

Environmental and Social Compliance Audit Report

Project Number: 53027-001
June 2019

PRC: New Hope Liuhe Integrated and Sustainable Livestock Value Chain Project (Huanghua Pig Breeding Farm Phase 1)

Prepared by New Hope Liuhe for the Asian Development Bank.

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1.1 Subproject #2 – Huanghua Pig Breeding Farm Phase 1

1.1.1 Details of Site Visit

Site visit to Huanghua Pig Breeding Farm Phase 1 was carried out on 19 June 2019. The due diligence team interviewed with the Project Manager for Construction and Project Manager for Operation.

1.1.2 Subproject Background

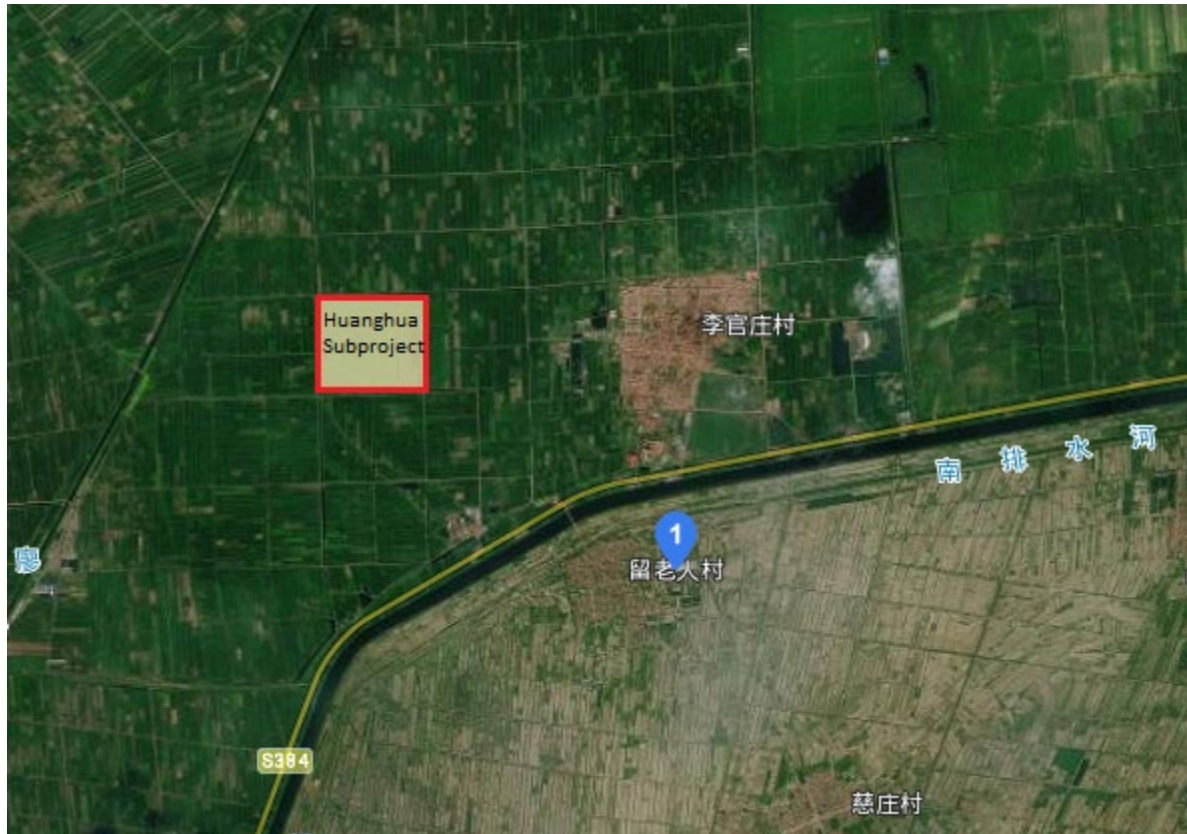
Location. Huanghua Pig Breeding Farm Phase 1 (“Huanghua subproject”) is located in the Liulaoren Village, Huanghua City, Hebei Province. The on-site facilities will comprise four pig sheds for sow (3,000 heads each), one pig shed for boar (300 heads), two isolation sheds, one breeding shed, one transfer zone, one disinfection zone, staff residential area, etc. The site is surrounded by farm lands. The sensitive receivers listed in the EIA report are summarized as follows.

No.	Sensitive Receivers	Location	Distance from Site Boundary (m)
1.	Liguanzhuang Village	E	1600
2.	Liulaoren Village	SE	1650
3.	Gegutang Village	NE	2430

Figure 3.2 below shows the location of the subproject site.

No.	Sensitive Receivers	Location	Distance from Site Boundary (m)
4.	Liguanzhuang Village	E	1600
5.	Liulaoren Village	SE	1650
6.	Gegutang Village	NE	2430

Figure 3.1 Location Map of Huanghua Pig Breeding Farm Phase 1



Source: Tianditu map

Subproject Description. The subproject is managed by Huanghua Xinhao Technology Company Limited ("Huanghua Xinhao Technology"), a wholly-owned subsidiary of New Hope Liuhe. The total investment was 250 million RMB, where environmental protection investment accounted for 0.36 million RMB. The estimated annual pig production is around 300,000 heads. The facility construction is estimated to be completed in September 2019.

1.1.3 Subproject Audit Findings (Environment)

Table 3.1 Summary of Environmental Issues of Huanghua Pig Breeding Farm Phase 1

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
1.	Environmental Impact Assessment	<ul style="list-style-type: none"> ADB SPS 2009 Environmental Impact Assessment Law of PRC 	<p>An EIA Report was prepared on December 2016 and the EIA approval was obtained from Huanghua City Environmental Protection Bureau on 18 October 2017.</p> <p>Gaps identified: None.</p>
2.	Environmental Acceptance	<ul style="list-style-type: none"> Environmental Impact Assessment Law of PRC Measures for the Administration of Recordation of Registration Forms of Environmental Impact of Construction Projects 	<p>The subproject is currently under construction. The environmental acceptance will be conducted before commencement of operation.</p> <p><i>Gaps identified:</i> None.</p>
3.	Physical Cultural Resources	<ul style="list-style-type: none"> ADB SPS 2009 	<p>According to the EIA, there are three archaeological sites in Huanghua City. The Wuditai archaeological site (武帝台古遗址) is around 23km from the site, the Futicheng archaeological site (郭堤城遗址) is around 12km from the site, and the Haifeng County Jinyuan (海丰镇金元) is around 40km from the site. The EIA did not identify any major threats to these identified archaeological sites.</p> <p><i>Gaps identified:</i> None.</p>
4.	Operation Permits and Licenses	<ul style="list-style-type: none"> Environmental Protection Law of PRC Measures for the Examination of Animal Epidemic Disease Prevention Conditions 	<p>The Operating License has not yet obtained as the subproject is still under construction. According to the interview with the Project Manager for Operation, Animal Epidemic Prevention Qualification will be obtained from the Animal Health Inspection Bureau after construction is complete.</p> <p>The License for Water Drawing for construction phase has been obtained from Hebei Province Water Bureau on 18 October 2018, which will be expired on 18 October 2019. As stated in the license, the water is for domestic use and the source is from ground water.</p> <p><i>Gaps identified:</i> None.</p>
5.	Groundwater	<ul style="list-style-type: none"> WBG General EHS Guidelines 	<p>According to the EIA, treated water will be used for irrigation and will not cause adverse impacts on the groundwater quality. In general, groundwater quality complies with the Standard for Groundwater Quality (GB/T14848-93) Class 3 standard except for chlorides, sulphate, and total dissolved solids. According to</p>

