker vehicles by end 2017.		
	xi. Strengthen environmental management of vehicles. Improve environmental certification, restrict non-compliant vehicles, adopt new standards, encourage installation of exhaust cleanup facilities, and increase environmental requirements on low-speed vehicles (e.g. tricycles).		
	xii. Promote new energy vehicles. Increase fleet of new energy vehicles.		
4. Establishment of monitoring and warning systems, and planning tools	xiii. Establish and improve the ambient air monitoring and warning system. Expand the ambient PM _{2.5} monitoring network.	Yes	
	xiv. Design a complete environmental emergency plan for days with heavy pollution.		
	xv. Take emergency measures in a timely manner on days with heavy pollution.		
	xvi. Strengthen the organization and leadership. Build capacity to strengthen the organization and leadership for air quality management.		
	xvii. Clarify the duties and responsibilities among the different agencies.		
	xviii. Improve the laws, regulations and policies.		
	xix. Prepare the new multi-year plan. Conduct the GAINS model (or similar) analysis for the new 2016-2020 plan.		
	xx. Improve environmental regulation capacity. Conduct source inventory and composition analysis.		

HAP Sub-plan	HAP Activities	Included in the PforR	Comments
5. Elimination of overcapacity and promotion of industrial transformation and upgrade	xxi. Eliminate low productivity industries.	No	Not suitable for PforR according to ESSA screening
	xxii. Control the expansion of high polluting industries.		
	xxiii. Control small coal-fired boilers.		
6. Adjustment of the energy structure and increase the clean energy supply	xxiv. Implement coal consumption cap.	No	Covered by the Innovative Financing for Air Pollution control in JingJinJi PforR
	xxv. Prohibit building coal-fired power facilities for self-supply in new projects.		
	xxvi. Advance clean use of coal.		
	xxvii. Improve energy efficiency.		
	xxviii. Increase the supply of natural gas, LPG, SNG, hydropower, and other clean fuels.		
	xxix. Develop green buildings.		
7. Supporting measures	xxx. Implement environmental information disclosure. Implement environmental information disclosure and expand the mechanisms to disseminate information to the public.	Yes	
	xxxi. Implement the reward and punishment system.		
	xxxii. Implement pilot and demonstration projects.		
	xxxiii. Mobilize social participation.		
	xxxiv. Strengthen scientific and technological development and promotion.		
	xxxv. Promote clean production.		
	xxxvi. Enhance the use of environmental protection and energy saving indicators.		
	xxxvii. Develop circular economy.		
	xxxviii. Promote energy saving and environmental protection industries.		
	xxxix. Reduce excessive capacity of high polluting industries.		

42. This PforR operation supports a broad multi-sectoral Hebei government Action Plan. In order to ensure a sharper focus on key activities, the Results Areas and Disbursement-Linked Indicators (DLIs) cover a subset of each of the four result-oriented sub-plans (sub-plans 1 to 4 on Table 2). The Results Area and DLIs were selected because: (i) they directly address the underlying weaknesses identified by Tsinghua University and China Council for International Cooperation on Environment and Development (CCICED) and confirmed by the World Bank; (ii) they can benefit from the Bank experience in China or international good practices; and (iii) they can make significant contribution to the achievement of the HAP's 2017 target. The Bank's PforR operation will support the HAP's target of a 25 percent reduction in ambient PM_{2.5} by translating this overall target into sectoral emission reduction targets and enhanced implementation actions as detailed below.

43. **Results Area 1: Comprehensive control of industrial enterprises and reduced emission of multi-pollutants (SO₂, NO_x and primary PM_{2.5}) from key industrial sectors.** The goal is to ensure that

industrial enterprises are meeting the Government's emissions standards on a daily basis, and to ensure that investments in end-of-pipe and other emission-reduction solutions actually result in lower emissions. This should be achieved by implementing a robust Continuous Emissions Monitoring system (CEM) and use it to enforce the existing emission standards.

44. The HAP reimburses heavy polluting companies (iron/steel, cement, glass and power plants) for 10 to 20 percent of the cost of the desulfurization, denitrification, and dust removal equipment once their adequate installation is verified. The HAP also provides CEM equipment to the provincial and municipal EPBs along with protocols for data collection, transfer and storage. CEM equipment is installed in 241 industrial and power generating enterprises comprising 806 production lines in Hebei.
45. The Ministry of Environmental Protection (MEP) determines which enterprises must install CEM equipment. The National Government has a list of the most polluting companies. Companies topping the list that are responsible for 65 percent of the emissions are mandated to be part of CEM.
46. The Environmental Protection Bureau (EPB) has guidelines for the type of equipment eligible for HAP support. Each enterprise makes its own selection, buys and contracts the installation, and then applies for partial government reimbursement.
47. The Program will support the strengthening of the CEM through the implementation of international good verification and management practices and the further expansion of CEM into additional industrial and other point-source locations to ensure more extensive and integrated CEM coverage.
48. Meeting the existing emissions standards would result in reduced emissions; however, some enterprises have not yet installed the required equipment or are not operating it properly. The type of measures to be supported under the Program include: (i) upgrading the verification, calibration, and data collection protocols based on similar protocols adopted in USA and Europe which have shown strong technical capacity in managing main polluters and bringing air quality in line with WHO standards; (ii) expanding the CEM system to cover the main polluting enterprises in the province; (iii) promoting the proper installation and operation of desulfurization facilities in coal-fired power plants, sintering machines and pellet production equipment of iron-steel enterprises, and catalytic cracking units in oil refineries; (iv) promoting the proper installation and operation of denitrification facilities in coal-fired units and in cement kilns; and (v) promoting the upgrade of dust removal facilities in coal-fired power plants, iron and steel enterprises, and cement plants.
49. **Results Area 2: Area pollution control and dust control.** The goals are to promote the use of clean and efficient stoves, optimize the use of nitrogen-based fertilizers in crops, improve crop residue management, and improve waste management in animal husbandry farms. The type of measures to be supported under the Program include: (i) supporting adoption of clean and efficient household stoves using different solid fuels preferably with processed biomass or coal briquettes; (ii) promoting farmers' use environment-friendly, slow-release formula fertilizers based on the results of soil testing and nutrient needs of crops during different growth periods; and (iii) installing livestock waste management facilities in animal husbandry farms for energy co-generation, biogas, and to produce organic fertilizer.
50. Clean stoves: The Program will support: (i) the development and update of clean and efficient stoves standards; and (ii) the adoption of clean and efficient stoves by rural households.
51. The HAP targets stoves that are primarily used for space heating and secondarily used for cooking for replacement. These stoves often use water as a heating agent and include a combustion chamber, heat

exchanger, ash collector and chimney. They are designed to run continuously for many days with low, medium and high fire. The lifetime is at least 5 years.

52. The Program will support a market-oriented approach, combining government subsidy, policy support and market mechanisms. Products are pre-qualified and sales are made directly between the dealers/distributors and users. Subsidies are deducted from the sales price and reimbursed to the manufacturer upon verification of the sales. Educational and informational campaigns are conducted to raise user awareness and ensure selection of quality products. Grassroots organizations such as village committees are heavily involved in these promotional and educational campaigns. Provincial and local governments are held accountable for the performance of the program in their jurisdictions.
53. Agriculture: The Program will support the adoption by farmers of environment-friendly, slow-release formula fertilizers based on the results of soil testing and nutrient needs of crops during different growth periods. Among the measures in the agricultural sector, the formula fertilizer application measure has the best available information for evidence-based support.
54. The Program will support an evidence-based approach. Soil sampling is provided for free to participating farmers. The results of the tests are used to design balanced formula fertilizers according to nutrient demand calculations and fertilizer use efficiency tests. These fertilizers are made available to the farmers at a subsidized price. Subsidies are deducted from the sales price and reimbursed to the manufacturer upon verification of the sales.
55. Livestock waste management. The Program will support improving the waste management of existing medium and large-scale farms including: (i) dry-wet separation facilities; (ii) crop-animal integrated systems; and (iii) production of biogas.
56. **Results Area 3: Prevention and control of emissions from mobile sources.** The goal is to ensure implementation of key measures for reducing vehicular emissions and fuel-related activities. The type of measures to be supported under the Program include: (i) accelerating the elimination of yellow-sticker vehicles and disposing of them properly; (ii) strengthening the environmental management of vehicles through stricter emission standards to ensure compliance with new government standards, including piloting the adoption of catalyst and filter devices on heavy duty vehicles in selected areas; (iii) promoting the use of new energy vehicles especially for public transport, city services and government agencies; (iv) encouraging a more rapid adoption of stricter transport fuel standards; and (v) implementing VOC controls to ensure oil and gas vapor recovery at refueling stations.
57. The Program will focus on urban public transport. This should decrease emissions from diesel burning, reduce NO_x emissions in the province, improve air quality in urban areas, and generate climate change mitigation co-benefits. The Program will support the acquisition of battery electric buses. Manufacturers can receive up to RMB 500,000 per bus from the HAP earmarked funds, while public bus companies (purchasers) can receive an equal amount from the provincial government. In addition to subsidies for bus acquisition, the central government also provides subsidies to cover bus operation costs. In 2015, subsidies amounted to RMB 80,000 per bus. Battery Electric Vehicles (BEV) buses are competitive with compressed natural gas (CNG) buses due to government operating subsidies.
58. The Program will also support eliminating old and highly polluting vehicles and disposing of them properly. By the end of 2014, all yellow sticker buses used for public transport were eliminated. An

additional 4,500 diesel buses will be replaced as part of the bus replacement initiative described above. Although they are not labeled as yellow-stickers¹⁹, those buses must be disposed of properly.

59. **Results Area 4: Establishment of monitoring and warning systems and planning tools.** The goal is to develop modern air quality management systems and strengthen institutional capacity for the short- and medium-term planning and implementation of measures to continuously reduce ambient PM_{2.5} concentrations in the province over the next 10 to 15 years. The program is currently based on the Ambient Air Quality Monitoring (AAQM) network established in 207 locations in Hebei province mainly for public information purposes. The program also collects information on rural emissions through satellite-based tools.
60. The measures to be supported under the Program include: (i) establishing a Smart Platform for monitoring the ecological environment that covers the whole province and integrates all environmental elements (AAQM, CEM, rural emissions), with the Meteorological Department for heavy pollution weather monitoring and early warning systems; (ii) strengthening the data collection system to provide a complete source and composition of both primary and secondary PM in order to guide future planning and interventions; and (iii) developing the 13th Five-year Plan for air pollution prevention and control using modern AAQM planning tools to ensure cost- effectiveness and prioritization.

2.2 Institutional Arrangement for Implementing the Program

61. This Program will rely on existing structures and mechanisms used for implementing and monitoring the current HAP. Overall, the assessment concluded that adequate capacity and commitment is in place to implement the Program.
62. A comprehensive structure is in place that supports the implementation of the HAP. The overall guidance is provided by the highest level leadership of the province, and its execution is led by sectoral agencies and municipal governments in a coordinated manner. Given the cross-disciplinary nature of the air quality management, the institutional coverage includes many agencies within the provincial government's structure. Implementation takes place at the municipal and prefecture level, so the institutional arrangement is a matrix that, in addition to horizontal coordination, involves a vertical structure where each line agency is mirrored at the municipal/prefecture level and down to the county level.
63. Overall coordination of the HAP is carried out by the High-level Provincial Working Group comprised of the governor (the Working Group Leader), the vice governors responsible for sectors covered in the plan (Deputy Leaders), and leaders of relevant departments and municipalities. The Working Group's Office (WGO) has been established within the Hebei EPB serving as the secretariat to the Working Group for day-to-day management and coordination of the HAP. An annual work plan is developed by the EPB WGO, which also works jointly with the Finance Bureau in allocating the annual HAP budget. Each activity defined in the annual work plan is assigned to a specific agency that is responsible for its implementation.
64. To address the additional coordination and support required by the Program, the Development and Reform Commission of Hebei (Hebei DRC) has set up a coordination office to liaise with the respective line bureaus involved in the implementation of the HAP, especially in the four Results Areas of the Program. Hebei DRC's multi-sectoral nature is expected to be valuable to the Program's

¹⁹ In the case of diesel vehicles, the "Implementation Plan on Phasing Out Yellow Sticker and Old Vehicles" published by MEP in 2014, defines as "yellow sticker vehicles" those that do not meet State Grade III standards as follows: CO emission does not exceed 2.1g/km, hydrocarbon emission does not exceed 0.66g/km, particulate matters does not exceed 0.1g/km and NO_x does not exceed 5g/km.

coordination. The DRC will coordinate directly and primarily with the EPB WGO and the Finance Bureau to ensure that they are fully engaged in the Program's design and implementation.

65. There are nine Working Groups under the Leading Group. These include: (i) Comprehensive coordination – led by EPB; (ii) Industrial energy control – led by Development and Reform Commission (DRC); (iii) Pollution control and emission reduction –led by EPB; (iv) Motor vehicle management –led by Public Security Department (PSD); (v) Area source control in agriculture – led by provincial Department of Agriculture (DOA); (vi) Comprehensive management of the urban area – led by Department of Housing and Urban-Rural Development (DHURD); (vii) Financial support – led by provincial Department of Finance (DOF); (viii) Supervision and monitoring – led by provincial Department of Work Safety Supervision (WSS); and (ix) Performance evaluation – led by provincial Cadre Management Department of Party Committee. The vice governors responsible for the relevant sectors are the chiefs of the Working Groups, and the deputy chiefs of the Working Groups are the leaders of the relevant departments. All the Working Groups have their offices established in the responsible departments.

SECTION III: POTENTIAL ENVIRONMENTAL AND SOCIAL EFFECTS

3.1 Environmental and Social Screening

66. An initial environmental and social screening of all HAP was undertaken during the early stages of the dialogue between Hebei and the World Bank. The purpose of the screening was to: (i) identify HAP activities likely to have significant adverse impacts on the environment and/or affected people (those activities are not eligible for financing and should not be included under the Program); and (ii) determine the priority areas for further attention during the environmental and social system assessment. Results of the initial screening are as follows:

- Positive environmental and social benefits are expected as major results of the Program.
- The initial screening has identified the following activities under the HAP which may bring about complex social and environmental issues: (i) closing down enterprises and boilers; and (ii) installation of new boilers. These activities may have significant impacts on the environment and affected people. Therefore, they are not addressed through a PforR, and were excluded from the Program.
- Risks related to activities supported under the Program mainly include: (i) inadequate waste management and lack of vocational health and safety capacity in industrial enterprises associated with installing/operating desulfurization, denitrification and dust removal facilities; (ii) inadequate licensing of livestock waste management facilities and lack of skills for using new technologies for rural non-point source pollution management; (iii) loss of income for owners of eliminated yellow-sticker vehicles used for private business and inappropriate disposal of vehicles in dismantling enterprises that do not operate according to China's Regulation; and (iv) potential down-stream environmental and social impacts of new laws, policies and regulations.
- Environmental and social management systems should be enhanced during implementation of the Program Action Plan.
- The proposed Program is suitable for PforR with the above-mentioned exclusions.

3.2 Potential Environmental Benefits and Risks

3.2.1 Potential Environmental Benefits

67. The proposed Program is anticipated to have significant positive environmental and health benefits in terms of reducing air pollution emissions, improving environmental quality and public health, and enhancing environmental monitoring and management capacity in Hebei.
68. The installation of desulfurization, denitrification and dust removal facilities in key enterprises will significantly reduce emission of SO₂, NO_x and particulate matter. This will improve air quality in Hebei and the JJJ region and reduce acid rain and heavy metal contamination of soil and water. The deployment of a CEM system on emission sources and the establishment of an information and management system will help strengthen the capacity of Hebei to implement the Program and should sustain the long-term pollution control efforts in the province.
69. The activities supported under the Program to promote the use of formula fertilizer based on soil testing and analysis will decrease atmospheric ammonia emissions. Installation of livestock waste management facilities to collect and convert animal manure to organic fertilizer will return carbon to farm soils, thus, enhancing the carbon sink in farm soils. Carbon-rich soils hold water and macronutrients such as calcium, magnesium, and potassium better than soils with low carbon and require less formula fertilizers. Enhanced use of organic fertilizers creates a greater demand for animal manure. This will reduce the significant pollution caused by ammonia loss from unmanaged manure as well as the pollution of local surface and ground water from manure disposal into local streams.
70. The activities supported under the Program which promote clean stoves that can burn fuel more efficiently make a significant contribution to indoor and outdoor air pollution control. Replacing coal with briquettes made of compressed biomass residues to fuel stoves will also reduce greenhouse gas (GHG) emissions.
71. Hebei Province had about 15 million registered vehicles in 2014 of which one million were yellow sticker vehicles. More than 90 percent of the yellow sticker vehicles were eliminated between 2013 and 2014. The rest will be phased out by 2015-2016. Elimination of high pollution yellow-sticker vehicles will reduce vehicular emissions. Increasing the fleet of new energy vehicles (such as natural gas and electric) will reduce vehicular emissions and improve air quality in Hebei.
72. VOC controls will enhance oil and gas vapor recovery at refueling stations and VOC recovery from potentially hundreds of industrial enterprises; thus, reduce VOC emission into the ambient environment.

3.2.2 Potential Environmental Risks

73. The activities supported under the Program are not expected to take place in environmentally sensitive areas (e.g., natural habitat, protected area, or forest) or to have adverse impacts on physical cultural resources. Activities will not involve pest management practices or the production, storage, transport, use, or disposal of hazardous pesticides. However, certain limited environmental risks are expected as part of the implementation of activities supported under the Program. The potential environmental risks identified during the assessment include:

- **Disposal of wastes from end-of-pipe treatment facilities.** Operation of end-of pipe treatment facilities will generate waste that needs to be reused or disposed of properly. For example, dust removal facilities in coal-fired power plants, sintering machines and pellet production equipment of

iron-steel enterprises, and catalytic cracking units in oil refineries will have fly ash solid waste. Fly ash is a non-hazardous waste and is normally reused as construction material or disposed of in landfill as general industrial solid waste. Operation of desulfurization facilities at the enterprises is primarily associated with the disposal of gypsum byproduct ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$, non-hazardous material) which is the chief component of the spent sorbent. Generally this material could be utilized by construction industries. Denitrification facilities commonly use Selective Non-Catalytic Reduction (SNCR) or Selective Catalytic Reduction (SCR) technology and will not have solid or liquid by-products. NO_x emissions in the flue gas are converted into elemental nitrogen and water by injecting a nitrogen-based chemical reagent, most commonly urea or low concentrated ammonia water in Hebei Province.

A review of approved EA document samples for end-of pipe treatment projects in China and consultations with enterprises during field visits indicate that the installation of the end-of-pipe treatment facilities under the Program does not entail major retrofitting or expansion of existing production facilities at the enterprises.

- **Occupational health and safety.** Installation and operation of end-of pipe treatment facilities, such as desulfurization, denitrification and PM removal facilities in the power generation iron & steel, and petroleum and cement industries may pose some occupational health and safety issues, including exposure to pollutants and other environmental hazards. There is a risk in use of liquid ammonia or high concentrated ammonia water as a reducing agent for denitrification facilities. According to the EPB, Hebei government has limited the use of these substances due to the potential issues of safety and fugitive ammonia emissions. Instead, Hebei EPB encourages the use of urea (a safe chemical) as the reducing agent. The emission control facilities pose no significant environmental or health risks to workers or the general public. The safety and health issues are most likely generic issues of industrial enterprises where China's health and safety related regulations would be sufficient to address them.
- **Disposal of old yellow sticker vehicles.** The elimination of yellow-sticker vehicles requires environmentally safe disposal. Improper dismantlement, reuse, recycling, and disposal of vehicle parts/wastes may result in adverse environmental impacts of soil, air and water, as well as health impacts on plant workers involved in dismantling vehicles. At present, there are 32 licensed vehicle dismantling enterprises in Hebei province, about half of them are not in compliance with the latest Chinese EA standards/technical specification because these enterprises were built before the current standards/specifications took effect. Therefore, it is possible that the disposal of yellow-sticker vehicles or diesel buses under the Program could take place at vehicle dismantling enterprises that are not in compliance with applicable Chinese standards/technical specifications. To mitigate this risk, the DLI related to replacing diesel buses requires evidence that the buses were disposed of in dismantling enterprises compliant with the latest Chinese EA standards/technical specification. The activities supported under the Program do not include any construction/upgrading of dismantling enterprises.
- **Livestock waste management.** The installation and operation of livestock waste management facilities will have negative limited short-term construction and long-term operational impacts and risks. Long-term impacts include the disposal of livestock waste, the need for wastewater treatment, odor control, and other impacts associated with the operation and maintenance of biogas facilities and distribution pipelines. The potential risks associated with the biogas facilities are fire and explosion. These adverse environmental impacts and risks can be adequately avoided, minimized and mitigated with good management practice and mitigation measures in accordance with Chinese EA regulations.
- **Formulation /revision of a number of environmental laws, policies and regulations.** The formulation/revision of environmental policies that promote environmental improvement or pollution

control in some domains may have unintended negative environmental and social consequences in other domains. Therefore, environmental concerns shall be mainstreamed into the revision and formulation of laws, policies and regulations. The policy aspects under the Program will likely include: (i) promoting the use of high quality fuel and clean energy vehicles and restricting the use of less efficient vehicle; (ii) strengthening enforcement of existing environmental policies; and (iii) revising existing policies or formulating new policies. The Regulation on Public Participation in Environmental Protection in Hebei Province (HPC, 2014) explicitly requires public consultation when drafting local environmental protection regulations. Comments from experts and the public must be carefully considered by the drafting and reviewing departments. They, in turn, must provide justification for accepting or rejecting public and expert input. Regulations requiring public consultation exists but have not been implemented effectively. Measures to strengthen application of this Regulation are included in the Program Action Plan.

3.3 Potential Social Benefits and Risks

3.3.1 Social Benefits

74. **Overall improvements of air quality and people's living standards.** Implementation of the activities to be supported under the Program would contribute to reducing ambient PM2.5 concentration by 25 percent over its 2012 level; thereby, enabling residents to breathe fresher and cleaner air, mitigating risks of diseases due to environmental deterioration, reducing disease-related expenditures, and improving people's quality of life. It is expected that mortality of air pollution related diseases would decline significantly by 2020.
75. **Control of rural non-point source pollution and improvement of living quality of rural residents.** Implementation of the Program would promote integrated management of rural non-point source pollution from fertilizer use and animal waste disposal and strengthen the ban on stalk burning and integrated use of stalk. It will reduce emissions of various pollutants from non-point sources in rural areas of Hebei. Improvement of rural energy mix and application of various alternative materials would contribute to increasing the efficiency of new energy use, decreasing indoor pollution, and improving the living conditions in rural areas.

3.3.2 Social Risks

76. The assessment of social risks of the activities to be supported under the Program concluded that there would not be significant social conflicts caused by those activities. However, the Program would have some social risks in terms of social sustainability, land acquisition, and ethnic minority development.

Social risks related to social sustainability and informed decision-making

77. In the short term, eliminating yellow-sticker vehicles use for private business (12 percent of all yellow sticker vehicles) may result in the loss of original job opportunities for owners and renters of these vehicles and reduce their income to some extent. Therefore, this elimination may have negative impacts on the income of vehicle owners and renters, especially those without other skills who are unable to find new job opportunities within the short term.
78. Use of new types of fertilizers in rural areas would play a big role in increasing market competitiveness of farm produce and increasing farmers' income. However, farmers' lack of training on how to adequately apply fertilizers constrains its sustainable use. In addition, farmers lack understanding of rural clean energy development and utilization projects, such as biogas projects.

Insufficient gas supply, difficulties cleaning sludge, inability to ensure their safe use, and high installation costs are among the perceived problems in developing biogas digesters. These could impede, to some extent, the promotion and use of new energy and make it difficult for activities supported by the Program to be sustainable.

