

Green Agricultural and Rural Revitalization
Program for Results - Phase II
(P178907)

Environmental and Social Systems Assessment

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Abbreviations and Acronyms

ARAB	Agriculture and Rural Affairs Bureau
BOD ₅	Five-day Biochemical Oxygen Demand
CAB	Civil Affairs Bureau
COD	Chemical Oxygen Demand
CPC	Communist Party of China
CPMO	Central Project Management Office
CTB	Culture and Tourism Bureau
DLI	Disbursement-linked Indicator
DMS	Detail Measurement Survey
DPF	Disabled Person's Federation
DRC	Development and Reform Commission
EEB	Ecology and Environment Bureau
EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ERAB	Ethnic and Religious Affairs Bureau
ESSA	Environmental and Social Systems Assessment
FALU	Facility Agriculture Land Use
FECC	Foreign Economic Cooperation Center
FGD	Focus Group Discussion
GAP	Green Agricultural Practices
GHG	Green House Gas
GI	Geographic Indication
GRM	Grievance Redress Mechanism
HRSSB	Human Resources and Social Security Bureau
HURDB	Housing and Urban-Rural Development Bureau
IPRCC	International Poverty Reduction Center in China
IVDP	Integrated Village Development Plans
LAR	Land Acquisition and Resettlement
LURT	Land Use Right Transfer
MARA	Ministry of Agriculture and Rural Affairs

M&E	Monitoring and Evaluation
MEE	Ministry of Ecology and Environment
MHURD	Ministry of Housing and Urban-Rural Development
MHRSS	Ministry of Human Resources and Social Security
MLS	Minimum Living Security
MNR	Ministry of Natural Resources
MWR	Ministry of Water Resources
MRV	Monitoring, Reporting, and Verifying
NCD	National Central Government
NDRC	National Development and Reform Commission
NGO	Non-Governmental Organization
NIMBY	Not In My Back Yard
NPS	Non-pointed Sources
NRB	Natural Resources Bureau
NRRA	National Rural Revitalization Administration
OHS	Occupational Health and Safety
O&M	Operation and Maintenance
PADC	Poverty Alleviation and Development Center
PAP	Program Action Plan
PCPB	Public Complaints and Proposals Bureau
PforR	Program-for-Results
PIU	Program Implementation Unit
PLAC	Political and Legal Affairs Committee
PMO	Program Management Office
PPE	Personal Protective Equipment
PPMO	Provincial Program Management Office
RA	Result Area
RRB	Rural Revitalization Bureau
RRP	Rural Revitalization Program
RRS	Rural Revitalization Strategic
SIA	Social Impact Assessment
SSRA	Social Stability Risk Assessment
TA	Technical Assistance
UMB	Urban Management Bureau
WRB	Water Resources Bureau
WSC	Water and Soil Conservation
WWTF	Wastewater Treatment Facility

1. Introduction

Background

1. On 31 March 2022, the World Bank approved the Green Agricultural and Rural Revitalization Program for Results - Phase I (P177590) to support a subset of the Chinese Government's national Rural Revitalization Program (RRP, 2018-2035) by using \$350 million of program-for-results planning loan. The Phase I Program supports the implementation of the Rural Revitalization Strategic (RRS) plans of Guangxi and Guizhou in three result areas, namely RA1 - strengthening institutional capacity for governance, RA2 - greening selected agricultural value chains and increasing access to rural solid waste and wastewater services, to enhance environmentally sustainable agricultural and rural infrastructure development in selected areas of Guangxi and Guizhou provinces. At present, the World Bank team and Chinese government are still working on agreement signing and getting ready for implementation of the Phase I Program.

2. The Green Agricultural and Rural Revitalization Program for Results - Phase II (hereinafter, the PforR), as an extension of the Phase I Program, will continue to support the implementation of Chinese Government's national RRP (2018-2035), including:

- 1) **Activities at central level**, namely (i) Developing national IT-based platform for mapping and M&E of delivery of rural infrastructure and public services and (ii) Developing national methodologies for monitoring, reporting, and verifying (MRV) of GHG emissions reduction from main agriculture sector sources, which will be implemented by the International Poverty Reduction Center in China (IPRCC) under the National Rural Revitalization Administration (NRRRA).
- 2) **Activities at provincial level**, environmentally sustainable agricultural and rural infrastructure development in Hunan and Hubei provinces.

Objectives and tasks of the ESSA

3. This Environmental and Social Systems Assessment (ESSA) is prepared as an instrument to address the environmental and social (E&S) risks and impacts of the PforR using national and local E&S legal frameworks and management systems. In the ESSA, the potential E&S risks were identified, the applicable national and local E&S frameworks and systems have been reviewed and assessed and actions and recommendations have been proposed to fill the gaps to improve the implementation performance of the systems following the "Bank Guidance Program-for-Results Financing Environmental and Social System Assessment". The main tasks of the ESSA include:

- Assess the potential E&S impacts and risks of the PforR activities.
- Assess the applicable national and local E&S policies and regulations.
- Assess the institutional settings and implementation procedures of the provincial and local E&S management systems.
- Assess the institutional capacity and performance of E&S management authorities.
- Propose recommendations and actions to improve the performance of the E&S management systems as required by China's regulations and the Bank's core principles.

Procedures and Methodologies of the ESSA

4. The World Bank team implements the assessment and prepares the ESSA report, and the team also largely relies on the assistance of Chinese governments, especially in data collection and stakeholder engagement at the various phases of the PforR cycle.

5. At the **Identification Stage**, the ESSA team conducted the risk screening in two steps: applying the E&S exclusion criteria to eliminate activities that are not eligible for PforR financing; and carrying out preliminary E&S assessment and risks rating. At the **Preparation Stage**, the ESSA team conducted a comprehensive ESSA by fully assessing the E&S benefits, impacts, and risks of the PforR activities, assessing the domestic E&S management systems in terms of legal and regulatory framework, implementation mechanism, institutional arrangement, and management performance, and proposing recommendations and actions to fill the gaps between the E&S systems and the Bank's PforR policies. The ESSA report has been consulted with governments and improved based on the feedbacks. At the **Appraisal Stage**, the agreed E&S actions are incorporated into the Program Action Plan, and the final ESSA will be disclosed on the Bank and governments' websites.

6. To ensure a successful assessment, the ESSA team conducted information collection and stakeholder engagement by various means and carried out field visits to six of the total 23 demonstration counties. The selection of the sample counties/cities for the field investigation took into account the following main factors: (1) covering different geographic scope and distribution; (2) containing representatives of minority villages. In addition, information from other project counties were also collected through the provincial project management office (PPMO).

- **Secondary information collection and analysis:** Secondary information like documents provided by provincial and county level government departments, online public data, and published literatures and books were collected and analyzed to understand the legal framework, institutional arrangements and implementation procedures of national E&S management systems related to the PforR.
- **Primary information collection and analysis:** Primary information was also obtained in multiple ways, including consultation, discussion, interview, questionnaire, and field visit, etc. In August 2022, the ESSA team conducted a series of on-site meetings with and visits provincial and county-level governments at provincial and county/city level in Hunan and Hubei provinces to understand the management mechanisms of the E&S systems; meanwhile visited the sites of typical activities in the sample counties/cities to learn the actual implementation effectiveness of the E&S systems.
- **Whole process stakeholder engagement:** Throughout the PforR cycle since the identification and training till the ESSA preparation and finalization, the ESSA team kept communicating with a variety of stakeholders at each step. During the preparation of this report, the ESSA team interviewed various relevant E&S government departments at the provincial and county levels and consulted different representatives of potentially affected community/village leaders and residents: women, the poor, and minority residents by means of face-to-face meetings, interviews, virtual conferences, etc.
- **ESSA consultation:** In October 2022, consultation on the ESSA was conducted with the government departments at the national, provincial, and county levels. The first version of the draft ESSA was sent out on 11 October 2022 to seek comments of the national PMO, PPMOs, all relevant provincial-level authorities, and all relevant county-level authorities. Online consultation meetings were conducted by the ESSA team with Hunan and Hubei on 26 and 27 October 2022, respectively, to have discussions on the draft ESSA with the key stakeholders from provincial government authorities and all PforR demonstration counties/cities. Written feedback has been provided to the ESSA team right after the consultation meetings and incorporated into the ESSA as listed in **Appendix 6**.

2. Program Description

2.1 Government Program

7. China adopted an ambitious national RRP (2018-2035) in 2017 and implemented it through a series of five-year RRS plans. The main objectives are to sustainably increase rural incomes, increase access to rural infrastructure and public services, and to improve living environment in rural areas. The first phase of the national RRS plans (2018-2022) cover seven sub-programs on green agricultural development and six sub-programs on improving rural infrastructure and public services (the details are presented in **Table 2-1**). These RRS plans are implemented nationwide and are included in the 14th Five-Year Plans (FYPs, 2021-2025). The selected two provinces, Hunan and Hubei have developed their respective provincial and county-level RRS plans and 14th FYPs on agricultural and rural modernization (see **Appendix 1** for the development areas and the main activities), with clear baselines, objectives, and financing plans developed considering the existing agro-ecological and environmental conditions, levels of economic development, available fiscal space, and the agricultural and rural development priorities.

2.2 The PforR Scope

8. **Investment Boundary:** The PforR aims to support the development of information platform and management mechanisms at central and provincial level, and six green agricultural development sub-programs and three rural infrastructure and public services sub-programs out of the 13 sub-programs under the RRS Plans in 23 demonstration counties/cities of Hunan and Hubei. The total government financing of two provinces is \$4,735 million, while the Bank will provide an IBRD loan of US\$350 million. The PforR implementation period is from 2024 to 2029.

Table 2-1: Government Program and the PforR Scope

Description	Government Rural Revitalization Program/RRS plan (under the 14th FYP 2021–2025)	Program supported by the World Bank's GARR PforR
Objectives	To sustainably increase rural income, increase access to rural infrastructure and public services, and improve the living environment in rural areas	To enhance environmentally sustainable agricultural and rural infrastructure development in selected areas of Hubei and Hunan
Geographic coverage	22 provinces, 4 municipalities, and 5 autonomous regions	10 counties/cities in Hubei and 13 counties/cities in Hunan
Sub-programs (SPs)/Results Areas (RAs)	<p>A. Green Agricultural Development Pillar 1</p> <ol style="list-style-type: none"> 1. Strengthening the protection and utilization of agricultural resources 2. Strengthening the prevention and control of agricultural NPS pollution 3. Strengthening agricultural ecological protection and restoration 4. Building green and low-carbon agricultural industry chains 5. Improving the innovation system for green agricultural technology development 6. Improving the governance systems and mechanisms for enhancing the green development of agriculture 7. Planning and implementing green agricultural development <p>B. Rural Infrastructure and Public Services Pillar 3</p> <ol style="list-style-type: none"> 8. Building an ecologically livable beautiful village 9. Improving rural habitat environment 10. Improving the appearance of the village 11. Improving rural water infrastructure network 	<p>Green Agricultural and Rural Revitalization PforR RAs</p> <ul style="list-style-type: none"> • RA1: Strengthening institutional capacity for governance (RRS plan SP #6) • RA2: Greening agricultural value chains (RRS plan SPs #1, #2, #4, and #5) • RA3: Increasing access to rural solid waste and wastewater services (RRS plan SPs #9, #10, and #11) • RA4: Restoring and protecting agricultural ecological ecosystems (SP#3)

Description	Government Rural Revitalization Program/RRS plan (under the 14th FYP 2021–2025)	Program supported by the World Bank's GARR PforR
	12. Strengthening rural transportation infrastructure 13. Building a modern energy system in rural areas	
Overall financing	USD 960 billion (2022-2025)	Total IBRD loan of USD 350 million, and government financing for a total of USD 4,735 million (2024-2029)

9. **Geographic coverage:** The PforR will support 23 demonstration counties/cities in Hubei and Hunan, including 10 demonstration counties/cities (out of 103 counties) in Hubei Province, namely Honghu, Chongyang, Xishui, Yangxin, Yunxi Shishou, Suixian, Xiantao, Danjiangkou, and Xianfeng, and 13 demonstration counties (out of 122 counties) in Hunan Province, namely Taojiang, Lixian, Yueyang, Linxiang, Liling, Jiangyong, Suining, Hengyang, Hengnan, Huayuan, Yongding, Yongshun, and Cili.

10. **Program development objectives and result area:** the overall development objectives of the PforR is to enhance environmentally sustainable agricultural and rural infrastructure development in selected areas of Hunan and Hubei provinces through supporting the following four RAs, namely, RA1 - strengthening institutional capacity for governance (RA1.1 for central level and RA1.2 for provincial level); RA2 – greening selected agricultural value chains; RA3 – increasing access to rural solid waste and wastewater services; and RA4 – restoring and protecting degraded agricultural ecosystems.

11. **Typical activities and expected outcomes:** The typical PforR activities and their intermediate outcomes with disbursement-linked indicators (DLIs) are presented in **Table 2-2**.