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified																													
		<ul style="list-style-type: none">Standard for Groundwater Quality (GB/T14848-93)	<p>baseline study of the EIA, the exceedance of chlorides, sulphate, and total dissolved solids are due to the chemical reaction in the vadose zone.</p> <p>Based on the EIA, following protection measures should be taken: 1) prevent leakage in manure processing area, domestic waste collection point, wastewater storage pond, and pig sheds; 2) carry out regular maintenance and checking on the sewage treatment plant.</p> <p><i>Gaps identified:</i> Groundwater monitoring is not included per monitoring plan in EIA. The subproject company should carry out groundwater monitoring quarterly.</p>																													
6.	Noise	<ul style="list-style-type: none">WBG General EHS GuidelinesEmission Standard for Industrial Enterprises Noise at Boundary (GB12348-2008)Environmental Quality Standard for Noise (GB3096-2008)	<p>According to the estimation from the EIA, the nearest sensitive receiver is Liguanzhuang Village, which is located 1.6km from the site boundary. The EIA estimated that noise level complies with the Emission Standard for Industrial Enterprises Noise at Boundary (GB12348-2008) Class 2 standard given the following mitigation measures in place: 1) use of quiet plant and working methods; 2) reducing the numbers of plants operating in critical areas close to sensitive receivers; 3) implement noise screening structures; 4) control traffic noise by lowering the speed; and 5) prohibit construction work from 12pm to 2pm and 10pm to 6am, etc.</p> <p>Although the estimated result from EIA has slightly exceeded the EHS Guidelines standards for residential area, the noise impact on the nearest residential area at 1.6km is likely to be insignificant after considering the distance of the sensitive receiver and the estimated noise level at the boundary in the EIA.</p> <table border="1"><tr><th rowspan="2">Boundary</th><th colspan="2">Estimated Result from EIA</th><th colspan="2">GB12348-2008 Class 2 Standard</th><th colspan="2">EHS Guidelines – Residential</th></tr><tr><th>Day</th><th>Night</th><th>Day</th><th>Night</th><th>Day</th><th>Night</th></tr><tr><td>North</td><td>56.32</td><td>47.34</td><td rowspan="4">60</td><td rowspan="4">50</td><td rowspan="4">55</td><td rowspan="4">45</td></tr><tr><td>East</td><td>53.16</td><td>49.25</td></tr><tr><td>South</td><td>51.31</td><td>49.35</td></tr><tr><td>West</td><td>53.38</td><td>48.34</td></tr></table> <p><i>Gaps identified:</i> None.</p>	Boundary	Estimated Result from EIA		GB12348-2008 Class 2 Standard		EHS Guidelines – Residential		Day	Night	Day	Night	Day	Night	North	56.32	47.34	60	50	55	45	East	53.16	49.25	South	51.31	49.35	West	53.38	48.34
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7.	Waste management	<ul style="list-style-type: none">WBG General EHS Guidelines: Hazardous and Non-hazardous WasteLaw of the People's Republic of China on the Prevention	<p>Construction waste – Construction waste is managed by the contractor. According to the Project Manager for Construction, construction waste is transported and disposed of off-site by the contractor. Documentary evident, including waste disposal record or their contracts, will be provided.</p>																													

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
		and Control of Environmental Pollution by Solid Waste <ul style="list-style-type: none"> Standard for Pollution Control on the Storage and Disposal Site for General Industrial Solid Wastes (GB18599-2001) Technical standard of preventing pollution for livestock and poultry breeding (HJ/T81-2001) Technical Specifications for Pollution Treatment Projects of Livestock and Poultry Farms (HJ497-2009) Hygienic Requirements for Harmless Disposal of Night Soil (GB7959-1987) WBG EHS Guidelines for Mammalian Livestock Production 	<p>Domestic waste – According to the site visit, it is found that there is inappropriate storage of domestic waste in the temporary residential zone. According to the interview with the Project Manager for Construction, waste generated by the staff is collected and delivered to the municipal sanitation services by qualified third-party. The waste disposal record has provided for Consultant's review.</p> <p>Manure – According to the interview with the Project Manager for Operation and the EIA, manure will be collected through scraping of solid floors (dry collection) as recommended in Technical Specifications for Pollution Treatment Projects of Livestock and Poultry Farms (HJ497-2009). All collected manure will be converted to organic fertilizer after storing in an upflow anaerobic sludge blanket (UASB) reactor for seven days. Part of the fertilizer will be sold to third-party, while part of it will be used for on-site farming.</p> <p>Animal Carcasses - The subproject does not have the facility to handle pig carcasses on site. According to the approved EIA and the interview with the Project Manager for Operation, pig carcasses are stored in an appropriate container and removed by the government certified veterinary service station for non-hazardous treatment. Dead pigs will not be sold or used as feed for recycling. An agreement will be entered between the project company and the government certified veterinary service station on animal carcasses handling.</p> <p><i>Gaps identified:</i> During construction phase, enhance domestic waste management and adopt good housekeeping practices in the temporary residential zone and impose such requirements to the contractors.</p> <p>Waste monitoring:</p> <ul style="list-style-type: none"> As manure will be used as a fertilizer on agricultural land, careful assessment of potential impacts due to the presence of hazardous chemical and biological constituents should be conducted. Waste generation and disposal records will be documented for hazardous and non-hazardous waste
8.	Wastewater (industrial process wastewater and its treatment, other wastewater streams)	<ul style="list-style-type: none"> WBG General EHS guidelines Water Pollution Prevention and Control Law of PRC (2008) Discharge Standard of Water Pollutants for Livestock and Poultry Breeding (GB18596-2001) 	<p>Wastewater generated from the site includes urine, piggery rinse water and domestic sewage. According to the EIA, wastewater to be generated from production during summer time and winter time will meet the maximum volume allowance set in the Discharge Standard of Water Pollutants for Livestock and Poultry Breeding (GB18596-2001). Livestock and domestic wastewater are mixed and treated in the on-site wastewater treatment station. The treatment processes include anaerobic digestion, sedimentation, A/O process and UV disinfection.</p> <p>Treated water will be used for on-site irrigation. A 90,000m³ storage pond was built for reclaimed wastewater storage during non-irrigation season (4 months). According to the EIA and the interview, the pond is a concrete structure which will be covered and fenced. The pond will also be used for</p>

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		<ul style="list-style-type: none"> Technical Specifications for Pollution Treatment Projects of Livestock and Poultry Farms (HJ497-2009) Standards of Irrigation Water Quality (GB5084-2005) 	<p>emergency storage purpose. According to the calculation in the EIA, around 18487.2m³ of wastewater will be produced and stored during the non-irrigation season. According to the EIA approval, treated wastewater should meet the requirements in the Standards of Irrigation Water Quality (GB5084-2005). Table below summarized the national standards and the IFC effluent standards for mammalian livestock production. There is no regulatory or EIA requirement on testing the antibiotic residues of the effluent.</p> <table border="1"> <thead> <tr> <th>Pollutants</th><th>Unit</th><th>IFC Effluent Standard</th><th>EIA Requirement</th></tr> </thead> <tbody> <tr> <td>COD</td><td>mg/l</td><td>250</td><td>150</td></tr> <tr> <td>BOD</td><td>mg/l</td><td>50</td><td>60</td></tr> <tr> <td>TN</td><td>mg/l</td><td>10</td><td>/</td></tr> <tr> <td>TP</td><td>mg/l</td><td>2</td><td>8</td></tr> <tr> <td>Oil and grease</td><td>mg/l</td><td>10</td><td>5</td></tr> <tr> <td>SS</td><td>mg/l</td><td>50</td><td>80</td></tr> <tr> <td>Coliform bacteria</td><td>MPN/100ml</td><td>400</td><td>1000</td></tr> <tr> <td>Active Ingredients/Antibiotics</td><td></td><td>To be determined</td><td>/</td></tr> </tbody> </table> <p>According to the interview with the Project Manager for Operation, a qualified third-party will carry out monthly wastewater testing. The testing result will be reported to the government for approval.</p> <p>Rainwater – Separated collection system will be implemented for the collection of stormwater and sewage.</p> <p><i>Gaps identified:</i> A monitoring program shall be adopted to include in the monthly monitoring antibiotic residue and other pollutants of the effluent for irrigation per national and IFC standards.</p>	Pollutants	Unit	IFC Effluent Standard	EIA Requirement	COD	mg/l	250	150	BOD	mg/l	50	60	TN	mg/l	10	/	TP	mg/l	2	8	Oil and grease	mg/l	10	5	SS	mg/l	50	80	Coliform bacteria	MPN/100ml	400	1000	Active Ingredients/Antibiotics		To be determined	/
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9.	Air emissions (odour, greenhouse gases and dust)	<ul style="list-style-type: none"> WBG General EHS guidelines Air Pollution Prevention and Control Law of the People's Republic of China (2015) Emission standards of air pollutants for catering industry (GB18483-2001) Emission Standards for Odor Pollutants (GB14554-1993) 	<p>Odours – Sources of odour include ammonia and hydrogen sulphide (H₂S) generated by manure and the pigs. According to the approved EIA, odour is controlled by:</p> <ul style="list-style-type: none"> Sufficient ventilation of the pig sheds; Punctual dry collection of manure; Biological deodorant in pig sheds, manure storage area, and processing area; Confined manure storage and processing plant; Transport manure among facilities by tanker trucks; Feed composition to reduce odor generation; Covered wastewater treatment station. <p>According to the air modelling result of the EIA, the subproject is expected to comply with emission standards for odour pollutants.</p>																																				