Formulation of policies and regulations could trigger downstream social risks

79. Hebei Province would update its Environmental Protection Regulations and Air Pollution Control Regulations in accordance with the amended Environmental Protection Law and the Law on the Prevention and Control of Atmospheric Pollution. It would enact Hebei Vehicle Exhaust Pollution Control Measures, Hebei Provincial Supervision and Inspection of Environmental Governance and Accountability Measures, Hebei Provincial Measures for Implementation of Grid Management in Environmental Supervision, Hebei Environmental Monitoring Measures, and other laws and regulations. It would also accelerate the introduction of emission standards for key industries, technical policies for pollution prevention and control, a clean production assessment indicator system, and other economic policies that are conducive to improving air environment.
80. Formulation and revision of these policies involves ethnic minority regions. This may cause job transfer or unemployment to the current workforce and require limited, land acquisition. As a result, it could have negative impacts on some people. Social assessment, public participation, and education must be incorporated into the policy making process. In particular, policymakers shall pay special attention to the needs of ethnic minorities, the poor and women.

Land acquisition

81. The social risk assessment concluded that the activities to be supported under the Program would not lead to large-scale land acquisition and relocation. However, development and utilization of clean energy in rural areas, upgrading of farms, management of pilot cities, and implementation of air pollution prevention and control policies may involve small-scale land acquisition or occupation. This may result in permanent or temporary loss of land to a small number of affected people, thereby, reducing their agricultural income.

Ethnic Minorities

82. Activities to be supported under the Program include areas throughout Hebei Province and are likely to take place in locations mainly occupied by ethnic minorities. Therefore, their views must be taken into account to ensure that ethnic minority groups can enjoy the benefits with minimum impacts on their cultures. Such measures also apply to activities such as the elimination of yellow-sticker vehicles, utilization of new energy in rural areas, and land acquisition and occupation for livestock farms.

SECTION IV: ASSESSMENT OF ENVIRONMENTAL MANAGEMENT SYSTEM

4.1 Legal Framework Applicable to the Program

83. Since the promulgation of its first Environmental Protection Law in 1979, China has gradually established a comprehensive environmental management legal framework²⁰. This framework includes more than 80 laws and statutes, 120 regulations, and over 1,000 standards and technical guidelines at the national level primarily addressing pollution control, natural resource conservation and

²⁰ Reaching out to the Rule of Law: China's Continuing Efforts to Develop an Effective Environmental Law Regime, , Richard J . Ferris Jr.* & Hongjun Zhang, Ph.D.**; 2003.

management of the environment. Occupational health and safety is addressed in China through a comprehensive set of laws, regulations, standards, and guidelines similar to or even more complex than the environmental protection and pollution control system. There are also a large number of regulations and implementation plans at local levels. The list of main laws, regulations, and guidelines is provided in Annex 1.

84. In general, this legal framework can be classified into three categories: (i) laws and regulations issued by the National People's Congress and the State Council; (ii) administrative regulations, standards and technical guidelines issued by various ministries; and (iii) regulations, policies and standards issued by local People's Congress and local government. The system puts emphasis on a "preventive approach" and comprehensive pollution control.

85. The key laws, regulations and technical guidelines related to the activities to be supported under the Program are below.

(i) Environmental Protection and Pollution Control

86. **Environmental Protection Law- EPL (NPC, 2014):** This law is the "most stringent" environmental law ever promulgated in China. It lays out general principles for environmental protection and describes key instruments for environmental management. It requires enterprises, public institutions and any other producers/business operators to prevent and reduce environmental pollution and ecological destruction and to bear the liability for the damage caused by them (Article 6). It also requires that development plans and construction projects with environmental impacts be subject to environmental impact assessment (Article 19). This statute divides environmental management functions between national and local environmental administrations with powers to enforce environmental legal requirements. In addition, the EPL requires that the State adopts regulatory instruments such as environmental protection target, accountability and performance evaluation system (Article 26), establish ecological protection compensation mechanisms (Article 31), implement the "Three Simultaneousness" system²¹ (Article 41), implement the total emission control system for key pollutants (Article 44), and establish a pollution permit system (Article 45). The EPL includes stipulations on information disclosure and public participation (Chapter 5) and recognizes the right of citizens, legal persons and other organizations to report environmental pollution and ecological damage activities of polluters. The new EPL authorizes environmental departments to stop or shut down non-compliant producers and enterprises, and to enforce cumulative non-compliance penalties on a daily basis without top limit. It allows personal detention of violators (but not criminal charges). It also requires consideration of environmental impacts during the formulation of economic and technological policies by center, provincial and municipal governments.

87. The EPL establishes a number of key implementation systems which are being used as main instruments in China for environmental safeguards. These systems are supported under a large number of regulations, implementation rules, standards, and guidelines. The main systems include:

- Environmental Impact Assessment System: All construction projects and relevant development plans are subject to regulation of the EIA system. More is discussed below under the EIA Law.
- "Three Simultaneousness" system: Pollution control facilities must be designed, constructed and operated simultaneously within the main project. The implementation of "Three Simultaneousness" is enforced by relevant levels of environmental protection bureaus (EPBs),

²¹ Pollution control facilities must be designed, constructed and operated at the same time with the main project.

which review and approve the EIAs and carry out the verification inspection upon the completion of construction and commencement of operation.

- Total emission control system: The State adopts a total emission cap control system for key pollutants. The total emission quota is allocated to each province. Provinces will further allocate down to the enterprise level. All enterprises are required to meet both the emission standards (national and local) and the total emission control target. Areas failing to meet the total emission control targets are banned from approving new construction projects with additional emission of regulated pollutants.
- Pollution permit system: All entities are required to obtain a permit for pollution emission. The permit specifies the types of pollutants, ways of emission, total emission quota, and period of validity. Local EPBs regulate the permit system by reviewing and approving permits and supervising compliance.

88. **Environmental Impact Assessment Law (NPC, 2002)**: This law is a subset of the nation's larger Environmental Protection Law. In October 2002, the former EIA Regulation was upgraded to a new national EIA Law, which entered into force in September 2003. The statute, which has five chapters and 38 articles in total, requires that all relevant parties, including experts and the general public, evaluate the likely impacts of development projects, programs, and plans on the environment. The EIA Law, together with a set of technical guidelines, provides a comprehensive EIA system that addresses the full range of environmental issues related to construction projects and plans.

89. Development projects are classified as either A (significant environmental impacts, requiring a full-scale EIA), B (limited adverse environmental impacts in scope and severity, requiring a simplified EIA report known as EIA Form), or C (likely to have negligible adverse environmental impacts, requiring filling an EIA registration form).

90. As part of the EIA system, the Interim Measures for Public Consultation in EIA (SEPA, 2006) provides further detailed requirements and procedures of public consultation and information disclosure. In summary, these include:

- Two rounds of information disclosure: (1) Project owners shall issue public notice within 7 days of hiring EA institute, announcing the start of EIA preparation, project brief and key issues requiring public opinions; (2) Project owner shall carry out second round of information disclosure before submission of EIA report for approval, disclosing the key findings of EIA in terms of impacts and mitigation measures, as well as the ways to get simplified version of EIA report and provide feedbacks. The project owner is obliged to disclose the simplified version of the EIA report in public places, on the internet, or through other ways convenient to the public.
- Public consultation: Project owner or EA institute shall, after public announcement and disclosure of simplified EIA report, carry out public consultation through public survey, consultation with experts, public meetings, discussion workshops, or hearings to seek public opinions.

91. It should be noted that the public consultation requirement only applies to those projects requiring EIA Report (Category A). For projects subject to an EIA Form (Category B), consultation is not mandatory, except when special impact assessment for certain environmental elements is required as an annex. As per requirement of the Interim Measures, the MEP or local EPBs shall announce, through their website or other ways convenient for public accessibility, the receipt of EIA documents for review and disclose the reports as well as the decision results after review.

92. For the implementation of EIA system, the *Regulation on Environmental Management of Construction Projects* defines the EIA classification (Article 7), contents requirements (Article 8), and the levels of approval commensurate with the scale of potential impacts. It also establishes the requirement of qualification licensing system for entities practicing EIA.
93. In order to guide the determination of EIA categories, the Ministry of Environmental Protection (MEP) issued the *Categorized Directory for Environmental Management of Construction Projects*. The latest version (2015) provides detailed criteria for EIA category classification for 23 sectors (199 types of projects) with consideration of project type, scale, and sensitivity of locations. To support the technical quality of EIA, there is a set of 26 technical guidelines which articulate methodologies and technical details for assessment of various types of impacts and for key sectors of projects.
94. *Water Conservation and Erosion Control Law (NPC, 2010)*: This law is to prevent water pollution and soil erosion from construction projects that may disturb land surface. As a prerequisite for approval, all construction projects that may cause soil erosion are required to prepare a water conservation and soil erosion control plan (as part of the overall EIA package). The plan is approved by the relevant water resources authority before the full EIA package is submitted to the environmental authority for approval.
95. *Air Pollution Control Law (NPC, 2015)*: As fundamental legislation for air pollution control, this law requires all air pollution emission entities to comply with national or local emission standards (Article 13). They must report to local environmental departments on their air pollution emission control facilities, pollutants types, emission concentration, and amounts of emissions (Article 12). All new construction, renovation and expansion are subject to air pollution impact assessment and must be approved and verified by relevant environmental departments (Article 11). It specifically defines provisions for air pollution from coal-burning (Chapter 3), automobile vehicle and ship (Chapter 4) and waste gas, dust and odor (Chapter 5). It requires environmental authority (MEP) of the State Council to establish air pollution monitoring networks. It allows local governments to develop local environmental standards that are stricter than national standards (Article 7).
96. *Solid Waste Pollution Control Law (NPC, 2004)*: This law requires the environmental authority to establish solid waste pollution monitoring systems. All projects that generate solid wastes are subject to environmental impact assessment (Article 13) and “Three Simultaneousness” requirements (Article 14). It includes general solid waste control provisions, as well as specific provisions for industrial solid waste, domestic garbage, and hazardous waste (Chapter 3). More specifically, it requires proper collection, use, and disposal of livestock waste and prohibits the open burning of agricultural waste in densely populated areas, along airports and transport corridors, and areas designated by local governments (Article 20).
97. *Regulation on Mandatory Retirement of Automobile Vehicles (MOFCOM, 2012)*: The Regulation requires mandatory retirement for vehicles that do not meet applicable pollutants emission and noise standards. All retired vehicles must be handed over to vehicle dismantlement enterprises for disposal.
98. The *Technical Specifications for End-of-life Vehicle Dismantling Enterprises (GB22128-2008)* specifies technical requirements for the dismantling enterprises in terms of site, facility, staffing, dismantling procedures, waste (including hazardous waste) storage and disposal, and corporate management.

99. MEP also issued *Environmental Protection Technical Specifications for Dismantling of End-of-life Vehicles (HJ348-2007)*, which provides detailed requirements of environmental protection for vehicle dismantling, including general requirements, site location, site zoning, waste water management, emergency response, hazardous waste management, waste disposal, and emission standards.
100. **Wildlife Protection Law (NPC, 1988)**: The State protects wildlife and their natural habitats. Illegal poaching and damaging by any unit or person is strictly forbidden. The State provides special protection to rare and endangered wildlife. Governments should establish nature reserves on land and water areas that are habitats for national and local protected wildlife.
101. **Forestry Law (NPC, 1998)**: Construction projects should avoid or minimize the occupation of forest land. If unavoidable, approval from the forestry authority of the county (or higher) government must be obtained for land acquisition. The project must pay forest restoration fees as defined by the State Council. Forest restoration fees are to be used for forest re-plantation organized by relevant forestry authorities. The area of forest restoration cannot be smaller than the area lost by the land acquisition.
102. **Regulations on Nature Reserves (SC, 1994)**: Nature reserves shall be established for: (i) typical natural geographical areas, representative natural ecological system areas, or damaged natural ecosystems restorable through protection; (ii) natural concentrated habitats for rare and endangered wild plants and animals; (iii) special valuable sea waters, coastal areas, islands, wetlands, inland waters, forests, grassland and deserts. Nature reserves are established in three areas: core areas prohibited from any activities including scientific studies; buffer areas limited to scientific observations; and experimental area prohibited from any production activities.
103. **Cultural Property Protection Law (NPC, 2002)**: (i) For various levels of protected cultural relics, governments at various levels define the necessary scope of protection. A buffering construction-control zone can be defined outside the scope of protection; (ii) No other construction projects are allowed within the scope of protection. Necessary construction within the scope must be approved by the corresponding level of government and the cultural relics authority at one higher level; (iii) Pollution facilities and activities that may affect the safety and environment of the protected relics are forbidden within the scope of protection and outer construction-control zone; (iv) Alternatives for construction projects shall be explored to avoid immovable cultural relics to the extent possible. If cultural relics are unavoidable, in-situ protection shall be pursued to the extent possible, and a protection plan must be approved by the relevant cultural relics authority. Ex-situ protection or dismantling must be approved by relevant level of governments. All necessary protection expenses shall be included in the budget of the construction project; (v) For large scale civil works, construction units shall contact the cultural relics authorities who will organize archeological surveys prior to construction. Expenses for archeological survey, exploration and excavation must be included in the construction budget; and (vi) Chance-find procedures: during construction projects or agricultural activities, any one or unit which uncovers cultural relics shall stop construction and protect the site, and immediately report to local cultural relics authorities for investigation. In case of important discoveries, the local cultural relics authority must report to authorities at higher levels.
104. **Flood Control Law (NPC, 1997)**: This law requires that all projects located in areas prone to floods to prepare a flood control assessment by a licensed institute. The report is to be approved by relevant water resources authorities, which is a prerequisite for approval of feasibility study.
105. **Regulation on Geological Hazard Prevention (SC, 2003)** This regulation requires that all projects located in areas prone to geological hazards are required to prepare a geological hazard assessment

report by a licensed institute. The report is to be approved by relevant land resource authorities, which is a prerequisite for approval of the feasibility study.

106. Under the overall national environmental legal framework, a number of provincial environmental protection laws and regulations in Hebei enhance and detail the implementation of the national framework in the province. These mainly include:

- Hebei Environmental Protection Regulation
- Hebei Air Pollution Control Regulation
- Environmental Management Regulation on Construction Projects in Hebei
- Hebei Regulation on Pollution Emission Reduction
- Regulation on Public Participation in Environmental Protection in Hebei Province.

(ii) Occupational Health and Safety

107. The established system for occupational health and safety also includes a great number of other laws and regulations supported by numerous management rules, implementation procedures, technical guidelines, and standards. The key legal framework and implementation system are summarized below.

108. **Labor Law (NPC, 1994)**: The Law mandates health and safety requirements in work contracts. It requires that employers establish labor health and safety systems, comply with applicable national standards and guidelines, provide training for employees on occupational health and safety, prevent accidents and reduce occupational damages. It also requires employers to provide necessary personal protection equipment, working environments in compliance with national requirements, and periodic medical examination for employees in jobs with potential occupational health and safety risks. It requires a “Three Simultaneousness” system for work safety facilities in new construction, renovation and expansion projects -- safety facilities must be designed, constructed and put into operation simultaneously with the main project.

109. **Labor Contract Law (NPC, 2007)**: This law requires work protection, work condition and occupational hazard protection provisions in labor contracts. It is enforced by human resources and social security departments, which also handle grievance arbitration.

110. **Work Safety Law (NPC, 2002)**: This law is the umbrella law for work safety. It requires production operation entities to comply with relevant laws and regulations, establish safety operation rules and management systems, improve safety conditions and ensure safe operation of production. It specifies safety responsibilities of operation entities in terms of establishment of safety operation rules and specifications, setting of organization systems with clear responsibilities, staff qualifications and training, “Three Simultaneousness” of safety facilities, safety assessment, safety design and construction, safety signage, emergency response plan, and provision of PPEs. Enterprises, if involved in the use, manufacture, transportation, storage, or sales of dangerous materials, should establish special safety management systems and adopt effective measures. Associated operational staff should be examined and licensed. The Law clarifies the responsibility of safety supervision by relevant work safety authorities at various levels.

111. This law establishes a “Three Simultaneousness” system for work safety facilities, which is further elaborated in the *Regulation on Supervision and Management of Three Simultaneousness for Safety Facility in Construction Projects (SAWS, 2010)*. The “Three Simultaneousness” system requires that work safety facility be designed, constructed and operated simultaneously with the main project.

112. The *Work Safety Law* and the *Regulation* also establishes a work safety assessment system, which requires work safety assessment to be conducted for the following types of projects: non-coal mining projects; projects producing and storing dangerous chemicals and fireworks; key projects on chemical, metallurgical, non-ferrous metal, construction material, machinery, light industry, roads, and other projects required by relevant regulations. Safety assessment is conducted by licensed entities and approved by relevant work safety authorities, which is a prerequisite for feasibility study approval.
113. Under the *Work Safety Law*, the *Regulations on Safety Management in Construction Projects* (State Council No. 393) defines general provisions on safety responsibility of the project sponsor, the construction surveyors, the design units, contractors, and supervision companies. The law also includes provisions on emergency rescue and investigation for accidents and legal liability for violating the regulations.
114. The *Interim Regulations on Works Safety Risk Investigation* (SAWS, 2007) clarifies that enterprises are responsible for work safety and mandates that enterprises establish work safety investigation and reporting systems. Under this regulation, all enterprises must conduct quarterly work safety risk investigations and report to the local Administration of Work Safety (AWSs).
115. The main regulator on work safety is the State Administration of Work Safety (SAWS) and its subordinate Administration of Work Safety at the provincial and municipal levels. The SAWS has developed over 80 administrative regulations and hundreds of work safety standards and guidelines, which form a comprehensive occupational health and safety management system.
116. In Hebei Province, a Regulation on Work Safety was issued by Hebei People's Congress in 2005, which provides specific requirements for implementation of the Work Safety Law in the province.
117. ***Law of Prevention and Treatment of Occupational Diseases (NPC, 2011)***: This law defines the “occupational diseases caused by contact of fine dust, radioactive substances, and other toxic and hazardous elements during working” and gives the prevention of occupational diseases top priority. It also defines the duties and responsibilities of the relevant organizations (i.e., employer, employee, workers' union, supervision organizations).
118. This law establishes another “Three Simultaneousness” system, which is further defined under the *Regulation on Supervision and Management of Three Simultaneousness for Occupational Hygiene Facility in Construction Projects* (SAWS, 2012). The system requires that occupational diseases prevention facilities must be designed, constructed and operated simultaneously with the main project. It is enforced by work safety authorities at various levels.
119. This law establishes an occupational diseases hazard declaration system. The *Occupational Diseases Hazard Declaration Method* (SAWS 2012) specifies detailed requirements and procedures for employers to report their occupational diseases hazards to relevant Administration of Work Safety at various levels, following the guidelines of *Categorization of Occupational Diseases Hazard Risks of Construction Projects* (SAWS 2012).
120. This law also established an occupational diseases hazard assessment system for construction projects including three categories:
- For projects with general occupational health hazards, a preliminary occupational diseases hazard assessment report shall be prepared and submitted to local AWS for their records. Construction of necessary facilities shall be inspected and accepted by the project owner and reported to AWS.

- For projects with relatively severe occupational health hazards, a preliminary occupational diseases hazard assessment report shall be submitted to relevant AWS for review. Construction of necessary facilities shall be inspected and verified by AWS.
 - For projects with severe occupational health hazards, a preliminary occupational diseases hazard assessment report and the design of necessary facilities shall be submitted to relevant AWS for review. Construction of necessary facilities shall be inspected and verified by AWS.
121. To implement this hazard assessment system, the *Classification Category of Occupational Health Hazard of Construction Projects* specifies hazard classification for eight broad categories (49 specific industrial sectors with over 150 detailed types of production activities) based on which occupational diseases hazard assessment is mandated for approval by (or reported to, for less risk projects) AWS.
122. Under the framework of occupational diseases law, the *Regulation on Supervision and Management of Occupational Hygiene at Work Place (SAWS, 2012)* requires enterprises to provide occupational hygiene training to workers prior to and during the working period, develop an occupational diseases prevention plan, provide personal protection equipment in compliance with national requirements, and installs warning and emergency response facilities. The regulation is supervised by relevant AWSs.
123. A *Supervision and Management Method on Occupational Health Protection of Employer (SAWS, 2012)* further specifies detailed requirements to ensure that employers implement annual occupation health examinations , as well as prior to and at the end of employment for work positions with occupational health hazards. This is inspected by local AWSs.
124. **Regulations for Safety Management of Dangerous Chemicals (SC, 2011):** The regulation covers the whole process of production, storage, use, sale, and transportation of dangerous chemicals. It defines the responsibilities of relevant organizations. The employer takes the overall responsibility of safe management of dangerous chemicals within the enterprise. The authorities of work safety, public security, quality supervision, environmental protection, transportation management, health, industrial and commercial administration, and the post management are designated with different duties in the system. The work safety authority takes lead responsibility for reviewing safety conditions of enterprises involving production and storage of dangerous chemicals and for certifying the production, use and sale of dangerous chemicals.
125. Enterprises that use dangerous chemicals are required to obtain certification from work safety authorities. Facilities must be technically sound, comply with national standards and guidelines, have well established safety management rules and procedures, and a well-trained staff. Safety assessment is required to be conducted every three years for the enterprises that produce, store, or use dangerous chemicals, and must provide reports to the local work safety authority.
126. Workers handling dangerous chemicals are required to take mandatory training. Transportation of dangerous chemicals is strictly regulated by special license and workers involved (e.g. drivers, loading, and escort staff) are required to pass relevant exams to obtain special certification.
127. Local work safety authorities above the county-level are required to develop emergency response plans for dangerous chemicals. Enterprises are required to develop their own emergency response plans, including necessary staff and equipment, and organize periodic drills.

4.2 Implementation of Environmental Management system

128. The detailed application of involved environmental management systems are described below.

4.2.1 Environmental Impact Assessment of Projects

Certification of EIA Institutes and Practitioners

129. In China, the EIA system established by MEP applies universally to all provinces. The MEP strictly regulates EIA services as per the EIA Law. Only institutes that pass MEP accreditation are granted certification for performing EIA services.
130. The *Measures on the Management of Qualification Certificates for Construction Project Environmental Impact Assessment (EIA) issued by MEP* provide detailed requirements of qualifications and measures of administration for the EIA institutes. There are two levels of EIA certificates, Class A and Class B. The former requires higher qualifications and provides a broader scope of EIA services. MEP conducts periodic review of the qualification and performance of all certified institutes and may suspend, downgrade or cancel the certificates accordingly.
131. MEP also regulates individuals performing EIA through an EIA engineer registration system. All the persons providing EIA services must pass a professional exam to be eligible to register as an EIA engineer.

EIA Review and Approval

132. EIA review and approval in China is classified into different levels. The reviewing and approval body will be either the MEP or the local (provincial, municipal, or county) EPB, depending on thresholds of investment, level of approval for the project proposals, and environmental sensitivities.
133. As currently structured, the EIAs for the HAP activities mentioned-above are all managed by district/county level EPBs. Municipal EPBs will only review and approve projects with heavy pollution or cross-district/county borders. None of the Program activities is expected to require approval from the provincial EPB.
134. Upon receipt of EIA documents, the district/county or municipal EPBs will announce the receipt, commence the review process, and disclose the full reports to the public for comment and feedback. The EIA review process is implemented by an independent expert panel system organized by the EPBs. These experts are selected from an expert pool established by EPB. Normally, at least three experts are selected for the review panel organized by city/county EPBs. Based on satisfactory results from the expert panel review, the municipal or district/county EPBs will issue the final approval documents.

Acceptance Examination

135. After the approval of EIA documents, the project owners are responsible for ensuring the implementation of measures defined in the EIAs. During the construction stage, mitigation measures are implemented by contractors and supervised by project owners and supervision engineers. Upon project completion, a mandatory environmental acceptance examination is to be conducted by the environmental authority that approved the EIA. A project can only formally start operation after passing the environmental acceptance examination (among other mandatory acceptance examinations for engineering quality, safety, and occupational health).
136. During construction, projects may receive random on-site supervision from local EPBs (through their supervision and enforcement teams, normally known as Environmental Enforcement Squads).