Table 2-2: PforR Activities, Expected Outcomes and DLIs

Typical Activities	Expected Outcomes	DLIs
RA1.1 – Strengthening central level institutional capacity for governance		
1. Developing national IT-based platform for mapping and M&E of delivery of rural infrastructure and public services 2. Developing national methodologies for monitoring, reporting, and verifying (MRV) on GHG emissions reduction from main agriculture sector sources	1. National IT-based platform with rural infrastructure and public services baseline in place 2. National methodology for MRV of agriculture and rural GHG emissions reduction in place	DLI1.1: Development and use of a comprehensive national IT-based platform for mapping and M&E of the delivery of rural infrastructure, public services and spatial IVDPs of rural villages (Central Level)
RA1.2 - Strengthening provincial level institutional capacity for governance		
1. Developing regulations, standards and guidelines for green agricultural practices (GAP), and delivery of rural infrastructure and public services 2. Developing mechanisms for program-based budgeting, expenditure tracking and reporting 3. Implementing the IT-based platform for mapping and M&E of the delivery of rural infrastructure and public services 4. Establishing frameworks for nurturing green skills and talents	1. Regulations, standards and guidelines for GAP and delivery of rural infrastructure and public services are approved 2. Program-based budgeting and expenditure reporting frameworks are operational 3. IT-based platform for mapping and M&E of rural infrastructure and public services used by counties/cities 4. GAP training and capacity building frameworks are used by counties/cities	DLI1.2: Development and use of an IT-based system for green agricultural program-based budgeting and expenditure reporting (Provincial Level) DLI1.3: Adoption of local regulations, standards and guidelines on green agricultural development and number of agro-products produced in the Program Counties that are certified and/or registered as green, organic or geographical indication pursuant to said regulations, standards and guidelines (Provincial Level)
RA2 - Greening selected agricultural value chains		

Typical Activities	Expected Outcomes	DLIs
<ol style="list-style-type: none"> Reducing use of chemical fertilizer and toxic pesticide, and treating and recycling livestock and poultry wastes Adopting climate-smart agricultural practices—increasing productivity, building resilience, and reducing GHG emissions (CO₂, CH₄, N₂O) Training FCs, FAs, WUAs, input suppliers, agro-enterprises, and rural extension staff Implementing the MRVs for GHG emissions reduction from major agriculture sector sources 	<ol style="list-style-type: none"> Reduced quantity of chemical fertilizer use, and increased quantity of livestock and poultry manure treatment achieved Increased productivity and resilience of selected agricultural value chains Agro-products certified e.g., green, organic and Geographic Indication (GI) Rural beneficiaries trained in green technologies and practices and agro-business skills 	<p>DLI2.1: Tonnes of chemical fertilizer reduced due to the adoption of green technologies and sustainable practices in selected crop production systems in the Program Counties (Provincial Level)</p> <p>DLI2.2: Percentage increase of treated and recycled livestock and poultry manure from large scale and small-scale farms in the Program Counties (Provincial Level)</p>
RA3 - Increasing access to rural solid waste and wastewater services		
<ol style="list-style-type: none"> Preparing spatial Integrated Village Development Plans (IVDP) Constructing rural wastewater management systems e.g., rural decentralized facilities, connections to township systems Constructing rural solid wastes management systems e.g., rural sorting, township transfer and recycling Providing training on (O&M) of wastewater and solid waste management systems 	<ol style="list-style-type: none"> IVDPs approved by county/city authorities and registered with provincial authorities Rural wastewater treatment and recycling facilities constructed, and wastewater treated and recycled/reused Rural solid waste collection, sorting and township transfer facilities constructed, and solid waste treated and recycled Rural people trained in O&M of wastewater and solid waste management systems 	<p>DLI3.1: Number of Integrated Village Development Plans approved by Program Counties (Provincial Level)</p> <p>DLI3.2: Number of demonstration villages with newly constructed or rehabilitated existing climate resilient wastewater treatment facilities and established solid waste collection, sorting and transfer systems (Provincial Level)</p>
RA4 - Restoring and protecting degraded agricultural ecosystems		
<ol style="list-style-type: none"> Preparing sustainable agricultural ecosystems management plans Returning crops straw to the farmland to increase soil organic carbon Managing acidity and heavy metals to improve soil health and food safety Treating aquaculture waters to reduce GHG emissions and pollutant loads entering waterways 	<ol style="list-style-type: none"> Sustainable agricultural ecosystems management plans approved by county/city authorities Proportion of crops straw generated that is returned to soil in farmland Farmland area with acidic soils and heavy metals pollution restored Proportion of aquaculture farms meeting effluent discharged standards 	<p>DLI4.1: Number of hectares of farmland with heavy metals treated and percentage of crop sampling points meeting food safety standards in Program Counties (Provincial Level)</p> <p>DLI4.2: Tonnes of crops straw (rice, wheat, rapeseed) returned to the soil in farmland and increased rate (or percentage) of comprehensive straw utilization (Provincial Level)</p>

2.3 Program implementation agencies

12. The PforR will be implemented across various sectors at different levels to ensure efficient and effective supervision and coordination. A Central Program Management Office (CPMO) has been established at the IPRCC and will be responsible for the implementation of the activities at central level and overall coordinating the activities at provincial level. The Hunan Provincial Program Management Office (PPMO) has been set up at Foreign Economic Cooperation Center (FECC) under Hunan Provincial Agricultural and Rural Affairs Bureau (ARAB); the Hubei PPMO has been set up at Poverty Alleviation and Development Center (PADC) under Hubei Provincial Rural Revitalization Bureau (RRB); and the two PPMOs will be responsible for day-to-day management of the PforR. Program Implementation Units (PIUs) have also been established to include relevant government authorities at different levels. The county-level authorities are responsible for designing, implementing, and monitoring specific PforR activities

13. IPRCC (hereinafter, the CPMO), set up in 2005, is a public institution under the NRRA. It has 45 employees and consists of research office, exchange office, cooperation office, training office, foreign affairs office, etc. The cooperation office is responsible for E&S management of the PforR. So far, the CPMO has led the completion of six phases of poverty alleviation projects financing by foreign loans, with a total investment of RMB 13.9 billion, including USD 930 million from the World Bank, such as World Bank-financing Southwest Poverty Reduction project, World Bank-financing Poverty Alleviation and Agriculture-based Industry Pilot and Demonstration in Poor Areas project, which include activities similar to those under the PforR. Therefore, the IPRCC has rich experience in the implementation and management of projects using foreign loans.

14. FECC of Hunan Province (hereinafter, the Hunan PPMO), set up in 1973, is a class I department-level institution directly under the Provincial ARAB. It has 22 permanent employees and 5 contracted employees, and consists of general section, finance section, foreign capital utilization section, overseas project section, trade promotion section and exchange service section, among which the foreign capital utilization section is responsible for the E&S management of the PforR. The Hunan PMO has a stable team of professionals who have been engaged in the preliminary research, planning and design, financial management, planning and supervision, procurement management and other aspects of foreign funded projects for a long time. Since the first foreign government grant project was accepted in 1978, twelve agricultural projects with foreign loans have been completed, with a total investment of RMB 3.46 billion, using a loan of USD 191.6 million; and 24 grant projects have been completed, with a total investment of RMB 840 million and using the grants of USD 0.735 million. At present, there are two projects under construction, namely the Hunan Integrated Management of Agricultural Land Pollution Project and the Hunan Rural Revitalization Demonstration Project loaned by International Fund for Agricultural Development, with a total investment of RMB 1.78 billion, using a foreign loan of USD 160.2 million.

15. PDCA under Hubei Provincial RRB (hereinafter, the Hubei PPMO) is a department-level public institution established in 1992. It has 14 employees and 4 departments (general department, monitoring department, foreign capital department and children department). The foreign capital department is responsible for the E&S management of foreign financed projects, including the PforR. Since its cooperation with International Finance Corporation in 1981, Hubei has implemented more than 110 foreign loaned and grant projects, with total loans exceeding USD 6.5 billion. During the 13th Five-Year Plan period, 26 foreign-funded projects were implemented in the province, including 12 projects in the fields of ecological protection, pollution prevention and control, and low-carbon cycle development, etc. with a loan of about USD 1.54 billion. Among which, the Hubei Safe, Sustainable, Smart Agriculture Project won the SD-VPU Award, which include activities similar to those under the PforR. At present, Hubei Province is also actively preparing the Yangtze River Protection and Ecological Restoration Program for Results Phase 2 (P178338).

16. According to field visits to past projects, the two provinces have rich experience and good track record in E&S management and monitoring in accordance with the standards of the World Bank, and their E&S management performance is satisfactory so far. In addition to the two PPMOs, other relevant provincial, municipal and county-level competent departments have also set up specialized personnel to coordinate and manage the E&S issues of the PforR. During the survey in the two provinces and sampled project counties, it's confirmed by the PPMOs and project counties that full-time personnel will be assigned to be responsible for E&S monitoring and management during the project implementation. **Chapter 8** of this ESSA discusses the organization, staffing, and responsibilities of the PPMOs and PIUs. The E&S risks induced by the downstream activities and facilities of the PforR shall be managed by the relevant government departments in accordance with the corresponding E&S laws and regulations, for example, formulating policies and standards, introducing instructions and guidelines, and supervision. Chapter 4 and section 3 of Chapter 5 of the ESSA discusses the institutional arrangements at different levels in detail. On the other hand, Specific E&S management measures for the E&S sensitive points related to PforR activities have been developed by PIUs and enterprises. In addition, government departments and PIUs can also get external support in terms of training, technology, and personnel to strengthen their capacity when needed.

3. E&S Impact Assessment

3.1 E&S Exclusion

17. **Purpose:** During the ESSA preparation, the Bank's core principles and requirements on E&S screening have been fully considered, and screening has been conducted on the government program activities to (i) identify and exclude activities with significant E&S risks/impacts; and (ii) define the scope of activities to carry out ESSA.

18. **Exclusion criteria:** Under the Bank PforR Policy, activities that are “judged to be likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people are not eligible for financing and are excluded from the Program.” More specifically, following criteria are applicable to exclude activities with significant E&S impacts:

- Significant conversion or degradation of critical natural habitats or critical cultural heritage sites.
- Air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems.
- Workplace conditions that expose workers to significant risks to health and personal safety.
- Land acquisition and/or resettlement of a scale or nature that will have significant adverse impacts on affected people or the use of forced evictions.
- Large-scale changes in land use or access to land and/or natural resources (e.g., ecological resettlement).
- Adverse E&S impacts covering large geographic areas, including transboundary impacts, or global impacts such as GHG emissions.
- Significant cumulative, induced, or indirect impacts.
- Activities that involve the use of forced or child labor.
- Marginalization of, discrimination against, or conflict within or among social (including ethnic and racial) groups.
- Activities that would (a) have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation; (b) cause relocation of ethnic minority groups from land and natural resources that are subject to traditional ownership or under customary use or occupation; or (c) have significant impacts on ethnic minority cultural heritage.

19. **Excluded activities:** Following activities are excluded from the PforR based on the above-mentioned criteria:

- activities that are classified as domestic Category A (EIA Report category) projects.
- activities that would be conducted in environmentally sensitive areas including the legally established protected areas and the regions sensitive to environmental impacts as defined in China's *Construction Project EIA Classification Catalogue*.
- activities that would be conducted in areas with significant legacy pollution.
- construction, upgrading, relocation, or shutdown of livestock/poultry farms.
- construction, upgrading, or expansion of domestic solid waste treatment facilities such as incineration plants and landfill sites.
- activities that would involve large-scale land acquisition.
- activities that would involve acquisition of basic farmland.
- activities that would involve returning lake/river by requisition of water/land/fishing materials, or returning forests by requisition of farmland, etc.

3.2 E&S Assessment Scope

20. **Physical activities under the PforR:** After excluding the above-mentioned activities, the main physical activities that the PforR will support include: (i) pesticide reduction; (ii) chemical fertilizer reduction; (iii) livestock and poultry manure treatment and utilization; (iv) aquaculture tailwater treatment; (v) rural domestic wastewater collection and treatment; (vi) rural domestic solid waste collection and transfer; (vii) managing acidic soil and heavy metal polluted farmland and returning straw to farmland to improve soil quality, etc. These physical works would produce certain direct and/or indirect E&S impacts in construction and operation stages.

21. **TA activities under the PforR:** Policy study, training, capacity building, and other TA activities will also be supported by the PforR. The TA activities at national level include: (i) developing national IT-based platform for mapping and M&E of delivery of rural infrastructure and public services; and (ii) developing national methodologies for MRV for GHG emissions reduction from main agriculture sector sources. The TA activities at provincial level include: (i) developing regulations, standards, and guidelines for GAP, and delivery of rural infrastructure and public services; (ii) developing mechanisms for program-based budgeting, expenditure tracking and reporting; (iii) implementing the IT-based platform for mapping and M&E of the delivery of rural infrastructure and public services; (iv) establishing frameworks for nurturing green skills and talents; (v) training FCs, FAs, WUAs, input suppliers, agro-enterprises, and rural extension staff; (vi) implementing the MRVs for GHG emissions reduction from major agriculture sector sources; (vii) preparing IVDPs; (viii) providing training on (O&M) of wastewater and solid waste management systems; and (ix) preparing sustainable agricultural ecosystems management plans, etc. Implementation of the TA activities would have minimal or no direct adverse E&S impacts, but the outputs of some TA activities may induce indirect downstream E&S effects.

22. **Associated/linked facilities/activities:** The PforR will not involve any Associated Activity defined by the Bank ESF policies. As per the Bank's PforR ESSA Guidance, associated (or linked) activities refer to activities that would be required to meet the PforR objectives but that are not explicitly defined as PforR activities or included in the expenditure framework. Based on the E&S due diligence review, it's identified that some of the PforR activities will link to downstream facilities/activities: (i) WWTF sludge will be delivered to farmland as fertilizer; (ii) Collected domestic solid waste will be transported to existing sanitary landfills or incineration power plants for disposal. (iii) Composted livestock/poultry manure will be applied on farmland or woodland as fertilizers or sold as raw materials to produce commercial organic fertilizers. These linked facilities/activities will have some indirect E&S impacts.

3.3 E&S Benefits

23. The PforR will have obvious positive E&S benefits for Hubei and Hunan through pesticide and fertilizer reduction, rural domestic wastewater and solid waste management, livestock/poultry manure treatment and utilization, aquaculture tailwater treatment, polluted farmland restoration, etc. These will be achieved by reducing pollution to soil, surface water, and groundwater, rehabilitating ecological environment, enhancing agro-products safety and quality, and improving rural living environment, etc.

3.4 E&S Impacts

24. The PforR activities will also generate certain negative E&S impacts for which a general description is provided in the following sections while the E&S impacts of typical PforR activities are given in **Appendix 2**. Specific E&S impacts of each investment activity will be assessed in the corresponding E&S instruments such as Environmental Impact Assessment (EIA) and Social Stability Risk Assessment (SSRA) during the PforR implementation.

Direct impacts

25. Construction, operation, or implementation of various physical activities under the PforR will have different degrees of direct E&S impacts.

26. Major environmental impacts:

- **Environmental pollution:** (i) **In construction:** Dust, noise, wastewater, and solid waste and residues will be generated, but they are usually temporary, short-term, small-scale, and site-specific and can be properly managed by applying good techniques and construction practices and disappear right after the construction is completed. (ii) **In operation:** Odor, untreated effluent, and sludge would be generated at village/township WWTFs. Odor and leachate would be produced at domestic solid waste collection and transfer facilities. Inadequate treatment or improper use of livestock/poultry manure might produce odor, wastewater, and biogas residue and slurry. Untreated effluent might be discharged from aquaculture tailwater treatment facilities. (iii) **In crop farming:** Improper application of chemical fertilizer might cause NPS pollution especially eutrophication, and improper use of pesticide might pollute the environment, influence food safety, and threaten human health.

(iv) **In farmland restoration:** Application of unqualified heavy metal deactivators or organic fertilizers that contain excessive heavy metals may cause secondary pollution to soil, improper disposal of polluted straw may pollute soil and threaten food safety, and improper management of polluted rice may let them enter the market and threaten human health, etc. These impacts are normally predictable, can be avoided or mitigated using known and demonstrated techniques and/or management measures, and are unlikely to cause significant environmental risks.