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			<p>Boiler emission - According to the EIA, the estimated SO₂ and NO_x emissions from the biogas boiler comply with the Emission Standard of Air Pollutants for Boiler (GB13271-2014) and the WBG General EHS Guidelines requirements. Total annual emissions of SO₂ and NO_x are estimated to be 0.415 tonnes and 1.66 tonnes respectively. With reference to WBG General EHS Guidelines, it has not reached the amount to be defined as significant source (NO_x: 500 tpy; SO₂: 500 tpy). H₂S is removed by dry desulfurization with the use of desulfurizer (e.g. Fe₂O₃).</p> <p>GHG emissions estimation - According to the approved EIA, the subproject is estimated to have an average of 49,200 heads of pigs in the farm. The GHG emissions factor is estimated to be 328.72 kg of CO₂eq.per head of swine per year, with reference to the estimates from California Air Resources Board. It is assumed the ratio of sucker and non-sucker is five to one, in line with the assumption made in the EIA report on manure production.</p> <table border="1"> <thead> <tr> <th>Category</th><th>Amount (heads)</th><th>kg CO₂e /head/year</th><th>Total emission (kg CO₂e)</th></tr> </thead> <tbody> <tr> <td>Sucker</td><td>19,200</td><td>328.78</td><td>1,262,208</td></tr> <tr> <td>Feeder</td><td>7,500</td><td>328.72</td><td>2,465,400</td></tr> <tr> <td>Grower</td><td>11,000</td><td>328.72</td><td>3,615,920</td></tr> <tr> <td>Sow</td><td>11,200</td><td>328.72</td><td>3,681,664</td></tr> <tr> <td>Boar</td><td>300</td><td>328.72</td><td>98,616</td></tr> <tr> <td>Total</td><td>49,200</td><td>-</td><td>11,123,808</td></tr> </tbody> </table> <p>By multiplying the emission factor and the numbers of pigs in farm, the subproject is estimated to generate 11,123,808kg CO₂e per year.</p> <p>Oily fume and cooking odour emissions from cooking activities are the major sources of air emission during operation. According to the EIA, fume purifiers will be installed to treat the oily fume and cooking odour before discharging into the atmosphere. Testing result from the EIA shows that the treated fume will comply with the requirements in the Emission standards of air pollutants for catering industry (GB18483-2001).</p> <p><i>Gaps identified:</i> According to the interview, staffs were not aware to conduct odor testing during operation phase. It is required in the environmental management plan of the approved EIA for the subproject to monitor ammonia and H₂S at the site boundaries, and this should be carried out quarterly. The testing result should comply with Emission Standards for Odor Pollutants (GB14554-1993).</p>	Category	Amount (heads)	kg CO ₂ e /head/year	Total emission (kg CO ₂ e)	Sucker	19,200	328.78	1,262,208	Feeder	7,500	328.72	2,465,400	Grower	11,000	328.72	3,615,920	Sow	11,200	328.72	3,681,664	Boar	300	328.72	98,616	Total	49,200	-	11,123,808
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10.	Hazardous materials (use of pesticides,	<ul style="list-style-type: none"> WBG EHS Guidelines for Mammalian Livestock 	<p>Veterinary Waste includes used chemical bottles, medical packaging materials, syringe, etc. According to the approved EIA and the interview with site staff, veterinary waste will be stored in an appropriate</p>																												

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
	integrated pest management, good management practices)	Production: Hazardous Materials <ul style="list-style-type: none"> • Directory of National Hazardous Wastes (2016) 	<p>container and removed by qualified third-party regularly. An operation manual, which includes instructions on veterinary waste handling, has been provided to the Consultant.</p> <p>A corporate level management program to control the usage of hazardous materials and prevent the workforce from exposing to hazardous materials has been established by New Hope Liuhe. Emergency Response Plan has also been established in case of over-dosing, over-exposure and/or accidental spillage of hazardous materials. Relevant documents have provided to the Consultant.</p> <p><i>Gaps identified:</i> Per waste management measures, to maintain records of hazardous waste generation and disposal.</p>
11.	Animal diseases	<ul style="list-style-type: none"> • WBG EHS Guidelines for Mammalian Livestock Production: Animal Diseases • Animal Epidemic Prevention Law of the People's Republic of China 	<p>According to the interview with the Project Manager for Operation, Animal Epidemic Prevention Qualification will be obtained from the Animal Health Inspection Bureau after construction is complete. A corporate level Emergency Response Plan for animal disease has been established, which includes disease identification, reporting mechanism, responsible parties, handling procedures, etc.</p> <p>Prevention measures (biosecurity) – Details on the control of access by humans and vehicles have been discussed in the Operation Manual for Pig Breeding. Vehicles, for pig transport purpose, are required to sanitize after duties. On-site hygiene staffs and veterinarians are responsible for the monitoring of the sanitizing work. The cleaning procedures are discussed in the Operation Manual for Pig Breeding. Other vehicles (e.g. personal vehicles) are not allowed to enter the site. Truck drivers are also required to go through sanitization process after duties. Instructions on the quarantine periods of pigs/humans has also been discussed. Sick and injured pigs will be isolated from the pig sheds.</p> <p>Sanitization – Instructions on sanitization, including the procedure and frequency of sanitization for housing areas and transporting vehicles, have been included in the Operation Manual for Pig Breeding. Housing areas will be sanitized weekly. Workers are required to fill in the Sanitation Form after cleaning. The descriptions on the use of different types of disinfectant have been included.</p> <p>Vaccination – The instructions on the use of different types of vaccine have been discussed in the Operation Manual for Pig Breeding. Vaccinated pigs will be recorded.</p> <p>Monitoring of animal health – On-site veterinarians and workers will be responsible for the monitoring of animal health. Random sample testing will be conducted monthly. Sick or injured pigs, which required remedial action, will be marked to track their health conditions. Instructions on animal health monitoring are included in the Operation Manual for Pig Breeding.</p> <p>Staff capacity per facility – According to the interview with the Project Manager for Operation, there will be 5 on-site veterinarians, including 3 qualified veterinary officers and 2 assistants.</p>