The EIA process and the Program

137. According to the *Categorized Directory for Environmental Management of Construction Projects* (MEP, 2015), the following HAP activities may have impacts that will trigger the environmental impact assessment process (Table 3).

Table 3 EIA Categorization of activities to be supported by the Program according to China's environmental regulatory system

Activities	Full EIA Report (Category A)	EIA Form (Category B)	EIA Registration (Category C)
Environmental facilities of desulfurization, denitrification and dust removal		√ (all projects)	
Waste resources recycling (vehicles)	√		
Livestock breeding plant	√ (for plant with over 5,000 pigs or equivalent; or in sensitive areas ²²)		√ (all others)
Livestock waste disposal facility		√ (for capacity over 50t/d)	√ (all others)

138. According to this classification:

- The installation of desulfurization, denitrification and dust removal facilities are categorized as Category B projects. Therefore, an EIA needs to be prepared and approved by an environmental authority.
- The ESSA did not identify any plans to install additional vehicle dismantling enterprises. In case such need arises during the period of the Program, a full EIA Report would be required because the construction of such facilities is classified as Category A under China's environmental regulatory system.
- The ESSA determined that promotion of livestock waste management would focus on existing livestock farms. If the need to build new facilities is identified during the period of the Program, such activity would be classified as Category A or C depending on the scale of the livestock farm. Construction of large scale livestock enterprises will trigger the EIA process and EIA documents would be required.

139. According to the classification of environmental authority, county/district EPBs are responsible for managing the EIA for the types of projects related to the activities supported under the Program.

140. Except for the above-mentioned activities, all other project activities under the Program will have negligible or no environmental impacts. They are either not subject to further EA actions or may only need to file an EIA registration in the local EPB.

4.2.2 Environmental Impacts Assessment of Policies

141. The *Environmental Protection Law* requires consideration of environmental impacts during the formulation of economic and technological policies by center, provincial and municipal governments. In Hebei Province, this is further institutionalized through the formulation of *Regulation on Public Participation in Environmental Protection in Hebei Province* (HPC, 2014).

²² Nature reserves, scenic parks, drinking water protection areas, eutrophication waters, physical cultural resource protection areas and areas with main function of residential, medical care, educational and offices.

142. This regulation explicitly requires public consultation when drafting local environmental protection regulations or policies. The comment period is no less than 15 days. Feedback from experts and the public must be carefully considered by the drafting and reviewing departments. They, in turn, must provide justification for accepting or rejecting public input.
143. In practice, expert panels are organized by provincial and municipal government departments in Hebei when developing new plans, standards, and economic and technical policies with environmental implications. However, such expert panels are organized in an ad hoc manner, not in a formal institutionalized approach, and may not always be backed up by a detailed study. In addition, policy may be issued without adequate consultation of potentially affected people.

4.2.3 Pollution Control and Monitoring System

Enterprises with end-of-pipe facilities

144. As per the *Environmental Protection Law (EPL)*, Hebei issued its pollution discharge permit system rule (Hebei 2014 No.12) which requires enterprises to register with EPBs and apply for a permit. Before applying for the permit, enterprises must meet the following criteria: (i) its development project's EIA has EPB approval or the project is registered at the EPB; (ii) the performance of its pollution abatement facilities is in compliance with relevant national and provincial standards; and (iii) continuous environmental monitoring equipment has been installed at its discharging points and verified. Hebei EPBs allocate allowable pollution loads to enterprises (on the basis of local total pollution discharge amount, discharge of sector performance, verified monitoring data, and pollution discharge standards) and issue discharge permits. Hebei EPBs are also responsible for enforcing permit conditions.
145. During operation of enterprises, the emission compliance is enforced by Environmental Enforcement Squads within the provincial, municipal and district/county EPBs. All enterprises are required to meet the national and local emission standards. As per the EPL, local governments may create ambient and discharge standards for pollutants not specified in national standards, and they may also establish stricter limit values for pollutants than those of the national standards. Currently, Hebei has issued a number of local emission standards, including *Emission Standard of Air Pollutants for Thermal Power Plants*, *Air Pollutants Emission Standards for Iron & Steel Industry*, *Air Pollutants Emission Standards for Cement Industry*, *NO_x Emission Standard for Coal-fired Boiler*, and *Rural Domestic Sewage Discharge Standard*.
146. MEP enforces a nationwide continuous emission monitoring for key enterprises designated by ME. In addition, each province (including Hebei) also implements a CEM network for municipality designated key pollution enterprises. The CEM equipment is installed at these enterprises and data transmitted directly to the EPB. Installation and operation of CEM equipment are performed by a third party service provider to ensure transparency and accuracy. In addition to CEM supervision, provincial, municipal and county/district EPBs also conduct periodic on-site supervision through Environmental Enforcement Squads (including sampling/lab analysis to verify the compliance on at least a quarterly basis). Small enterprises are not required to install CEM equipment, but EPBs conduct on-site sampling monitoring on a monthly basis through environmental monitoring stations.
147. The desulfurization, denitrification and dust removal facilities supported under the Program are all subject to the CEM installation requirement. After installation of pollution abatement facilities, CEM equipment provides real-time data to provincial and municipal EPB.

148. According to the institutional responsibility allocation, the primary environmental management and supervision authority for enterprises rest with district/county EPBs in which the enterprises are located. However, enterprises classified as national, provincial or municipal important pollution emitters are also subject to direct supervision from provincial and municipal EPBs (through environmental enforcement squads at each level). This is the case for all facilities connected to CEM under the Program.
149. Technical assessment of this Program indicates that there is a need to address shortcomings of the current CEM system. These include: (i) the quality and consistency of the CEM data transmitted online; (ii) incomplete CEM coverage in the province; and (iii) lack of systematic onsite inspection by local EPBs.

Vehicle Dismantling Enterprises

150. The operation of vehicle dismantling enterprises are subject to *Integrated Wastewater Discharge Standards (GB8978-1996)*, *Standard for Pollution Control on Hazardous Waste Storage (GB18597-2001)*, *Standards for Storage and Disposal of General Industrial Waste (GB18599-2001)*, *Pollution Control Standard for Hazardous Wastes Incineration (GB18484-2001)*, *Integrated Emission Standards for Air Pollutants (GB16297)*, and *Standard of Noise at Boundary of Industrial Enterprises (GB12348-90)*. Compliance is enforced by district/county EPBs (through their Environmental Enforcement Squads) by regular site inspection and monitoring.
151. Currently, there are a total 32 vehicle dismantling enterprises in Hebei managed by the Department of Commerce (DOC) under a concession licensing system. However, many of these enterprises were built before the *Environmental Specifications for Disassembly of End-of-life Vehicles (HJ348-2007)* and *Technical Specifications for Vehicle Dismantling Enterprises (GB22128-2008)* were issued by MEP and National Standardization Administration, respectively, and are not in compliance with these standards. Based on consultation with DOC, less than half of these existing enterprises are in compliance with these new technical specifications.
152. The disposal of yellow-sticker vehicles under the Program (and also future yellow-sticker vehicles) shall be done at vehicle dismantling enterprises that are in compliance with applicable Chinese standards or technical specifications. This requirement is included as part of the DLI related to clean energy buses.

Livestock Waste Management Facilities

153. Livestock waste management in rural areas is mostly handled by individual farmers and is not normally supervised by the city/county EPBs, except for large scale livestock farms. Livestock waste is becoming a major pollution source in rural areas. ESSA team field visits found inadequate infrastructure for collecting and storing animal waste. Waste is directly left in the open and causes contamination of the air and surface water. The activities supported under the Program will address this issue by focusing on livestock waste management facilities for existing livestock farms. These environmental improvement activities should reduce the current pollution level.
154. The operation of livestock farms and waste management facilities is subject to supervision of county EPBs through periodic on-site inspections approximately twice a year. However, due to lack of capacity, the quality of supervision of county level EPBs needs to be improved, especially in rural areas of Hebei Province.

4.2.4 Occupational Health and Safety Management System

Safety Assessment for New Construction Projects

155. Safety assessment is required by law for the new installation of desulfurization, denitrification and dust removal facilities in enterprises of selected sectors. The work safety assessment uses the “Three Simultaneousness” system as follows:
- Enterprises hire a licensed entity to conduct a work safety assessment;
 - Design Institutes incorporate the safety measures/facilities into the project design; and
 - Verification of safety facilities are conducted upon completion of construction.
156. Given the ongoing reform on the simplification and decentralization of government, these steps are not required to be approved by local AWSs (except for high risk sectors of coal, mining, dangerous chemicals, and fireworks), but records must be kept for inspection by AWSs.
157. The new construction of livestock waste treatment/biogas facility is also subject to the same safety assessment requirement with the same procedures as described above.
158. Other activities supported under the Program will not trigger the safety assessment system.

Occupational Health Hazard Assessment for New Construction Projects

159. According to the *Law of Prevention and Treatment of Occupational Diseases (NPC, 2011)* and the *Categorization of Occupational Diseases Hazard Risks of Construction Projects (SAWS 2012)*, the new installation of desulfurization, denitrification and dust removal facilities in sectors with severe occupation health hazards -- power generation, iron & steel, oil, and cement -- will trigger the “Three Simultaneousness” system for occupational health as described below:
- Enterprises hire a licensed entity to conduct preliminary occupational diseases hazard assessment;
 - Design Institutes incorporate the occupational diseases prevention and control measures/facilities into the project design; and
 - Upon construction completion, a licensed third party will be hired to conduct verification of occupational diseases prevention and control facilities.
160. These projects also require a preliminary occupational diseases hazard assessment report. Design of necessary facilities shall be reported to relevant district/county AWSs for review and construction of necessary facilities shall be inspected and verified by district/county AWSs.
161. New construction of livestock waste treatment/biogas facilities is also categorized as a severe occupational health hazards (“severe” for fuel gas production). Therefore, it is also subject to the same occupational diseases hazard assessment with the same procedures as described above.
162. Other activities supported under the Program will not trigger occupational hazard assessment.

Occupational Health and Safety Management and Supervision during operation

163. Work safety is one of the most important issues regulated by government. The *Work Safety Law* stipulates that enterprises bear the main responsibility for work safety. All production and operational enterprises are required to have a dedicated safety department (usually known as the Environment and Safety Department) to oversee environmental, health and safety issues at the enterprise level. Often each enterprise has its own work safety leading group (or committee), chaired by the head of the enterprise and comprised of senior management staff from relevant departments. This group

establishes work safety management regulations and procedures, designates dedicated staff, implements necessary staff training, and prepares emergency response plans.

164. In accordance with *Interim Regulations on Works Safety Accident Risk Investigation (SAWS, 2007)*, all production and operation enterprises must establish a work safety risk investigation system. Responsibilities are allocated at each management level and down to the individual worker. Enterprises must conduct quarterly and annual work safety accident risk investigations and submit reports to local AWSs. For general accidental risks, enterprises shall take immediate remedial actions. For serious risks (which pose serious impacts and require full or partial suspension of production to remedy), enterprises must develop remedial action plans and report to AWSs.
165. Under the Program, enterprises in coal, iron & steel, cement, oil, and power industries (including gas stations) must monitor occupational diseases hazards elements every year. The occupational diseases situation assessment must be conducted every three years by a licensed institute. Results of such monitoring and assessment must be reported to AWSs and workers.
166. The supervision and enforcement of work safety and occupational health is the responsibility of AWSs at various levels. Local AWSs are responsible for supervising the compliance of enterprises within their jurisdictions. There are five institutional levels for work safety in Hebei: (i) Hebei Provincial AWS; (ii) Municipal AWSs; (iii) District/county AWSs; (iv) Township Work Safety Stations; and (iv) Village Safety Staff.
167. Provincial, municipal and district/county AWSs develop their own annual supervision and enforcement plans to ensure all enterprises in the province are supervised. Based on the consultation with HAWS, enterprises will receive on-site inspection from AWSs at least once every month.

Emergency Response

168. The *Work Safety Law* and *Management Methods for Work Safety Emergency Response Plans (SAWS, 2009)*, as well as detailed implementation plan issues by Hebei government require that all production and operation enterprises develop work safety emergency response plans and conduct periodic drills. Such plans are renewed every three years and must be reported to local AWSs.
169. Enterprises are required to conduct drills for the general emergency response plan once a year and specific topic drills twice a year. These drills are to be supervised by local AWSs. All records (paper and video materials) are to be sent to AWSs.
170. All relevant departments of various levels of governments in Hebei have developed their own emergency response plans, which are reviewed by expert panels and reported to the upper level government and AWSs. AWSs at or above county levels are responsible for the coordination of the plans from the same level government departments.

4.3 Performance of Environmental Safeguards Management Agencies and Capacity

171. Based on the screening of environmental and social effects of the Program activities and the analysis of applicable management systems, the main government stakeholders involved in environmental safeguards management include: Hebei EPB, municipal and district/county level EPBs, Hebei Provincial AWS and local AWSs at the municipal, district/county, township and village levels.

4.4.1 Environmental Management

1) EPB

172. Hebei EPB is the highest environmental protection authority in the province reporting to the provincial government. The main responsibilities of the EPB include: (i) establishing provincial environmental protection institutional system; (ii) preventing and controlling environmental pollution; (iii) coordinating and supervising key environmental issues; (iv) enforcing provincial emission reduction targets; (v) directing, coordinating and supervising ecological protection work; (vi) managing and supervising nuclear and radiation safety; and (vii) monitoring and publishing environmental information.
173. Below is a list of divisions and subordinate institutes within the EPB's organizational system and their associated responsibilities for environmental management of the Program activities.
- Division of Environmental Impact Assessment: Managing the EIA for plan, policy and project; providing inputs on environmental impacts to the formulation of local laws/regulations; supervising and managing license and qualification of EIA institutes; and controlling the EIA approval for areas with non-compliance of total emission control threshold, serious ecological damage or pending ecological restoration efforts.
 - Provincial Environmental Project Appraisal Center: Conducting technical review on EIA reports of construction projects and post-evaluations and establishing an EIA review experts pool, with over 100 experts in various fields to be shared by all municipal and county/district EPBs.
 - Provincial Environmental Enforcement Supervision Bureau: Conducting on-site inspection on pollution emission entities/individuals in the province; organizing the investigation of major environmental pollution incidents in the province, or cross-province and cross-basin; implementing Environmental Emergency Response Plan; implementing supervision on ecological environmental protection; conducting supervision on administration of environmental protection; receiving public complaints and reporting on environmental incidents and handling environmental hotline for provincial governor. There are three supervision teams, one emergency investigation center, and one public complaints and pollution incidents reporting center in the bureau with a total 38 staff. The three supervision teams conduct site inspections of pollution abatement, industrial solid wastes, and hazardous wastes management facilities and supervise key pollution emission sources, CEM installations, ecological environmental protection measures (e.g. burning of stalk), and implementation of EIA measures.
 - Provincial Environmental Protection Inspection Center: Inspecting environmental protection work in key areas; implementing on-site inspection of "Three Simultaneousness;" conducting completion acceptance inspection on construction projects; and verifying emission reduction for key pollutants.
 - Division of Automobile Vehicles Pollution Management: Supervising and managing pollution emission of vehicle, non-road mobile sources, gas stations, oil tanks, and soil storage facilities.
 - Division of Rural Environmental Protection: Guiding, coordinating and managing the environmental protection works in rural areas.
174. Besides the public complaints receiving office inside the Environmental Enforcement Supervision Bureau, EPB has also established a public grievance system for environmental issues and violations reporting through its website (www.hebhb.gov.cn; or www.hb12369.net), which provides access to on-line reporting and on-line consultation. In addition, EPB also opened an environmental protection hotline directly to the provincial Governor's office (0311 - 7908448).

175. A nationwide environmental protection grievance hotline (12369) is universally available to access the local environmental grievance system.
176. Based on institutional review and consultation, it is concluded that EPB has a well-established organization structure with comprehensive divisions and subordinate institutes, and is authorized with adequate mandate to manage the overall environmental protection work in the province. The EIA for new construction projects is well-regulated by a well-established legal and regulatory framework and procedures and managed by qualified staff in relevant divisions and institutes in the bureau. The environmental compliance of key enterprises is well supervised by the Enforcement Supervision Bureau and Inspection Center systems.
177. EPB should play a major role in the assessment of new economic or technical policies that may have adverse environmental or social risks or impacts. However, the EIA for policy is a new requirement of the new Environmental Protection Law. This law is implemented through a public participation process (including expert panel consultation) in Hebei. However, such expert panel reviews are organized in an ad hoc manner, and there is not a formal institutionalized mechanism for systematic environmental and social impact review or study. A formal and standing expert committee is recommended to be established as an advisory body for the HAP Leading Group at the provincial level.

2) Municipal EPBs and district/county EPBs

178. Municipal EPBs are responsible for managing and supervising the implementation of environmental protection measures on the ground. There are 11 municipalities in Hebei Province and each has its own Municipal EPB structured similarly to the provincial EPB. For example, the main divisions of Shijiazhuang Municipal EPB include:
- Division of Environmental Impact Assessment
 - Division of Pollution Prevention and Treatment
 - Division of Total Pollutant Discharge Amount Control
 - Division of Air Pollution Prevention and Treatment
 - Division of Environmental Monitoring and Emergency
 - Shijiazhuang Comprehensive Environmental Enforcement Squad
179. The main responsibilities of the Division of Environmental Impact Assessment at Shijiazhuang EPB are the same as those of the provincial EPB. With six total staff, it is responsible for reviewing and approving the EIA reports for all projects that are subject to the approval of the municipal EPB (about 50 projects each year).
180. The environmental compliance of provincially-designated key enterprises during operation is verified by the Shijiazhuang Comprehensive Environmental Enforcement Squad through periodic site inspection and emission monitoring, typically on a quarterly basis. There are about 140 staff in the municipal environmental enforcement squad.
181. Under the municipal EPBs are the district and county level EPBs. These district/county EPBs are responsible for enforcement of pollution control and compliance supervision at the district/county level. Given the decentralization of government function reform, district and county EPBs are responsible for EIA approvals for most of the projects within their jurisdictions. There are 24 districts

and counties in the municipality of Shijiazhuang City and each district and county has its own EPB. In total, these district/county EPBs review and approve about 1,500 projects every year.

182. The organization structure of district/county EPBs is similar to that of the provincial and municipal EPBs. For instance, the Wuji County EPB (within Shijiazhuang Municipality) has 15 divisions and ten subordinate institutes, including EIA, air pollution control, solid waste management, inspection divisions and environmental enforcement squad with total staff of 129. The Zhao County EPB (within Shijiazhuang Municipality) includes similar divisions with a total 120 people, including 31 working at the environmental enforcement squad.
183. The activities that require licensing that are supported under the Program are the installation of desulfurization, denitrification and dust removal facilities, and the provision of livestock waste management facilities that fall within the district/county EPB's approval threshold. The EIA review process by district/county EPB is consistent with the provincial-level review process. The EIA report is reviewed by an expert panel with at least three experts. Based on this report, the district/county EPB issues the final approval document. The experts are randomly chosen from an EIA review expert pool established by the EPB.
184. County/district EPBs are the primary authorities responsible for routine supervision on the environmental compliance of all the enterprises related to HAP activities. The supervision is conducted through district/county level Environmental Enforcement Sub-squads, which typically conduct on-site inspection on a monthly basis. Feedback from the interview with county-level EPBs shows that their capacity needs to be improved, including provision of training and necessary monitoring equipment.
185. Based on consultation with municipal and county EPBs, the implementation of local environmental management systems may not be adequate in some areas, especially the enforcement of environmental compliance in rural areas. Capacity building for environmental enforcement teams in rural areas is needed.

4.4.1 Occupational Health and Safety Management

1) Hebei Administration of Work Safety (HAWS)

186. HAWS is the provincial authority in Hebei responsible for work safety management and supervision. The main responsibilities of HAWS, include: enforcing national work safety laws/regulations, developing local policies and regulations, analyzing and predicting work safety situation and publishing relevant information, and conducting overall supervision on work safety.
187. HAWS is also responsible for inspecting key industrial sectors for compliance of laws/regulations, work conditions, safety of facilities, materials, and protection equipment; reviewing and approving the work safety for non-coal enterprises and enterprises that produce or sell dangerous chemicals; managing dangerous chemicals; conducting occupational health inspection in enterprise work places and issuing occupational health and safety permits; enforcing the "Three Simultaneousness" requirements for safety facilities; supervising licensing and qualification management of safety assessment institutes; and registering safety engineers.
188. There are 28 divisions inside HAWS with a total staff of 200. Below is a list of the main divisions with safety supervision functions and their associated responsibilities:

- Safety Supervision Division I, II, III and IV: Supervising the implementation of work safety laws/regulations in key industrial sectors and compliance of work safety conditions and facilities; managing safety assessment of projects; organizing safety facility design review; participating in investigation of major accidents and supervising the implementation of conclusion decisions; and managing and registering dangerous chemicals. There are more than 30 staff in these four divisions.
- Occupation Safety and Health Supervision Division: Developing local occupational health regulations; organizing the implementation of occupation hazard control facilities and personal protection measures by employers; inspecting employers in terms of occupational health and enforcing relevant standards; managing the “Three Simultaneousness” of occupation health facilities for new, renovation and expansion projects; managing the declaration of occupational hazards from employers; issuing occupational health and safety permits; supervising and enforcing employers to establish occupational hazards monitoring, assessment, and worker health monitoring systems; and inspecting the archives of worker’s health and occupational diseases records. There are five staff in this division.
- Hebei Provincial Work Safety Inspection Squad: Conducting inspections on compliance of work safety laws and regulations in the industrial enterprises and issuing administrative punitive orders; conducting inspection on the “Three Simultaneousness” of safety facilities, as well as corrective actions of major risk sources, safety certificate of workers and responsible management staff and safety training; conducting inspection on occupational health aspects of work places. There are 39 staff in the squad. Under the Provincial Squad, which has a total of 39 staff, there are Safety Inspection Divisions I, II, III and IV, conducting on-site inspections on worker safety in key industrial sectors.
- Work Safety Emergency Rescue Office: Enforcing national work safety emergency response laws, regulations, procedures and standards; organizing the development of emergency preparedness plans and the establishment of emergency rescue systems; guiding drills for emergency plans; and directing and coordinating emergency response.
- Emergency Response Command Center: Conducting emergency response on major work safety accidents in the province; training management staff and response teams; establishing emergency response information and communication systems.
- Accidents Investigation Division: Guiding work safety accident investigation and inspecting the implementation of accountability and remedial actions.
- Human Resource and Training Division: Providing work safety training to HAWS staff; managing license of registered safety engineers; managing certification of safety staff; supervising the training of work safety in enterprises; regulating the qualification of safety training consultants; providing training and issuing certificates of work safety supervision and enforcement inspection.

189. HAWS staff receive occupational health and safety training from accredited entities by SAWS. Within the province, HAWS provides training and issues accreditation to the staffs from municipal AWSs. For enterprises, HAWS organizes training to key responsible persons and safety management staff of all high risk sectoral enterprises in the province. The Work Safety Inspection Squad is the main enforcement team which conducts field supervision to the enterprises that are designated as provincially major enterprises.

190. Based on consultation with HAWS, it is found that HAWS has a comprehensive institutional setup with qualified staff to manage the work safety in major industrial sectors and key enterprises in the province.