- **Ecological impacts:** (i) **In design:** The PforR activities will take place in built-up areas or agricultural farming areas that have been disturbed by human activities and dominated by modified ecosystems. The environmental exclusion of this ESSA has excluded the activities that might affect critical or natural habits from the PforR scope. In addition, the EIA process of each specific physical project under the PforR will strictly follow the national ecological redline mechanism and project siting will be subject to approval by relevant government authorities. Accordingly, site selection of the PforR activities is unlikely to cause significant implication on critical or natural habitats or ecosystems. (ii) **In construction:** Construction activities would only disturb vegetation at construction sites or cause some site-specific soil erosion, which can be avoided or mitigated using known and demonstrated techniques and/or management measures and get restored right after the construction is completed. (iii) **In operation:** Operation of physical facilities under the PforR are unlikely to have adverse impacts on natural ecosystems; instead, they will improve ecological quality.
- **Health and safety risks:** (1) **In construction:** There are potential risks to health and safety in excavation, high-altitude working, and driving machinery and vehicles, etc. (2) **In operation:** Risks such as odor from livestock/poultry manure treatment and domestic solid waste collection and transfer, and dead animals from livestock/poultry farms would potentially threaten the public and workers' health. (iii) **In crop farming:** Pesticides would have risks to the public and farmers' health if they are not managed well. (iv) **In farmland restoration:** Dust generated in lime application will have impacts on workers' health.

27. **Major social impacts:** Through screening and analysis of the activities in the provincial plans and consistent with the PforR priority areas, and maybe able to include into the PforR boundary, those with potential high social risks have been excluded from the PforR boundary. Meanwhile, referring to the experience of local projects during implementation and implemented, it is considered that the rural roads that exceed the demand of agricultural production and aim for traffic may involve large-scale and uncontrollable LAR, and the large-scale of land uses are hard to be approved sometimes, so they are risky, and should be excluded from the PforR scope, but field roads involve limited land occupation and easy to be management with existing land use management mechanism, so they are limited risks, and may be included in the PforR scope; farmland conversion into woodland and returning lake/river by requisition of water/land/fishing materials should also be excluded because they normally involve many households, profound impact to farmer's livelihood, large amount of compensation, multi-authority coordination, and great uncertainty in the project implementation. Other activities have minor social risks, such as small-scale land use, limited livelihood impacts, or OHS and community safety management at the construction or operation stage. Some activities such as pesticide and fertilizer reduction, straw reuse and organic fertilizer use involve daily behavior changes which may involve slight impacts and can be managed effectively through existing social management system. Different types of social impacts are analyzed as follows:

- **Labor impacts:** Such risks include protection of the rights and interests of the workers of contractors and agencies of associated facilities, living environment risks in working sites, camps and living areas, risks of disturbance to nearby communities, workers' occupational health and safety risks, etc. the health and safety of workers and related staff may be endangered during the purchase, application, storage and disposal of pesticides for agricultural production. In addition, child labor could be a risk given the activities are in the agriculture sector.
- **Community impacts:** The site selection of associated facilities (e.g., manure recycling

facilities) may lead to NIMBY¹ risks, such as impacts on the living environment and property value of community residents, diseases brought by external workers, and potential environmental, traffic and safety issues during construction and operation.

- **Land use and involuntary resettlement:** During the preparation of this report, the E&S team conducted risk screening for activities that may be included in the PforR scope in the provincial green agriculture and rural revitalization plans and excluded those with potential high risks in terms of involuntary resettlement from the PforR scope. Remaining activities that may involve land occupation include: 1) integrated straw utilization facilities with land use around 20mu for each; 2) manure disposal and utilization facilities with around 10mu on the existing poultry and livestock farms; 3) village WWTFs with about 100 to 400m² for each as well as some underground connection pipeline with temporary land occupation ; 4) rural domestic waste collection and transfer with about 2mu of land acquisition for each; 5) access roads for the fields and agricultural facilities that are restricted on existing road bases; and 6) cold chain storage facilities with land use around 10mu. Land use for these activities is not big in scale, and the risks can be controlled to the low level through the existing domestic management systems in terms of involuntary resettlement. And, some use land will be reached in voluntary basis, e.g., negotiation with the current land users by lease, etc., and the overall risks will be much slighter than involuntary resettlement.
- **Livelihood impacts:** Although small-scale land use has limited livelihood impacts, they should still be identified and managed. Pesticide and fertilizer reduction, straw reuse, organic fertilizer use, etc. involve daily behavior changes that may just have slight impacts, but they need to be managed by policy support, training, etc.
- **Impacts on ethnic minorities:** Although the minority policies in place on the state, provincial and county levels, which ensures it will not exclude ethnic minorities from the beneficiary population based on their special history, cultures and traditions; and in Guangxi and Guizhou, there are even offering much more preferential financial and policy support for minority areas in certain projects as compared to other regions, it is considered meaningful consultation with minority residents should be carried out when it is in design, construction and maintenance, so as to avoid or reduce negative impacts on them, and respect their cultures and customs.

Indirect/Induced impacts

28. E&S impacts of the linked facilities/activities and the TA activities are indirect or induced impacts so fall within the scope of the ESSA.

29. **E&S impacts of linked facilities/activities:** In August 2022, the ESSA team conducted site visits and due diligence to some sample linked facilities (e.g., sanitary landfills and incineration plants) in Xiaotao and Suixian of Hubei and Lixian and Hengnan of Hunan. Accordingly, the ESSA team conducted E&S risk screening and rating for these linked facilities/activities (**Table 3-1**). The due diligence investigation reveals that the domestic E&S management systems for these associated facilities/activities are well-established and can properly manage the E&S impacts of these facilities/activities, and the overall E&S risks are controllable.

Table 3-1: E&S Screening for Linked Facilities/Activities

Linked facilities/activities	E&S impacts and management	E&S risk rating
Collected domestic solid waste will be delivered to existing sanitary landfills or incineration power plants for disposal.	The existing sanitary landfills or incineration power plants had involved land acquisition around 50 to 100 mu; and some labors were involved during the construction and around 15 labors are involved during the operation. The nature and scale of these facilities determines that they usually generate various pollutants such as leachate, biogas, and odor which will have large negative impacts on the environment if there are no proper management measures implemented.	The general E&S risk is Moderate to Substantial.

¹ NIMBY: Not-In-My-Back-Yard, means that people or units concern about the potential negative impacts to their health, quality of living environment or assets value due to site selection of a particular construction project, e.g. landfill of solid waste, WWTP, and therefore, resent to the project or the proposal of the project.

Linked facilities/activities	E&S impacts and management	E&S risk rating
	China has sound regulations, policies, standards, and guidelines on managing the E&S impacts of these facilities/activities. The visited sanitary landfills and incineration power plants have fulfilled their E&S management duties in terms of EIA, SIA, environmental acceptance check for construction completion, pollutant discharge permitting, pollutant monitoring, etc. The related leachate, odor, landfill gas, incineration emissions, fly ash and other pollutants have been properly managed and monitored under strict supervision of local government authorities such as HURDBs and EEBs, etc.	
Sludge from small-scale WWTFs and a part of composted livestock/ poultry manure will be applied onto farmland or woodland as fertilizer.	Crop farmer will calculate their farmland's capacity of taking the composted manure and the WWTFs sludge in accordance with relevant technical guidelines when receiving them as organic fertilizer. The agreement between the two parties will have to be submitted to local ARAB for registration. This helps prevent excessive use of organic fertilizer in farmland.	The general E&S risk is Moderate.
Another part of composted livestock/poultry manure will be taken by existing organic fertilizer factories as raw materials to produce commercial organic fertilizer that is sold through mature market mechanism.	The existing organic fertilizer factories had involved land acquisition around 10 to 30 mu; and some labors were involved during the construction and around 5 labors are involved during the operation. The nature of these facilities determines that they usually generate various pollutants such as wastewater, biogas, and odor which will have certain negative impacts on the environment if there are no proper management measures implemented. China has regulations, policies, and guidelines on managing the E&S impacts of these factories. The visited organic fertilizer factory has fulfilled their duties in EIA, SIA, environmental check for completion acceptance, pollutant discharge permitting, etc. The related wastewater, odor, and other pollutants have been properly managed. The produced organic fertilizer products cannot enter the market until they pass the quality assurance inspection and obtain certification from ARABs.	The general E&S risk is Moderate.

30. **E&S impacts of TA activities:** The TA activities (e.g., development of regulations and standards, establishment of mechanisms for program budgeting and expenditure tracking, nurturing green skills and talents in rural areas, and providing training on O&M of domestic wastewater and solid waste facilities, etc.) will improve PMOs and PIUs' capacity, raise public environmental awareness, upgrade rural living environment, and improve rural residents' health. Except that the TA activities will involve some labor issues and cross-sector coordination, the implementation will have minimal or no direct adverse E&S impacts. However, once the outputs of some TA activities (e.g., preparation of green agriculture regulations, guidelines, and standards) become effective, they may trigger downstream investments (e.g., green crop planting and livestock farming), which might induce indirect E&S impacts (see Error! Reference source not found.). In general, the TA activities under the PforR are not likely to create high downstream E&S risks but it is required that (i) the TORs for the TA activities should clearly state the requirements of carrying out E&S assessment and stakeholder engagement during the TA implementation; (ii) stakeholder engagement should be conducted during the TA implementation; and (iii) E&S impacts assessment should be included in the TA outputs with mitigation measures recommended.

Cumulative E&S effects

31. During the implementation, different types of activities under the PforR (including physical works such as rural domestic wastewater collection and treatment, rural domestic solid waste collection and transfer, and livestock/poultry manure treatment and utilization, and TA activities such as development of regulations and guidelines on green agriculture development), other investments under the Hunan and Hubei government programs (such as high-level farmland construction, rural living environment improvement, rural infrastructure upgrading, etc.), and other related projects in the region (such as the World Bank Yangtze River Protection and Ecological Restoration PforR Phase 2 (P178338), the World Bank Hunan Integrated Management of Agricultural Land Pollution

Project, etc.) may be implemented simultaneously or alternately with each other. This might cause certain synergistic effects or cumulative impacts on the natural or social environment of a larger region of Hunan and Hubei provinces. However, firstly, the land use for these activities or projects, must follow local land use master plans, which can ensure that the time-specific land use must be managed as required and not be carried out disorderly. Secondly, these activities/projects will be carried out in different cities or counties, so it is unlikely to have many development and construction activities going on at the same time in the same place, and their site-specific E&S impacts are unlikely to become significantly cumulative (e.g., synergistic dust, noise, wastewater, solid waste, vegetation disturbance, interference of migrant workers to local communities, price changes, etc.). Thirdly, based on the PforR nature and the E&S exclusion criteria, the PforR activities will not be carried out in environmental or social sensitive areas; instead, the PforR activities are all small-scale works for the purpose of protecting the environment and will not add regional-level negative cumulative E&S impacts. Finally, together with the two provincial government program activities and other relevant projects as mentioned above, the PforR will generate cumulative net benefits by reducing pollutants discharge, improving agricultural and rural environment, and accelerating social and economic development in Hunan and Hubei, which is reflected in the following aspects:

- **Reduce regional pollution through improved wastewater management:** The village WWTFs and sewerages to be implemented under the PforR and other township or urban wastewater management projects to be implemented by local governments will jointly and largely prevent pollutants from entering surface-water bodies. They can usually realize a COD reduction of 70–95%, an ammonia nitrogen reduction of 80–97%, a total phosphorus reduction of 50–90%, and a total nitrogen reduction of 70–90%. Operating all of the wastewater management activities in the two provinces will have significant cumulative benefits in pollution reduction.
- **Reduce regional pollution through improved livestock and poultry manure treatment and aquaculture tailwater management:** Livestock and poultry manure treatment and utilization will reduce the pollutant discharge from livestock and poultry farms. The manure treatment systems can usually realize a COD reduction of 40–95%, a BOD₅ reduction of 60–96%, a coliform reduction of 70–97%, and a total phosphorus reduction of 50–95%. Once the manure is applied to land as organic fertilizer, a greater reduction in pollutant discharge can be achieved. In addition, based on some domestic research results², typical ecological systems for aquaculture tailwater treatment can usually realize a COD reduction of 65–93%, a total phosphorus reduction of 31–87%, and a total nitrogen reduction of 31–86%. Under the two provinces' government programs and the PforR, multiple systems for managing livestock and poultry manure and aquaculture tailwater will work together to generate significant E&S benefits such as NPS pollution reduction, water and soil quality improvement, agro products quality upgrading, community health enhancement, etc.
- **Promote regional green agricultural and rural development through various similar World Bank projects:** The World Bank projects implemented in the two provinces (such as Guangxi Poverty Alleviation PforR, Guizhou Rural Development Project, and China Poor Area Industry Poverty Alleviation Pilot Demonstration Project) have similar activities to those under this PforR applying similar E&S management mechanisms. These projects will have synergic effects in the regions, leading to further NPS reduction, polluted farmland restoration, green agriculture development, and rural revitalization, and promoting broader agroecosystem conservation and rural living environmental improvement.
- **Strengthen management capacity on green agricultural and rural development:** Combined with other World Bank projects implemented in the region, the activities of policy development and training under the PforR will further enhance the institutional organization, improve the regulatory system, and strengthen the management capability on green agricultural development and rural revitalization, thereby generating long-term benefits.

3.5 E&S Risk Rating

32. The E&S risks of the PforR activities have been rated applying four criteria: (1) likely E&S

² Yuqin Wang et al., 2022. [Online]. Aquaculture Wastewater Pollution and Purification Technology in China, [Accessed on 23 October 2022]. Available from: <https://www.fx361.com/page/2022/0507/10294824.shtml>

effects, (2) E&S contextual risks, (3) institutional capacity and complexity risks, and (4) political and reputational risks. The analysis concludes that these activities have different levels of E&S risk. A few that have potentially high risks have been excluded from the PforR, whereas others have substantial, moderate, or low risks that can be mitigated through proper E&S management measures. The following sections provide a general E&S risk rating, and the details are shown in Error! Reference source not found..

Likely E&S effects

33. Based on the PDO of the PforR and the above assessment of the E&S benefits and impacts, it's understood that the ecological restoration and pollution reduction activities under the PforR will generate E&S benefits including reduced pollutants discharge, improved soil quality and water environment, improved agricultural ecosystems, upgraded rural living conditions, etc. However, the large varieties of the PforR activities will have diverse adverse E&S impacts covering 23 demonstration counties/cities of the two provinces during the implementation, although the adverse E&S impacts are predictable and can be avoided or mitigated by applying known and demonstrated techniques and management measures under the domestic E&S management systems.

34. Therefore, the overall rating of the likely E&S effects is **Substantial**.

E&S contextual risks

35. Except that policy development and other TA activities may cover a larger region, all physical activities under the PforR will be conducted in rural areas. Regular operation and maintenance of the physical facilities and implementation of farming practices under the PforR will take place in or close to existing townships or villages instead of natural or critical habitats. Considering China's strict management mechanisms about nature reserves and ecological protection redlines and the environmental exclusion principles under this ESSA, the PforR activities are unlikely to take place in environmental sensitive areas. Though agricultural pollution caused by pesticide, chemical fertilizer, livestock and poultry waste, aquaculture, and heavy metal is still widespread in rural areas of the two provinces, local governments have been making efforts to manage the issues. In addition, activities that would be conducted in areas with significant legacy pollution (e.g., industrial or mining pollution) are also excluded from the PforR. To sum up, the environmental context risk is deemed Moderate.