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			<p><i>Gaps identified:</i> None.</p>
12.	Occupational Health & Safety	<ul style="list-style-type: none"> • WBG EHS Guidelines for Mammalian Livestock Production: Occupational Health and Safety • WBG General EHS Guidelines • Regulations on the Protection of Power Facilities (1998) 	<p>Construction phase – During the site visit, it was observed that personal protective equipment (PPE) were provided to site staff, warning signs and safety requirements were displayed throughout the site. Safety requirements of the construction plan has been provided for the Consultant's review.</p> <p>The subproject has appointed a third-party construction project management authority to supervise the occupational safety during construction phase with dedicated safety officer. Periodic safety meeting was held by the construction project management authority, contractor, and the Huanghua Xinhao Technology.</p> <p>There are also safety requirements in contracts reviewed by consultants covering PPE, fire safety and overall a safe working environment.</p> <p>Occupational safety is co-managed by the contractor and Huanghua Xinhao Technology. Penalties on safety matters (e.g. lack of safety helmets) were issued to the contractor by the third-party construction management authority. The safety track records and the proposed corrective actions from the construction project management authority have been provided to the Consultant. According to the provided records and the interview, no incidents or injuries occurred. Regarding the on-site medical service, the contractor has provided medical kits for minor injuries for the workers. According to the Project Manager for Construction, severe injuries will be transferred to medical facilities in town.</p> <p>As observed during the site visit, it is found that the living condition in the worker's camp is unsatisfactory. Poor sanitation, lack of a clean common area, and the hygienic food preparation area may pose threats on worker's health. Although medical kits are provided to the workers, an equipped first-aid station was not established.</p> <p>Operation phase – The Safety Production Management System is established and included in the Operation Manual for Pig Breeding, which covers safety training, operational safety requirements, traffic safety, animal epidemic prevention, etc.</p> <p>According to the interview with the Project Manager for Construction, the distance between the facilities and the high voltage transmission towers is more than 30m as instructed and approved by the power grid department. It is able to comply with the requirements in the Regulations on the Protection of Power Facilities (1998).</p> <p><i>Gaps identified:</i> A high-voltage transmission tower safety plan should be established.</p>

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
13.	Community Health & Safety	<ul style="list-style-type: none"> • WBG EHS Guidelines for Mammalian Livestock Production: Community Health and Safety • WBG General EHS Guidelines 	<p>Construction phase – According to the approved EIA Report, the nearest residential area is 1,600m away from the site boundary. Given that the site is surrounded by farm lands, the impacts of construction work on residential areas are limited. According to the interview with site staff, there were no complaints from the residential area so far.</p> <p>Operation phase – Food safety is the key aspect to be considered regarding community health and safety. According to the interview with the Project Manager for Operation, use of antibiotics and other chemical and biological substances is strictly regulated by the project company. Antibiotics are given only for treatment. Relevant training and instructions will be provided to ensure responsible and correct use. Based on the document provided by the subproject, reproductive hormones are used for sows to support pregnancy. The document lists out the types (e.g. PG600), volume, purpose, and frequency of each reproductive hormone. No growth hormones are used. According to our interview with New Hope, feed formulation is designed to minimize the amount of manure produced and to reduce chemical/ biological ingredients of manure. Low-protein, amino acid-supplemented diets is designed to reduce the amount of nitrogen excreted.</p> <p><i>Gaps identified:</i> None.</p>
14.	Ecological impacts	<ul style="list-style-type: none"> • WBG EHS Guidelines for Mammalian Livestock Production: Ecological Impacts • Technical Standard of Preventing Pollution for Livestock and Poultry Breeding (HJ/T81-2001) 	<p>According to the EIA, there are three natural protection zones in Huanghua City. The Guzaoyuan (聚馆古贡枣园) is around 11km from the site, the Nandagang wetland (南大港湿地) is around 30km from the site, and the Gubeike (黄骅古贝壳堤) is around 44km from the site. The EIA did not identify any major threats to these identified habitats. Site visit and EIA review do not reveal any ecological elements of conservation value in the subproject site.</p> <p><i>Gaps identified:</i> None.</p>
15.	Environmental Management Plan (including contractors / sub-contractors' construction / site specific EMP)	<ul style="list-style-type: none"> • ADB SPS 2009 	<p>The WBG EHS Guidelines for Mammalian Livestock Production calls for the implementation of environmental monitoring programs to address all activities that have been identified to have potentially significant environmental impacts during normal operations and upset conditions. The EIA Report proposed an EMP and monitoring plan for the subproject.</p> <p>Based on the on-site interviews with various management personnel, it appears that there are limited environmental monitoring activities conducted during the construction. The project company should improve its environmental, health and safety management during construction phase. For instance, the construction department or the environmental management department should enhance monitoring of contractors to ensure that sewage and waste generated from the temporary residential area are properly managed.</p>

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
			<p><i>Gaps identified:</i> Limited environmental monitoring activities conducted during the construction. As construction is expected to be completed in September, a construction completion report should be developed to report on E&S compliance, monitoring results, incidents/ grievance records and resolutions (if any), and any other outstanding or legacy issues.</p> <p>According to the proposed EMP in the EIA Report, noise and air monitoring will be conducted periodically; however, according to the interview with the Project Manager for Operation, only wastewater will be tested during operation. The project company should ensure environmental monitoring requirements for operational phase are implemented.</p> <p>In addition, the EMP does not address monitoring gaps as mentioned earlier on waste, wastewater and organic fertilizers. It should also cover budget, responsible party and time-bound actions as required by ADB SPS.</p> <p>The project company should develop an Operational Environmental and Social Management Plan (OESMP) which includes all relevant management and training plans, organizational structure and monitoring plan to include all the above aspects to be monitored.</p>
16.	Meaningful Consultation and Grievance Redress Mechanism	<ul style="list-style-type: none"> • ADB SPS 2009 • Interim Measures on Public Participation in Environmental Impact Assessment (2006) 	<p>Public consultation was carried out during the EIA period. According to the approved EIA Report, publicly information disclosures (twice) and questionnaires (once) had been conducted during the EIA period. The Huanghua subproject has received support from the surrounding communities. The subproject did not receive any concerns and complaints on either social or environmental aspects during public consultation.</p> <p>Huanghua Xinhao Technology has established a reporting hotline for resolving complaints about its environmental performance.</p> <p><i>Gaps identified:</i> Although the project company has established a hotline for reporting, no documented manual on the follow-up actions were established.</p>
17.	Contingency and emergency response plan	<ul style="list-style-type: none"> • Emergency Response Law of the PRC • ADB SPS 2009 • WBG General EHS Guidelines 	<p>Emergency Response Plan for construction phase was not provided for the Consultant's review.</p> <p>According to the interview, Emergency Response Plan for operation phase will be established according to the corporate's Management Measures of Environmental Protection.</p> <p>The EIA has proposed a Risk and Emergency Management Plan. It has set out precautions and management measures in cases of biogas explosion or leakage, and animal disease. Details are summarized as follows:</p>

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
			<ul style="list-style-type: none"> • Biogas is primarily methane and carbon dioxide. It can be explosive and flammable with sources of ignition. Biogas leakage may cause fire or adverse human health impact. Potential biogas risks are prevented by: 1) conduct regular checking on biogas plants to prevent leakage; 2) biogas storage pond should be covered to prevent falling; 3) always keep track on the pressure changes and avoid sources of ignition around the biogas plants, etc. • Animal disease can be easily spread without proper control and management. It can cause severe human health problem if zoonotic pathogens transmit from animal to human. Precautions are summarized as follows: 1) take actions preemptively (e.g. vaccination, disinfection, isolation) to prevent diseases; 2) separate domestic area and breeding area; 3) entrance of non-production staff to the breeding area is strictly prohibited; 4) provide annual body-check for onsite staffs; 5) maintain cleanness and tidiness in pig sheds, 6) establish animal epidemic monitoring system, etc. <p><i>Gaps identified:</i> Subproject-specific emergency response procedures for operation phase will be developed.</p>
18.	Capacity and Trainings	<ul style="list-style-type: none"> • ADB SPS 2009 • WBG General EHS Guidelines 	<p>A Training Handbook for Pig Breeding is provided for the Consultant' review. The main objective of the handbook is to train and to ensure the implementation of Standard Operating Procedures (SOPs). Contents of the training include the basic technics and knowledges required in the whole breeding process. All new employees are required to complete the technical training.</p> <p>Topics on OHS and E&S are included in the Operation Manual for Pig Breeding. Relevant trainings (e.g. safety production, safe use of equipment, environmental management, testing, etc.) have been provided to workers. Training records on OHS and E&S have provided for the Consultant's review.</p> <p>According to the interview with the Project Manager for Operation, all on-site veterinarians have to obtain the National Practicing Veterinary Certificate.</p> <p><i>Gaps identified:</i> Subproject-specific training plan will be developed and included in OESMP.</p>
19.	Animal Welfare	<ul style="list-style-type: none"> • IFC Good Practice Note - Improving Animal Welfare in Livestock Operations (2014) 	<p>Transport – The instructions on loading, transporting, and unloading of the pigs are documented in the Training Handbook for Pig Breeding. According to the Training Handbook for Pig Breeding, two trained workers should be monitoring the whole transporting process. Trained personnel should conduct final check before loading to ensure all pigs are fit to travel without unreasonable or unnecessary pain or distress. Casualty pigs will not be transported. Pigs will be moved with a flat “pig board” rather than with a stick.</p>