2) Municipal, District/county Level AWSs and Arrangement in Township and Village Level

191. All 11 municipalities in Hebei Province have municipal AWSs. Municipal AWSs have similar organization structure to HAWS. For example, Shijiazhuang's AWS has 16 divisions. The main divisions for work safety include:
- Supervision Division I, II, III and IV
 - Occupational Health Division
 - Emergency Response Division
 - Accidents Investigation Division
 - Policy and Regulation Division
 - Information Division
 - Coal Mine Supervision Office
 - Training and Education.
 - Work Safety Inspection Sub-squad
192. These divisions have similar functions as the divisions in HAWS, but focus on the enterprises within the municipal administrative boundary.
193. Municipal AWSs provide occupational health and safety training and issue accreditation to the staffs in lower level AWSs. In addition, municipal AWSs also provide training to the occupational health and safety management persons and workers at special working posts from industrial enterprises.
194. Below municipal level AWSs, there are three level institutional arrangements for occupational health and work safety management and supervision, district/county AWSs, Township Work Safety Supervision Stations, and Work Safety Supervisors at the village level.
195. There are in total 197 districts and counties within the 11 municipalities of Hebei, each has its own district or county AWS with about 20 staff (up to 200 depending upon the scale of industrial enterprises in the district or county). According to the classification of government functions, the district/county level AWSs are the main bodies to supervise the occupational health and work safety of the enterprises within their jurisdictions.
196. Township is an administrative level under district/county government, and each township has its own Work Safety Supervision Station with about three to seven staff. Each village also has a Work Safety Supervisor overseeing work safety in village enterprises and reporting to the higher level AWSs.
197. Overall, Hebei has a comprehensive five-level organizational setup for occupational health and work safety management and supervision with well-established laws, regulations, procedures and enforcement arrangement.
198. During consultation, HAWS expressed concern regarding inadequate staffing (less than 3,000 staff in the AWS system in Hebei) to meet the demand of supervising over 100,000 industrial enterprises in the province. With simplification and decentralization of government functions in terms of approval of work safety related procedures, there is more demand for strengthened supervision during the operation stage.

199. The ultimate responsibility of occupation health and safety rests with enterprises. According to HAWS, human-related reasons, such as inadequate attention and awareness to safety and insufficient implementation of safety measures and procedures, are the main causes of industrial accidents. Therefore, supervision from work safety authorities at various levels shall be further strengthened with better training for relevant inspection and enforcement staff.

4.5 Assessment of Environmental Management System against the Bank PforR Policy and Directive

200. The legal framework for environment management in China is comprehensive and is evolving toward international standards. The legal framework of laws, regulations, guidelines, policies, and standards, as well as the implementation mechanism provide full coverage over the environment and health and safety aspects. In general, the framework is consistent with the Bank PforR Policy and Bank PforR Directive in terms of principle and key elements. The legal framework provides a reasonable basis for addressing environment, health and safety issues likely to arise in the proposed Program.

201. An assessment of environmental management systems relevant to the activities supported under the Program for each PforR Bank Policy and respective Bank PforR Directive is presented below.

202. *PforR Policy (a): Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts.*

203. The legal framework of environmental management aims to promote environmental and social sustainability as ultimate objectives through comprehensive laws, regulations, guidelines, and institutional arrangements. These are supported by political commitment at the highest level for developing an ecological civilization. It prioritizes prevention and defines a comprehensive assessment system to promote informed decision making. Overall, the legal framework of environmental management in China is fully consistent with the Bank PforR Policy.

204. *PforR Key Directive: Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the Program level.*

205. China has developed an adequate legal framework for environmental and social impact assessment for construction projects. This framework includes comprehensive laws, regulations, technical guidelines, standards, institutional arrangements, and practice procedures that apply nationwide. Over the decades, it has gradually evolved into a comprehensive system that is consistent with the internationally accepted good practices.

206. The new Environmental Protection Law requires consideration of environmental impacts when formulating new economic and technical policies by provincial and municipal governments. The provincial regulation on public participation also requires public consultation (including experts consultation) on new economic and technical policies.

207. *PforR Directive: Incorporate recognized elements of environmental and social assessment good practice, including: (i) early screening of potential impacts; (ii) consideration of strategic, technical, and site alternatives (including the "no action" alternative); (iii) explicit assessment of potential induced, cumulative, and transboundary impacts; (iv) identification of measures to mitigate adverse environmental or social impacts that cannot otherwise be avoided or minimized; and (v) clear articulation of institutional responsibilities and resources to support implementation of plans.*

208. The Chinese EIA system has well-defined screening principles, technical manuals and guidelines to guide the environmental screening and classification of EIA categories early in the project preparation stage.
209. The EIA guidelines require the consideration of technical and site alternatives for construction projects. EIA is normally best suited to the analysis of alternatives within a given project concept, including detailed site, technology, design, and operational alternatives. The EIA guidelines require assessment of potential, induced, cumulative, and trans-boundary impacts.
210. The EIA system emphasizes preventive measures, such as avoiding environmentally and socially sensitive sites as much as possible from the outset. Based on assessment of potential impacts, measures are developed to minimize, mitigate and/or compensate the impacts encountered. These measures are required to be built into construction contracts and will be inspected and verified by environmental authority upon completion of the project construction.
211. The EIA system requires institutional arrangements with clear responsibilities and resources in the environmental management plan to support implementation.
212. The EIA system requires timely disclosure of project and EA information. Project proponents must announce both the preparation and disclosure of EA documents to the environmental authority prior to approval. Public consultation is mandatory by EIA law for projects that require EIAs and responses to public comments must be included in the EIA report. Upon receipt of EA documents, local EPBs will conduct public consultation by disclosing the full EA documents and soliciting public feedbacks through their websites before approving the report. Environmental grievance/complaint systems are well established in Hebei's provincial and local EPBs and include universally available internet registries and phone hotlines.
213. Overall, the EIA system applied to the activities supported under the Program is well aligned with the key planning elements of the Bank PforR Policy in terms of screening, alternative analysis, assessment of cumulative impacts, development of mitigation measures, requirements of institutional arrangements for implementation, and public consultation and grievance redress.
- 214. PforR Policy (b): *Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program.***
- 215. PforR Directive: *Include appropriate measures for the early identification and screening of potentially important biodiversity and cultural resource areas; support and promote the protection, conservation, maintenance, and rehabilitation of natural habitats; avoid the significant conversion or degradation of critical natural habitats; or, if avoiding the significant conversion of natural habitats is not technically feasible, include measures to mitigate or offset the adverse impacts of the Program activities.***
216. The EIA guidelines provide detailed guidance on identification and screening of sensitive environmental and cultural resources, including surveys of baseline environmental data. Key sensitive areas such as rivers, reservoirs, nature reserves, wetland parks, forest parks, and scenic areas are identified for detailed survey and special assessment. Cultural resources are screening through consultation/approval of the relevant authority and field investigation. Therefore, the Chinese EIA system has well established processes for early identification and screening of potentially important biodiversity and cultural resource areas that are consistent with this key element.

217. The Chinese environmental protection system emphasizes the protection, maintenance and rehabilitation of natural habitats through a comprehensive set of laws, regulations, guidelines and standards. Avoiding such sensitive areas is the top priority of the EIA. Special assessment is mandatory and necessary mitigation or offset measures are to be included in the environmental management plan when avoiding these areas is not possible. The environmental protection system in China is well aligned with this key planning element.
218. The activities to be supported under the Program will only take place in existing industrial enterprises and rural communities. Important biodiversity and cultural resource areas will not be involved.
- 219. PforR Directive: Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.**
220. The *Cultural Property Protection Law* provides adequate legal framework and procedures for protecting cultural property during the EA process. If any physical cultural resource is impacted, impacts must be assessed and consultation and approval must be secured from the cultural property authority. Additionally, protection measures be included in the environmental management plan. Chance-find procedures are also explicitly established in the legal system for cultural property protection. These are fully in line with the requirement of this key planning element.
221. The activities to be supported under the Program will only take place in existing industrial enterprises and rural communities. Important physical cultural resource areas will not be involved.
- 222. PforR Policy (c): Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.**
- 223. PforR Directive: Promote adequate community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure; or, in carrying out activities that may be dependent on such infrastructure, incorporate safety measures, inspections, or remedial works as appropriate.**
224. China has established a comprehensive management and supervision system for work safety as discussed in previous sections. This system ensures the screening of safety issues and occupational hazards, assessment of work safety, and assessment of occupational diseases hazards during project preparation, design and construction, and supervision during operation. The ultimate responsibility of occupation health and safety rests with enterprises that are closely supervised by work safety and health authorities. The system is consistent with the Bank PforR Directive.
- 225. PforR Directive: Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the Program; promote the use of integrated pest management practices to manage or reduce pests or diseases vectors; and provide training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with the relevant international guidelines and conventions.**

226. The *Work Safety Law* and *Regulations for Safety Management of Dangerous Chemicals*, as well as their implementation systems, provide a comprehensive framework for managing hazardous materials. It requires special permit systems for production, storage and sale of dangerous chemicals in accordance with established management practices. It also enforces the certification of workers involved in handling dangerous chemicals. A comprehensive management system addressing the production, management, storage, transport of dangerous chemical, and disposal of hazardous materials is in place that is consistent with this planning element requirement.
227. The activities to be supported under the Program do not involve any relevant storage or sale of dangerous chemicals including pesticides.
- 228. PforR Directive: Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the Program activities are located in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate event.**
229. The EIA and work safety systems incorporate environmental and work-related risk assessment measures into the project design and implementation. As discussed in previous sections, China has also established other risk assessment systems for projects that are prone to flood and natural hazards to avoid, minimize or mitigate community, individual, and worker risks.
230. China has well established systems to address risks related to natural hazards. These systems are consistent with the Bank PforR Directive.

SECTION V: SOCIAL MANAGEMENT SYSTEM AND PERFORMANCE ASSESSMENT

5.1 Social management system

5.1.1 Social Management System for subsidizing the elimination of yellow-sticker vehicles

231. The Ministry of Environmental Protection, the National Development and Reform Commission, the Ministry of Public Security, the Ministry of Finance, the Ministry of Transport and the Ministry of Commerce jointly promulgated the 2014 Implementation Plan for eliminating yellow-sticker vehicles or old vehicles. In order to effectively ensure improved air quality, the Hebei provincial government also introduced the Implementation Plan for Eliminating yellow-sticker Vehicles in Hebei Province, which requires elimination of all yellow-sticker vehicles in the province by the end of 2017.
232. At the current pace, all yellow-sticker vehicles should be eliminated by mid-2016 and will not be considered an activity supported under the Program. However, the current social assessment and recommendations would apply to future initiatives to remove old and heavy-polluting vehicles.
233. In 2014, the provincial Environmental Protection Department and five other departments in Hebei issued a notice for the 2014 national Implementation Plan, in which it also introduced the Implementation Plan for yellow-sticker vehicles. The outline of the system is presented in Table 4. It required all cities to introduce subsidies and policies to encourage the elimination of yellow-sticker vehicles. The Hebei Province Reward Subsidy Measures for Early Elimination of Yellow-sticker Vehicles earmarked incentive funds from the HAP. The earmarked funds are used in accordance with relevant provisions of the national treasury management system to ensure that they are used for specific purposes. Interception, misappropriation, retention of incentives, or other irregularities shall

be punished pursuant to the Regulation on Penalties and Sanctions against Illegal Fiscal Acts (Decree No. 427 of State Council, PRC). Provincial cities in Hebei Province have introduced subsidy rates according to their specific situation.

234. The “yellow-sticker units” of public security departments and traffic police offices restrict the registration and ownership transfers of these vehicles. They have also set up traffic restrictions on highways, designated towns, and other areas. Therefore, the owners of such vehicles will eventually have no right to drive on roads and the vehicle will have no resale value.

235. In order to mitigate the impacts on owners, the Hebei initiative provides subsidies to those who deliver yellow sticker vehicles to the dismantling facilities. The value of the subsidies vary according to the type of vehicle, engine size, and region. Annex 2 presents different subsidy rates by municipality. Subsidies vary from RMB 3,000 to 18,000, which is similar to the market value before the Plan started.

Table 4. Social Management System for eliminating “yellow-sticker vehicles in Hebei Province

Items	Social Management System
Policy targets	Government incentives, department coordination, market guidance, financial participation
Subsidy types	Vehicles are classified into three categories as freight vehicles, passenger vehicles, and cars, and subsidized accordingly
Subsidy rates	Subsidy rates for “yellow-sticker” vehicles differ depending on vehicle type, engine size, and region (Annex 2)
Vehicle scrapping incentives	Owners relinquishing yellow-sticker vehicles or old cars shall be given credit support when purchasing new vehicles; automakers are encouraged to provide incentives and discounts to customers relinquishing yellow-sticker vehicles or old cars; with public trading certificates for old cars and “yellow-sticker” vehicles, owners can partially offset the purchase of new vehicles.
Subsidy procedures	Owners deliver labeled vehicles to companies under commerce departments to be dismantled and receive recycling certificates; owners bring relevant documents to one-stop service windows to receive subsidies.
Provision of employment (skill training)	The Hebei Department of Human Resources and Social Security has a series of policies supporting employment and business startup for laid-off workers. However, the department does not have relevant training policies for owners of yellow-sticker vehicles.
Institutional strengthening	The environmental protection department is in charge of detecting emissions, defining yellow-sticker vehicles and labeling; the public security department has set up yellow-sticker vehicles offices and works with traffic police offices to jointly restrict incoming and outgoing registrations, ownership transfers and set up traffic bans; companies under the commerce department dismantle “yellow-sticker” vehicles and provide recycling certificate; the finance department allocates financial subsidies, incentive funds, and enhances financial supervision; one-stop service windows have been set up to ensure convenient

Items	Social Management System
	subsidy pickups by vehicle owners.
Information disclosure	A website on eliminating “yellow-sticker” vehicles in Hebei Province has been set up to promote the work and disclose information; an information platform has been established to monitor emissions reduction, and the elimination of “yellow-sticker” and old vehicles at national, provincial and city levels for data exchange.

Capacity of Implementing Agencies for Eliminating Yellow-sticker Vehicles

236. To facilitate efficient implementation of eliminating “yellow-sticker” vehicles, Hebei Provincial Government has set up a leading group headed by the vice governor. The Director of the Provincial Public Security will serve as deputy leader. Members will include responsible leaders of other provincial authorities, including environmental protection, transportation, commercial, financial, industrial and commercial, quality supervision, legal, discipline inspection and supervision, public communication, and industry and information authorities, as well as the Bureau for Administration of Provincial Department Affairs. These authorities have worked together to formulate policies and measures for eliminating “yellow-sticker” vehicles, supervise all prefectures and counties to implement relevant requirements, and address specific issues or problems. Governments of prefectures and counties also need to set up their respective leading groups to develop a yellow-sticker vehicle elimination plan, define the leading agency, and assure the necessary human and financial resources.

237. Each of the offices of relevant Hebei provincial departments has two to five staff who have degrees at or above the university level; each office of relevant prefectural and county departments has three to six staff, 70 percent of whom have degrees at or above the university level. Relevant staff participate in training and learning activities on a regular basis to enhance their operational capacity. Staff are paid from government budgets and provided office space and necessary office equipment.

Assessment of Social risk related with the initiative to eliminate yellow sticker vehicles

238. Discussions with provincial public security and environmental protection authorities in 2013 indicate that the province established a sound organizational structure for eliminating “yellow-sticker” vehicles and developed relevant policies that are open and transparent. These actions have promoted orderly elimination of “yellow-sticker” vehicles. Various local governments in the province have also put in place subsidy policies. Examples include providing differentiated subsidies for scrapping three types of “yellow-sticker” and old vehicles (freight, passenger vehicles and cars), providing credit support to owners of these scrapped vehicles so that they can purchase new vehicles; and encouraging automobile companies to offer discounts to these owners when they purchase new vehicles.

239. According to consultations between Traffic Police Office of Gaocheng District of Shijiazhuang and some owners of “yellow-sticker” vehicles, the owners are aware of subsidy and incentive policies for eliminating “yellow-sticker” vehicles and are satisfied with these policies and government services. They indicated that subsidies were normally paid into their accounts within two months after their applications were processed. Subsidy rates in Shijiazhuang are higher than prices paid for old vehicles sold on the second-hand vehicle market. Elimination of vehicles used for business purposes did not have significant impacts on the livelihood of their owners or drivers employed by the owners as they can easily find other employers. However, drivers hoped that they could get access to free training.

240. The Work program for Eliminating Yellow-Sticker Vehicles lacks relevant requirements in several areas: reemployment and skill training for owners and renters of yellow-sticker vehicles used for business purposes; attention to vulnerable groups, including women and the poor; and grievance redress mechanisms. The Leading Group for Eliminating Yellow-Sticker Vehicles initiative (YSVLG) does not include human resources and social security authorities, women's federations, civil affairs authorities, or poverty alleviation offices. It is recommended that the YSVLG consult potentially-affected groups when defining a new yellow sticker vehicle elimination initiative.

5.1.2 Social Management System for Rural Non-Point Source Pollution Control

Fertilizer application by farmers and training and promotion of new technologies

241. Pursuant to Suggestions on Fertilizer Formula and Application in Wheat, Corn and Cotton Production Areas of Hebei Province (Hebei Provincial Department of Agriculture, 2015) agricultural technicians and experts shall be mobilized to provide on-site guidance, technical services and training to farmers on rational fertilizer application.

242. The Implementation Plan for Projects Cultivating New and Professional Farmers of Hebei Province (2015) supports the development of professional farmers through education and training. Through a subsidy-based initiative, Hebei Province provides a full range of free education training to new and professional farmers. The government also grants subsidies to different types of farmers based on varying rates. There are a total of 211 agricultural training facilities in Hebei Province, including technology extension schools, agricultural vocational schools, grassroots agricultural technology extension agencies and agricultural science and technology research centers that will undertake specific training tasks for new and professional farmers.

Assessment of social risks related to lack of skills to use new technologies adequately

243. At the provincial, prefectural and county levels, leading groups for rural non-point source pollution control in Hebei province have been established. Relevant activities will be implemented in accordance with the Hebei Action Plan for Rural Non-point Source Pollution Control (2015-2018) issued by the province's Department of Agriculture.

244. Provincial budgets allocated RMB 350 million in 2014 to subsidize the use of crop residues for fuel. This contributed to the promotion of biomass stoves for 300,000 households. Working teams and leaders stationed in villages provided support and guidance while the Provincial Department of Public Communication developed a systematic public communication plan to enhance farmers' awareness of and their participation in agricultural residue use.

245. A leading group for achieving zero growth of chemical fertilizer used in Hebei province has been set up, an Action Plan for the same has been launched, and Suggestions on Fertilizer Formula and Application (for 2015) in Wheat, Corn and Cotton Production Areas of Hebei Province has been issued. The province has established mechanisms for fertilizer formula development and disclosure, provided free nutrient tests of 450,000 samples for farmers, erected bulletin boards for disclosing fertilizer formula and application suggestions at 90 percent of villages, and conducted thematic public campaigns on rational application of fertilizers. In addition, the province has established 211 training

bases and trained about 15,000 new professional farmers. Training and promotion of new technologies should give consideration to vulnerable groups to ensure full participation and consultation.

5.1.3 Social Management System for Development of Regulations and Policies

Assessments of social impacts of significant policies and key activities

246. Pursuant to Measures on Assessment of Social Stability Risks of Significant Events (Hebei Bureau of Safety Monitoring and Supervision, 2010), some sensitive issues, including the launch of reform measures shall undergo assessment in terms of potential social stability risks. Investigation and research shall be carried out before the implementation of relevant measures, expert consultation shall be performed, and public views shall be solicited, especially views of groups who would be affected by relevant measures.

247. Pursuant to the Interim Measures on Assessment of Social Stability Risks of Major Fixed Asset Projects (NDRC, Document No. 2492, 2012), Hebei formulated its Provincial Interim Measures on Assessment of Social Stability Risks of Major Fixed Asset Projects (Document No. 1, 2016). Prefectural and county development and reform commission departments, under direct leadership of the provincial government and concerned enterprises, shall, when submitting project feasibility study reports and project application reports, incorporate and attach the assessment results of the project's social stability risks. These reports will serve as references when Hebei DRC reviews and approves or submits the project to relevant national authorities for review and approval.

248. Those assessments include: (i) the Rational of whether key projects are in compliance with the pattern of local economic and social development, as outlined in the Scientific Outlook on Development; (ii) the Feasibility Study to assess whether key projects have undergone a meticulous and scientific feasibility study; and (iii) the Security Study to address whether key projects would result in significant events that could affect social security and stability.

Assessment of social risks of current mechanisms to formulate new policies

249. China's or Hebei's laws, regulations and policies are enforceable. Policies are formulated based on study, expert and public consultation and assessment. Social stability risks are assessed for significant policies and key projects and emergency preparedness plans developed. Social stability risk assessment in China is relatively new. Existing social stability risk assessment reports lack in-depth analysis of significant social issues and attention to potential impacts on vulnerable groups, women and ethnic minorities.

250. As for possible downstream impacts of industrial restructuring on the labor force, Hebei Provincial Department of Human Resources and Social Security is working in strict accordance with Guidelines of Hebei Provincial Government on Placement, Reassignment and Reemployment of Workers from Enterprises undergoing Industrial Restructuring. In 2014, the department allocated RMB 2.6 billion in earmarked employment funds to support such affected workers, including 1.24 billion for social insurance subsidies, 183 million for vocational training, and 736 million for public job subsidies. In addition, the department also provided special support to workers with difficulties in finding a job. Provincial, prefectural and county level human resources and social security authorities have set up unemployment insurance offices, vocational capacity building offices, employment services bureaus, and human resource market offices to assist in reassignment and reemployment of enterprise workers. Labor reemployment policies need to ensure full engagement of vulnerable groups and women.

5.1.4 Policy System Governing Land Acquisition

251. To ensure the rights and benefits of affected people, enterprises and institutions, the Government of China and Hebei formulated a series of policies governing land acquisition and resettlement. Based on these policies, Hebei developed clear regulations governing compensation for land acquisition, resettlement measures, work procedures, and information disclosure to ensure that the original living standards of affected people are not lowered and their long-term livelihoods are guaranteed.
252. **Land ownership and land use rights.** The People's Republic of China practices socialist public ownership of land, namely, ownership by all people and collective ownership by the working people. Land in urban areas of cities is owned by the State. Land in rural and suburban areas is owned by farmer collectives, except for those portions of land that legally belong to the State (Articles 2 and 8 of Land Administration Law of the People's Republic of China).
253. For the purpose of public interest, collectively-owned land, houses and other real property owned by institutions or individuals may be legally expropriated. For collectively-owned land, compensation shall be paid for the land expropriated, subsidies for resettlement, compensation for standing crops, and a premium for farmers whose land is taken in order to guarantee their livelihoods and safeguard their legitimate rights and benefits. Compensation for demolition and resettlement shall be paid according to law for expropriation of houses and other real properties of institutions and individuals. Residential conditions of expropriated houses shall be guaranteed (Article 42 of Property Law of the People's Republic of China).
254. Women have equal rights as men in terms of contracting rural land. The legitimate rights and benefits of women shall be protected during land contracting. No organizations or individuals may be deprived of their rights to land contracting and management. During the term of contracting, the party giving out the contract may not take back or readjust the contracted land (Articles 6, 26 and 27 of Rural Land Contracting Law of the People's Republic of China).
255. Land for facility-based farming refers to land directly used for production facilities for animal sheds, scaled cropping or aquaculture and agriculture facilities beyond residential land such as ground used for grain drying. It does not include associated permanent construction land for management facilities and houses (Current Land Use Classification – GB/T21010-2007). Farmland irrigation facilities refer to ponds, reservoirs, ditches and channels and waterways that are mainly used as sources of water for farmland irrigation and people's daily use.
256. Users who occupy cultivated land beyond the scope of basic farmland and do not use the land for animal farming or to build permanent structures shall apply for approval of the land as land for temporary use. If the land is used to build permanent structures, the user shall apply for approval of the land as land for construction purpose (Land Administration Regulations, 2005).
257. The temporary land user shall use the land for purposes stipulated in the contract for temporary use of the land and may not build permanent structures. Generally, the period for temporary use of land shall not exceed two years (Article 57 of Land Administration Law of the People's Republic of China).
258. **Review and approval of land for construction purposes.** State-owned land and land owned by farmer collectives may be lawfully used by entities or individuals. All entities and individuals that need land for construction purposes shall, in accordance with law, apply for the use of state-owned land. When agricultural land is to be used for construction purposes, conversion of use procedures are required (Articles 9, 43 and 44 of Land Administration Law of the People's Republic of China).