36. Livestock and poultry manure treatment and utilization facilities are located in existing farms with no need of additional land acquisition, and most of them are small in scale so don't need a transfer from agricultural land to construction land. On the other hand, Hubei and Hunan have established sound systems in terms of relevant laws and regulations, and approval and supervision procedures, to manage different patterns of land use. Under the projects completed in the past, different patterns of land use have been well handled by the demonstration counties/cities. Land use policies and procedures have been open to all related parties including land users, farmers, village collectives, and local governments who have had a good understanding of the policies and procedures. Some activities will be implemented in ethnic minority areas, but an analysis of secondary data shows that these areas are not characterized by socio-economic disadvantage. Residents and government departments have conducted propaganda widely on domestic solid waste classification and NPS pollution control, however there is still no effective guidance on practical implementation. These issues will be addressed through implementing the activities such as training to farmers, upgrading of facilities, and improvement of management and monitoring, etc. Therefore, the social contextual risk of the PforR is moderate.

37. Therefore, the overall rating of the E&S contextual risks is **Moderate**.

Institutional capacity and complexity risks

38. The E&S risks/impacts management will involve a variety of government authorities, such as development and reform commission (DRCs), finance bureaus (FBs), agriculture and rural affairs bureaus (ARABs), rural revitalization bureaus (RRBs), ecology and environment bureaus (EEBs), housing and urban-rural development bureaus (HURDBs), urban management bureaus (UMBs), natural resources bureaus (NRBs), human resources and social security bureaus (HRSSBs), water resources bureaus (WRBs), forest and grass bureaus (FGBs), emergency management bureaus (EMBs), health commissions (HCs), culture and tourism bureaus (CTBs), civil affairs bureaus (CABs),

women's federation, etc. These authorities perform regular E&S management as per national/local laws and regulations with sufficient institutional organization, staffing, and budgets, and they will fulfill their responsibilities for implementing the PforR and managing the related E&S issues under the guidance of national and provincial governments and the coordination of the PPMOs. The PforR activities are widespread in the two provinces covering different regions and numerous sectors, so strong coordination and cooperation among the related authorities are necessary to well manage the activities and the associated E&S impacts. Any of the authorities failing in sufficient coordination and cooperation, especially in joint management of manure, wastewater, tailwater, and polluted farmland, would make the PforR and E&S management systems unable to operate effectively.

39. Therefore, the overall rating of the institutional capacity and complexity risks is **Substantial**.

Political and reputational risks

40. The PforR will help promote green agricultural development, reduce environmental pollution, protect ecological systems, improve rural living environment, and increase farmers living standards. The objectives of the PforR are consistent with national and local policies and plans with high political security. Local people will largely benefit from the PforR and will make efforts to support it. There will be minimal or no political risk to the PforR, which has been demonstrated by a variety of similar projects that were implemented in the past.

41. Therefore, the overall rating of the political and reputational risks is **Low**.

42. As a conclusion, the overall rating of the E&S risks associated with the PforR is **Substantial**.

4. Environmental Management System Assessment

4.1 General Principles

43. The Bank's PforR ESSA Guidance provides six core principles for E&S system assessment, of which the first three are associated with environmental management systems (EMSs):

Core Principle #1 is about environmental assessment and management. Program EMSs are designed to promote environmental sustainability in the program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to a program's environmental effects (social impact assessment and management will be described in Chapter 5).

Core Principle #2 is about natural habitat protection. Program EMSs are designed to avoid, minimize, or mitigate adverse impacts on natural habitats resulting from the program (physical cultural heritage protection will be described in Chapter 5).

Core Principle #3 is about health and safety management. Program EMSs are designed to protect public and worker safety against the potential risks associated with exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the program (other items on health and safety will be described in Chapter 5).

44. China has substantially sound EMSs to respond to the Bank's principles. Since the "Environmental Protection Law" became effective in 1979, China has been building up a legal framework for environmental protection and pollution control. This framework consists of more than 80 laws, 120 departmental bylaws, more than 1,000 technical guidelines and standards, and numerous local regulations. It is run under an institutional structure led by EEBs and assisted by multi-sectoral authorities. The "Environmental Protection Law" provides fundamental legislation for China's environmental protection and pollution control, stipulating basic requirements on environmental management in terms of ecological protection redlines³, ecology and biodiversity protection, EIA, "Three Simultaneousness"⁴, pollutant discharge permitting⁵, information disclosure, and public consultation, etc.

45. Following the Bank's core principles and China's environmental management requirements, the Bank's ESSA team classified the domestic EMSs that handle the environmental issues related to the PforR activities (e.g., pesticide reduction, chemical fertilizer reduction, rural domestic wastewater collection and treatment, rural domestic solid waste collection and transfer, livestock/poultry and aquaculture pollution control, degraded or polluted farmland restoration, etc.) into four groups: (i) EIA and follow-up management system, (ii) pollution control system, (iii) ecology protection system; and (iv) environmental safety and health management system. The legal and regulatory framework, management mechanism, institutional arrangement, and implementation performance for each system are reviewed, assessed, and compared with the Bank's core principles to identify any gaps to address during the PforR implementation. The EMSs that will serve the PforR activities are listed in **Table 4-1**.

Table 4-1: Domestic EMSs Applicable to the PforR

Bank core principles	Environmental impacts	Domestic EMSs	Responsible authorities
1. Environmental assessment and management	<ul style="list-style-type: none">• Construction: dust, noise, wastewater, and solid waste generated in construction of physical works.• Operation: odor, wastewater, biogas slurry and residue from livestock/ poultry manure treatment, and organic fertilizers and biogas production; aquaculture tailwater; odor, effluent, and sludge from rural WWTFs; and odor and leachate from rural domestic solid waste transfer stations; etc.	<ul style="list-style-type: none">• EIA and follow-up management system• Pollution control system (pesticide, chemical fertilizer, livestock manure, aquaculture)	<ul style="list-style-type: none">• EEBs• ARABs• HURDBs

³ China sets up ecological redlines in critical areas that have ecological significance, environmental sensitivity, or vulnerability to strengthen protection of these areas.

⁴ Three Simultaneousness mechanism: The pollution prevention and control facilities of a construction project must be designed simultaneously, constructed simultaneously, and put into operation simultaneously with the main components of the project.

⁵ Enterprises and public institutions subject to pollutant discharge permit management should discharge pollutants according to the pollutant discharge permit, and pollutant discharge is prohibited without qualified discharge permits.

Bank core principles	Environmental impacts	Domestic EMSs	Responsible authorities
	<ul style="list-style-type: none"> • Farming practice: NPS pollution from pesticide and fertilizer application • Polluted farmland restoration: polluted straw, rice, and other residues with high Cd 	tailwater, rural domestic wastewater, rural domestic solid waste, polluted farmland, etc.)	
2. Natural habitat protection	<ul style="list-style-type: none"> • Design: site selection might relate to local ecological protection redlines • Construction: disturbance to modified ecosystem; soil erosion, etc. • Operation: minimal or no impacts 	• Ecology protection system	<ul style="list-style-type: none"> • NRBs • FGBs • EEBs • WRBs
3. Health and safety management	<ul style="list-style-type: none"> • Construction: workers' health and safety risks • Operation: risks of odor from domestic solid waste transfer stations and livestock/poultry farms; risks of dead animals at livestock/poultry farms; risks of confined spaces; risks of toxic pesticides, etc. 	• Health and safety management system	<ul style="list-style-type: none"> • HCs • EMBs • EEBs • ARABs • HURDBs

4.2 EIA and Follow-up Management System

Legal framework

46. Based on the “Environmental Impact Assessment Law” and combined with a series of relevant regulations, standards and guidelines, China has established a comprehensive EIA and follow-up management system for construction projects, including EIA, “Three Simultaneousness”, environmental acceptance check for construction completion, pollutant discharge permitting, etc. This system is under development towards a project life-cycle environmental management for construction projects.

47. **Environmental Impact Assessment Law** (amended in 2018): It’s required that when preparing government programs/plans⁶ and construction projects, potential environmental impacts should be identified and assessed, mitigation measures should be recommended, and follow-up monitoring and supervision should be conducted. It also stipulates basic requirements on EIA classification, EIA approval hierarchy, and ban from construction without EIA approval, etc. Entities, experts, and individuals are encouraged to participate in public consultation on an EIA.

48. **Construction Project Environmental Protection Management Regulations** (2017 Amendment): It reinforces the requirements on EIA screening and classification, EIA approval hierarchy, “Three Simultaneousness”, and environmental check for construction completion, etc.

49. **Pollutant Discharge Permit Management Regulations** (2021): Enterprises, public institutions, and other entities that generate pollutants in their operations are not allowed to discharge pollutants into the environment unless they obtain a proper pollutant discharge permit.

50. **Measures of Public Consultation in EIA** (2018 Amendment): If a construction project or a government program is likely to have potential significant impacts on the environment, it is required to carry out public consultation during preparing EIA report.

51. **Construction Project EIA Follow-up Supervision Regulations** (trial, 2015): From EIA preparation till project commissioning, EEBs should oversee whether mitigation measures are implemented as per EIA instruments and approval documents. After the project becomes operational, EEBs should check whether relevant environmental regulations are complied with and whether post EIAs are conducted.

52. **Regulations on Environmental Acceptance Check for Construction Completion** (2017): The Project Implementation Unit (PIU) is responsible for undertaking environmental acceptance check for construction completion, preparing an investigation or monitoring report, and disclosing it to the public. The project is not allowed to start commissioning until proper mitigation

⁶ These refer to land use plans; regional, basin, and sea area construction and use plans; as well as special plans for industry, agriculture, stockbreeding, forestry, energy, water resources, traffic, urban construction, tourism, and natural resource development.

measures and pollution control facilities are put in place with a pollutant discharge permit obtained following relevant requirements. The project should not start formal operation until the mitigation measures and/or the pollution control facilities have passed the environmental acceptance check.

53. **Construction Project EIA Classification Catalogue** (2021): Criteria are given for classifying environmental impacts of 173 types of projects in 55 sectors into three levels (Class A - significant, Class B - moderate, and Class C - minor), based on project nature, project scale, and contextual environment.

54. **Fixed-Source Pollutant Discharge Permit Classification Catalogue** (2019): Criteria are given for classifying pollutant discharge permits of 112 types of operations into three categories (focus management, general management, and registration management), based on pollutant production, pollutant discharge, and impacts on the environment.

55. **Mechanism of Information Disclosure for Construction Project EIA** (2015): PIUs are required to disclose environmental information including EIA instruments and project progress (before, during and after the construction) throughout the project life cycle from site selection, construction, to operation. EEBs should disclose information about EIA instruments approval and supervision findings throughout the project life cycle.

56. **EIA Technical Guidelines**: China has developed more than 20 sets of EIA technical guidelines, including the General Guidelines and a series of specific guidelines on different environmental factors such as surface water, groundwater, soil, air, noise, and ecology and on different industries such as water engineering, hydropower, coal, pharmacy, and steel, etc. The General Guidelines provides fundamental guidance on EIA preparation in terms of alternatives analysis, positive and negative impact assessment, long-term and short-term impact assessment, direct and indirect impact assessment, cumulative impact assessment, mitigation measures, cost estimate, and environmental management and monitoring plans, etc.

57. **Pollutant Discharge Permit Application and Issuance Guidelines**: China has developed more than 70 guidelines on how to apply and issue pollutant discharge permits, including General Guidelines and a series of specific guidelines for important industries (e.g., non-ferrous metals, food processing, coal, pharmacy, steel, livestock and poultry farming, municipal sanitation, and water and wastewater treatment, etc.). The entities subject to the permits are required to submit pollutant discharge information, conduct pollutant monitoring, keep environmental management track records, and prepare implementation reports. The guidelines also recommend good technical practices on prevention and control of wastewater, waste gas, odor, and solid waste, etc.

58. **Guidance on Ecology and Environment Zoning Management under the "Three Lines and One List" Mechanism** (Trial, 2021): It requires that ecological functions be kept from degrading by applying ecological protection **redlines**; the environment be protected from deteriorating by holding the environmental quality **bottom lines**; natural resources be conserved by keeping the utilization **limit lines**; and construction or operation activities that are to be carried out in any ecology and environment zones follow the **lists** of environmental entry criteria to strengthen pollution control. The "Three Lines and One List" mechanism provides a strong fundament for implementing strategic EIAs, program EIAs, and project EIAs and a basis for other environmental work.

59. In addition, the central government and Hunan and Hubei governments have developed other regulations, guidelines, standards, and documents, such as the "14th FYP on EIA and Pollutant Discharge Permitting" (2022), the "Opinions on Strengthening Construction Project EIA Follow-up Supervision" (2018), the "Technical Guidelines on Environmental Monitoring" (2003), and the "14th FYP on Ecological Environment Monitoring" (2021), the "Hubei EIA Approval Hierarchy" (2019), the "Hubei Enhancement of Construction Project 'Three Simultaneousness' and Environmental Acceptance Check for Construction Completion" (2021), the "Hubei Interim Methods of Pollutant Discharge Permitting Management" (2018), the "Hubei Accelerating Ecology and Environment Zoning Management under the Three Lines and One List Mechanism" (2020), the "Hunan Construction Project EIA Approval Procedures" (2019), the "Hunan Strengthening Pollutant Discharge Permitting" (2015), the "Catalogue of Construction Projects Subject to Approval by Hunan Provincial Ecology and Environment Bureau" (2017), and the "Hunan Ecology and Environment Zoning Management under the Three Lines and One List Mechanism" (2020), etc. These documents

provide detailed procedures and requirements on project siting, EIA approval by EEBs at different levels, pollutant discharge permitting, and other related issues.

Implementation mechanism and procedures

60. **Environmental impact screening and classification:** China has established a detailed and comprehensive catalogue for screening environmental impacts and classifying EIA processes proportional to project nature, location, scale, environmental context, etc. Environmental impacts of construction projects are classified into three levels, namely Class A - significant impacts, Class B - moderate impacts, and Class C - minor impacts. Correspondingly, the EIA instruments are divided into three categories, namely EIA report (Class A), EIA form (Class B), and EIA registration (Class C). With the environmental exclusion, the PforR will not include any Class A projects; then the physical works to be supported by the PforR such as rural WWTFs, rural domestic solid waste transfer stations, livestock/poultry manure treatment and utilization facilities, and aquaculture tailwater treatment will be subject to EIA form or EIA registration (as indicated in **Table 4-2**); while other physical activities such as chemical fertilizer and pesticide reduction and straw collection would not involve EIA process due to the minor impacts on the environment. This section only gives an initial analysis of EIA classification related to the PforR activities and specific types of EIA instruments applicable to each project will be determined by local EEBs during the PforR implementation.