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Comments / Gaps Identified
			<p>Castration – According to the Training Handbook for Pig Breeding, the castration process should only be done by trained workers. Disinfection will be implemented before the castration process; however, no anaesthesia will be used.</p> <p>Housing system – Both pig stalls and group housing system will be constructed in the subproject. Stalls will allow space to stand and lie down comfortably; however, the space of a stall is not enough for pigs to turn around. There are bigger stalls for pigs expressing abnormal behavior. The sheds are designed and operation practices are in place to prevent pigs from suffering heat stress or hypothermia. All surfaces and flooring will be non-slip, without sharp projections or edges likely to cause injury. Pigs will be stand on solid floor without straw.</p> <p>Genetic Selection – the breed and pedigree of pigs are considered to improve varieties and avoid inbreeding; to minimize the chances of inherited diseases; to breed pigs with higher stress resilience on long-distance transport. Modern equipment and intelligent environment control can better avoid the impact of climate on pigs.</p> <p>Feed and water – Sufficient feed and water will be provided which suited the pig's age and needs, to maintain normal health and productivity and to prevent hunger, thirst, malnutrition or dehydration. Relevant instructions and requirements on feed and water are included in the Training Handbook for Pig Breeding.</p> <p>Management of diseases and parasites - Diseases and parasites are prevented and controlled through standardized management practices. Animals with serious health problems will be isolated and treated promptly or killed humanely if treatment is not feasible or recovery is unlikely. Instructions on the management of diseases and parasites are discussed in the Training Handbook for Pig Breeding. For more details on the management of diseases, refer to topic No.108.</p> <p>Knowledge and skills of handlers – On-site handlers are trained with sufficient skills and knowledge to ensure that pigs are treated in accordance with the requirements discussed in the Training Handbook for Pig Breeding, which include feeding, spotting abnormal, use of animal medicine, pig sheds cleaning, prevention of injury and infection, sick pigs handling, slaughtering, castrating, care of the pregnant sow, farrowing, etc. Good stockmanship is encouraged.</p> <p>Slaughter - According to the Training Handbook for Pig Breeding, severely injured pigs will be slaughter in the least distressing and most pain-free manner possible by trained workers. According to the interview with site staff, pigs are rendered unconscious by electrical stunning.</p> <p><i>Gaps identified:</i> To discuss with New Hope on feasible options to enhance animal welfare referencing good practices.</p>

1.1.4 Subproject Audit Findings (Social)

Scope of Land Acquisition and Resettlement Impacts. The total area of the farm is 1,045.5 mu. There are no other structures or ground attachments affected by the land leasing. According to the EIA, there's no house demolition impact within the 500 meters buffer zone.

History of Land Acquisition. New Hope signed the 1,045.5 mu land lease agreement with Liulaoren Village Committee of Tengzhuangzi Township on 5 November 2016. Among the 1,045.5 mu land, around 600 mu are contracted land, affecting 100 HHs, and the remaining land belongs to the village committee. The key provisions of this agreement include:

- Land is leased from November 5, 2016 to November 4, 2036;
- Since the land was contracted to the farmers by the village committee from 31 December 1998 to 31 December 2028, the agreement shall be renewed by the village committee in 2028 without violating state policies and the provisions of the agreement are the same;
- The rent for the first 10 years was negotiated based on rate of similar projects in the area. For the second 10 years, if the national temporary storage purchase price of corn in December 2026 is increased by more than 10% compared with the present price (CNY 1,800/ ton), the rent will be increased by 15%; if the national temporary storage purchase price of corn in December 2026 is increased by less than 10% or decreased compared with the present price (CNY 1,800/ ton), the rent will be the same.
- The land will be transferred to New Hope only when the approval of EIA and agricultural facilities land is received by New Hope. New Hope will also pay guarantee fee to the village committee. If New Hope confirms that the land will not be leased before 31 December 2016, the guarantee fee will belong to the village committee. If New Hope can get the approval, the guarantee fee will be deduced as rent for the first 2 years, and New Hope will pay the remaining rent.
- Since the 3rd year, New Hope needs to pay the rent of this year within one month before 5 November;

New Hope received the approval of Agricultural Facilities Land issued by Huanghua City Land Resource Bureau on December 26, 2016.

As required by the land lease contract, New Hope paid the guarantee fee to the village committee on 22 December 2016. Since New Hope received the approval of EIA and agricultural facilities land, the remaining amount was paid on April 25, 2017 as the rent for the first 2 years. The rent was paid to the township government firstly, and then it was distributed to the farmers.

The audit verified that New Hope paid the rent each year on time and paid the rental for the 3rd year on December 21, 2018.

The land leased to New Hope was saline-alkali land. The time it was used by villagers in the past, the agricultural output from the land is said to be very limited. According to interview with the village leader, the output of the land was 400 kilograms or equivalent to CNY 700 averagely in a year. The net income from the land will be only CNY 300-400 after deducting the agricultural and labor inputs. Some farmers also abandoned the land due to its low productivity. The farmers will earn more from the lease, requiring no hard agricultural labor and other production inputs and they can also opt to find other jobs to have additional income if they wish to. The per HH land holding in the village is 20-30 mu, so after land lease, the farmers still have a lot of land. The first annual rent was paid by New Hope to the township government and distributed to the villagers, and afterwards the rent was directly paid to the villager's through their bank account.

Indigenous Peoples. Huanghua is a Han City. Ethnic minority population is 25,383, which is 4.63 % of the total population. The main ethnic minority group is Hui. They all speak the

same language as Han. They do not face any social discrimination. However, it is noted that all population in Liulaoren Village Committee is composed of Han. There is no adverse impact to any IP in the subproject location in Liulaoren Village.

Stakeholder Engagement. The information of the project was disclosed in the village's information board in August 2016. The Tengzhuangzi Township Government played a key role to organize the consultation activities from August 2016 to October 2016. The government checked New Hope's previous performance and introduced it to the local farmers. New Hope, village committee, officials from township government and villager representatives joined the meeting before signing the land lease contract. During the consultation, the farmer's key concerns and New Hope's replies are presented in **Table 3.4**. New Hope has constructed 2 roads with total length of 5 kilometres in consultation with the villagers. This access road can be used by the farm as access road and also used by the villagers.

Table 3.2 Farmer's Queries and Replies during Consultation

	Query	Reply
1	How to determine the rent?	Based on consultations and villagers knowledge of local similar projects which offered the same rent rate, the villagers think this was reasonable. The rental rate is also higher than the annual agricultural output.
2	If the rent can be paid on time?	<ul style="list-style-type: none"> ● Local governments have checked the history and reputation of New Hope and found to be paying responsibilities on time. ● Local government will closely monitor the payment of rent.
3	If New Hope can provide some supports to the communities?	<ul style="list-style-type: none"> ● New Hope agreed to construct the access road, which can be shared with the villagers. The road provides the community easier commute/transport for the community

Grievance Redress.

(1) Land Lease

The local government uses its existing grievance mechanism to deal with the problems induced by land lease and compensation, so the farmer could find relevant departments to solve their appeal and grievance. The basic procedures for grievance include the following:

If any farmer feels aggrieved by any aspect of the land lease and compensation, he/she can state his/her grievance and appeal to the village committee in oral or written form. If an oral appeal is made, the village committee will record it on paper and process it. The village committee will make a decision on it and the resolution will be made in two weeks.

The aggrieved farmers can state the grievance and appeal to the township government in oral or in written form. The township government will make a decision on it and the resolution will be made in two weeks.

If the aggrieved farmer is not satisfied with the decision of the township government, he/she can appeal to the Land Resource Bureau, which will come up with a decision within two weeks.

Farmers can decide to go through the legal system directly and may decide not to use the project level grievance channels. By now, those agencies did not receive any appeal and grievance for land lease and compensation.