259. Acquisition of the following land shall be subject to approval by the State Council: (i) basic farmland; (ii) cultivated land, other than basic farmland, that exceeds 35 hectares; and (iii) other land which exceeds 70 hectares (Article 45 of Land Administration Law of the People's Republic of China).
260. Land administrations offices at or above the county level are responsible for processing, examining and pre-approving applications for land to be used for construction purposes, with the applications submitted to higher level authorities for final approval (Article 3 of Procedures for Examination and Approval of Land for Construction Purposes).
261. **Procedures for approval of land for construction purposes** are sequentially listed below: (i) apply to land administrations for pre-approval; (ii) land administration to prepare and issue pre-approval report; (iii) land administrations prepare "one letter and four plans"²³ within 30 calendar days of the receipt of the application; (iv) local people's government approves; (v) within 10 calendar days after receiving the approval document, city and county people's governments disclose the following information at townships/towns and villages where the proposed land is to be acquired: the agency responsible for land acquisition, approval document number, uses, scope and area of land to be acquired, land acquisition compensation rates, methods for resettling agricultural population and validity period for processing land acquisition compensation; (vi) pay compensation for land acquisition and attachments to land and standing crops on land, and develop plans for resettling the agricultural population; and (vii) issue relevant documents to construction units (Document on Allocation of State-owned Land and Document of Approval for Land Use for Construction Purposes²⁴) and register the land in compliance with relevant regulations (Articles 4-21 of Procedures for Examination and Approval of Land for Construction Purposes).
262. **Land acquisition compensation rates.** Land acquired shall be compensated for on the basis of its original purpose of use. Compensation for acquired land shall include compensation for land, resettlement allowance, and compensation for attachments to and standing crops on the land. Compensation for cultivated land acquisition shall be six to ten times the average annual output value of the land calculated on the basis of three years preceding such acquisition. Resettlement allowance for cultivated land acquisition shall be calculated based on the size of the agricultural population to be resettled. It will be calculated by dividing the total area of cultivated land acquired by the average area of the original cultivated land per person. The rate of resettlement allowance shall be four to six times the average annual output value of the acquired cultivated land calculated based on the average annual output value of three years preceding such acquisition. However, the maximum resettlement allowance for each hectare of the acquired cultivated land shall not exceed fifteen times its average annual output value calculated based on the annual output value of two years preceding such acquisition (Article 47 of Land Administration Law of the People's Republic of China).
263. Local people's governments at or above the county level shall take practical measures to ensure the farmer's living standards affected by land expropriation are not lowered due to land acquisition. If land compensation and resettlement allowances are not sufficient to maintain affected farmers' original living standards and pay social security premiums, people's governments of provinces, autonomous regions and municipalities shall approve increased resettlement allowances. If the

²³ Letter of explanation on the land, agricultural land conversion plan, cultivated land top-up plan, land acquisition plan and land supply plan.

²⁴ Where use rights to state-owned land are provided on a fee basis, the land administration of city or county people's government shall sign a fee-based land use contract with the land user and issue to the construction unit Document of Approval for Land Use for Construction Purposes; where use rights to state-owned land are provided through land allocation, the land administration of city or county people's government shall issue to the construction unit Document of Decision on Allocation of State-owned Land and Document of Approval for Land Use for Construction Purposes.

aggregate amount of land compensation and resettlement allowance has reached its legally-specified upper limit, but is not enough to maintain affected farmers' original living standards, local people's governments may provide subsidies using remuneration from state-owned land used on a fee basis. People's governments of provinces, autonomous regions and municipalities need to determine and disclose unified rates of annual output values or comprehensive prices of land blocks of cities and counties whose land is to be acquired. Same price for the same type of land shall be used as the basis for land compensation. Key national development projects must include land acquisition costs in their respective cost estimates (Article 12 of State Council Decision on Deeping Reform and Strictly Enforcing Land Administration).

264. Article 17 of Regulations on Acquisition and Compensation of Buildings on State-owned Land specifies that compensation paid to owners of buildings to be acquired includes compensation based on the values of these buildings, relocation allowance and temporary resettlement allowance, and compensation for losses from suspended production and business operation. Article 19 specifies that compensation rates shall not be lower than market prices of real estate similar to buildings to be acquired on the day of announcement. Article 21 specifies that owners of these buildings can choose cash compensation or property swap. Article 22 specifies that departments responsible for acquisition of buildings shall pay relocation allowances to owners of these buildings if the acquisition leads to relocation. These departments shall pay a temporary resettlement allowance and provide buildings for use during the transitional period to the owners if they choose compensation through property swap. Article 24 specifies that before a county people's government makes an acquisition decision, it shall organize its relevant departments to identify and register structures that are not registered and fall under the scope of acquisition. Temporary structures that are confirmed to be legally built within the specified period shall be compensated. Temporary structures that are confirmed to be illegally built beyond the specified period shall not be compensated.

265. **Channels for resettling land-taken farmers.** Governments at or above the county level shall develop specific measures to ensure that the original living standards of the affected people are not lowered and their long-term livelihoods are guaranteed. For projects with stable income streams, farmers can buy their stocks in proportion to their rights to the land to be used for construction purposes approved according to law. Within the urban planning area, local people's governments shall incorporate landless farmers due to land acquisition into urban employment systems and establish social security systems for them. Outside the urban planning area and when land owned by farmer collectives is to be acquired, local people's governments shall reserve, within their respective jurisdictions, necessary cultivated land or arrange jobs for farmers whose land has been taken. Landless farmers who do not have access to basic production and living conditions shall be relocated (Article 12 of State Council Decision on Deeping Reform and Strictly Enforcing Land Administration).

266. Land-taken farmers can choose from the following resettlement approaches:

- ***Agricultural production-based resettlement.*** When land of farmer collectives outside urban planning area is taken, land shall be allocated to land-taken farmers to ensure that they have necessary cultivated land to continue their agricultural production. This includes unallocated land of farmer collectives, contracted land returned by farmer contractors on a voluntary basis, and increased land as a result of contracted land transfer and land development and consolidation.
- ***Employment-based resettlement.*** Favorable conditions shall be created for providing training and jobs to land-taken farmers. Land use entities shall give priority to employing land-taken farmers. When land acquisition takes place within urban planning areas, local governments shall include landless farmers in urban employment systems and social security systems.

- **Shareholding-based resettlement.** For projects with stable income streams and subject to consultations between rural collective economic organizations and land use entities, farmers can voluntarily buy stocks with their land acquisition compensation or for construction purposes approved by law. Rural collective economic organizations and farmers shall benefit from preferred stocks by signing contracts with land use entities.
- **Relocation-based resettlement.** If the local area cannot provide basic production conditions to landless farmers, the local government can organize their relocation to other areas, subject to consultations with rural collective economic organizations and farmers (Article 2 of Guidelines on Improving Systems for Land Acquisition Compensation and Resettlement).

267. Agricultural production-based resettlement shall be a priority method in rural areas with adequate land. When land is to be acquired for urban construction purposes as defined by the land-use master plan, the reserved land-based resettlement approach can be used, but guidance and administration need to be strengthened. When land acquisition involves conversion of agricultural land, the land shall be included in the annual land-use plan to prevent the expansion of urban construction land use. Development of reserved land shall meet the requirements of the urban development plan and relevant regulations. Where reserved land-based resettlement is implemented, local governments shall develop strict administration procedures to ensure orderly allocation and rational development and use of reserved land. It is necessary to ensure provision of funding for social security for land-taken farmers. Land resource authorities at all levels shall coordinate with other relevant authorities to proactively build and protect the social security systems for land-taken farmers (Circular of Ministry of Land Resources on Further Ensuring Effective Land Administration, June 26, 2010).

268. Ensuring effective employment training and social security for land-taken farmers shall be an important component of land acquisition system reform. While ensuring balanced and synergized rural and urban economic development, local governments at all levels shall incorporate employment of land-taken farmers into their respective economic and social development and annual plans, establish social security systems in alignment with characteristics and needs of land-taken farmers, and take effective measures to provide funding for employment training and social security. These measures will ensure that farmers' original living standards are not lowered and their long-term livelihoods are guaranteed (State Council Circular on Circulating Guidelines of Ministry of Labor and Social Security on Ensuring Effective Employment and Social Security for Land-taken Farmers, Document No. 29 issued in 2006 by the State Council's General Office).

269. **Land acquisition administration.** In order to ensure timely land acquisition compensation payments, local governments shall develop a system for pre-deposit of land acquisition compensation funds. Where land acquisition applications are submitted by county and city governments to higher-level authorities for their approval, land acquisition compensation payments shall be estimated based on the size and compensation rates of land acquisition and such payments shall be pre-deposited by entities applying to use the land. Where land is to be used or transferred for construction purposes, land acquisition compensation payments shall be pre-deposited by local governments (Circular of Ministry of Land Resources on Further Ensuring Effective Land Administration, June 26, 2010).

270. **Disclosure of land acquisition information.** During land acquisition, it is necessary to safeguard ownership of farmer-collectives land and farmers' rights and benefits to land contracting. Before an application for proposed land acquisition is submitted for approval, farmers whose land is to be taken shall be informed of the uses, location and compensation rate of the land to be taken and resettlement approaches. A survey of the current status of the land proposed to be taken must be confirmed by rural collective economic organizations and the affected farmers. If necessary, land resources authorities shall organize hearings. It is necessary to accelerate the establishment and improvement of

coordination and mediation mechanisms for disputes related to land acquisition and resettlement so as to safeguard legitimate rights and benefits of land-taken farmers and land users. With the exception of special circumstances, issues related to approved land acquisition shall be disclosed. After the land use application is approved, the pre-deposited funds shall be accounted for and refunded or topped up (Article 14 of State Council Decision on Deepening Reform and Strictly Enforcing Land Administration).

271. The disclosure of land acquisition information shall be strengthened, especially information closely related to the affected people. City and county governments shall create a section of “land acquisition information” on their website or websites of land administrations, and disclose the information publicly through various media. Land acquisition information shall be disclosed within 10 working days from the date of receiving approval documents from higher level authorities (Circular of General Office of Ministry of Land Resources on Ensuring Effective Disclosure of Information about Land Acquisition in Cities and Counties, Document No. 29 issued in 2014).
272. Where land owned by farmers’ collectives is to be expropriated, land acquisition, land compensation and resettlement plans shall be disclosed in written form at relevant affected villages and village groups. When rural collective economic organizations, villagers or other affected people disagree with land compensation and resettlement plans or request to hold hearings about the plans, applications for addressing such disagreement or holding such hearings shall be submitted to land administrations of relevant cities and counties within 10 working days from the date of disclosure of these plans. Relevant land administrations shall work to address the disagreement or hold hearings. If these plans need to be revised, they shall be revised according to relevant laws and regulations (Procedures for Disclosing Land Acquisition Information, Decree No. 10 of Ministry of Land Resources issued in 2001).

Local regulations and policies

- Circular of Hebei Provincial People’s Government on Revising Prices of Land Blocks to be Expropriated (Document No. 28 issued in 2015; in effect since May 29, 2015);
 - Implementation Plan for Social Security for Land-taken Farmers (Document No. 41 jointly issued in 2007 by Hebei Provincial Department of Labor and Social Security and Department of Land Resources); and
 - Guidelines of Hebei Provincial Government’s General Office on Ensuring Effective Employment Training and Social Security for Land-taken Farmers (Document No. 21 issued in 2006).
273. **Hebei’s land acquisition compensation rates.** In order to safeguard the rights and benefits of the affected people, ensure their original living standards are not lowered and their long-term livelihoods are guaranteed, and implement the principle of “same price for same land,” Hebei People’s Government has specified standard prices for land blocks to be expropriated in the province in its Circular on Revising Prices of Land Blocks to be Expropriated.
274. Where collective land is to be expropriated, land compensation shall be calculated using the block price multiplied by the area of land to be expropriated. Compensation rates for unused land in mountainous areas and on dikes shall be equivalent to 60 percent of its corresponding block price. Without authorization, no entity or individual is allowed to increase or reduce land compensation rates. For large and medium water and hydropower projects, land compensation rates and resettlement methods are to be separately determined by the State Council. Before the State Council issues relevant regulations, land compensation rates for these projects shall be 16 times the annual average output value of the previous three years for expropriated land. If land compensation rates cannot maintain the

original living standards of land-taken farmers, the legal person or management agency of the project shall submit an application to the project approving agency to increase the compensation.

275. Of total land compensation, 20 percent shall be paid to collective economic organizations and 80 percent to owners of use rights or contract farmers for expropriated land. When no holder of use rights or contract exists, all land compensation shall be paid to the collective economic organization. The collective is responsible for allocating or using the compensation according to law. Land compensation shall be paid in its full amount in a timely manner and no entity or individual is allowed to intercept or embezzle the compensation. Where there are attachments to and standing crops on the land to be expropriated, owners of these attachments and crops shall be compensated in addition to the land compensation. Compensation rates for attachments to the land are decided by local governments. Compensation rates for standing crops are calculated based on the output value of the land for the specific season when land acquisition takes place.
276. Before an application for expropriating agricultural land is submitted for approval, the prefectural or county government shall define the social security premium for land-taken farmers based on a rate not lower than 10 percent of the block price of the land to be expropriated. The premium shall be paid to a local special account for social security for land-taken farmers and be used exclusively for the purpose. After the premium is paid into the account, both provincial and prefectural administrations of social security shall produce documents confirming social security measures for land-taken farmers in a timely manner. The social security premium shall be included in the land acquisition cost. Where land is supplied through land transfer, the premium shall be paid out of land transfer revenues; where land is supplied through land allocation, the premium shall be collected from the land user during land supply. Shortfalls in the social security premium shall be filled by the local government.
277. **Hebei's social security for land-taken farmers.** In 2007, Hebei Provincial Department of Human Resources and Social Security issued the Implementation Plan for Social Security for Land-taken Farmers (Document No. 41).
278. Endowment insurance funds are co-financed by individual farmers, rural collectives and local governments. Personal contributions are paid out of the resettlement allowance, rural collective contributions are paid from land compensation, and local governments contributions are paid from net revenue from land transfers. Shortfalls in endowment insurance premiums are filled by local governments with revenue from paid use of state-owned land.
279. Within three months from the approval date of land acquisition and resettlement plan, local finance authorities shall: (1) Disburse the social security premium in its full amount to social insurance agencies from land acquisition compensation, resettlement allowance, and net revenue from land transfers; (2) Withdraw risk funds in proportions specified in the procedures for implementing endowment insurance for land-taken farmers and pay the withdrawn amount into the risk fund account.
280. Relevant authorities of Hebei province are actively developing a new policy governing endowment insurance for land-taken farmers, which is expected to be issued in 2016. Before the new policy is implemented, landless farmers can participate, on a voluntary basis, in endowment insurance for urban workers or endowment insurance for rural and urban residents.
281. **Hebei's employment training for land-taken farmers.** Pursuant to Guidelines of the General Office of Hebei Provincial People's Government on Ensuring Effective Employment Training and

Social Security for Land-taken Farmers, land-taken farmers are entitled to subsidies for employment services and employment training. Within the urban planning area, local governments shall incorporate landless farmers due to land acquisition into unified unemployment registration and urban employment systems. All types of employment agencies can apply to local labor and social security authorities for subsidies based on the actual number of employed people who have signed labor contracts with validity periods over half a year. The maximum subsidy per employed person is RMB 120. Land-taken farmers who have found jobs within six months after completing vocational training are entitled to vocational training subsidies provided by the government. Rates vary according to the type of training with a maximum of RMB 400 per person for basic skills training, RMB 600 for intermediate skills training, and RMB 1,000 for advanced skills training.

282. Land-taken farmers are encouraged to achieve self-employment and start up their businesses. Land-taken farmers within the urban planning area who have not been employed or registered in the unemployment system are entitled to relevant employment and re-employment support. Governments and relevant authorities at all levels shall provide self-employment and business start-up support to land-taken farmers in terms of approval procedures, issuance of certificates and permits, fee collection, arrangement of vendor booths and stands, and microfinance.

283. A summary of the land management systems is presented in Table 5.

Table 5. China's and Hebei's Land Use Management Systems

Key Elements	Policies and Procedures
Target	Protect legitimate rights and benefits of affected people, ensure their original living standards are not lowered, and guarantee their long-term livelihoods.
Authority for approving land use	Land acquisition plans shall be submitted to and approved by the State Council for expropriation of basic farmland, cultivated land beyond basic farmland that exceeds 35 ha, and other land exceeding 70 ha.
Approval procedures for land to be used for construction purposes	Pre-approval → development of “one letter (of explanation) and four plans” → Local people's government approve land within 10 calendar days after receiving the approval document. City and county people's governments shall disclose the following information at townships/towns and villages where the proposed land is to be acquired: the agencies responsible for land acquisition; approval document number; uses, scope and area of land to be acquired; land acquisition compensation rates; methods for resettling the agricultural population; and validity period for processing land acquisition compensation. Pay compensation for land acquisition and attachments to land and standing crops and identify channels for resettling the agricultural population. Issue the Document of Decision on Allocation of State-owned Land and Document of Approval for Land Use for Construction Purposes to construction units.
Work procedures	Rural collective economic organizations and farmers whose land is to be taken are informed of the uses, location, and compensation rates of the proposed land to be taken and resettlement channels. Conduct surveys of the ownership, type, and area of the proposed land to be taken and the ownership, type and quantity of attachments to the land. Publicize the issues relating to the approval of land to be taken. Publicize compensation plans for land to be taken. Consult with the affected people and obtain signed land acquisition compensation and resettlement agreements from them. Issue the Document of Approval for Land Use for Construction Purposes to construction units that have made full payment of compensation within the specified period.

Key Elements	Policies and Procedures
Compensation for permanent land acquisition	Compensation is provided based on prices of land blocks or the unified annual output value of land. Local governments shall establish mechanisms for adjusting land acquisition compensation rates. Such adjustment is conducted every 2-3 years based on local economic development levels and local per capita income. Adjustments aim to increase compensation rates over time. Qualified evaluation agencies will evaluate attachments to the affected land, develop compensation plan, sign final compensation agreements with the affected households, and disburse compensation payments.
Temporary land occupation	Temporary land users shall use the land as specified in the land use contract and shall not build permanent structures on the land. Normally, the period for temporary land use does not exceed two years.
Compensation for acquisition of buildings on state-owned land	Compensation rates for acquired buildings shall not be lower than the market prices of real estate for similar buildings on the day of the announcement. Owners of these buildings can choose cash compensation or property swap. Before a county people's government makes an acquisition decision, it shall organize its relevant departments to identify and register structures that are not registered and fall under the scope of acquisition. Temporary structures that are confirmed to be legally built within the specified period shall be compensated. Temporary structures that are confirmed to be illegally built beyond the specified period shall not be compensated.
Resettlement measures	Resettlement channels, include: (1) agriculture-based resettlement, (2) employment-based resettlement, (3) shareholding-based resettlement, and (4) relocation-based resettlement.
Social security for land-taken farmers	<p>Before an application for acquisition of agricultural land is submitted for approval, the prefectural and county (city) people's government shall define the social security premium for land-taken farmers, which shall not be less than 10 percent of the price of the land block in the acquisition area. The fee shall be paid into a special account and used exclusively for social security for land-taken farmers.</p> <p>In 2007, Hebei Provincial Government issued the implementation plan for social security and employment training for land-taken farmers, but compensation rates for these farmers specified in relevant policies are low. Currently, a new social security plan for land-taken farmers is under development.</p>
Organizational structure	Land administrations under the State Council are responsible for administering and supervising all land across the country. Land administrations of people's governments above the county level shall be established and responsibilities be defined by people's governments of provinces (autonomous regions and municipalities) in compliance with relevant regulations of the State Council. Both China and Hebei Province have extensive experience in land acquisition and resettlement and a strong team of professionals with experience in World Bank financed projects.
Information disclosure	Before an application for proposed land acquisition is submitted for approval, farmers whose land is to be taken shall be informed of the uses, location and compensation rates of the land to be taken and resettlement channels. Results of status quo survey of the proposed land to be taken must be confirmed by rural collective economic organizations and farmers whose land is to be taken. If necessary, land resources authorities shall organize hearings. Relevant documents that are confirmed by land-taken farmers shall be used as necessary documents for approving the land acquisition application. It is necessary to accelerate the establishment and improvement of coordination and mediation mechanisms for disputes related to land acquisition and resettlement so as to safeguard legitimate rights and benefits of land-taken farmers and land users. With the exception of special circumstances, issues related to the approved land acquisition shall be disclosed.

Key Elements	Policies and Procedures
Vulnerable groups (women and the poor)	It is specified in the Land Contract Law that women enjoy equal land contracting rights as men.

Institutional Capacity for Land Acquisition and Resettlement

284. Hebei Provincial Department of Human Resources and Social Security and prefectural and county human resources and social security bureaus are responsible for land acquisition and administration. The department has 105 regular staff in 15 offices, with extensive experience in land acquisition and resettlement. The department and bureaus collaborate with land resources authorities to ensure effective resettlement, include eligible affected people in endowment insurance system for land-taken farmers, and provide employment skill training. Staff of the department are well educated and have fixed work places and their salaries are paid out of the provincial budget. In addition, towns and townships involved in land acquisition also have land administration stations, that support local land acquisition and resettlement activities.

285. Each year, Hebei Provincial Department of Human Resources and Social Security provides training to prefectural, county and township land administration staff to enhance their land administration and implementation capacity. Expenses on the training are covered by provincial budget.

Assessment of social risk regarding land acquisition

286. Both China and Hebei have established sound land acquisition policy systems and have developed detailed regulations on land acquisition policy targets, approval procedures, compensation rates, resettlement plan, and public participation. However, these policy systems lack attention to poor people, clear regulations on land acquisition and grievance redress mechanisms, and regulations on resettlement monitoring and evaluation (with the exception of resettlement activities of large and medium water and hydropower projects).

287. Hebei Provincial Department of Land Resources, city and county land administration authorities, and township land administration stations have extensive experience in land administration. Interviews with Hebei Provincial Department of Land Resources staff indicate that agencies have carried out land acquisition in strict accordance with national and local policies. However, submissions of land acquisition applications for approval were delayed for some small projects due to land acquisition quotas. Although some of the relevant policies do not have special provisions regarding vulnerable groups, these groups have been supported and assisted during implementation. Special attention to women has been lacking during land acquisition implementation.

5.1.5 Management System for Ethnic Minority Development

288. To safeguard rights and benefits of ethnic minorities and ensure ethnic minority residents to receive better benefits, both the Government of China and Hebei provincial and prefectural governments have formulated a series of policies targeting ethnic minorities, and developed detailed guidelines on development measures, cultural respect, public consultation and participation, information disclosure and assistance to vulnerable groups. These policies and guidelines aim to promote integration and shared development and prosperity of all ethnic groups, respect and safeguard legitimate rights and benefits of all ethnic groups, and strengthen and develop equal and harmonious ethnic relations under which all ethnic groups collaborate and assist each other.