Table 4-2: EIA Classification for the Key Physical Activities under the PforR

PforR activities	Sectors	EIA Categories		
		Category A: EIA report	Category B: EIA form	Category C: EIA registration
Rural WWTFs	Wastewater treatment and recycling	Construction or expansion of WWTFs with a capacity of 100,000 t/d and above	Construction or expansion of WWTFs with a capacity of 500 t/d and above but less than 100,000 t/d	Others (except for upgrading of WWTFs, recycling of septic tank effluent, and building of settlement tanks)
Rural domestic wastewater collection systems	Urban and township pipe networks	None	Construction of new pipelines in environmental sensitive areas	Others
Aquaculture tailwater treatment	Other wastewater treatment	None	All	None
Livestock/poultry manure used as organic fertilizers	Fertilizers production	Production of chemical fertilizers (N, P, or compound fertilizers) by chemical methods	Others	None
Rural domestic solid waste transfer	Domestic solid waste transfer stations	None	Construction of transfer stations with capacity of 150 t/d and above	None

61. **EIA preparation:** PIUs are responsible for the quality and conclusions of EIA instruments for their projects, and the agencies engaged to prepare the EIAs also have certain responsibilities. Under the national EIA engineer qualification system, chief technical personnel that are in charge of preparing EIA instruments must be certified EIA engineers who have passed the national exam and gotten related certifications.

62. **EIA technical review:** In principle, EIA instruments should go through a technical review before approval. Technical review of EIA report for a Class A project is usually undertaken by a panel of at least 3 independent experts who will be randomly selected from EEBs' expert database. EIA forms for Class B projects can be reviewed by either an expert panel or by staff of EEBs.

63. **EIA approval:** EIA report and EIA form should be submitted to competent EEBs for approval, while a simple EIA registration can be done online by PIUs themselves. EIA instruments (reports and forms) are approved by EEBs at different levels proportional to nature and scale of the corresponding projects, magnitude of the environmental impacts, and sensitivity of the environmental context, etc.

64. **Public consultation and information disclosure:** In EIA process, PIUs (or under the assistance of EIA agencies) should carry out public consultation as required or needed, generally through interviews, meetings, questionnaires, etc. The PforR doesn't include Class A projects that are subject to mandatory public consultation; while for Class B projects, public consultation is not compulsory, but local EEBs would usually suggest the PIUs to conduct proper public consultation if the projects are possible to have potential impacts on adjacent people (e.g., manure treatment facilities generate odor that would influence residents nearby). In addition, it's legally required that EIA instruments and approval comments be disclosed to the public for all construction projects.

65. **Environmental 'Three Simultaneousness':** Design, construction, and operation of a pollution control facility that is to support a construction project must be carried out simultaneously with the project main parts. The project design report must include a specific chapter to specify mitigation measures, pollution control facilities, and necessary cost estimates. To ensure the pollution control facilities be built properly as designed, the PIU is responsible for including the physical works of pollution control facilities into civil contracts and ensuring construction/installing schedule and budget to be sufficient. The PIU is also responsible for implementing other mitigation measures that are recommended in the EIA instruments and approval documents. The project is not allowed to start operation until all pollution control facilities and mitigation measures have passed the environmental acceptance check for construction completion.

66. **Environmental management in construction:** PIUs are responsible for implementing proper measures to mitigate environmental impacts during construction. As per China's "Standard Construction Bidding Regulations", a bidding document should include an environmental protection chapter to include the mitigation measures that are recommended in the approved EIA instruments. A standard civil work contract will also include an environmental protection chapter to clarify the contractor's duties on environmental management such as implementing the mitigation measures. After the contract is signed, the contractor should develop construction implementation programs which should include environmental management plans that are reviewed and agreed upon by the PIU and supervision engineer prior to construction commissioning. During construction, the PIU and supervision engineer will oversee the implementation of the environmental management plans.

67. **Environmental acceptance checks for construction completion:** When construction of a project is completed, the PIU (or under the assistance of qualified agencies) should carry out a specific check for environmental acceptance, by undertaking tests/investigations, preparing an environmental check report, and seeking relevant experts' comments. The PIU should disclose the environmental check report within 5 working days once the report is completed and keep it open to the public for at least 20 working days. Within 5 working days after the disclosure, the PIU should log into the national platform for environmental check to upload the project description, the review comments on the environmental check, and other basic information etc. This information will be disclosed to the public by EEBs who will supervise the procedures of the environmental check.

68. **EIA Follow-up supervision:** The follow-up supervision **during EIA** is to check whether EEBs have justly fulfilled their duties in EIA approval, whether technical review agencies have provided rational review comments on the EIA, whether EIA agencies have done accurate EIA based on true data and in a reliable way, and whether PIUs have gone through proper EIA procedures and conducting public consultation as required. The follow-up supervision **after EIA** is to check whether EEBs have fulfilled their duties in "Three Simultaneousness" supervision and whether PIUs have implemented the "Three Simultaneousness" and other environmental management measures as required in the stages of design, construction, environmental acceptance check, and operation.

69. **Pollutant discharge permitting:** Entities that are to discharge pollutants to the environment are classified to three categories based on the quantity of pollutant production and discharge and the potential impacts on the environment: (i) an entity with a large amount of pollutant production or discharge or substantial environmental impacts is subject to focus management; and (ii) an entity with a medium level of pollutant production and discharge and moderate environmental impacts is subject to general management; and (iii) an entity with minimal pollutant production and little environmental impacts is subject to online registration instead of permitting. Any entity that is subject to pollutant discharge permitting should strictly follow the permit requirements when discharging pollutants, conduct monitoring of the effluents/emissions, establish environmental management and monitoring records and archives, and submit regular reports to EEBs. Entities

under focus management must install and maintain automatic monitoring devices and connect them with the EEBs' online systems. The indicative pollutant discharge permitting classification for the PforR activities such as rural wastewater treatment, domestic solid waste transfer, and livestock/poultry manure treatment and utilization (organic fertilizer production), etc. is shown in **Table 4-3**; while other activities may not be subject to the permitting requirements. This section only gives an initial analysis on permitting classification, and specific types of permits that are applicable to the PforR activities will be determined by local EEBs during implementation.

70. **Pollutant discharge permitting:** Taking into consideration the pollutant production, pollutant discharge, and impacts on the environment, the permitting is managed by following categories: (1) an entity with a large amount of pollutant production or discharge or substantial environmental impacts is subject to focus management; and (2) an entity with a medium level of pollutant production and discharge and moderate environmental impacts is subject to general management; and (3) an entity with minimal pollutant production and discharge and little environmental impacts is subject to registration management and discharge permitting exemption but should get registered online. All entities that are subject to pollutant discharge permitting should discharge pollutants in line with the permits, conduct monitoring of the effluents/emissions, establish environmental management and monitoring records and archives, and submit regular reports to EEBs. Entities under focus management must install and maintain automatic monitoring devices and connect them with the EEBs' online systems. The indicative pollutant discharge permitting classification for the key PforR activities such as rural WWTFs, rural domestic solid waste transfer, and livestock/poultry manure utilization (organic fertilizer manufacturing), and aquaculture tailwater treatment, is shown in **Table 4-3**; while other activities will not be required to follow the permitting mechanism. However, specific permits applicable to the PforR activities will be determined by local EEBs during implementation.

Table 4-3: Pollutant Discharge Permitting Classification for Key PforR Activities

PforR activities	Sectors	Categories of Pollutant Discharge Permit		
		Category A: focus management	Category B: general management	Category C: registration management
Livestock/poultry manure treatment and utilization	Fertilizer production	Production of nitrogen fertilizers, phosphorus fertilizers, or compound fertilizers (excluding mixing or sub-packaging)	Production of potassium fertilizers, organic fertilizers, microbial fertilizers, or other fertilizers (excluding mere mixing or sub-package process); mixing or sub-packaging of nitrogen fertilizers	Others
Rural WWTFs	Wastewater treatment and recycling	Centralized industrial wastewater treatment; or domestic WWTFs ($\geq 20,000$ t/d)	Domestic WWTFs (≥ 500 t/d and $< 20,000$ t/d)	Domestic WWTFs (< 500 t/d)
Domestic solid waste transfer	Sanitation	Incineration or landfill facilities for disposing domestic solid waste and sludge from WWTFs, etc.	Other facilities for disposing of domestic solid waste and WWTFs sludge; or domestic solid waste transfer stations (≥ 150 t/d), etc.	Domestic solid waste transfer stations (< 150 t/d), etc.
Aquaculture tailwater treatment	Other wastewater treatment	Treatment processes that are subject to focus management	Treatment processes that are subject to general management	Others

71. **Environmental monitoring:** (i) Environmental quality monitoring: Comprehensive monitoring of air, water, soil, ocean, ecology, and acoustic environment etc. should be strengthened by establishing a unified environmental quality monitoring network and assessment system. (ii) Pollution sources monitoring: Entities subject to pollutant discharge permitting mechanism should carry out monitoring of relevant pollutants and disclose monitoring information, and EEBs should carry out compliance monitoring and spot checks on these entities. (iii) Environmental emergency monitoring: Regional bases for environmental emergency monitoring should be established to form a sufficient cross-provincial emergency monitoring system. (iv) Other environmental monitoring functions: A variety of monitoring services should be available to provide monitoring data for environmental baseline investigation and assessment and other environmental management work.

Institutional organization and performance

72. EEBs are responsible for project EIA and follow-up management. The EIA and Pollution Control Department under the Ministry of Ecology and Environment (MEE) is responsible for overseeing EIAs and project life cycle environmental management at national level.

73. **Provincial EEBs** have EIA and Pollution Control Division (4-5 staff members) responsible for approval of EIAs for government programs, strategies, and projects, coordination and management of pollutant discharge permitting, supervision on pollution prevention and control, and preparation and implementation of provincial environmental entry lists, etc. In accordance with local EIA approval regulations, Hunan and Hubei provincial EEBs are in charge of approving EIAs of large-scale projects or cross-city projects, mainly covering the sectors of water engineering, hydropower, coal power, wind power, petrochemical, transport, nuclear, and radiation, etc. They are also responsible for approving EIAs for government programs and policies and managing pollutant discharge permitting. The provincial Environmental Assessment Centers (about 20 staff) provide coordination services to the provincial EEBs in EIA approval. The provincial Environmental Law Enforcement Bureaus (about 40 staff members), responsible for organizing and guiding lower-level EEBs' work in EIA follow-up management, coordinating interprovincial environmental disputes, and investigating significant environmental issues within the province etc. Under the provincial EEBs, Environmental Monitoring Divisions are set up to develop and manage the ecology and environment monitoring networks; and they have subsidiary monitoring centers to organize monitoring exercises (in terms of environmental quality, pollution sources, law-enforcement, etc.), manage monitoring data, and provide technical guidance and training to the monitoring teams within provincial jurisdictions.

74. **Municipal EEBs** also have divisions of EIA approval (4-5 staff members) that are responsible for approving EIAs for (i) projects that are approved by provincial government but are not subject to provincial EEB's approval of EIAs; (ii) projects that are approved by municipal government; and (iii) projects that cross cities/counties in the municipal jurisdiction. Enshi and Jingzhou municipal EEBs are involved in the PforR and each of them have completed EIA approval for about 40 projects every year covering various sectors such as chemical, hospital, livestock and poultry farming, transport, and water engineering, etc. Under each municipal EEB, there is an environmental law enforcement team (LET, about 20 staff members) responsible for EIA follow-up management within the municipal jurisdiction.

75. **County EEBs** are branches of municipal EEBs and have divisions of EIA approval (2-5 staff members). They are responsible for approving EIA forms for projects that are approved by county/city governments. For example, in the past two years, the Administrative Review and Approval Office (4 staff members) under Hunan Lixian EEB has finished approval of 219 EIA reports and forms (tables) and registration of 301 EIA tables for livestock and poultry farming, rural domestic wastewater treatment, and other construction projects. Under the county/city-level EEBs, the subsidiary environmental LETs (5-42 staff members) are responsible for having spot checks, special inspections, and surprise inspections by means of drones, third-party services, maps, and site visits to supervise physical projects over their construction pollution control, "Three Simultaneousness", environmental acceptance check, pollutant discharge permitting, and other environmental management work, etc. For example, since 2021, the environmental LET of Hunan Cili County EEB carried out spot checks on the environmental management of 18 large-scale livestock and poultry farms, 3 wastewater treatment facilities, and other enterprises within the county; and they have examined the pollutant discharge permit implementation of 7 enterprises and the EIA and "three simultaneousities" procedures of 15 enterprises. Some county/city level EEBs also have subsidiary environmental monitoring stations which carry out environmental monitoring exercises within the jurisdictions and assist higher-level environmental monitoring stations' work. In addition, at township governments there are 1-2 full-time environmental staff to coordinate with higher-level EEBs.

76. Information on EIA instruments and pollutant discharge are open to the public through various online platforms such as the EIA Information Disclosure, the Pollutant Discharge Permit Management, and the Pollution Source Monitoring Center, etc. In addition, the MEE has other channels such as the National Ecological and Environmental Complaint and Reporting Platform, the minister's mailbox, the 12369 Environmental Hotline, the 12369 WeChat account, and the 12345 Government Service Hotline for the public to report environmental complaints, track feedback, and voice their opinions. For example, Hubei Shishou EEB received 194 cases of environmental

compliance in 2021, mainly about livestock and poultry pollution, and noise nuisance, etc., which have been managed in a proper and timely manner.

77. In the field visits, the ESSA team reviewed a variety of track records on environmental management for sample facilities/activities such as rural WWTFs, rural domestic solid waste transfer stations, livestock manure treatment, and organic fertilizer production, etc. In general, the EIA preparation, approval, and follow-up environmental management have been conducted as required. For example, in Hengnan County, Hunan Province, the Niumama Pig Farm had their EIA reports prepared and approved for the Phase I works (producing 12,000 pigs per year) and Phase II works (producing 30,000 pigs per year) in 2017 and 2019, respectively. Subsequently, the facilities of dry-and-wet separation, biogas generation, manure drying, and wastewater treatment were checked at completion and passed the environmental acceptance. Since then, regular monitoring of wastewater, odor, and noise were conducted, and the sample results satisfied the discharge/emission standards. Another example, in Xiantao City, Hubei Province, the Huchang Township WWTP serves two villages as well as the township with a design capacity of 3000m³/d. They prepared the EIA form and obtained the approval from Xiantao EEB in 2016. Later in 2020, they obtained a pollutant discharge permit and started regular monitoring of odor as well as influent and effluent water quality. The monitoring results are shared with EEBs via "Hubei Pollution Source Monitoring Information Platform".