(2) Employees

When the employee of the farm has complaints on labor issues, he/she can contact the HR Department

(3) Contractors workers

New Hope has disclosed the contact information (email address and telephone number) in the construction site. By now, there is no complaint received.



(4) Local communities

If the local people have complaints towards the operation of the plant, they can call the Government service hotline 12345 to seek resolution. The government will transfer the complaints to the company and the company needs to provide replies.

Gender and Labor. The farm gives local labor a priority. During construction from April 2018 to September 2019, averagely 350 job opportunities are generated, and 30% will be provided to the local people and 5% were provided to women. At the construction site, separate toilet and bathroom is provided to the female and male workers.

New Hope encourages and requires their contractors to hire workers from the local communities, and would select contractors who have good track records of compliance with the national labor laws (minimum wages, hours worked, benefits, prohibition of child labor and forced labor, etc.). For example, the tendering documents should include the letter of commitment that don't default on the wages of migrant workers. The contract with the contractors includes the key provisions:

- The contractor shall arrange the working hours and rest time of the construction workers in accordance with the law;
- Extension of working hours shall not exceed the provisions of the law and shall be granted supplementary leave or remuneration in accordance with the provisions of the law.
- The contractor shall purchase insurance required by the law;

In order to protect the worker's rights, the contractors should provide guarantee fee for migrant worker's salary, which is 2% of the amount of the contract. The manager of the farm on site checks and monitors their performance. Labor Inspection Bureau under the Labor Bureau inspects the farms frequently during construction to check if the Labor Law is complied with. By now, there's no non-compliance issue reported by the local labor bureau.

During operation, the farm will have 200 employees and local people is expected to be 80. Around 70 jobs (35%) will be provided to female, and the main positions include chefs, laboratories, finance, and blue-collar workers (breeder and maintenance worker).

The plant will also provide for separate toilets, changing rooms for men and women workers. New mothers are also provided with separate rooms in their dormitory. They also encourage that women staff invite their female friends and relatives to apply as workers in the farm so they can support each other, especially for the mothers with babies and small children.

The farm will also include in their HR policy provision on anti sexual harassment and non discrimination. The farm will also ensure that new workers, and 100% of women workers, undertake their technical and safety trainings/orientations to ensure their health and safety.

Table 3.3 Summary of Social Issues of Huanghua Pig Breeding Farm Phase 1

No.	Concerned Item	Relevant Regulation(s) and/or Standard(s)	Compliance Status (Fully Compliant/Partially Compliant/Non-compliant)	AECOM Comments	Corrective Actions Required?
1.	Status of land acquisition/leasing (e.g. whether affected village collective is satisfied with the compensation, whether compensation amount is equivalent to replacement value, whether replacement land was provided to village collective, whether the subproject has legal tenure over the land)	Land Administration Law Land Contract Law Organization Law of the Villagers Committees Basic Farmland Protection Regulation	Fully Compliant	The land leasing contract is based on negotiation. Land rent was negotiated based on rate of similar projects in the area. Full consultation was conducted before signing the land lease contract. There are 18 Villagers' Representatives in the village, and 17 attended the meetings and all approved the land lease. As required by the Land Contract Law, at least 2/3 of the Villagers' Representatives should accept. The local government plays a key role in organizing the consultation activities and supervising New Hope's performance, especially if the rent is paid on time.	No
2.	Outstanding issues, complaints or grievances and the resolution status related to local community	ADB SPS 2009: Grievance redress mechanism Land Contract Law	Partially Compliant	By now, there is no complaint. There is existing GRM with the government.	Documentation system needs to be established to log and track actions on addressing any grievance raised to the plant/company.
3.	Effects of subproject facilities/activities on ethnic minorities	Law of PRC on Regional National Autonomy; and Regulation on the Work of	Not applicable.	The project area is inhabited by Han; there is no adverse impacts to IPs.	No

		Administrative Urban Ethnic Minority			
4.	Gender and development issues (e.g. whether the Company or its subsidiaries in various locations have a policy related to supporting the rights of women and ensuring women's participation in project activities, whether opportunity for equal employment and promotion is ensured for men and women, whether there is specific benefit provided to women, etc.)	People's Republic of China on the Protection of Rights and Interests of Women	Fully Compliant	<p>For couple workers, the farm provides family rooms.</p> <p>Priorities will be provided to women if the jobs are more appropriate for female staff. Otherwise, the company promotes equal opportunity to qualified men and women.</p> <p>They also encourage that women staff invite their female friends and relatives to apply as workers in the farm so they can support each other, especially for the mothers with babies and small children.</p>	<p>Performance on gender issues should be included in the AESPR.</p> <p>35% of jobs during operations will be allocated to women staff.</p> <p>It's recommended to set up a nursing/lactating room for female employees.</p> <p>The plant will also provide for separate toilets, changing rooms for men and women workers.</p> <p>New mothers are also provided with separate rooms in their dormitory.</p> <p>The farm will also include in their HR policy provision on anti sexual harassment and non discrimination.</p> <p>The farm will also ensure that new workers, and 100% of women workers, undertake their technical and safety trainings/orientations to ensure their health and safety.</p>
5.	Labor and social protection (e.g. whether the company follows ILO core labor	WBG General EHS Guidelines: Worker's Accommodation:	Fully Compliant	For example, the tendering documents should include the letter of commitment that don't	Performance on labor issues should be included in the AESPR.

	standards, issues related to contractor management and regulations, worker's accommodation, local labor recruitment policy, training, etc.)	<p>Process and Standards</p> <p>China Labor Law (1995) and the Labor Contract Law (2008)</p>		<p>default on the wages of migrant workers.</p> <p>In order to protect the worker's rights, the contractors should provide guarantee fee for migrant worker's salary, which is 2% of the amount of the contract.</p>	<p>Contracts with contractors/subcontractors to include provisions on compliance with national labor laws and to take measures to comply with the principles of the core labor standards.</p> <p>New Hope should monitor its contractors and subcontractors to ensure that national labor laws (min wages and mandated benefits are provided, hours worked, issuance of contracts, etc) are complied with and CLS principles practiced (no child labor, no discrimination, no force labor, freedom of association)</p>
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1.1.5 Corrective Action Plan

No.	Concerned Item 有关项目	Corrective Action(s)纠正行动	Responsible Party(ies) 负责方	Indicative Cost 指标性成本	Suggested Time Frame 建议实践框架
Huanghua Pig Breeding Farm 黄骅项目					
1.	Construction E&S Management and Reporting 建设期安环管理及报告	<p>As construction is expected to complete in September 2019, two construction completion reports will be developed: 因工程预期在 2019 年 9 月完成，项目需要准备两份竣工报告：</p> <p>1 Initial construction completion report on 1.初步竣工报告内容包括：</p> <ul style="list-style-type: none"> report on compliance, incidents and grievance during construction period, including consultation records with community that there are no remaining issues. 报告施工期间的合规，事件和投诉。包括与公众的咨询记录以证明项目没有遗留问题。 present monitoring records and site inspection photos, including but not limited to: 提交监督记录和场地巡查的照片，包括但不限于： <ul style="list-style-type: none"> Healthy and safety monitoring and incident reports, follow-ups etc; 健康安全相关的监督报告及事故报告，以及后续发展等； Waste management records/ contracts; 废物管理的记录/合同； Construction completion inspection approval by NH and by the government; 新希望和政府的竣工验收批复； confirm if any legacy issues remain from construction. 确认工程的遗留问题。 <p>2 Construction completion acceptance report e</p> <ul style="list-style-type: none"> update on status of approval and permits obtained, construction completion acceptance/ inspection records; 对各项证明（如：排污许可证，运营许可证，取水证）的更新，竣工验收的记录； 	New Hope/ Subproject Company 新希望/子公司	About 1 month of management time 大约一个月的工作时间	Initial construction completion report: Within 3 months of construction completion 初步竣工报告 工程完结的三 个月内完成 Construction completion acceptance report: Within 3 months of construction completion acceptance after trial operation 竣工验收报告 于试运完成， 竣工验收后三 个月内完成