National laws, regulations and policies

289. Relevant laws, regulations and policies include Regional Ethnic Autonomy Law of the People's Republic of China (in effect since October 1, 1984), Regulations of People's Republic of China on Administrative Work in Ethnic Minority Townships (issued on September 15, 1993) and 12th Five-year Plan for Developing Ethnic Minority Undertakings. A summary of China's and Hebei's Management Systems for Ethnic Minority Development is presented in Table 6.
290. **Regional Ethnic Autonomy.** Regional ethnic autonomy is a system under which ethnic minority concentrated regions establish autonomous authorities and exercise the power of autonomy under the leadership of the government. Autonomous regions may be established where one or more ethnic minorities live in concentrated communities, in the light of local conditions such as relationships among different ethnic groups and the level of economic development, and with due consideration of historical background. Within an ethnic minority autonomous region where other ethnic minorities live in concentrated communities, corresponding autonomous areas or ethnic minority townships may be established (Article 12 of Regional Ethnic Autonomy Law of the People's Republic of China).
291. Guided by government plans, authorities of ethnic minority autonomous regions shall independently arrange for and administer local economic development and develop guidelines, policies and plans for economic development in the light of local realities and needs (Articles 25 and 26 of Regional Ethnic Autonomy Law of the People's Republic of China).
292. Authorities of ethnic minority autonomous regions shall independently develop education for local ethnic minorities by eliminating illiteracy, setting up different types of schools, extending nine-year compulsory education, developing secondary education and establishing specialized schools for ethnic minorities, such as teacher training schools, secondary technical schools and vocational schools to train ethnic minority professionals. Authorities of ethnic minority autonomous regions shall independently develop literature, arts, press and publication, radio, film, television and other cultural undertakings with ethnic minority characteristics and in forms unique to ethnic minorities, and shall collect, consolidate, translate and publish books of ethnic minorities and protect local scenic spots and historical sites, precious cultural relics and other important historical and cultural heritages (Articles 37 and 38 of Regional Ethnic Autonomy Law of the People's Republic of China).
293. **Ethnic relations in ethnic autonomous regions.** In addressing special issues concerning local ethnic groups, authorities of ethnic minority autonomous regions must conduct extensive consultations with their representatives and respect their views. These authorities shall ensure that members of all local ethnic groups enjoy citizen rights as specified in the Constitution. (Articles 51 and 52 of Regional Ethnic Autonomy Law of the People's Republic of China).

Local regulations and policies

294. Local regulations and policies mainly include: Regulations of Hebei Provincial Government on Implementing the Regional Ethnic Autonomy Law of the People's Republic of China (in effect since November 1, 2007), Hebei Provincial 12th-Year Plan for Economic Development in Ethnic Minority Areas, and Methods for Administration of Funds for Ethnic Minority Development (in effect since March 13, 2015).
295. **Regional ethnic autonomy.** Pursuant to the above Regulations, financial authorities of provincial, prefectural and autonomous county governments shall establish ethnic minority development funds, allowance funds for ethnic minority townships, and special funds for work in ethnic minority areas. Increases to these funds should occur as economic development and fiscal revenue levels increase.

People's governments above the county level and their relevant authorities shall provide support to ethnic minorities for trade and production of special commodities such as traditional handicrafts; give preferential treatment to ethnic minorities in investment, tax and fiscal policy; and give priority to arranging infrastructure construction projects in autonomous counties while giving consideration to local realities of these counties.

296. People's governments above the county level and their relevant authorities shall strengthen poverty alleviation in autonomous counties and give priority to arranging projects in and allocating funds to these counties. It is necessary to increase financial inputs to education in autonomous counties. The proportion of investments in infrastructure development in autonomous counties shall be higher than that of non-autonomous counties. Hebei Provincial Finance Department shall earmark subsidies for education in ethnic minority areas to address significant educational issues in autonomous counties.

Ethnic minority development plan. Pursuant to Hebei Provincial 12th Five-year Plan for Economic Development in Ethnic Minority Areas, the main tasks and development priorities for ethnic minorities in Hebei include: strengthening infrastructure development to enhance carrying capacity; expanding special industries and building on their resource advantages; speeding up development and creating a new landscape of all-round opening up; strengthening ecological and environmental protection to promote balanced development; developing education, culture, technologies, and sports; improving livelihoods and living quality and standards; and implementing national laws, regulations and policies to strengthen equal and harmonious ethnic relationships of mutual assistance in ethnic minority areas.

297. **Ethnic minority development funds.** Pursuant to Methods of Hebei Province for Administering Ethnic Minority Development Funds, funds are allocated by national and provincial finance authorities to be used exclusively for improving production and living conditions of ethnic minority people in ethnic minority areas, poor and remote mountainous areas, and underdeveloped areas. Such funds include separate contributions from the national budget and provincial budget.

298. Ethnic minority development funds are to be used for: improving basic production and living conditions, including rural drinking water systems, power facilities, roads, bridges, and rural energy facilities; providing labor skills and advanced training in production techniques; developing cropping, animal farming and tourism sectors with characteristics unique to ethnic minorities; and supporting demonstration villages with unique ethnic minority features.

299. Ethnic minority development funds allocated to cities and counties shall be used for projects and shall be disclosed. The Hebei provincial finance authorities and the ethnic minority work authorities of cities and districts are jointly responsible for reviewing and evaluating the performance of activities to be supported under the Program. Ethnic minority development funds are managed based on the reimbursement approach and unused funds for the current year can be carried over to the next year.

Table 6 China's and Hebei's Management Systems for Ethnic Minority Development

Item	Policies and Procedures
Target	Promote unity among and shared development and prosperity of different ethnic groups, respect and protect in accordance with law the legitimate rights and benefits of all ethnic groups, consolidate and develop equal and harmonious ethnic relations of unity and mutual assistance.
Principles	Principle of regional ethnic autonomy, "people-centered" principle, principle of self-dependence, and principle of sustainable development.
Development priority	Implement national laws, regulations and policies for ethnic minorities to strengthen equal and harmonious ethnic relationships of mutual assistance in ethnic minority areas; strengthen infrastructure development to enhance the carrying capacity in

Item	Policies and Procedures
	development of ethnic minority areas; expand special industries in ethnic minority areas by building on their resource advantages; speed up development and create a new landscape of all-round opening up; strengthen ecological and environmental protection to promote balanced development in ethnic minority areas; focus on developing education, culture, technologies and sports; improve livelihoods and living quality and standards of ethnic minority people.
Development measures	Set up an ethnic minority development fund and a subsidy fund for ethnic minority townships and provide and gradually increase special funding for ethnic minority work and funding for developing ethnic minority undertakings; encourage and guide autonomous counties to build markets for trading farm produce, livestock products, mineral products and local specialties; provide support to ethnic minority trade and production of special commodities needed by and traditional handicrafts of ethnic minority groups and give preferential treatments in investment, tax and fiscal policy; give priority to arranging activities financed by earmarked funding for environmental protection in autonomous counties and provide more earmarked funding for capacity building for environmental monitoring stations; increase financial inputs to education in autonomous counties proportionately higher than non-autonomous counties; Hebei provincial finance department shall arrange earmarked subsidies for education in ethnic minority areas, which shall be used for addressing significant educational issues, helping these counties train teachers, and assisting ethnic minority students to complete their schooling; establish a new rural cooperative medical care system and medical care assistance system and strengthen training of health practitioners in autonomous counties to increase their capacity.
Development funding management	Use ethnic minority development funds for improving basic production and living conditions; providing labor skills and advanced production techniques training; developing cropping, animal farming and tourism sectors with characteristics unique to ethnic minorities; and supporting demonstration villages with unique ethnic minority features. Such funds allocated to cities and counties shall be used for projects, be disclosed and be managed based on the reimbursement approach. Unused funds for the current year can be carried over to the next year.
Cultural respect	Safeguard freedom of religious beliefs of citizens from all ethnic groups; where conditions are opportune, schools and other education institutions mainly recruiting ethnic minority students shall use textbooks and teach in languages of local ethnic minorities; authorities of ethnic minority autonomous regions shall independently develop literature, arts, press and publication, radio, film, television and other cultural undertakings with ethnic minority characteristics and in forms unique to ethnic minorities, increase investments in these cultural undertakings, strengthen construction of cultural facilities and accelerate development of all cultural undertakings; actively carry out exchanges and collaboration with other regions in terms of education, science and technology, culture and art, health and sports and other fields; safeguard rights of citizens from all ethnic groups to lodging lawsuits in their respective language; strengthen protection and rescue of arts, non-physical cultural resources, scenic spots and historical sites and physical cultural resources; support autonomous counties to collect, consolidate and publish ancient books, protect precious cultural relics and other important cultural heritages of ethnic minorities, inherit and develop traditional cultures of ethnic minorities, and provide financial subsidies to rescue traditional cultures on the brink of being lost.
Safeguard measures	Provide policy, financial and project support to ethnic minority regions; establish and perfect leadership mechanisms, work mechanisms and responsibility systems to

Item	Policies and Procedures
	ensure smooth implementation of relevant activities.
Public consultation and participation	In addressing special issues concerning local ethnic groups, authorities of ethnic minority autonomous regions must conduct extensive consultations with their representatives and respect their views. These authorities shall ensure that members of all local ethnic groups enjoy citizen rights as specified in the Constitution and shall educate them to fulfill their due obligations.
Organizational structure	Hebei Provincial Department of Ethnic and Religious Affairs and prefectural and county bureaus of ethnic and religious affairs are responsible for administering ethnic minority affairs in their respective jurisdiction.
Information disclosure	Disseminate ethnic minority policies via TV, radio, newspapers, websites, posters and other media.
Poverty	Strengthen poverty alleviation and development of autonomous counties, focus financial and project support on autonomous counties; relocate people living in areas lacking basic existence conditions, areas prone to natural disasters and ecological protection zones; allocate local counterpart funds by higher level authorities in proportion to relevant national subsidies.

Institutional Capacity for Ethnic Minority Development

300. The activities supported under the Program would cover all regions in Hebei province, including six autonomous counties and three ethnic minority counties. The autonomous counties are Mengcun Hui Autonomous County in Cangzhou City, Dachang Hui Autonomous County in Langfang City, Qinglong Manchu Autonomous County in Qinghuangdao City, and Fengning Manchu Autonomous County, Kuancheng Manchu Autonomous County and Weichang Manchu and Mongol Autonomous County in Chengde City. The ethnic minority counties are Luanping, Longhua and Pingquan counties in Chengde City where Manchu, Hui, Mongol and Korean people live.

301. In order to promote socioeconomic development of ethnic minorities, safeguard their rights and benefits and respect their cultures, Hebei Provincial Department of Ethnic and Religious Affairs and prefectural and county bureaus of ethnic and religious affairs have assigned experienced staff to assist in the preparation of ethnic minority development plans, provide policy recommendations on socioeconomic development in ethnic minority areas, compile comprehensive statistics and analyze socioeconomic data, and manage development funds for poverty alleviation activities in ethnic minority areas. However, the LGO for the HAP and prefectural and county Leading Groups do not include representatives from Hebei Provincial Department of Ethnic and Religious Affairs or prefectural and county bureaus of ethnic and religious affairs.

Assessment of Ethnic Minority Development

302. Elimination of “yellow-sticker” vehicles, rural non-point source pollution control, and other activities involve all regions in Hebei province, including the six ethnic autonomous counties. In order to promote socioeconomic development of ethnic minorities, safeguard their rights and benefits and respect their cultures, Hebei Provincial Government has formulated a series of policies to promote ethnic minority development, taken a series of policy measures to ensure public consultation and participation and respect of ethnic minority cultures, and developed and implemented policies to support women, the poor and other vulnerable groups. The organizational structure is sound and information is open and transparent. The YSVLG does not include the representatives from the provincial department or county bureaus of ethnic and religious affairs.

5.2 Assessment of Social Management System against PforR Policy and Directive

303. In general, the legal framework and implementation performance on social sustainable development, land acquisition activities, and ethnic minority development nationally and in Hebei are broadly adequate. The legal framework of laws, regulations, policies and standards and implementation mechanism provided are consistent with the Bank PforR Policy and Bank PforR Directive.
- 304. *PforR Policy (d): Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards.***
- 305. *PforR directive: Avoid or minimize land acquisition and related adverse impacts; identify and address economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people lacking full legal rights to resources they use or occupy; provide compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses before taking land or restricting access; provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment); and restore or replace public infrastructure and community services that may be adversely affected by the Program.***
306. The current legal framework on land acquisition in China is well established to ensure affected people are assisted in improving or at least restoring their livelihood and living standards.
307. The economic and social impacts caused by land acquisition or loss of access to natural resources are fully investigated and compensated.
308. Land compensation is adequate for APs livelihood restoration. Replacement price is used for housing cash compensation.
309. The government mechanisms use multiple compensation and livelihood approaches during implementation.
310. Relevant regulations on disclosing information related to land acquisition are developed.
311. China has adequate systems to address risks related to land acquisition. These systems are consistent with the Bank PforR Directive.
- 312. *PforR Policy (e): Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups.***
- 313. *PforR Directive: Undertake free, prior, and informed consultations if the Indigenous Peoples are potentially affected (positively or negatively), to determine whether there is broad community support for the Program activities; ensure that the Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter (indigenous knowledge) to include the consent of the Indigenous Peoples; and give attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups; and, if necessary, take special measures to promote equitable access to the Program benefits.***

314. A series of measures have been taken to conduct public consultation and participation activities, but there are no specific policy requirements for any development intervention to carry out prior, free and informed consultation with minority communities, or to obtain broad community support.
315. The activities to be supported under the Program that may involve ethnic minorities are formula fertilizers application and the use of clean stoves. Both of these activities are voluntary. The only issues that to be addressed under the Program are adequate communication and coverage to ensure that those communities have equal opportunity to participate in those activities.
316. There is an efficient organizational structure; however, the Leading Group does not include representatives from the department and county bureaus of ethnic and religious affairs. This should be addressed during implementation of the Program.

SECTION VI: SUMMARY OF ASSESSMENT OF ENVIRONMENTAL AND SOCIAL SYSTEMS

317. The Environmental and Social Systems Assessment as defined in the Bank PforR²⁵ should assess the degree to which systems relevant to the Program:
- a. Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to the Program's environmental and social impacts.
 - b. Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program.
 - c. Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.
 - d. Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving or, at the minimum, restoring their livelihoods and living standards.
 - e. Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits with special attention to the rights and interests of the Indigenous Peoples²⁶ and to the needs or concerns of vulnerable groups.
 - f. Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes (not applicable to this operation).
318. The ESSA concluded that, in general, the rules and regulations are consistent with the Bank PforR Policy and the Bank PforR Directive, but the capacity to effectively enforce certain regulations in some agencies could be improved. Thus, several recommendations are made to address these shortcomings and are included in the Program Action Plan or Disbursement Linked Indicators. The summary of the assessments relevant for the activities to be supported under the Program is presented in Table 7.

²⁵ OPCS5.04-POL.01

²⁶ For the purpose on this Policy indigenous people are defined as ethnic minorities.

Table 7. Assessment of Environmental and Social Systems based on the Bank Policy for PforRs

a. Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts.		
Key Elements	National and Provincial Systems	Key Findings
Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the Program level.	<p>China has developed an adequate legal framework for environmental and social impact assessment, backed by a set of comprehensive laws, regulations, technical guidelines and standards, which apply nationwide. Over the decades, it has gradually evolved into a comprehensive system that is generally consistent with the PforR.</p> <p>The Hebei provincial and municipal EPBs have well-established institutional arrangements with qualified staff and technical expertise for managing the environmental and social impact assessment of construction projects.</p>	<p>Consistent.</p> <p>The implementation of policy level EIA is yet to be formally institutionalized.</p>
Incorporate recognized elements of environmental and social assessment good practice, including: (i) early screening of potential impacts; (ii) consideration of strategic, technical, and site alternatives (including the “no action” alternative); (iii) explicit assessment of potential induced, cumulative, and transboundary impacts; (iv) identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized; (v) clear articulation of institutional responsibilities and resources to support implementation of plans; and (vi) responsiveness and accountability through stakeholder consultation, timely dissemination of the Program information, and responsive grievance redress measures.	The Chinese EIA system has well-defined guidelines covering screening, alternative analysis, impact assessment, mitigation measures, management plan, and consultation.	<p>Consistent.</p> <p>The implementation of local environmental management systems may not be adequate in certain aspects, especially the enforcement of environmental compliance in rural areas (e.g., on-site supervision of environmental enforcement teams on livestock farms in rural areas can occur less than twice a year). Therefore, capacity building for environmental enforcement teams in rural areas is needed.</p>

b. Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program.		
Key Elements	National and Provincial Systems	Key Findings
Include appropriate measures for the early identification and screening of potentially important biodiversity and cultural resource areas.	The EIA guidelines provide detailed guidance on identification and screening of sensitive environmental and cultural resources, including survey of baseline environmental conditions in geology, surface water, wild life, forest, wetland, fishery, rare and endangered species, and nature reserves. Key sensitive areas such as rivers, reservoirs, nature reserves, wetland parks, forest parks, and scenic areas are identified for detailed survey and special assessment. Cultural resources are screened through consultation/approval of relevant authorities and field investigation.	Consistent. Important biodiversity and cultural resource areas will not be involved in this program.
Support and promote the protection, conservation, maintenance, and rehabilitation of natural habitats; avoid significant conversion or degradation of critical natural habitats; and, if avoiding the significant conversion of natural habitats is not technically feasible, measures to mitigate or offset the adverse impacts of the Program activities are required.	The Chinese environmental protection system emphasizes the protection, maintenance and rehabilitation of natural habitats. Avoiding such sensitive areas is the top priority of the EIA. Special assessment is mandatory and necessary mitigation or offset measures are to be developed in the environmental management plan if avoidance is not feasible.	Consistent. The activities supported under the Program do not take place on sensitive environmental sites/areas.
Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.	The <i>Cultural Property Protection Law</i> provides adequate legal framework and procedures for protecting cultural property during the EA process. If any physical cultural resource is impacted, impacts must be assessed, and consultation and approval must be secured with the cultural property authority, and protection measures be included in the environmental management plan.	Consistent. The activities supported under the Program do not take place in areas with existing physical cultural resources.

c. Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.		
Key Elements	National and Provincial Systems	Key Findings
Promote adequate community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure; or, in carrying out activities that may be dependent on such infrastructure, incorporate safety measures, inspections, or remedial works as appropriate.	China has established a comprehensive management and supervision system for work safety. This system ensures the screening of safety issues and occupation hazards, assessment of work safety and occupational diseases hazard during project preparation, design and construction completion acceptance of work safety and health facilities, and supervision during operation. Hebei has a comprehensive five-level governmental organizational setup for occupational health and work safety management and supervision with well-established laws, regulations, procedures and enforcement arrangement.	Consistent. The resources and capacity of AWSs at various levels (especially at district/county level) are inadequate, and need to be strengthened due to the large number of industrial enterprises (about 10,000) in Hebei.
Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the Program; promote the use of integrated pest management practices to manage or reduce pests or diseases vectors; and provide training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with the relevant international guidelines and conventions.	The legal system in China provides a comprehensive framework in managing hazardous materials, which requires special permit systems for production, storage and sale of dangerous chemicals. It requires the adoption of good and compliance management practices. It also enforces mandatory certification of workers involved in handling dangerous chemicals.	Consistent. The activities supported under the Program do not involve any relevant storage and sale of dangerous chemicals or pesticide

Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the Program activities are located in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events.	The EIA and work safety systems cover the environmental and work related risk assessment, and require necessary measures to be incorporated into the project design and implementation. In addition, China has established other risk assessment systems for projects that are in areas prone to flood and natural hazards (e.g. geo-hazard, earthquake) as part of project approval procedures.	Consistent.
d. Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving or, at the minimum, restoring their livelihoods and living standards.		
Key Elements	National and Provincial Systems	Key Findings
Avoid or minimize land acquisition and related adverse impacts; identify and address economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people lacking full legal rights to resources they use or occupy.	<p>The effort to avoid or minimize land acquisition is achieved through both technical design of the project (including project feasibility study and preliminary design), and the land department review process, including preliminary verification. The main focus of preliminary verification is to ensure compliance with regional and local land use planning and safeguard primary farmland.</p> <p>Where it is not feasible to avoid resettlement, ensure the original living standards of the affected people are not lowered and their long-term livelihoods are guaranteed.</p> <p>Strict procedures for approving land acquisition for investment projects. Failing to pass the preliminary verification, the party concerned shall not be approved to convert the land for agricultural use into that for construction use or to have the land requisitioned, nor shall it be permitted or go through the land supply procedures.</p> <p>Under the existing land acquisition procedures, the potential social and economic impacts caused by land acquisition are addressed by engaging affected villages in the land impact survey process, confirming surveyed outcomes, conducting public hearings, establishing unified compensation rates by provincial government, and providing employment opportunities and social security coverage for land-taken farmers.</p> <p>For those affected people who lack full legal rights to assets or resources they use or occupy, existing laws or regulations do not provide clear entitlements. However, in the actual implementation, certain level of</p>	<p>Consistent.</p> <p>Consistent.</p> <p>The current legal framework on land acquisition in China is well established to ensure affected people are assisted in improving or at least restoring their livelihood and living standards.</p> <p>The economic and social impacts caused by land acquisition or loss of access to natural resources are fully investigated and compensated.</p>

	<p>compensation is often provided following negotiation with affected parties. Information related to land acquisition is disclosed and disseminated in a timely and effective manner through public media.</p>	
<p>Provide compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses before taking land or restricting access.</p>	<p>Land compensation is provided based on prices of land blocks or the unified annual output value of land and is adjusted every 2-3 years. (see Annex 4)</p> <p>Engage qualified evaluation agencies to evaluate attachments to the affected land, develop compensation plans and sign final compensation agreements with affected households.</p> <p>Specify types of temporarily occupied land and duration of occupation (up to 2 years) and give compensation to affected people.</p> <p>Specify that buildings can be acquired through cash compensation and property rights swap. Market prices are used for cash compensation.</p>	<p>Consistent.</p> <p>Land compensation is adequate for APs livelihood restoration. Replacement price is used for housing cash compensation.</p>
<p>Provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment).</p>	<p>Land policies use multiple resettlement channels, including: 1) agriculture-based resettlement; 2) employment-based resettlement; 3) shareholding-based resettlement; and 4) relocation-based resettlement. In addition, policies have specific provisions for endowment insurance and employment training to land-taken farmers.</p> <p>Hebei's existing endowment insurance policies targeting land-taken farmers are no longer applicable due to low insurance benefits. New policies are under development.</p> <p>Land Contract Law specifies that women enjoy equal rights as men to contracting rural land.</p>	<p>Consistent.</p> <p>Multiple compensation and livelihood approaches are used during implementation.</p>
<p>Restore or replace public infrastructure and community services that may be adversely affected by the Program.</p>	<p>Titling, registration and announcement of land to be acquired are required and hearings must be held.</p>	<p>Consistent.</p> <p>Relevant regulations on disclosing information related to land acquisition are developed.</p>

e. Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups.		
Key Elements	National and Provincial Systems	Key Findings
Undertake free, prior, and informed consultations if the Indigenous Peoples are potentially affected (positively or negatively) to determine whether there is broad community support for the Program activities.	The current legal framework supports the lawful rights and interests of the minority nationalities and upholds and develops a relationship of equality, unity and mutual assistance among all of China's nationalities. Relevant information is disclosed on radio, TV and the internet (taking into account languages of ethnic minorities). Relevant information is posted at ethnic minority villages and on community bulletin boards and is disseminated through community and village committees. Communities and village collectives organize village meetings to discuss project-related issues.	Consistent. A series of measures have been taken to conduct public consultation and participation activities, but there are no specific policy requirements for any development intervention to carry out prior, free and informed consultation with minority communities, or to obtain broad community support. The activities to be supported under the Program that may involve ethnic minorities are voluntary. The issues to be addressed under the Program are of adequate communication and coverage to ensure that those communities have equal opportunity to participate in those activities.
Ensure that the Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter	Policies are formulated to guarantee freedom of religious belief of all ethnic groups, develop unique languages, increase financial inputs in cultural undertakings, strengthen construction of cultural facilities, accelerate development of various cultural undertakings, strengthen protection and rescue of physical cultural resources, and develop traditional cultures of ethnic minorities.	Consistent. There is an efficient organizational structure; however,

<p>(Indigenous knowledge) to include the consent of the Indigenous Peoples.</p>	<p>Ethnic minority development and project management are responsibilities of Hebei Provincial Department of Ethnic and Religious Affairs and bureaus of ethnic and religious affairs of all counties in the province.</p> <p>During daily work, an organizational structure has taken shape, which comprises ethnic and religious affairs, finance, environmental protection and other relevant authorities, whose roles and responsibilities are clearly defined and who collaborate with each other, hold joint meetings every year, supervise and inspect implementation of relevant activities and address relevant issues.</p>	<p>the Leading Group does not include representatives from the department and county bureaus of ethnic and religious affairs. This should be addressed during the implementation of the Program.</p>
<p>Give attention to groups vulnerable to hardship or disadvantage, including the poor, the disabled, women and children, the elderly, or marginalized ethnic groups; and, if necessary, take special measures to promote equitable access to the Program benefits.</p>	<p>Financial and project support focused on autonomous counties; relocation of people living in areas lacking basic existence conditions, areas prone to natural disasters and ecological protection zones; local counterpart funds allocated by higher level authorities in proportion to national subsidies.</p> <p>There is an established system in China for local government to provide support to urban and rural low income households, including various vulnerable groups. Such support includes cash income to meet the minimum living allowance for the group and in kind support for daily expenses, such as reducing or waiving electricity tariffs and heating cost.</p>	<p>Consistent.</p>

SECTION VII: STAKEHOLDERS CONSULTATION

319. Between September 6 and September 9, 2015, meetings were held with representatives from a number of Hebei government institutions to discuss policies and procedures governing elimination of “yellow-sticker” vehicles, land acquisition, structure demolition, ethnic minority development, and other issues. Participating institutions are presented in Table 8. (See Annex 6 for details).