Brief summary

78. The EIA and follow-up supervision system, covering EIA, environmental acceptance check for construction completion, pollutant discharge permitting, and pollutant monitoring etc. has been implemented in China for decades and has kept improving towards project life cycle management. It is known from the ESSA team's due diligence investigation that the sample activities implemented in the past few years have gone through proper EIA and follow-up management procedures as required. EEBs carried out inspection and supervision in different ways to oversee projects' performance in avoiding, reducing, or mitigating negative impacts on the environment. The system is deemed satisfactory and complies with the Bank's core principles.

4.3 Pollution Control System

79. The laws and regulations listed in **Table 4-4** cover general pollution control for a variety of activities under the PforR. In addition, there are specific regulations, standards, and guidelines on each subsystem (fertilizer, pesticide, livestock and poultry manure, aquaculture tailwater, rural domestic wastewater, rural domestic solid waste, and polluted farmland), which will be introduced in the following sections.

Table 4-4: General Laws and Regulations on Pollution Control

National	Hunan	Hubei
Water Pollution Prevention and Control Law (amended in 2017): Rural domestic wastewater and solid waste management facilities should be well designed and constructed, and proper O&M should also be ensured. Guidance and advice should be provided to farmers on the scientific application of fertilizer and pesticide. Livestock and poultry farms should have proper facilities to harmlessly treat or utilize manure and wastewater, and proper O&M should be ensured to meet effluent discharge standards. Aquacultural farms should have necessary measures to protect water ecology and environment from pollution by determining breeding density, feeding, and applying chemicals in a scientific and rational way.	Hunan Xiangjiang Basin Water Pollution Prevention and Control Ordinance (2014)	Hubei Water Pollution Prevention and Control Ordinance (2022)
Soil Pollution Prevention and Control Law (2018): Production of pesticide and fertilizer should be subject to registration requirements. Impacts of applying pesticide and fertilizers on soils should be assessed appropriately. Use of pesticide and fertilizer on farmland should be guided and controlled. Collection, storage, utilization, or disposal of livestock and poultry manure, biogas residues, and biogas slurry should be supervised and inspected. It is prohibited to discharge any wastewater or sludge that contain excessive heavy metals or toxic and hazardous substances into farmland. It is prohibited to use industrial solid waste, domestic solid waste, or contaminated soils that contain excessive heavy metals or other toxic and hazardous substances for land reclamation.	Hunan Methods for Implementing Soil Pollution Prevention and Control Law (2020)	Hubei Soil Pollution Prevention and Control Ordinance (2019)

National	Hunan	Hubei
Air Pollution Prevention and Control Law (2018 Amendment): Farmers and farm operators should improve fertilization methods and apply fertilizer and pesticide in a scientific and rational way to reduce emission of air pollutants such as ammonia and volatile organic compounds. Livestock and poultry farms should collect, transport, and treat wastewater, manure, and dead animals to prevent odor emission. Forbidden zones should be set up to prevent straw burning. Straw can be utilized to make fertilizer, feed, fuel, or raw materials applying appropriate technology.	Hunan Air Pollution Prevention and Control Ordinance (2017)	Hubei Air Pollution Prevention and Control Ordinance (2018 Amendment)
Solid Waste Pollution Prevention and Control Law (amended in 2020): Entities that generate, collect, store, transport, utilize, treat, or dispose of solid wastes should timely disclose information on pollution control. Sorting is promoted in collection, transfer, treatment, and disposal of domestic solid waste. Entities that generate straw or other agricultural waste should promote recycling or other measures to prevent environmental pollution. Entities that operate livestock and poultry farms should collect, store, utilize, or dispose of manure and other solid waste in a proper and timely manner.	Hunan Methods for Implementing Solid Waste Pollution Prevention and Control Law (2020 Amendment)	None
Agriculture Law (2012 Amendment): Fertilizer production and selling should be subject to registration and permitting requirements. Users should use fertilizer and pesticide in a proper way and increase use of organic fertilizer to prevent farmland pollution and degradation. Straw and other agricultural residues should be fully used as resources or properly disposed of to prevent any environmental pollution or ecological damage. Entities or individuals that operate large-scale livestock and poultry farms should harmlessly treat or fully utilize the generated manure, wastewater, and other waste. Entities or individuals that operate aquaculture farms should use feed, fertilize, and drugs in a rational way to prevent environmental pollution or ecological damage.	Hunan Agricultural Ecology and Environment Protection Ordinance (2013 Amendment)	Hubei Agricultural Ecology and Environment Protection Ordinance (2020)
Rural Revitalization Promotion Law (2021): Rural revitalization should include ecological protection in terms of conserving resources (e.g., water saving, energy saving), controlling NPS pollution (e.g., reduction of fertilizer and pesticide), improving rural living environment (e.g., sanitary toilets, rural domestic solid waste sorting and management, rural domestic wastewater treatment), improving safety of cropping inputs (e.g., prohibition of highly toxic and high residue pesticides), and protecting rural environment (e.g., recycling of crop straw, and utilization of livestock and poultry manure), etc.	None	Hubei Rural Revitalization Promotion Ordinance (2021)

4.3.1 Fertilizer management

Legal framework

80. **Chemical Fertilizer Registration Management Measures** (2017): This regulation applies to chemical fertilizer producing, selling, using, and advertising. All chemical fertilizer products are subject to registration requirements, and unregistered chemical fertilizer cannot be imported, produced, sold, used, or advertised.

81. **Technical Guidelines on Environmentally Safe Application of Chemical Fertilizers** (2010): It's required to increase chemical fertilizer application efficiency and prevent NPS pollution by purchasing qualified chemical fertilizer, applying chemical fertilizer in a scientific way, and intercepting drainage, etc.

82. In recent years, Chinese government has been making great efforts to reduce chemical fertilizer use. Following the national "Chemical Fertilizer Use Zero Growth Action Plan" becoming effective in 2015, each province worked hard on implementing the Action Plan and reached the expected objectives. In 2022, the MEE, the Ministry of Agriculture and Rural Affairs (MARA), the Ministry of Housing and Urban Rural Development (MHURD), the Ministry of Water Resources (MWR), and the National RRB jointly issued the "Action Plans for Agricultural and Rural Pollution Control" (2021-2025). Accordingly, Hunan and Hubei provinces issued their respective "Implementation Plans for Agricultural and Rural Pollution Control" (2021-2025) to require that the coverage of test-based precision fertilization technology should stay more than 90% by 2025.

Implementation mechanism and procedures

83. **Chemical fertilizer registration:** Fertilizer producers must pass a special field test prior to fertilizer registration. Application for fertilizer registration is reviewed by provincial ARAB and approved by MARA. If function, formula, trademark, or company name of a registered chemical fertilizer changes within the valid period (five years), the producer must register again to report the changes. Chemical fertilizer producing and selling activities are not subject to permitting requirements like pesticides; instead they are produced and sold in a market-based manner. Producers and sellers manage their activities in line with market rules; and farmers are responsible for safe use of fertilizers.

84. **Chemical fertilizer selection:** Varieties of chemical fertilizer should be selected rationally based on soils, crops, fertilizers, and ecosystems. It's encouraged to adopt test-based fertilization and use high-efficient products such as composite, slow-release, and water-soluble fertilizers.

85. **Chemical fertilizer reduction:** The amount of chemical fertilizer application should be determined by testing soils and based on crop species, expected yields, soil conditions, and environmental sensitivity, etc. Other approaches are also proposed to reduce chemical fertilizer such as applying organic fertilizer, green fertilizer, and crops straw, etc.

86. **Chemical fertilizer application:** it's encouraged to adopt mechanical fertilization, fertigation, and time-based fertilization to increase efficiency of fertilizers; schedule fertilization timing to improve fertilizer efficiency; and use suitable cropping pattern, irrigation technique, and rotation system. It's required to keep fertilization far from drinking water sources or vulnerable areas (soil erosion or high groundwater levels) to prevent fertilizer losses and NPS pollution.

Institutional organization and performance

87. ARABs are sectoral authorities for fertilizer management. Provincial ARABs are responsible for provincial-level fertilizer planning and guidance, while county ARABs are in charge of local supervision and management. The law enforcement departments under county ARABs take periodical inspections and spot checks on fertilizer products in the market, push fertilizer producers to improve unqualified products, cancel fertilizer registration for successive unqualified products, and provide technical training and guidance to farmers under the assistance of local agricultural promotion stations, soil and fertilizer stations, plant protection stations, farmer training schools, etc.

88. In each sample county/city of Hunan and Hubei, there is a Crop Farming Division (around 4 staff members) set up under the ARAB responsible for chemical fertilizer reduction. A Soil and Fertilizer Station or a Crop Protection Station (2-24 staff members) is in place to support this division by undertaking daily operations. For example, in 2021, Honghu ARAB of Hubei Province conducted 380 times of surveys to farmer households on their fertilization practices, completed 25 cases of field experiment, and provided training and guidance to farmers and cooperative leaders more than 5,000 person times, which helped reduce annual use of chemical fertilizer by 0.42% than the previous year. Another example, Lixian ARAB of Hunan Province delivered fertilization tips to farmers, taught farmers to install and use "Hunan Test-based Fertilization APP", and conducted more than 20 rounds of training to farmers for 3,000 person times, which helped them successively accomplish test-based fertilization on 2.3 million mu of farmland, demonstrate green fertilizer on 74600 mu of farmland, and apply commercial organic fertilizer (costing RMB1.968 million) to grape farms. It was also found that there are still difficulties in fertilization technology popularization in some counties/cities which need more training to strengthen farmers' awareness and knowledge on scientific fertilization.

Brief summary

89. China as well as Hunan and Hubei have a sound system on chemical fertilizer management in terms of regulatory framework and institutional arrangement. It can provide sustainable service on chemical fertilizer reduction and NPS pollution control and complies with the Bank's core principles.

4.3.2 Pesticide management

Legal framework

90. **Pesticide Management Regulations (2022 Amendment):** Pesticide producers and sellers have responsibility for the safety and quality of their pesticide products and should accept

government and public supervision. Government should promote biological and physical approaches in pest control and encourage to use advanced spray equipment to reduce pesticide use. Pesticide producers and sellers are subject to pesticide registration and permitting requirements. Pesticide users are asked to follow specifications when applying pesticides. ARABs should regularly oversee pesticide production, sale, and use.

91. **Regulations on Crop Pest Control** (2020 Amendment): It calls for the application of IT and biological technologies to promote intelligent and green pest control and encourages the use of green techniques, advanced spraying equipment, and safe and efficient pesticides to control pests.

92. Other regulatory documents on pesticide management are also in place, such as the “Soil Pollution Prevention and Control Law”, the “Water Pollution Prevention and Control Law”, the “Agricultural Products Quality and Safety Law”, the “Food Safety Law”, the “Pesticide Registration Measures”, the “Pesticide Production Permitting Management Measures”, the “Pesticide Selling Permitting Management Measures”, the “Guidelines on Pesticide Safe Use”, and the “Technical Guidelines on Environmental Safety of Pesticide Use”, etc. In addition, the MARA keeps updating the “Restricted Pesticides Catalogue” and releases it to guide farmers in pesticide use. These laws and regulations put forward requirements on safe use of pesticides and constitute the legal framework for pesticide management. In recent years, China has been promoting zero growth in pesticide use, and a national “Pesticide Use Zero Growth Action Plan” became effective in 2015 following which each province has reached the expected targets. In 2022, the five ministries jointly issued the “Action Plans for Agricultural and Rural Pollution Control” (2021-2025) and accordingly Hunan and Hubei provinces issued the respective “Implementation Plans for Agricultural and Rural Pollution Control” (2021-2025) requiring that green pest control should cover 55% and organized pest control cover 45% for main crops by 2025.

Implementation mechanism and procedures

93. **Producer management:** Pesticide producer should apply for a registration certificate for each pesticide product that provides basic information such as the pesticide name, ingredients, toxicity, scope of application, usage and dose, valid period, certificate holder, reference number, etc. Pesticide producer should also apply for a pesticide production permit. A pesticide product must pass a quality test and obtain a qualification certificate before entering the market. The pesticide label should give key information of the product. Pesticide producer should keep sale records for at least two years and recycle pesticide packages as per government requirements.

94. **Seller management:** Pesticide seller should obtain a permit for selling pesticides and equip with qualified staff with professional education background or 56-hour on-the-job training certifications in the field of agriculture, plant protection, pesticide, or other related subjects. Pesticide seller should have suitable selling and storage spaces and facilities, have proper systems and regulations on recording, safety management, emergency response, storage management, waste recovery and disposal, technical instruction, etc. Pesticide seller should not buy pesticides from any producer who doesn't have a pesticide production permit or from any pesticide seller who doesn't have a pesticide selling permit and should not process or sub-package any pesticides. Pesticide seller should explain the scope, method, dose, requirement, and precautions about pesticide application to buyers and recycle pesticide packages.

95. **User management:** Pesticide user should strictly follow the specifications on pesticide application scope, function, dose, methods, and precautions and should not apply pesticide beyond the specifications. Users are not allowed to use any prohibited pesticides; apply any pesticides in drinking water source protection areas; or dump pesticides or pesticide packages in drinking water source protection areas or rivers.

96. **Pesticide reduction:** Integrated pest management (IPM) is encouraged to push pesticide reduction using combined or multiple tactics: (1) *improvement of technique*: for example, using drones to increase spraying efficiency; (2) *selection of pesticides*: following ARABs' guidance in choosing pesticides of high efficiency, low toxicity, and low residue; (3) *green pest control*: combining multiple ways such as agronomic methods (e.g., ploughing), ecological methods (e.g., improving soil environment, removing weeds), physical methods (e.g., pest killer lamps, food or sexual attractants, insect nets, sticky colored boards), biological methods (e.g., ladybirds against aphids, microorganisms, and other biological pesticides), and scientific use of pesticides (e.g., eliminating

spraying scope, establishing pest monitoring systems); and (4) *organization*: applying organized pest control or third-party services.

Institutional organization and performance

97. ARABs are responsible for overseeing pesticide producing, selling, and using. Once an application for pesticide registration is received, the provincial ARAB will make a pre-review and the MARA will approve the application and issue a certificate to the pesticide producer. Pesticide production permits are approved by ARABs at provincial level and pesticide selling permits are approved by ARABs at county level and above.

98. In Hunan and Hubei, Crop Farming Divisions (3-5 staff members) under county-level ARABs are responsible for overseeing the pesticide producers and sellers, managing safe use of pesticides, and controlling pests and plant diseases within the corresponding jurisdictions. Agricultural law-enforcement teams (around 20 staff members) under county ARABs supervise and inspect pesticide sellers' permit, product quality, and safe management. Agricultural technology popularization stations, crop protection stations, and agricultural training stations under county ARABs are responsible for pest forecasting and technical training.