		<ul style="list-style-type: none"> Update (if any) on follow-up actions from the initial construction completion report. 对初步竣工报告的跟进行动结果（如有） 			
2.	Operation Environmental and Social Management Plan (OESMP) - monitoring 运营期环境与社会管理计划 – 监测	<p>Revise the environmental management plan in the EIA to include an Operation E&S Monitoring Plan, specifying monitoring standards, location, frequency, responsible party and total budget. 对环评的环境管理计划进行修订，加入运营期安环监测计划，列明各项监测的相关标准，监测地点，频率，责任单位及预算。</p> <p>The monitoring plan will include: 监测计划将包括：</p> <ol style="list-style-type: none"> Per EIA monitoring requirements for operational phase: 根据环评对运营期的监测要求： <ol style="list-style-type: none"> noise monitoring quarterly 噪音监测（每季度一次） ammonia and H₂S at site boundary quarterly. The project company should conduct monitoring on odour accordingly. 厂界 NH₃ 及 H₂S 监测（每季度一次）。 Conduct regular testing (minimum every 6 months) of treated manure against the Hygienic Requirements for Harmless Disposal of Night Soil (GB7959-1987) and conduct testing at a higher frequency as needed. 根据《粪便无害化卫生标准》（GB7959-1987），对处理后的猪粪定期至少每半年一次进行监测，可按实际情况加密频率。 Monitor treated effluent used for irrigation in line with national Standards, including antibiotics residue. Monitoring frequency will adjust per operational needs, minimum at every 3 months. 根据相关的国家标准，对处理后用于农灌的排污水进行监测（按实际情况调整，至少每季一次）。监测应包括抗生素遗留项目。 Groundwater monitoring quarterly 地下水监测（每季一次）。 Maintain hazardous waste transfer register as record for each transfer. Regularly inspect and monitor hazardous waste storage 	New Hope/ Subproject Company 新希望/子公司	Staff Time 员工工作时数	OESMP developed before disbursement and implemented immediately from operation 在支付款前完成，并尽快在运营期实施

		<p>areas (minimum monthly monitoring) and general waste storage areas, maintain general waste generation and disposal records.保留危废转移联单为每次转移作记录。定期（至少每月一次）巡查危废储存设施与一般废物收集地点。保持一般废物生产与弃置记录。</p> <p>6. Health and Safety monitoring per Health and Safety Management Plan 根据健康安全管理计划对健康与安全进行监测</p>			
3.	<p>Operation ESMP (OESMP) – Management Plans</p> <p>运营期环境与社会管理计划 – 管理计划</p>	<p>In addition to the management measures outlined in the EIA, the OESMP will also include project-specific management plans on:</p> <p>除了环评列举的管理措施以外，运营期环境与社会管理计划还需要包括下列措施：</p> <ol style="list-style-type: none"> 1. Occupational Health and Safety 职业健康及安全 2. Emergency Response Plans 应急管理计划 3. Waste management (with identified waste contractors, fertilizer companies, monitoring records) 固废管理（列出合作的固废处理商，肥料商，监测记录） 4. Training plan for E&S management, with training topic, timing, targeted participants etc. 针对安环管理的培训计划（培训项目，时间，针对的培训对象等）。 	<p>New Hope/ Subproject Company</p> <p>新希望/子公司</p>	<p>Staff time</p> <p>员工工作时数</p>	<p>OESMP developed before disbursement and implemented immediately from operation</p> <p>在支付前完成，并尽快在运营期实施</p>
4.	<p>Operation ESMP (OESMP) – Management and Resources</p> <p>运营期环境与社会管理计划 – 管理及资源</p>	<p>The OESMP should indicate budget (per year), organizational/ management structure of its implementation (responsible parties and reporting lines) at subproject level to corporate level.</p> <p>运营期环境与社会管理计划应包括：预算（每年），组织管理架构，及从总部到子公司的相关责任人。</p>	<p>New Hope/ Subproject Company</p> <p>新希望/子公司</p>	<p>Staff time</p> <p>员工工作时数</p>	<p>OESMP developed before disbursement and implemented immediately from operation</p> <p>在贷款前完成，并尽快在运营期实施</p>

5.	Grievance Redress Mechanism (GRM) 申诉机制	With reference to the corporate level GRM in the ESMS, a subproject specific GRM will be developed to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental and social performance. 子公司应参考总部层面环境与安全管理制度的申诉机制，建立子公司层面的申诉机制应对受影响人对公司在环境和社会方面的顾虑及投诉。	Subproject Company 子公司	Staff time 员工工作时数	Before disbursement 在支付前完成
6.	Grievance, Stakeholder Engagement, Gender and Development, Labor and Working Conditions 申诉机制，利益相关者的参与，性别和发展，员工及工作环境	New Hope is suggested to follow its relevant procedures to maintain reasonable stakeholder engagement, gender and development, labor and social protection, and document these practices in the annual E&S performance report. 建议新希望遵循其相关的程序，保持利益相关者的参与，性别和发展，劳工及社会保护等方面，并把这些实践纳入年度安环报告。 Subproject and contractors/subcontractors to comply with the national labor laws and take measures to comply with the relevant ILO core labor standards, as per ADB's Social Protection Strategy (2001). 子项目，承包商/分包商将遵守国家的劳动法，并采取措施去遵守相关的核心劳工标准，以及亚行的社会保护战略（2001）	New Hope Liuhe and Project Company 新希望/子公司	Staff time 员工工作时数	Within 1 year from the disbursement for the purpose of financing the first subproject 在第一个融资的项目贷款拨付后的一年内
Subproject 3 - Xiangzhou Pig Breeding Farm 象州项目					
7.	Construction Environmental and Social Management (CESMP) – management plans 建设期环境与社会管理 – 管理计划	According to the EIA, there will be 30 workers during construction phase; however, according to the interview, the maximum number of workers will be around 500 to 800. 根据环评，项目建设期会有 30 名员工同时施工。但据采访，项目在施工高峰期会有 500 到 800 名员工在场。 The number of workers will be confirmed and ensure that environmental impacts of the workers be assessed and managed with proposed mitigation measures in the construction environmental and social management plan (CESMP). The plan will include management structure and responsibilities by contractors, subproject company and at corporate level; budget, training plan, monitoring (see next item #27). 建设期的员工数量应再次确认，以准确预估及管理员工在施工期造成的环境影响，并制定对应的缓解措施。建设期环境与社会管理计划应包括组织管理架构	New Hope/ Subproject Company 新希望/子公司	Staff time 员工工作时数	CESMP be developed/ revised prior to disbursement 在贷款拨付前完成

		<p>及责任人（总部，子项目，及建筑承包商），预算，培训计划，及监测（见第27项）。</p> <p>Building on existing CESMP, the revised CESMP will include: 在现有的施工期环境与社会管理计划的基础上，应新增：</p> <ul style="list-style-type: none"> Workers accommodation to meet Chinese, IFC and ILO standards, i.e. safe structures, clean and sanitary conditions, easy access with separate arrangements for females and males 参考国内，世界银行，及国际劳工标准制定工人住宿标准（如：安全结构，清洁状况，卫生状况，性别分离安排等） Proper collection and disposal of waste and effluents 垃圾收集及运输和污水收集及处理的要求 All workers have access to clean water for consumption and washing 所有工人都可以获得清洁的水进行使用和洗涤 Chance find procedures for physical cultural resources 文物保护机制 Environmental management measures as outlined in the EIA (dust and noise control etc.) 环评列出的环境管理措施（如：扬尘及噪音控制等） Reference to Huanghua project's health and safety management system 参考黄骅项目的健康安全管理系统 			
8.	<p>Construction Environmental and Social Management (CESMP) – Monitoring</p> <p>建设期环境与社会管理 – 监测</p>	<p>Mitigation measures for each environmental aspect be monitored with a monitoring plan to include budget, monitoring item, methodology, location, frequency, and the corresponding national standards per EIA and international standards per gaps identified in this report</p> <p>应制定监测计划以监督各环境缓解措施的实施情况。监测计划应包括：预算，监测项目，方法，地点，频率，及环评列出的相关国家标准/国际标准。</p> <p>The revised monitoring plan will include: 修订后的监测计划应包括：</p> <ul style="list-style-type: none"> Noise monitoring 噪音监测 Waste monitoring (hazardous and non-hazardous waste) 废物监测（有害及无害废物） 	<p>New Hope/ Subproject Company</p> <p>新希望/子公司</p>	<p>Staff time</p> <p>员工工作时数</p>	<p>CESMP be developed/ revised prior to disbursement</p> <p>在贷款拨付前完成修订</p>