Table 8 Summary of Consultation and Participation Activities (Sept. 6 -9, 2015)

Stakeholder	Main Contents
PMO, Department of Public Security, Traffic Police Department, Department of Environmental Protection, Finance Department, Health and Family Planning Commission (Diseases Control Center), Pricing Department, Department of Land Resources, Department of Human Resources and Public Security, Department of Statistics, Poverty Alleviation Office, Department of Civil Affairs, Department of Ethnic and Religious Affairs, Women’s Federation, Department of Agriculture (Office of Agriculture) and New Energy Office.	<p>Collection and consolidation of social consultant materials (list of materials has been provided)</p> <p>Main Topics: elimination of “yellow-sticker” vehicles, rural non-point source pollution control, land acquisition and structure demolition, and ethnic minority development.</p> <p>Sub-topics:</p> <ul style="list-style-type: none"> a) China’s and Hebei’s policy systems; b) Implementation procedures; c) Implementation agency and capacity; d) Practices during implementation; e) Analysis of cases with implementation already completed.
Owners and renters of “yellow-sticker” vehicles (6-8 people, including women and the poor; vehicles already eliminated or to be eliminated)	<ul style="list-style-type: none"> - Social impacts of eliminating “yellow-sticker” vehicles; - Policies governing elimination of “yellow-sticker” vehicles; - Compensation and alternative livelihoods plans for eliminating “yellow-sticker” vehicles”; - People’s attitude towards eliminating “yellow-sticker” vehicles; and - Other issues relating to eliminating “yellow-sticker” vehicles.
Residents/farmers (6-8 people, including women, who use biogas, new fertilizers and new pesticides)	<ul style="list-style-type: none"> - positive and negative impacts of implementing the action plan; - Types, amounts, habits, mentality of chemical fertilizer and pesticide consumption; - Status quo understanding and recognition of new chemical fertilizers and new pesticides; - Willingness to use and needs of new chemical fertilizers and new pesticides; - Suggestions on approaches for use and management of new chemical fertilizers and new pesticides; - Subjective and objective barriers impeding use of new chemical fertilizers and new pesticides; - Public communication and education about use of new chemical fertilizers and new pesticides.
Households affected by land acquisition (6-8 people, including	<ul style="list-style-type: none"> - Channels for information disclosure; - Processes for and satisfaction with land measurement; - Understanding of land acquisition compensation policies;

Stakeholder	Main Contents
women and the poor)	<ul style="list-style-type: none"> - Implementation status of land acquisition compensation policies; - Livelihood restoration plan; - Whether or not support/assistance to vulnerable groups, including women and poor households; - Grievance redress mechanisms, channels and cases.
Ethnic minority groups (6-8 people, including women and the poor, from ethnic minority concentrated areas)	<ul style="list-style-type: none"> - Preferential policies promoting ethnic minority development; - Local ethnic minority development projects; - Channels for information disclosure; - Whether or not activities to be supported under the Program would consider respect to ethnic minority cultures; - Whether or not support/assistance to vulnerable groups, including women and poor households; - Grievance redress mechanisms, channels and cases.

320. From July to November, 2015, meetings were held with representatives from a number of Hebei institutions to discuss the environmental management system relevant to activities to be supported by the Program (Table 9) :

Table 9 Summary of Consultation and Participation Activities (from July to Nov. 2015)

Stakeholder	Main Contents
Hebei Provincial Environmental Department	Environmental Management System relative to the Program at provincial Level.
Hebei Provincial Monitoring Station	Environmental monitoring.
Shijiazhuang Municipal EPB	Environmental management system relative to the Program at municipal level.
Zhaoxian EPB	Environmental management system relative to the Program at county level.
Hebei Traffic Management Department; DRC, Commerce Department, EPB, and Yellow-sticker Management Office.	Procedures of handling yellow sticker vehicles.
Hebei Jiwu Resources Recycling Company	Disposal of end-of-life vehicles
Cement factory, Thermal Power Plant, Dairy Farms.	Environmental management at factories and farms.

321. **On March 3, 2016, the World Bank and the Hebei Government conducted consultations** to receive feedback on the draft ESSA (in Chinese and English) in Chinese which was distributed beforehand to potential participants. **Two consultation workshops were organized**, one at the provincial level, and the other relates to NOGs and individuals. The purpose of the consultation workshops was to: (a) introduce on the Environmental and Social Systems Assessment approach under the proposed Program for Results operation; (b)

seek opinions and feedback on the key findings and recommendations of the ESSA; and (c) identify possible recommendations for the proposed action plan. This note will also be used to update the ESSA.

322. The consultation included intensive discussions and consultation with provincial authorities, NGOs and individuals with the participating authorities, the PforR instrument, especially focusing on the ESSA and recommendations.

323. **Presentation and Discussion.** Each consultation meeting was divided into two parts, presentation and discussion. There were two presentations, PforR instrument and the ESSA, made by the Bank team in Chinese. The DRC also provided overall information about the proposed Program. After the presentations, the Bank's team took the opportunity to receive feedback from the participants at all levels.

324. **Conclusion.** The participants concurred with the findings of the draft ESSA and voiced their strong support in implementing the proposed Program in the province. Some of the provincial authority participants updated some data/information on the ESSA, and asked some questions on implementation of the Program. All the individuals expressed their much appreciation of having the opportunity to join in the consultation process, and raised questions on the program implementation benefits. Some data and information was updated based on the feedback.

SECTION VIII: RECOMMENDATIONS

325. Based on the assessment of the environmental and social management system applicable to the proposed Program, it is concluded that China and Hebei have established a comprehensive sets of environmental and social management systems to address the environment, health and safety, as well as land acquisition and indigenous peoples concerns related to the proposed activities under the Program. Such systems are principally well-aligned with the core principles and key planning elements as defined in the Bank Policy for PforR. As the Program is to support environmental pollution control and environmental improvement initiatives with exclusion of sub-plans of potentially high risk activities, the overall risk from environmental and social safeguards perspective is rated as moderate.

326. While, there are certain inadequacies and gaps from the perspective of actual implementation of such systems identified through this ESSA, based on which the following recommendations are proposed to Program Action Plan or DLI.

327. **Recommendation 1: Upgrading the existing vehicle dismantling enterprises to meet the applicable Regulations.** The disposal of the yellow-sticker vehicles under the Program (and also future yellow-sticker vehicles), shall be disposed of at the vehicle dismantling enterprises which are in compliance with applicable Chinese standards/technical specifications. To address this recommendation the DLI related to replacing diesel buses requires evidence that the buses were disposed of in dismantling enterprises compliant with the latest Chinese EA standards/technical specification.

328. **Recommendation 2: Capacity building for environmental supervision in rural areas.** Environmental enforcement supervision capacity at municipal and county levels shall be strengthened with adequate resources, staff, monitoring equipment and capacity training to ensure enterprises in rural areas (especially the polluting enterprises such as large livestock farms) to be adequately supervised and monitored. To address this recommendation the

Program Action Plan establishes that at least 480 monitoring and enforcement staff at the EPB at all levels receive relevant training.

329. **Recommendation 3:** Capacity building for work safety supervision on industrial enterprises. Work safety and health supervision capacity shall be strengthened of all levels to address the challenge of supervision, especially the municipal/county level Administration of Work Safety offices (AWS). To address this recommendation the Program Action Plan establishes that at least 60 work safety supervision staff receive relevant training.
330. **Recommendation 4:** Establish a social and environmental grievance redress mechanism and a complaint hotline for activities to be supported by the Program. These mechanism shall be created at provincial level in the Environmental Protection Bureau (EPB) and accessible to the local EPBs. To address this recommendation the Program Action Plan establishes that such mechanism should be created.
331. **Recommendation 5: Improve public participation mechanism.** Activities such as policy formulation, public communication and education and capacity building, need to give adequate consideration to the participation of vulnerable groups, including women, the poor and ethnic minorities. To address this recommendation the Program Action Plan establishes that the draft multi-year plan be available for public consultation through posting in publically accessible web portals or paper-copy distribution at municipal level.

Annex 1. List of Applicable Environmental and Social Law, Regulations and Guidelines

i. Main Environmental Laws and Regulations

Environmental Protection Law (NPC, 1989, last amended in 2014)

中华人民共和国环境保护法

Environmental Impact Assessment Law (NPC, 2002)

中华人民共和国环境影响评价法

Marine Environmental Protection Law (NPC, 1999, last amended in 2014)

中华人民共和国海洋环境保护法

Wildlife Protection Law (NPC, 2004)

中华人民共和国野生动物保护法

Water and Soil Conservation Law (NPC, 1991, last amended in 2010)

中华人民共和国水土保持法

Water Pollution Prevention and Control Law (NPC, 2008)

中华人民共和国水污染防治法

Noise Pollution Prevention and Control Law (NPC, 1996)

中华人民共和国环境噪声污染防治法

Air Pollution Prevention and Control Law (NPC, 1988, last amended in 2015)

中华人民共和国大气污染防治法

Solid Waste Pollution Prevention and Control Law (NPC, 1995, last amended in 2013)

中华人民共和国固体废物污染环境防治法

Cultural Property Protection Law

中华人民共和国文物保护法

Forestry Law

中华人民共和国森林法

Desertification Prevention and Control Law

中华人民共和国防沙治沙法

Grassland Law

中华人民共和国草原法

Flood Control Law

中华人民共和国防洪法

Regulations on Nature Reserves

自然保护区条例

Regulations on Wild Terrestrial Animal Protection

陆生野生动物保护实施条例

Regulations on Wild Aquatic Life Protection

水生野生动物保护实施条例

Regulations on Wild Plant Protection

野生植物保护条例

Regulations of Forest Parks

森林公园管理办法

Regulations on Wetland Parks

国家湿地公园管理办法（试行）

Regulations on Scenic Areas

风景名胜区条例

Regulations on Prevention of Ocean Pollution from Coastal Construction Projects

防治海岸工程项目污染损害海洋环境管理条例

Regulations on Prevention of Land-source Ocean Pollution

防治陆源污染物污染损害海洋环境管理条例

Regulations on Plan EIA

规划环境影响评价条例

Interim Measures for Public Consultation in EIA

环境影响评价公众参与暂行办法

ii. Main Environmental Management Rules and Codes

Regulations on Environmental Management of Construction Projects

建设项目环境保护管理条例

Procedures for Environmental Management for Construction Projects

建设项目环境保护管理程序

Categorized Directory for Environmental Management of Construction Projects

建设项目环境保护分类管理名录

Environmental Protection Design for Construction Projects

建设项目环境保护设计规定

Environmental Protection Completion Acceptance Methods for Construction Projects

建设项目竣工环保验收办法

Environment and Hygiene Standards for Construction Site

建筑施工现场环境与卫生标准

Management Rules for Safety of Construction Projects

建设工程安全生产管理条例

Regulations on Construction Site Management

建设工程施工现场管理规定

Interim Measures for Environmental Supervision

环境监理工作暂行办法

Protection Rules for Urban Old and Famous Trees

城市古树名木保护管理办法

Environmental Protection Management Rules for Transport Project

交通建设项目环境保护管理办法

Rules for Environmental Protection in Railway

铁路环境保护规定

Implementation Rules of Water Pollution Prevention and Control Law

水污染防治法实施细则

Implementation Rules of Air Pollution Prevention and Control Law

大气污染防治法实施细则

Circular on strengthening EIA Management for Construction Projects Funded by International Financial Institutions

关于加强国际金融组织贷款建设项目环境影响评价管理工作的通知

iii. Main Technical Guidelines for EIA Preparation

Technical Guidelines for Environmental Impact Assessment: General Principles

环境影响评价技术导则—总纲 (HJ/T 2.1-2011)

Technical Guidelines for EIA: Surface Water Environment

环境影响评价技术导则—地面水环境 (HJ/T 2.3-93)

Technical Guidelines for Environmental Impact Assessment Groundwater Environment

环境影响评价技术导则 地下水环境 (HJ 610-2011)

Technical Guidelines for Noise Impact Assessment

环境影响评价技术导则—声环境 (HJ2.4-2009)

Technical Guidelines for EIA: Atmospheric Environment

环境影响评价技术导则—大气环境 (HJ 2.2-2008)

Technical Guidelines for EIA: Ecological Environment of Nature Resource Development

环境影响评价技术导则—生态影响(HJ/T 19-2011)

Technical Guidelines for Water and Soil Conservation for Construction Projects

开发建设项目水土保持方案技术规范

Technical Guidelines for Environmental Risk Assessment on Projects

建设项目环境风险评价技术导则(HJ/T 169—2004)

Code for Environmental Impact Assessment of Water Conservancy and Hydro Projects

环境影响评价技术导则—水利水电工程(HJ/T 88-2003)

Technical Guidelines for Environment Impact Assessment of Urban Rail Transit

环境影响评价技术导则—城市轨道交通 (HJ 453—2008)

Guideline on Management of Radioactive Environmental protection Environmental Impact

Assessment Methods and standards on Electromagnetic Radiation

辐射环境保护管理导则—电磁辐射环境影响评价方法与标准 (HJ/T 10.3-1996)

Technical Guidelines on Environmental Impact Assessment of Electromagnetic Radiation

from 500 KV Ultrahigh Voltage Transmission Project

500KV 超高压送变电工程电磁辐射环境影响评价技术规范(HJ/T 24-1998)

Environmental Quality Risk Assessment Criteria for Soil at Manufacturing Facilities

工业企业土壤环境质量风险评价基准(HJ/T 25-1999)

Technical Guidelines for Environmental Impact Assessment: Civil Airport Projects

环境影响评价技术导则 民用机场建设工程(HJ/T 87-2002)

Technical Guideline for Environmental Impact Assessment: Petrochemical Projects

环境影响评价技术导则 石油化工建设项目(HJ/T 89-2003)

Technical Guideline for Environmental Impact Assessment: Terrestrial Petroleum and Natural Gas Development

环境影响评价技术导则 陆地石油天然气开发建设项目(HJ/T 349-2007)

Technical Guideline for Environmental Impact Assessment: Hazardous Waste and Medical Waste Disposal Projects

环境影响评价技术原则—危险废物和医疗废物处置设施建设项目
Technical Specifications for Zoning Classification of Urban Noise
 城市区域环境噪声适用区划分技术规范(GB/T15190-94)
Technical guideline for environmental risk assessment of tailings pond
 尾矿库环境风险评估技术导则 (试行) (HJ 740—2015)
Technical guideline for environmental impact assessment iron and steel construction projects
 环境影响评价技术导则 钢铁建设项目(HJ 708-2014)
Technical guidelines for environmental impact assessment of electric power transmission and distribution project
 环境影响评价技术导则 输变电工程(HJ 24-2014)
Technical guidelines for environmental impact assessment Constructional project of coal development
 环境影响评价技术导则 煤炭采选工程 (HJ 619-2011)
Guideline for Technical Review of Environment Impact Assessment on Construction Projects
 建设项目环境影响技术评估导则(HJ 616-2011)
Technical guidelines for environmental impact assessment Pharmaceutical constructional project
 环境影响评价技术导则 制药建设项目 (HJ 611-2011)
Technical Guideline for Environmental Impact Assessment—Constructional project of Pesticide
 环境影响评价技术导则 农药建设项目 (HJ 582-2010)
Technical Guidelines for Plan Environmental Impact Assessment General principles
 规划环境影响评价技术导则 总纲(2014-09-01)
Technical Guidelines for Plan EIA
 规划环境影响评价技术导则(HJ/T 130-2003)
Technical guidelines for plan environmental impact assessment — coal industry mining area plan
 规划环境影响评价技术导则 煤炭工业矿区总体规划(HJ 463-2009)
Technical Guidelines for Environmental Impact Assessment of Development Area
 开发区区域环境影响评价技术导则 (HJ/T 131-2003)

iv. Main Work Safety and Occupational Health Laws and Regulations

Labor Law (NPC, 1994)
 中华人民共和国劳动法
Labor Contract Law (NPC, 2007)
 中华人民共和国劳动合同法
Work Safety Law (NPC, 2002)
 中华人民共和国安全生产法
Law of Prevention and Treatment of Occupational Diseases (NPC, 2011)
 中华人民共和国职业病防治法
 中华人民共和国尘肺病防治条例
Regulations on Safety Management in Construction Projects (SC No. 393)

建设工程安全生产管理条例
Regulation on Supervision and Management of “Three Simultaneousness” for Safety Facility in Constriction Projects (SAWS, 2010)
 建设项目安全设施三同时监督管理办法
Interim Measures for Supervision and Administration of the “Three Simultaneities” for Occupational Health at Construction Projects (SAWS, 2012)
 建设项目职业卫生“三同时”监督管理暂行办法
Measures on Administrative Penalties for Violations of work safety
 安全生产违法行为行政处罚办法
Regulation on Work Safety Permit
 安全生产许可证条例
Provision on Administrative Review of work safety
 安全生产行政复议规定
Regulations for Safety Management of Dangerous Chemicals (SC, 2011)
 危险化学品安全管理条例
Implementation Measures on the Safety Licensing of Hazardous Chemical Construction Projects
 危险化学品建设项目安全许可实施办法
Regulation on Labor Protection in Work Place with Hazardous Materials
 使用有毒物品作业场所劳动保护条例
Measures on the Management of Work Safety Training (SAWS, 2012, last amended in 2015)
 安全生产培训管理办法
Provision and Administration of Occupation Health at the Workplaces (SAWS, 2012)
 工作场所职业卫生监督管理规定
Provision and Administration for Occupation Health for Employers (SAWS, 2012)
 用人单位职业健康监护监督管理办法
Measures on Emergency Response Plan Management
 生产安全事故应急预案管理办法
Occupational Disease Hazard Declaration Method (SAWS 2012)

Management Methods on Classification of Occupational Disease in Construction Projects
 建设项目职业病危害分类管理办法
Regulation on Supervision and Management of Occupational Hygiene at Work Place (SAWS, 2012)

Classification Category of Occupational Health Hazard of Construction Projects

Supervision and Management Method on Occupational Health Protection of Employer (SAWS, 2012)

Categorization and Checklist of Occupational Diseases
 职业病危害因素分类目录
Special Labor Protection Regulation for Women
 女职工劳动保护特别规定
Technical Guidelines for Occupational Health Monitoring
 职业健康监护技术规范
Hygiene Standards for Industrial Enterprises
 工业企业设计卫生标准

v. Main Land Acquisition Laws and Regulations

- *Land Administration Law of the People's Republic of China* (revised, issued and in effect since August 28, 2004);
- *Rural Land Contracting Law of the People's Republic of China* (in effect since March 1, 2003);
- *Regulations Governing the Implementation of the Law of the People's Republic of China* (State Council Decree No. 256, issued on December 27, 1998);
- *State Council Decision on Deepening Reform to Enforce Strict Land Administration* (Document No. 28 issued in 2004 by the State Council);
- *Guidelines on Improving Systems Governing Land Acquisition Compensation and Resettlement* (Document No. 238 issued in 2004 by the Ministry of Land Resources);
- *Circular of the State Council General Office about Transmitting the Guidelines of the Ministry of Labor and Social Security on Providing Employment Training and Social Security to Land-taken Farmers* (Document No. 29 issued in 2006 by the State Council General Office);
- *Circular of the Ministry of Labor and Social Security and Ministry of Land Resources about Effectively Addressing Relevant Issues Concerning Social Security for Land-taken Farmers* (Document No. 14 issued in 2007 by the Ministry of Labor and Social Security);
- *Property Law of the People's Republic of China* (in effect since October 1, 2007)
- *Interim Regulations of the People's Republic of China Governing Tax on Occupying Cultivated Land* (in effect since January 1, 2008);
- *Regulations of the People's Republic of China Governing the Disclosure of Government Information* (in effect since May 1, 2008);
- *Urgent Circular of the State Council General Office about Carrying out Stricter Administration of Land Acquisition and Structure Demolition Activities to Truly Protect Legitimate Rights and Benefits of the Affected People* (Document No. 15 issued in 2010 by the State Council General Office);
- *Circular of the Ministry of Land Resources about Further Ensuring Effective Administration of Land Acquisition* (issued on June 26, 2010);
- *Urgent Circular of the General Office of the Ministry of Land Resources about Strengthening Administration to Prevent Illegal Land Acquisition* (Document No. 28 issued in 2013 by the General Office);
- *Circular of the General Office of the Ministry of Land Resources about Further Ensuring Effective Disclosure of Information on Land Acquisition at the City/County Level* (Document No. 29 issued in 2014 by the General Office);
- *Methods for Making Announcements about Land Acquisition* (Decree No. 10 issued in 2001 by the Ministry of Land Resources; and
- *Categorization of Status Quo Land Use* (GB/T21010-2007)

Annex 2: Subsidy Rates of Cities in Hebei Province for Eliminating “yellow-sticker” Vehicles

City	Freight Vehicle (Yuan)				Passenger Vehicle (Yuan)				Car (Yuan)
	Heavy-duty	Medium-duty	Light-duty	Mini	large	Medium	small ²⁷	Mini ²⁸	
Shijiazhuang	18000	13000	9000	6000	18000	11000	7000	6000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 8,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 6,000 Yuan for displacement below 1L.
Tangshan	14400	8000	5600	2000	14400	8000	3200	2000	8,000 Yuan each for cars with engine displacement at 1.35L and above, 4,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 3,200 Yuan for displacement at and below 1L.
Qinhuangdao	18000	13000	9000	6000	18000	11000	7000	6000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 8,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 6,000 Yuan for displacement below 1L.

²⁷ Excluding cars.