99. For example, in Hubei, Honghu ARAB released 10 times of forecasts on wheat, rape, and rice diseases in 2021 through which farmers were informed to timely and scientifically control the pests and reduce the pesticide use. They also invested RMB 800,000 on buying 7 tons of biological agents and low toxic pesticides and distributed them to farmers from 6 townships such as Luoshan and Yanwo. In addition, they established 2 demonstration areas for green pest control, which helped Honghu increase the coverage of green pest control by 3% and accomplish zero growth in pesticide use. Similarly in Hunan, Cili County ARAB issued four times of forecasts through TV on citrus, corn, rice, and rape diseases in 2021. In addition, they established 7 county-level green pest control demonstration areas where a variety of approaches such as solar insecticidal lamps, sex attractants, bait attractants, fly traps, and low toxic pesticides were adopted to promote green pest control. They also organized 13 rounds of training courses to more than 800 trainees. These activities helped them reduce the use of pesticides by 1.048% over the previous year.

Brief summary

100. China as well as Hunan and Hubei have appropriate regulatory framework, institutional organization, staffing, and funding on green pest control and pesticide management. They have made significant achievements in the past, and their experience and capacity are demonstrated to be sufficient to serve the PforR. The system is compliant with the Bank's core principles.

4.3.3 Livestock and poultry manure management

Legal framework

101. **Livestock Farming Law (2015)**: Livestock and poultry farms should have proper facilities to treat and/or utilize manure, wastewater, and other waste. Any violation that results in environmental pollution is subject to undertaking corrective measures and compensating for losses.

102. **Large-scale Livestock and Poultry Farms Pollution Control Regulations (2013)**: Environmental carrying capacity and pollution control needs should be considered when preparing livestock/poultry development plans, and species, scales, and quantities of livestock and poultry farming should be designed in a rational way. Farms are encouraged to fully use farming waste such as applying manure to farmland or use it to produce biogas or organic fertilizer.

103. **Livestock and Poultry Pollution Control Technical Policy (2010)**: It provides general principles on livestock and poultry manure management such as pollution reduction from the source, clean production processes, comprehensive use of manure, and secondary pollution prevention, etc.

104. **Technical Guidelines on Livestock and Poultry Manure Harmless Treatment (GBT36195-2018)**: It stipulates technical requirements on farm layout, manure storage, wastewater treatment, manure treatment and utilization, feeding management, sick or dead animal disposal, pollutant monitoring, etc.

105. In addition, China as well as Hunan and Hubei have developed other relevant regulations, guidelines, and standards, such as the "Notice about Strengthening Livestock and Poultry Pollution

Management and Applying Manure to Farmland” (2020), the “Technical Guidelines on Livestock and Poultry Manure Composting” (NY/T3442-2019), the “Technical Guidelines on Livestock and Poultry Manure Application to Farmland” (GBT25246-2010), the “Technical Guidelines on Livestock and Poultry Pollution Control Engineering” (HJ497-2009), the “Livestock and Poultry Pollutant Discharge Standards” (GB18596-2001), the “Technical Guidelines on Land Capacity of Carrying Livestock and Poultry Manure” (2018), the “Hubei Work Plans on Livestock and Poultry Manure Utilization” (2017), the “Hubei Livestock and Poultry Farms Registration Methods” (2015), the “Hunan Livestock and Poultry Farming Pollution Control Regulations” (2022), the “Hunan Livestock Farming Pollution Control Plans (2021-2025)”, etc.

Implementation mechanism and procedures

106. **Pollution prevention:** (i) Prepare local livestock and poultry farming pollution control plans. (ii) Establish prohibited zones, restricted zones, and farming zones to properly site farms. (iii) Construction, expansion, or upgrading of livestock and poultry farms or manure treatment facilities should follow relevant government plans and EIA requirements.

107. **Pollution management:** (i) *Reduction:* Scientific manure cleaning methods (e.g., dry-and-wet manure separation, wastewater and storm water separation, dry manure collection, biological fermentation bed) are proposed to reduce wastewater and odor generation. (ii) *Treatment:* Discharge of treated effluent or emission should comply with applicable national and/or local standards. (iii) *Utilization:* Comprehensive use of manure is encouraged such as applying manure to farmland or using manure to make organic fertilizer or biogas. Applying manure to farmland as fertilizers must match the farmland carrying capacity. Third-party professional entities should be engaged to accomplish manure utilization or disposal when the farms cannot find sufficient farmland to carry their manure. Biogas residues and slurry can be applied to farmland as fertilizers following sufficient treatment.

Institutional organization and performance

108. ARABs are in charge of guiding, serving, and overseeing livestock and poultry manure treatment and utilization. Each county ARAB has specific divisions like Husbandry and Veterinary Division (about 5 staff members) to conducted daily operations e.g., checking the O&M of manure treatment facilities, overseeing the utilization of manure to farmland, and providing instruction and services to the livestock and poultry farms as needed. EEBs inspect the pollution prevention and control related to livestock and poultry farming with the detailed work undertaken by the subsidiary environmental LETs (7-26 staff members). They conduct spot checks, special inspections, and/or joint supervision to examine if the farms have managed the livestock/poultry farming, organic fertilizer production, biogas production, and other related activities following national and local pollution control regulations and to check if EIA preparation and approval, “three simultaneousness”, environmental acceptance check for completion, pollutant discharge permitting, pollutants treatment and monitoring, and other environmental management work have been implemented as required.

109. In Hunan and Hubei, large-scale farms can choose to register at local ARABs to report the information about farm siting, farming conditions, epidemic prevention, manure treatment, dead animal treatment, agreements on manure fertilizers utilization, EIA instruments, and pollutant monitoring reports, etc. The registrations are reviewed by county, municipal and provincial ARABs level by level. As a reward for the registration, they could enjoy certain privileges following relevant national and/or provincial policies. Through this way together with on-site inspections, ARABs are improving supervision on livestock and poultry manure treatment and utilization.

110. The ESSA team conducted site visits and due diligence investigation to some livestock/poultry farms in sample counties/cities (Hengnan, Cili, and Li of Hunan; and Xiantao, Honghu, and Sui of Hubei) and found that: (i) Good practices and techniques of manure management were widely applied at large-scale farms such as the Yitun Pig Farm (producing 28000 pigs per year) in Hengnan County, Hunan Province. The mixed manure goes through the regulation tank, grid, and separation machine and is separated into dry manure and wet manure. The dry manure is composted and sold out as raw materials for producing commercial organic fertilizers. The wet manure is delivered to anaerobic tank for fermentation. As a result, the generated biogas is burned and emitted; and the slurry is treated through the “anoxic + aerobic + anoxic + aerobic” processes at the end of which 70% of the treated effluent is used at farmland for irrigation and the

rest 30% is discharged to adjacent water bodies. Online influent and effluent water quality monitoring devices have been set up within the farm, and a portable manual instrument is also equipped to take additional experiments. This farm has gone through the required environmental management procedures such as EIA preparation and approval, environmental acceptance check at completion, keeping manure treatment records, and monitoring of key pollutants, etc. The sample monitoring data show that the treated effluent quality and the farm-boundary odor level satisfied standards. However, the odor was still obvious within the farm site especially near the manure separation process. (ii) Most small-scale farms lack of sufficient manure treatment and utilization facilities.

Brief summary

111. China as well Hunan and Hubei have regulatory framework and institutional arrangement to manage the environmental impacts of livestock and poultry manure, though there are still some issues in practical operations, for example, odor management needs to improve especially for old or small-scale livestock and poultry farms.

4.3.4 Aquaculture tailwater management

Legal framework

112. **Fishery Law** (2013): Any entity or individual engaged in aquaculture farming should well protect the ecology and environment of waters, scientifically control the breeding density, and reasonably manage the feeding, fertilization, and chemicals to avoid water pollution.

113. **Guidelines on freshwater pond aquaculture tailwater discharge** (SC/T9101-2007): Tailwater discharge must satisfy the requirements of receiving water quality and follow the discharge standards set up in this guidelines: (a) it's not allowed to build any new outlet to discharge aquaculture tailwater to critically important waters; (b) it's not allowed to build any new outlet to discharge aquaculture tailwater to other important waters (Class II water quality); while for existing outlets, the tailwater must satisfy Category I standards; and (c) for other waters (Class III, IV or IV), the tailwater must meet Category II standards.

114. In addition, the national government as well as Hunan and Hubei provinces have issued other relevant policies, guidelines, and standards, such as the "Aquaculture Quality and Safety Management Regulations" (2013), the "Hubei Guidance on Defining Aquaculture Three Zones" (2018), the "Hubei's 14th Five-Year Plan for Promoting Aquaculture Modernization" (2021), the "Hubei Aquaculture Waters and Beaches Master Plan (2021-2030)" (2021), and the "Hunan Aquaculture Tailwater Pollutants Discharge Standards" (DB43/1752-2020), etc.

Implementation mechanism and procedures

115. **Pollution prevention:** (i) Prepare local aquaculture management plans. (ii) Establish prohibited zones, restricted zones, and farming zones to properly site farms. (iii) Construction, expansion, or upgrading of aquaculture farms should follow government plans and EIA requirements.

116. **Pollution management:** (i) *Reduction*: Scientific farming techniques are proposed to reduce wastewater generation. (ii) *Treatment*: Discharging treated tailwater should comply with applicable national or local standards. (iii) *Utilization*: Treated tailwater can be recycled rationally.

Institutional organization and performance

117. ABRBs are the sector authorities to provide instruction, service, and supervision on aquaculture farming and tailwater management. Daily operations are undertaken by Fishery Divisions (about 3 staff members) and the subsidiary poultry and fishery business centers. They carry out regular checks on aquaculture tailwater management at least once a month and provide guidance and service as needed. Local EEBs conduct water quality monitoring at existing monitoring sections of related waters and manage complaints on aquacultural pollution.

118. During the 13th five-year period, Hubei developed the provincial-level aquaculture master plan and then 17 prefectures and 74 counties prepared counterpart local plans. Under these plans, specific prohibited zones, restricted zones, and farming zones have been clearly established. Subsequently, 6 demonstration counties and 355 demonstration farms were selected to conduct health fishery development. To date, 520,000 mu (34,666.67 ha) of aquaculture farms have tailwater treated, which accounts for 6.5% of all fish farming areas in Hubei.

119. Similarly, Hunan pays more attention to aquaculture tailwater management. As the first province to push the standards development, Hunan issued the provincial “Aquaculture Tailwater Pollutants Discharge Standards” (DB43/1752-2020). In 2021, Hunan launched demonstrations of building standardized fishponds and tailwater treatment facilities, and set up 10 large fishery counties (e.g., Lixian) to pilot green aquacultural developments under the MARA’s programs.

120. The ESSA team conducted field visits and investigation to some aquaculture farms in Xiaotan and Honghu of Hubei and found that the demonstration farms had proper tailwater treatment facilities in use. For example, Luoshan Shrimp and Crab Farm in Huhong City has 11000 mu of farming ponds. They installed aeration equipment, built biological purification tanks, grew water plants, and set up online monitoring systems to reduce pollutants and monitor water quality. However, most aquaculture farms still need to implement or strengthen tailwater management measures.

Brief summary

121. China as well as Hunan and Hubei have regulatory framework and institutional arrangement on aquaculture tailwater management, which still needs strengthening. The PforR is expected to push further development of this system by implementing tailwater management widely in the sector.

4.3.5 Rural domestic wastewater management

Legal framework

122. **Guidance on Promoting Rural Domestic Wastewater Management** (2019): It was issued jointly by 8 national-level government authorities⁷ to promote rural domestic wastewater management and improve rural living environment to build a beautiful and comfortable countryside.

123. **Agricultural and Rural Pollution Management Action Plans (2021-2025)** (2022): County level governments are required to promote integrated management of rural domestic wastewater in terms of planning, construction, and O&M. Different patterns should be concerned scientifically and rationally to build suitable rural domestic wastewater collection and treatment facilities in different types of regions. Priority should be given to wastewater treatment technologies that have low costs and simple O&M practices. For existing rural domestic wastewater collection and treatment facilities, investigation on the O&M conditions should be conducted to improve O&M performance.

124. In addition, China has developed other related regulations and guidelines, such as the “Guidelines on Development and Investment of Rural Domestic Wastewater Treatment Projects” (2013), the “Rural Domestic Wastewater Treatment Engineering Technical Standards” (GB/T51347-2019), the “Rural Domestic Pollution Control Technical Guidelines” (HJ574-2010), etc. Meanwhile, Hunan and Hubei provinces also issued relevant regulations, plans, and standards, such as the “Hubei Rural Domestic Wastewater Treatment Facilities O&M Management Methods - Trial” (2021), the “Hubei Rural Domestic Wastewater Treatment Facilities Water Pollutants Discharge Standards” (DB42/1537-2019), the “Hubei Rural Domestic Wastewater Management Action Plans (2020-2022)”, the “Hubei Rural Domestic Wastewater Management Examination Rules” (2021), the “Xiantao Rural Domestic Wastewater Management Special Plans” (2021), the “Hunan Technical Guidelines on Rural Domestic Wastewater Management” (2020), the “Guiding Opinions on Hunan Rural Domestic Wastewater Management Special Plans” (2020), the “Hunan Rural Domestic Wastewater Treatment Facilities Water Pollutants Discharge Standards” (DB43/1665-2019), the “Lixian County Rural Domestic Wastewater Management Special Plans (2020-2030)”, etc.

Implementation mechanism and procedures

125. **Selection of rational technologies:** (1) Where villages are close to urban areas, the urban wastewater systems could be used to receive and treat the domestic wastewater from rural areas. (2) Where villages are densely populated and far away from urban wastewater systems, centralized village WWTFs can be constructed to treat rural domestic wastewater. (3) Where villages are sparsely populated, upgraded household toilets and septic tanks can work as the main approach to pretreat rural domestic wastewater which is then composted before being applied on nearby farmland. It’s encouraged to adopt technologies of low-cost, low-energy use, easy maintenance, and

⁷ The MARA, the MEE, the MHURD, the MWR, the Ministry of Science and Technology, NDRC, the Ministry of Finance, and the Banking and Insurance Regulatory Commission.

high efficiency to treat rural domestic wastewater and to pilot artificial wetlands, oxidation ponds, and other ecological treatment approaches in areas that have suitable conditions.

126. **Improvement of O&M mechanism:** Strengthen O&M teams building, provide training to improve O&M capacity, promote market-based and professional O&M service, and establish a beneficiary payment system to increase residents' motivation for participating in O&M of WWTFs.

127. **Establishment of monitoring systems:** County EEBs should strengthen regular mechanism for monitoring the O&M performance of rural WWTFs. For those with a capacity of 100 t/d and above, the treated effluent should be monitored at least once every quarter, and those with a capacity of 20 to 100 t/d at least once every year. If county EEBs don't have sufficient monitoring capacity, they can ask higher-level EEBs for support or contract qualified monitoring agencies to conduct monitoring exercises.