		<ul style="list-style-type: none"> Dust control monitoring 扬尘控制监测 Workers accommodation inspections 工人宿舍环境检查 Health and Safety monitoring 健康安全检查 			
9.	Construction Completion Report 竣工报告	<p>When construction is completed, two construction completion reports will be developed</p> <p>1 Initial construction completion report on</p> <p>1.初步竣工报告,内容包括:</p> <ul style="list-style-type: none"> report on compliance, incidents and grievance during construction period, including consultation records with community that there are no remaining issues. 报告施工期间的合规, 事件和投诉。包括与公众的咨询记录以证明项目没有遗留问题。 present monitoring records and site inspection photos, including but not limited to: 提交监督记录和场地巡查的照片, 包括但不限于: <ul style="list-style-type: none"> Healthy and safety monitoring and incident reports, follow-ups etc; 健康安全相关的监督报告及事故报告, 以及后续发展等; Waste management records/ contracts; 废物管理的记录/合同; Construction completion inspection approval by NH and by the government; 新希望和政府的竣工验收批复; confirm if any legacy issues remain from construction. 确认工程的遗留问题。 <p>2 Construction completion acceptance report</p> <p>2. 竣工验收报告</p> <ul style="list-style-type: none"> update on status of approval and permits obtained, construction completion acceptance/ inspection records 对各项证明 (如: 排污许可证, 运营许可证, 取水证) 的更新, 竣工验收的记录; 	<p>New Hope/ Subproject Company</p> <p>新希望/子公司</p>	<p>Staff time</p> <p>员工工作时数</p>	<p>Initial construction completion report: be delivered within 3 months after construction completion.</p> <p>初步竣工报告工程完结的三个月内完成</p> <p>Construction completion acceptance report: Within 3 months of construction completion acceptance after trial operation</p> <p>竣工验收报告于试运完成, 竣工验收后三个月内完成</p>

		<ul style="list-style-type: none"> Update (if any) on follow-up actions from the initial construction completion report. 对初步竣工报告的跟进行动结果（如有） 			
10.	Operation ESMP (OESMP) – Management Plans 运营期环境与社会管理计划 – 管理计划	In addition to the management measures outlined in the EIA, the OESMP will also include project-specific management plans on: 除了环评列举的管理措施以外，运营期环境与社会管理计划还需要包括下列措施： <ol style="list-style-type: none"> Occupational Health and Safety 职业健康及安全 Emergency Response Plans 应急管理计划 Waste management (with identified waste contractors, fertilizer companies, monitoring records) 固废管理（列出合作的固废处理商，肥料商，监测记录） Training plan for E&S management, with training topic, timing, targeted participants etc. 针对安环管理的培训计划（培训项目，时间，针对的培训对象等）。 	New Hope/ Subproject Company 新希望/子公司	Staff time 员工工作时数	OESMP developed before disbursement and implemented immediately from operation 在贷款拨付前完成，并尽快在运营期实施
11.	Operation ESMP (OESMP) – Management and Resources 运营期环境与社会管理计划 – 管理及资源	The OESMP should indicate budget (per year), organizational/ management structure of its implementation (responsible parties and reporting lines) at subproject level to corporate level. 运营期环境与社会管理计划应包括：预算（每年），组织管理架构，及从总部到子公司的相关责任人。	New Hope/ Subproject Company 新希望/子公司	Staff time 员工工作时数	OESMP developed before disbursement and implemented immediately from operation 在贷款拨付前完成，并尽快在运营期实施
12.	Operation ESMP (OESMP) – Monitoring plan: 运营期环境与社会管理计划 – 监测	Revise the environmental management plan in the EIA to include an Operation E&S Monitoring Plan, specifying monitoring standards, location, frequency, responsible party and total budget. 对环评的环境管理计划进行修订，加入运营期安环监测计划，列明各项监测的相关标准，监测地点，频率，责任单位及预算。	New Hope/ Subproject Company 新希望/子公司	Staff time 员工工作时数	OESMP developed before disbursement and implemented

		<p>The monitoring plan will include: 监测计划应包括:</p> <ol style="list-style-type: none"> 1. Per EIA monitoring requirements for operational phase: 据环评对运营期的监测要求: <ol style="list-style-type: none"> (i) noise monitoring quarterly 噪音监测 (每季度一次) (ii) ammonia and H₂S at site boundary quarterly. The project company should conduct monitoring on odour accordingly. 厂界 NH₃ 及 H₂S 监测 (每季度一次)。 2. Conduct regular testing (minimum every 6 months) of treated manure against the Hygienic Requirements for Harmless Disposal of Night Soil (GB7959-1987) and conduct testing at a higher frequency as needed.. 根据《粪便无害化卫生标准》(GB7959-1987), 对处理后的猪粪定期至少每半年一次进行监测,可按实际情况加密频率。 3. Develop monthly monitoring for treated effluent used for irrigation in line with national Standards, including antibiotics residue 根据相关的国家标准, 对处理后用于农灌的排污水进行监测 (按实际情况调整, 至少每季一次)。监测应包括抗生素遗留项目。 4. Groundwater monitoring at least quarterly 地下水监测 (每季度一次) Maintain hazardous waste transfer register as record for each transfer. Regularly inspect and monitor hazardous waste storage areas (minimum monthly monitoring) and general waste storage areas, maintain general waste generation and disposal records 保留危废转移联单为每次转移作记录。定期 (至少每月一次) 巡查危废储存设施与一般废物收集地点。保持一般废物生产与弃置记录。 5. Health and Safety monitoring per Health and Safety Management Plan 根据健康安全管理计划对健康与安全进行监测 			<p>immediately from operation</p> <p>在拨付前完成, 并尽快在运营期实施</p>
13.	Grievance Redress Mechanism (GRM)	With reference to the corporate level GRM in the ESMS, a subproject specific GRM will be developed to receive and facilitate resolution of the affected	New Hope/ Subproject Company	Staff time 员工工作时数	Before disbursement

	申诉机制	<p>people's concerns and grievances regarding the project's environmental and social performance.</p> <p>子公司应参考总部层面环境与安全管理制度的申诉机制，建立子公司层面的申诉机制应对受影响人对公司在环境和社会方面的顾虑及投诉。</p>	新希望/子公司		贷款拨付前
14.	Protection of the graves 墓地保护	<p>A wall serve as a fence separating the project area and the village grave area should be built before operation.</p> <p>运营前应架设墙以将墓地与项目区域分开。</p>	Subproject Company 子公司	Include in the project cost 包含在项目经费内	Before operation 运营前
15.	Grievance, Stakeholder Engagement, Gender and Development, Labor and Working Conditions 申诉机制，利益相关者的参与，性别和发展，员工及工作环境	<p>New Hope is suggested to follow its relevant procedures to maintain reasonable stakeholder engagement, gender and development, labor and social protection, and document these practices in the annual E&S performance report.</p> <p>建议新希望遵循其相关的程序，保持利益相关者的参与，性别和发展，劳工及社会保护等方面，并把这些实践纳入年度安环报告。</p> <p>Subproject and contractors/subcontractors to comply with the national labor laws and take measures to comply with the relevant ILO core labor standards, as per ADB's Social Protection Strategy (2001).</p> <p>子项目，承包商/分包商将遵守国家的劳动法，并采取措施去遵守相关的核心劳工标准，以及亚行的社会保护战略（2001）</p>	Subproject Company 子公司	Staff time 员工工作时数	<p>Within 1 year from the disbursement for the purpose of financing the first subproject</p> <p>在第一个融资的项目贷款拨付后的一年内</p>