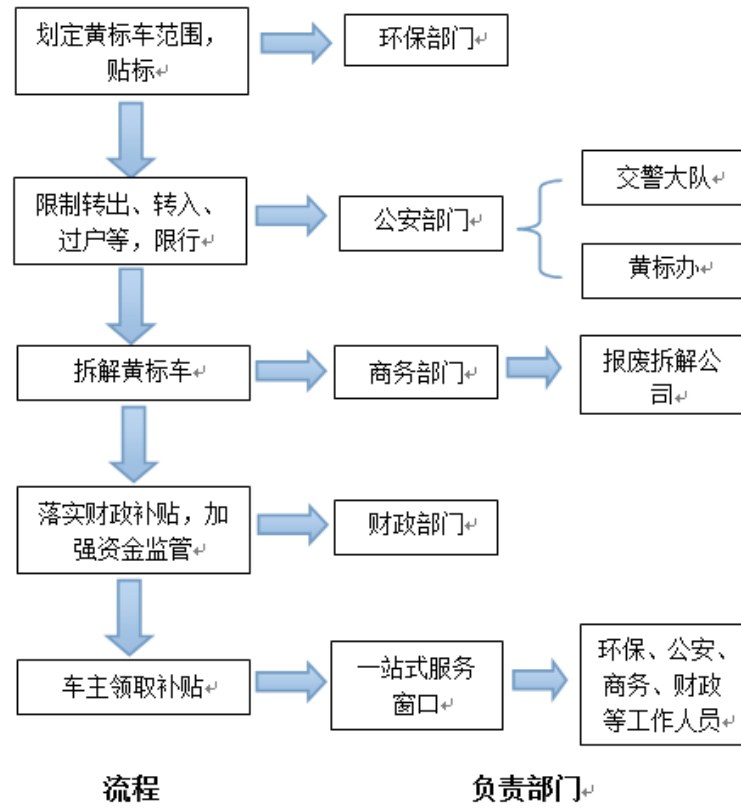
²⁸ Excluding cars.

City	Freight Vehicle (Yuan)				Passenger Vehicle (Yuan)				Car (Yuan)
	Heavy-duty	Medium-duty	Light-duty	Mini	large	Medium	small ²⁷	Mini ²⁸	
Handan	15000	11000	6000	3000	15000	11000	7000	3000	8,000 Yuan each for cars with engine displacement at 1.35L and above, 6,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 3,000 Yuan for displacement at and below 1L.
Xingtai	18000	13000	9000	6000	18000	11000	7000	6000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 8,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 6,000 Yuan for displacement at and below 1L.
Baoding	15000	10000	6000	3000	18000	11000	6000	3000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 6,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 3,000 Yuan for displacement at and below 1L.
Zhangjiakou	18000	13000	9000	6000	18000	11000	7000	5000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 8,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 6,000 Yuan for displacement at and below 1L.
Chengde	18000	13000	9000	6000	18000	11000	7000	5000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 8,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 6,000 Yuan for displacement below 1L.

City	Freight Vehicle (Yuan)				Passenger Vehicle (Yuan)				Car (Yuan)
	Heavy-duty	Medium-duty	Light-duty	Mini	large	Medium	small ²⁷	Mini ²⁸	
Cangzhou ²⁹	18000	10000	6000	4000	18000	10000	6000	4000	12,000 Yuan each for cars with engine displacement at 1.4L and above, 10,000 Yuan for displacement below 1.4L (exclusive).
Langfang	18000	11000	6000	3000	18000	11000	7000	3000	8,000 Yuan each for cars with engine displacement at 1.35L and above, and 6,000 Yuan for 1L (exclusive)-1.35L (exclusive), and 3,000 Yuan for displacement below 1L.
Hengshui	18000	13000	9000	6000	18000	11000	7000	6000	10,000 Yuan each for cars with engine displacement at 1.35L and above, 8,000 Yuan for displacement at 1L (exclusive)-1.35L (exclusive), and 6,000 Yuan for displacement below 1L.

²⁹ Subsidies for advance elimination of “yellow-label” vehicles are paid at differentiated percentages for three periods and according to the nature of business operation and vehicle types: 100% of full subsidy between December 6 and December 31, 2013; 80% between January 1 and June 30, 2014; 60% between July 1, 2014 and December 31, 2015; 50% for vehicles used for business purposes.

Annex 3: Process Flow Chart for Subsidizing “yellow-sticker” Vehicles



Annex 4: Latest Block Prices for Land Acquisition in Prefectural-level Cities of Hebei

Unit: CNY/mu

Region	Average	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8
Province- wide	67038	-	-	-	-	-	-	-	-
Shijiazhuang	90468	-	-	-	-	-	-	-	-
Main Urban Area	301105	450000	300000	210000	150000	-	-	-	-
Gaocheng District	123003	149700	126000	120000	-	-	-	-	-
Luquan District	108359	120000	104000	90000	-	-	-	-	-
Luancheng District	123069	142000	120000	-	-	-	-	-	-
Jingjingkuang District	45664	86500	43800	-	-	-	-	-	-
New- and High-tech Industrial Development Zone	195636	310000	195000	-	-	-	-	-	-
Jinzhou City	76711	80000	76000	-	-	-	-	-	-
Xinle City	85981	150000	116000	85000	80000	-	-	-	-
Chengde	66893	-	-	-	-	-	-	-	-
Shuangqiao District	136013	170000	150000	122500	100000	-	-	-	-
Shuangluan District	115246	154000	134000	119000	105000	-	-	-	-
Yingshou Yingzikuang District	72021	130000	110000	94000	67700	-	-	-	-
Zhangjiakou	51533	-	-	-	-	-	-	-	-
Qiaodong District	103992	125000	110000	98000	67630	-	-	-	-
Qiaoxi District	77848	146980	87420	52770	-	-	-	-	-
Xuanhua District	101788	216000	186000	156000	116000	81000	72000	-	-
Xiahuayuan District	63362	75000	66000	58000	-	-	-	-	-

Region	Average	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8
Economic Development Zone	115898	128600	119900	109800	-		-	-	-
Caibei Administrative Zone	43119	52200	47400	37400	-	-	-	-	-
Saibei Administrative Zone	42395	50600	38800	-	-	-	-	-	-
Qinhuangdao	66022	-	-	-	-	-	-	-	-
Haigang District	191090	300000	210000	175000	130000	86000	-	-	-
Shanhaiguan District	89592	111000	90000	89100	70000	-	-	-	-
Beidaihe District	187151	220000	170000	140000	-	-		-	-
Beidaihe New District	65000	65000	-	-	-	-	-	-	-
Economic and Technological Development Zone	56856	59000	45000	-	-	-	-	-	-
Tangshan	83052			-	-	-	-	-	-
Main Urban Area	161859	189000	133000	-	-	-	-	-	-
Guye District	71500	71500		-	-	-	-	-	-
Kaiping District	124000	124000		-	-	-	-	-	-
Fengnan District	107800	107800		-	-	-	-	-	-
Fengrun District	107539	115600	106000	-	-	-	-	-	-
Caofeidian District	84523	109600	95000	71000	-	-	-	-	-
Hangu Administrative Zone	72400	72400	-	-	-	-	-	-	-
Lutai Development Zone	72000	72000	-	-	-	-		-	-

Region	Average	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8
Haigang Economic Development Zone	70600	70600	-	-	-	-	-	-	-
Zunhua City	88800	88800	-	-	-	-	-	-	-
Langfang	86428	-	-	-	-	-	-	-	-
Main Urban Area	139006	172800	144100	118400	86600	-	-	-	-
Anci District	84760	99000	74000	-	-	-	-	-	-
Guangyang District	115000	115000	-	-	-	-	-	-	-
Development Zone	115000	115000	-	-	-	-	-	-	-
Bazhou City	85055	107000	90000	81000	-	-	-	-	-
Sanhe City	111607	115000	70000	-	-	-	-	-	-
Baoding	70462	-	-	--	-	-	-	-	-
Main Urban Area	174572	306700	220000	143300	120000	106600	-	-	-
Mancheng District	70888	180000	80000	65000	63000	-	-	-	-
Qingyuan District	94141	116000	101000	86000	71000	-	-	-	-
Xushui District	68307	110000	93000	76000	57000	54000	-	-	-
Anguo City	80516	103000	80300	72300	70000	-	-	-	-
Gaobeidian City	81900	115000	100000	90000	85000	75000	-	-	-
Cangzhou	59329	-	-	-	-	-	-	-	-
Main Urban Area	142017	175000	145000	119000	-	-	-	-	-
Economic and Technological Development Zone	78815	119000	93000	71000	-	-	-	-	-
Bohai New District	53368	58600	52600	-	-	-	-	-	-
Botou City	57538	71467	64317	59549	54847	-	-	-	-

Region	Average	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8
Huanghua City	57108	70000	60000	56000	-	-		-	-
Hejian City	57297	70000	60000	56300	-	-	-	-	-
Hengshui	58260	-	-	-	-	-	-	-	-
Main Urban Area	87740	171000	137000	81000	68000	-	-	-	-
Jizhou City	58079	59900	59500	58500	57900	-	-	-	-
Shenzhou City	55173	56800	56000	54000	-	-	-	-	-
Xingtai	59910	-	-	-	-	-	-	-	-
Qiaodong District	187151	225000	210000	196667	170000	132667	-	-	-
Qiaoxi District	146171	225000	195000	169000	130000	89000	-	-	-
Economic, Technological and Industrial Development Zone	92047	160000	131000	110000	85000	80900	-	-	-
Dacaozhuang Administrative Zone	49002	53200	48100	-	-	-	-	-	-
Nangong City	54022	61000	58000	56000	53500	50600	-	-	-
Shaohe City	88519	98000	93000	90000	86200	-	-	-	-
Handan	71047	-	-	-	-	-	-	-	-
Main Urban Area	163962	220000	200000	190000	180000	140000	120000	76000	70000
Fengfeng Mining Area	102638	138000	110000	96000	89000	-	-	-	-
Wu'an City	73083	120000	89000	75000	70000	65000	-	-	-
Dingzhou	76014	195000	170000	115000	74500	73400	-	-	-
Xinji	82035	102940	80880	78680	-	-	-	-	-
Qian'an	71376	79300	71200		-	-	-	-	-
Zhuozhou	111209	126000	117000	106000	-	-	-	-	-
Renqiu	96869	128000	110400	89100	-	-		-	-

Annex 5: Staff Arrangements of Departments Responsible for Eliminating “yellow-sticker” Vehicles in Hebei

No.	Department	Division of Roles and Responsibilities	Staff (Number of People)	Staff Composition	Whether or not there is a fixed workplace
1	Public security	Perfecting existing policies for managing and eliminating “yellow-sticker” vehicles, strengthening registration and administration of motor vehicles, upgrade on-the-road checks and inspection, coordinate with relevant authorities to supervise over motor vehicle scraping and vehicle safety technologies inspection institutions.	5-6 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
2	Environmental protection	Strengthening management and control of pollution sources, enforcing strict motor vehicle exhaust gas testing, formulating relevant regulations for strengthening environmental monitoring of motor vehicles and management of vehicles transferred from other jurisdictions.	3-5 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
3	Transportation	Taking charge of eliminating “yellow-sticker” vehicles and developing procedures for controlling and managing Road Transportation Permit for “yellow-sticker” vehicles used for business purposes.	3-5 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
4	Commerce	Strengthening supervision over enterprises recycling and dismantling scrapped vehicles and together with commercial and industrial, quality testing, transportation, environmental protection and public security authorities, formulating regulations for managing second-hand vehicle deals in the province.	2-3 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
5	Finance	Allocating budgets for subsidies and bonuses, strengthening supervision and administration of funds, and together with commercial, transportation, environmental protection and public security authorities, developing procedures subsidizing and incentivizing the elimination of “yellow-sticker” vehicles.	3-5 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
6	Industry and commerce	Coordinating with commercial authorities to strengthen supervision and administration of old and second-hand vehicle deals.	3-5 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
7	Quality supervision	Strengthening supervision and administration of vehicle safety technologies inspection and exhaust gas testing institutions and	3-5 people each at relevant offices at the provincial,	Public	Yes

No.	Department	Division of Roles and Responsibilities	Staff (Number of People)	Staff Composition	Whether or not there is a fixed workplace
		enforcing strict administration of vehicle inspection institutions and certification and qualification of these institutions.	prefectural and county levels	servant	
8	Legal	Reviewing local regulations, provincial government rules and decrees for managing “yellow-sticker” vehicles.	2-3 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
9	Discipline inspection and supervision	Strengthening inspection and strictly enforcing the accountability mechanism.	2-3 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
10	Public communication	Strengthening public communication to create an enabling media environment for eliminating “yellow-sticker” vehicles.	2-3 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
11	Industry and information	Conducting studies and formulating policies and measures for improving technologies for reducing exhaust gas emissions.	2-3 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes
12	Bureau for Administration of Provincial Department Affairs	Taking charge of eliminating “yellow-sticker” vehicles of departments, enterprises and public services units directly affiliated to the provincial government.	3-5 people each at relevant offices at the provincial, prefectural and county levels	Public servant	Yes

Annex 6: Minutes of Public Consultation Meetings

1. Minutes of Meeting on Land Acquisition and Structure Demolition

Time	Morning of September 8, 2015
Venue	Zhizhao Village, Gaocheng District, Shijiazhuang
Organizer	Jiumen Township Government, Gaocheng District
Participants	Villagers of Zhizhao Village
Topics	Impacts of land acquisition, compensation, resettlement and income restoration
Main contents and findings	<p>Between 2013 and 2014, more than 200 mu of batture of Zhizhao Village would need to be acquired for the construction of Zhizhao Industrial Park. After consultations with the villagers, the land was rented as there was no quota for land acquisition for the time being. After the quota was assigned, the land would be officially acquired and compensated at an appropriate price following relevant policies.</p> <p>A villagers' meeting was held with the participation of one third of women in the village to consult with the villagers on land occupation and to discuss compensation rates and methods.</p> <p>Villagers agreed to the land use and a land rental agreement was signed. The affected households would get compensation at the costs of 400kg corn and 400kg wheat and they were very happy with the compensation. In addition, priority was given to the affected people to work at the industrial park and free training was provided to them. After being employed, each of them would get a monthly salary of 2,000-3,000 Yuan.</p> <p>Villagers' complaints, if any, can be lodged to the township and district governments, which would address them in a timely manner.</p> <p>This project only affects the batture rather than land contracted by villagers. Therefore, implementation of the project would not have significant impacts on the villagers. There have been no complaints from the villagers.</p>

2. Minutes of Meeting on Rural Non-point Source Pollution Management and Use of New Energy

Time	Afternoon of September 8, 2015
Venue	Jiumeng Township Government, Gaocheng District, Shijiazhuang
Organizer	Jiumen Township Government
Participants	Major grain producers (professional farmers) of Zhidu Village, villagers of Zhizhao Village and Jiumen Village
Topics	Biogas digester project, stalk utilization, use of pesticides and chemical fertilizers, rural non-point source pollution
Main contents and findings	<p>Biogas digester project: The project has been implemented for a few years at Zhizhao Village, which aims to build 200 household biogas digesters. The cost for each digester is 5,000 Yuan, which includes about 800 Yuan of government subsidy. The digesters would be built by professional teams when they receive applications from villagers.</p> <p>The digesters would use livestock manure, the cost of which is 100 Yuan per cart. Zhizhao Village has six big cow farmers, who farm about 4,000 cows.</p> <p>Normally, digesters can only be used during June to August. During the other months, villagers use liquefied gas or electric stoves for cooking. A canister of liquefied gas is sold at 90 Yuan. A family of four would normally use five canisters of gas per year. In winter, villagers mainly use coal as the fuel for heating. The heating season is between November 15 of a year and March 15 of next year. A family of four would normally consume about 4 tons of coal per heating season at the total cost of about 2,000 Yuan.</p> <p>As there are hot underground springs at Zhizhao Village, heating facilities using spring water were built a few years ago at the total investment of more than 10 million Yuan, which includes over 4 million Yuan of government subsidy and contribution of 4,000 Yuan from each household. With the contribution, a household can use heating services for four years.</p> <p>Per capita income of villagers in the village is about 13,000 Yuan a year, which is above the average in Hebei. The village also has 15 poor households which are entitled to the minimum living standards protection. Except for subsidies from civil affairs authorities, these households do not receive additional subsidies from the village.</p> <p>Stalk utilization: At present, stalk is mainly returned to the field and used as forage for cows. The village has six cow farms and more than 4,000 cows. The purchasing price of stalk as forage is about 0.2 Yuan/kg. As a result, stalk is not burned.</p> <p>Use of pesticides and chemical fertilizers: Two major grain farmers contracted more 300 mu of land, which was obtained through land transfer arrangements at 500 Yuan/mu. They mainly grow bean and corn at the monthly cost of 1,100 Yuan/mu (excluding land transfer costs), 70% of which is cost for chemical fertilizer. In a normal year, the profit is around 500 Yuan per mu. This year, they will not earn any profit due to lower corn and wheat prices (down to 1.8 Yuan/kg from 2.6 Yuan/kg). They are aware of formula fertilizer application based on nutrient test, but have not used this technique in their contracted land. They have participated in free training for farmers. They hope to receive services from local technicians for this technique, which is well received by local villagers as it can reduce pesticide and chemical fertilizer inputs and increase yield.</p> <p>Rural pollution: Currently, the main rural pollution issues are rural garbage collection and disposal and wastewater treatment, which remain unattended due to lack of financial resources at local villages.</p>

3. Minutes of Meeting on Ethnic Minority Development

Time	Afternoon of September 8, 2015
Venue	Jiumen Hui Autonomous Village, Jiumen Township, Gaocheng District, Shijiazhuang
Organizer	Gaocheng District Government
Participants	Villagers of Jiumen Village
Topics	Attitude of local Hui people towards action plan and ethnic minority policies
Main contents and findings	<p>The village has 1,730 households, 7,200 people (85% of whom are Hui people) and 5,300 mu of cultivated land. Per capita net income of villagers is about 13,000 Yuan a year, which indicates that the village is a rich village.</p> <p>The village has two mosques and has been following cultural practices and customs of Hui Nationality. Local Hui people have good relationships with Han people and also celebrate the Spring Festival.</p> <p>Local ethnic and religious affairs bureau has provided significant support to the village. Between 2013 and 2015, the bureau provided about 500,000 Yuan a year to help develop the village into a unique Hui village. Relevant activities include Muslim food development project and unique industries development projects, such as the cow farming project (with 500 Yuan/cow of government subsidy) and the ostrich breeding project.</p> <p>Villagers welcome government's ethnic minority policies.</p> <p>Villagers support government's 50 measures for air pollution prevention and control. Consultation meetings would normally be held before project planning and implementation. About one-third of women in the village also attend these meetings.</p>

4. Minutes of Meeting on Eliminating yellow-sticker vehicles

Time	Afternoon of September 7, 2015
Venue	Traffic Police Office of Gaocheng District, Shijiazhuang
Organizer	Gaocheng District Government
Participants	Jiao Jingjing, Bao Mingqing, Wu Tongjun, Wu Minhua (telephone interviews with vehicle owners as they did not come to the site)
Topics	Disclosure of policies for eliminating "yellow-sticker" vehicles, processes of subsidization, impacts on livelihoods and suggestions
Main contents and findings	<p>Hebei's policies encouraging the elimination of yellow-sticker vehicles have been disclosed via TV and newspapers and each vehicle owner has been informed of these policies.</p> <p>Processes for inspecting and subsidizing yellow-sticker vehicles are clear and subsidies are generally higher than prices for selling such vehicles on the market.</p> <p>Freight vehicles for business purposes are normally driven by their owners or driven by employed drivers, whose average monthly salary is 5,000-6,000 Yuan.</p> <p>Vehicles not used for business purposes will also be subsidized and after their elimination, new vehicles will be purchased with the subsidy and some additional money.</p> <p>Eliminating yellow-sticker vehicle for business purposes will not have impacts on the livelihoods of their owners, who hoped that there would be opportunities for free training. Operating a freight vehicle is a hard work and some owners indicated that they would work in other sectors if there is a chance. Eliminating these vehicles will not have impacts on drivers employed by the owners as they can easily find other employers. These drivers also hoped that they could get access to free training.</p>

5. Note of Consultation Workshop on Mar 3, 2016

Introduction

The World Bank and the Hebei Government conducted an environmental and social systems assessment (ESSA) consultation mission on Mar 3, 2016 in Shijiazhuang for the Result Based Financing for Hebei Air Pollution Prevention and Control Program.

The mission comprised Mr. Garo Batmanian, the TTL, Mr. Ji Feng, Sr. Environment Specialist, Ms. Huang Dafei, Environment Specialist, Ms. Chen Shaojun, and Mr. Yao Songling, Sr. Social Development Specialist.

Two consultation workshops were organized, one at the provincial level, and the other relates to NOGs and individuals. The purpose of the consultation workshops was to: (a) introduction on the Environmental and Social Systems Assessment approach under the proposed Program for Results operation; (b) seek opinions and feedback on the key findings and recommendations of the ESSA; and (c) identify possible recommendations for the proposed action plan. This note will also be used to update the ESSA.

Meeting agenda includes i) presentation on the objectives and goals of a PforR approach versus Investment Project Financing (IPF); ii) The Hebei PforR: a presentation of the Program proposed for financing; the scope, the thematic areas of coverage, expected results, Disbursement-Linked Indicators (DLIs) and so on; iii) a presentation of the main issues, findings and recommendations in the ESSA; iv) Discussion & feedback.

The consultation mission conducted intensive discussions and consultation with provincial authorities, NGOs and individuals, discussed with the participating authorities the PforR instrument, especially focusing on the ESSA and recommendations. The ESSA has been prepared in English and Chinese, and provided for the participants.

The Provincial Program Office and the World Bank team facilitated the presentation and discussion at Shijiazhuang City. The consultations were organized jointly by the Provincial Program Office and the TT, during which the TT presents PforR instrument, and the ESSA separately on environmental and social sides.

Presentation and Discussion

Each consultation meeting was divided into two parts, presentation and discussion. There were two presentations, PforR instrument and the ESSA, made by the TT. The provincial program office also provided overall information about the proposed program; and the TT presented information about the new lending instrument of the World Bank, the PforR and its associated requirements, and presented the PforR instrument, and the ESSA separately on environmental and social sides.

After the presentation, the Bank and the Hebei teams took the opportunity to get feedback from the participants at all levels. The participants agreed with the ESSA and voiced their strong support in implementing the proposed Program in the province. Some of the provincial authority participants updated some data/information on the ESSA, and asked some questions on the implementation of the Program. All the individuals expressed their much appreciation for being invited to participate in the consultation process, and raised questions on the benefits Program implementation. Data and information were updated based on the feedback.

Next steps

This version of ESSA was updated to reflect this consultation, and will be revised according to input from one Regional Operations Committee (ROC) meeting and then disclosed locally and in the World Bank.

List of participants

Group One-Provincial Authorities

Li Jianshe	Hebei DRC, Division Director
Wang Ligang	Hebei DRC
Xu Yan	Hebei DRC
Liu Yingjie	Foreign Affairs Division of Hebei Finance Department
Lv Yinghua	Hebei Agricultural Department
Wang Miaosen	Hebei Human Resource and Social Security Department
Lang Xinyu	Hebei Ethnic Minority Department
Wang Peng	Hebei Poverty Department
Gao Min	Hebei Women Association
Zhang Hua	Hebei Civil Affairs Department
Dong Wei	Hebei Safety Supervision Department
Xu Xin	PMO, Director
Liu Pai	PMO
Wang Yi	Hebei Public Transport Control Department
Guo Jinshen	Provincial Land Resource Department
Wang Deyou	Provincial New Energy Management Office

Group Two-NGOs and Individuals

Agencies

Zhao Shuci, Engineer, Environmental Design Institute
Li Zhihua, from Gaocheng DRC
Jiao Jingjing, from Gaocheng Traffic Management
Liu Xianghuam Shijiazhuang DRC
Yang Kai, Jiumen Township

Farmers

Bai Qiu, Farmer from Jiumen Village
Bai Jiandong, Village Head of Jiumen Village
Tang Yulong, Zhuangtou Village
Gao Zhifen, Zhizhao Village

Owner of Yellow Stick Vehicle

Cui Longhai, Vehicle Owner
Chen Weiyong, Vehicle Owner

Minority Representatives

Sun Huijuan, Minority from Jiumen Village
Zhao Jinliang, Minority from Zhizhao Village

2. Bank ESSA Consultation Team

Garo Batmanian, Task Team Leader/Lead Environmental Specialist

Ji Feng, Sr. Environmental Specialist
Chen Shaojun, Sr. Social Consultant
Yao Songling, Sr. Social Development Specialist
Huang Dafei, Environmental Specialist