128. **Improvement of rural household toilets:** It's encouraged to design, construct, and operate rural toilets simultaneously with local WWTFs in areas that have suitable conditions.

Institutional organization and performance

129. In practical operations, EEBs are responsible for overall management of rural domestic wastewater as the competent authorities under the cooperation of other government departments, for example, ARABs or RRBs take care of rural household toilets improvement and HURDBs or urban management bureaus (UMBs) look after urban domestic wastewater management systems that receive and treat a little adjacent rural domestic wastewater as well as urban wastewater.

130. There is a Rural Ecology and Environment Division under the MEE's Soil Ecology and Environment Department providing general instructions from national level on rural domestic wastewater management. Following the line management, Hunan and Hubei provincial EEBs have corresponding Soil Ecology and Environment Divisions in charge of organizing province-wide rural domestic wastewater management, while county EEBs carry out detailed supervision on rural domestic wastewater collection and treatment activities. County EEBs usually have general management divisions (2-3 staff members) responsible for managing village WWTFs' construction and operation; environmental monitoring stations (4-7 staff members), sometimes through contracted third-party agencies, carrying out supervisory monitoring of the WWTFs' pollutants discharge and emission; and environmental LETs (about 10 staff members) undertaking spot checks on the WWTFs' O&M and pollutants discharge and emission.

131. In the 6 sample counties/cities, flushing toilets plus septic tanks were found commonly used for very primary treatment of rural domestic wastewater in most villages, and a few villages had their own centralized WWTFs or delivered their wastewater to nearby urban wastewater systems.

- To date, more than 90 percent of the rural household toilets had been upgraded in Hunan and Hubei by changing original dry latrines into flushing sanitary toilets plus septic tanks and applying the composts onto nearby farmland.
- The small-scale village WWTFs typically have a capacity of several tens of tons per day. The O&M personnel and funds are usually arranged by local village committees, except that at a few demonstration counties/cities, the construction and O&M of WWTFs are undertaken by third-party professional companies. For example, in Hubei Province, Honghu City Government engaged Wan'An Environmental Group Company to conduct unified O&M of the 68 rural WWTFs within the city. The ESSA team found in the investigation to the sample counties/cities that, treated effluent of village WWTFs for which the capacity is over 20t/d is under regular monitoring. The monitoring exercises are taken through manual sampling and testing quarterly or semi-annually by local environmental monitoring stations or by contracted third-party monitoring agencies. It's also found that a few village WWTFs had gaps in budgets and could hardly continue sustainable O&M.
- For the urban domestic wastewater management systems that receive and treat a few parts of rural domestic wastewater, the PPP pattern is usually adopted on integrated O&M of sewer networks and WWTPs. Third-party companies provide professional O&M services as per the signed service agreements, which helps ensure effective O&M, funding, and pollutants monitoring, etc.

Brief summary

132. China as well as Hunan and Hubei have established regulatory framework, implementation mechanism, and institutional arrangement, which is compliant with the Bank's PforR core principles and equivalent to the Bank's Environmental, Health, and Safety (EHS) Guidelines by covering good international industry practices (GIIP). This system, however, is still developing and improving since the rural areas have a broad coverage with complicated topography and dispersed residency.

4.3.6 Rural domestic solid waste management

Legal framework

133. **Rural Domestic Solid Waste Collection, Transportation, and Treatment Technical Standards** (GB/T51435-2021): Rural domestic solid waste can be divided into five categories: recyclables, perishables, hazardous waste, construction/decoration waste, and other garbage. Recyclables should be transported and handled through existing recycling systems. Hazardous waste should be collected and treated by qualified entities. Construction waste should be collected separately and buried nearby. Perishable waste should be collected separately and used as resources locally. Rural domestic solid waste collection sites should be sited by keeping a proper distance from concentrated residential regions and environmentally sensitive areas (e.g., farmlands, rivers, ponds, and drinking water sources) and should be equipped with ventilation, dust removal, deodorization, and acoustic insulation facilities, etc. Domestic solid waste transfer stations should set up at townships and the equipped facilities for ventilation, dust removal, deodorization, and acoustic insulation should be well operated and maintained.

134. **Technical Guidelines on Domestic Solid Waste Collection and Transportation** (CJJ205-2013): Domestic solid waste should be separated at collection points and transported and treated under the integrated management at village and township levels. It's better to exclude agricultural waste from domestic solid waste collection and transportation systems and forbidden to mix construction waste, industrial waste, medical waste, and hazardous substances with domestic solid waste in collection and transportation processes. Waste collection and transportation equipment should be sealed to prevent dust from spreading and waste from dropping. Facilities for ventilation, dust reduction, deodorization, and noise reduction set in the waste collection sites should be well operated and maintained. Workers should wear proper PPE at work.

135. **Technical Guidelines on Domestic Solid Waste Transfer Stations** (CJJ/T47-2016): The transfer stations should not be sited in busy areas or densely populated places in people's daily life. Plants should be grown around the stations. Ventilation, dust reduction, and deodorization systems should be provided in waste unloading, operation, and transfer areas within the stations. Waste operation should be carried out in relatively closed spaces within the stations to prevent odor from spreading. Proper sanitary facilities and PPE should be provided to workers.

136. Hubei Province issued relevant regulations including the "Hubei Urban and Rural Domestic Solid Waste Sorting Plan" (2021-2025), the "Hubei Promoting Urban and Rural Domestic Solid Waste Sorting Work Plan" (2019), the "Hubei Kitchen Waste Management Measures" (2020), and the "Hubei Urban and Rural Domestic Solid Waste Sorting Technical Guidelines" (2020) etc. Hunan also developed relevant regulations such as the "Rural Domestic Solid Waste Management Technical Guidelines - Trial" (2016), the "Notice on Implementing Rural Domestic Solid Waste Management Action Plans" etc.

Implementation mechanism and procedures

137. Following the central government's requirements on domestic solid waste sorting and recycling, Hunan and Hubei provinces developed specific implementation mechanisms: (i) **Reduction**: Reduce excessive packaging of products, encourage residents to use special containers to store kitchen waste, call for "Clear Your Plate" campaigns in catering industry, collect residents' decoration waste at designated locations, and use waste fruits and vegetables as resources, etc. (ii) **Sorting**: Divide urban domestic solid waste into "hazardous waste, recyclables, kitchen waste, and other waste"; and divide rural domestic solid waste into "hazardous waste, recyclables, perishables, and other wastes". (iii) **Collection**: Set up environment-friendly domestic solid waste collection sites and adopt provincial unified logos for collection sites and containers. (iv) **Transportation**: Improve separate transportation of different types of domestic solid waste and

prohibit mixing after sorting. (v) **Disposal:** Push the development of hazardous waste treatment/disposal facilities and enhance whole-process pollution control; accelerate kitchen waste disposal facilities planning and construction; encourage to use rural perishable waste as fertilizers; promote incineration facilities development; and stimulate recycling of large-size solid waste, etc.

Institutional organization and performance

138. MHURD is responsible for top-level design and guidance of rural domestic solid waste management nationally. Provincial HURDBs are responsible for planning, construction, and management of province-wide rural solid waste collection, transfer, and disposal systems. The rural solid waste collection and transfer activities under the PforR will be managed in different ways by county level authorities under the line management of provincial HURDBs. For example, in Cili County of Hunan, the county-level Environmental Sanitation Center (69 staff members) is responsible for collecting and transferring domestic solid waste within the county seat and its 26 subsidiary stations (285 staff members) look after the township level waste collection and transfer, and the final treatment and disposal of the collected waste is managed by the county UMB. In Suixian of Hubei, the county UMB's Environmental Sanitation Division (one staff member) and its subsidiary Environmental Sanitation station (11 staff members) manage the county-wide domestic solid waste collection, transfer, and disposal in an integrated manner.

139. A domestic solid waste management system has been established following the principles of "household sorting, group cleaning, village collection, township transfer, county treatment" in both Hunan and Hubei. Under the system, waste collection and cleaning are organized by village committees while waste transfer and treatment are managed by local UMB or environmental sanitation teams. For example, in Xiantao City of Hubei, more than 40,000 big garbage bins and 58,000 small ones are provided to rural households; 2079 waste collection sites are set up at villages; 32 compression transfer stations are established at townships; 400 vehicles are equipped for waste transportation; 3079 workers are engaged for waste collection and cleaning while 435 staff for waste transfer; and all rural domestic solid waste are sent to Xiantao incineration plant for disposal.

140. In the process of compressing solid waste, a small amount of leachate will be generated. In general, township-level transfer stations only have storage tanks instead of leachate treatment facilities. The leachate is then transported to leachate treatment stations at local landfill sites or incineration plants. The ESSA team conducted field visits to some landfills and incineration plants in the sample counties/cities such as Suixian and Honghu of Hubei, and Heng'nan of Hunan, etc. These facilities are operated under the strict supervision of local HURDBs which are the sectoral authorities; and they are also under the strict supervision of local EEBs since they belong to important pollutant discharge units. Therefore, the pollution control measures are relatively sound and comprehensive at these facilities and pollutant monitoring exercises are undertaken regularly, which can help to make the related environmental risks become controllable.

Brief summary

141. China, as well Hunan and Hubei have sound legal framework, institutional arrangement, and staffing on rural domestic solid waste management. This system is found equivalent to the WBG's *EHS Guidelines for Waste Management Facilities* and it covers GIIP, which makes it a qualified system to meet the need of domestic solid waste collection and transfer under the PforR. The government is also making effort to realize a whole process of solid waste classification and recycling. The ESSA team also noted some problems in practical operations, for example some solid waste transfer stations needed to improve odor collection and treatment measures.

4.3.7 Polluted farmland restoration

Legal framework

142. **Land Management Law** (2020 Amendment): Measures should be taken to well maintain irrigation and drainage facilities, improve soil quality and fertility, and prevent desertification, salinization, soil erosion, and land pollution.

143. **Soil Pollution Prevention and Control Law** (2018): Farmland management is subject to classification mechanism, under which farmland are classified to three categories, namely farmland with priority to protection, farmland for safe utilization, and farmland for strict control.

144. **Soil Pollution Prevention and Control Action Plan (2016):** It's aiming to initially restrain soil pollution from aggravating, keep soil quality generally stable, obtain basic insurance in soil safety of agricultural land and construction land, and manage soil risks under basic control by 2020. It's aiming to improve soil quality to be both stable and good, obtain effective guarantee in soil safety of agricultural land and construction land and keep soil risks under full control by 2030. It's also aiming to fully improve soil quality and put agroecosystems into a virtuous circle by the middle of this century.

145. In addition, China has issued other regulations and standards such as the "Notice on Improving Safe Use of Contaminated Farmland" (2019), the "Soil Environmental Quality Risk Control Standard for Soil Contamination of Agricultural Land" (GB15618-2018), etc.

Implementation mechanism and procedures

146. **Restoration of farmland with heavy metal pollution:** Various measures are applicable to manage the heavy metal pollution under different pollution situations for the purpose of preventing heavy metal entering agricultural products and food chains through soils: (i) Agronomic management measures are proposed for safe use of lightly polluted farmland, such as cultivating rice varieties that do not accumulate heavy metals, spraying foliar heavy metal resistance agents, applying lime to increase soil pH, optimizing water management in the fields, applying organic fertilizers, removing rice straw from contaminated fields, and adjusting planting structure, etc. (ii) treatment or restoration measures, such as immobilizing heavy metals in soils, and growing highly accumulating plant species to reduce heavy metals from the farmland, etc. (iii) farmland with seriously polluted soils should be turned to other uses instead of growing crops, and the change should be recognized in land planning if it belongs to permanent prime farmland.

147. **Management of acidic soils:** Various measures are applicable to manage the acidic soils, such as applying lime to increase soil pH, covering land with mulch films or grass to reduce rainfall from leaching alkaline substances in soil, and using test-based precision fertilization and applying organic fertilizer to reduce acidity induced by chemical fertilizer, etc.

Institutional organization and performance

148. Agricultural Resources Conservation and Utilization Divisions (2-6 staff members) under county-level ARABs are responsible for supervising and guiding restoration of polluted farmland, application of straw in farmland, and other soil improvement activities under the assistance of subsidiary institutions such as plant protection stations, and rural service centers (1-12 staff members), etc. Through local ARABs' regular administration and large projects implementation, some demonstration counties/cities have gained experience in polluted farmland restoration and soil improvement. For example,

- In Hubei, Xiantao ARAB carried out a baseline survey of polluted farmland in 2021 which revealed 13,451.7 mu (896.78 ha) of polluted farmland throughout the city. The ARAB then distributed 1800 tons of commercial organic fertilizer, 164 tons of special rice fertilizer, 6150 kg of green fertilizer seeds, and 40000 bags of foliar heavy metal resistance agents to farmers for managing the polluted farmland. About safe use of farmland, they also organized 18 lectures to provide training to 1825 farmers and sent 25 technicians to visit villages for providing technical guidance to farmers in the fields. Likewise, Suixian carried out a baseline survey on four townships for their farmland heavy metal pollution and established demonstration areas of 8000 mu (533.33 ha) adopting various management measures such as water management, deep ploughing, soil conditioning, soil passivation, foliar resistance, organic fertilizer application, and planting structure adjustment, etc.
- In Hunan, the demonstration counties/cities of Cili, Hengyang, Hengnan, Huayuan, Yongding, and Baojing were involved in another World Bank investment, namely the "Hunan Integrated Management of Agricultural Land Pollution Project". Under the project, they closed, relocated, or upgraded the industries that caused the heavy metal pollution; dredged the irrigation water sources and irrigation canals; set up sedimentation tanks at front of irrigation canals to treat irrigation water; and remedied the contaminated soil by applying a VIP mechanism (crop Variety adjustment, Irrigation optimization, and pH regulation). In high-risk areas, planting structure has been adjusted by growing non-food crops or low-cadmium (Cd) accumulating food crops instead of rice. At the same time,

monitoring to irrigation water, sediments, soil, and crops has been strengthened to track the heavy metals. To prevent the polluted rice from entering the market, local governments have contracted specific grain depots to collect and store the rice and specific breweries to use the rice for making industrial alcohol. With the efforts in the past several years, the Cd level in rice has largely dropped and the rice quality has met the food standards, though certain heavy metal pollution still exists in the soil requiring sustained endeavor.

Brief summary

149. China, as well as Hunan and Hubei, have established sound legal framework, institutional arrangement and staff setting on management of acidity and heavy metals in farmland, and have gained some experiences from the past activities and projects. The existing management system can meet the requirements of polluted farmland safe use and restoration.

4.4 Ecological Environment Protection System

150. Implementation of the physical works and agricultural activities under the PforR may relate to local natural ecosystem and ecological protection redlines and cause site-specific soil erosion in construction, so the ESSA team conducted investigation to the relevant management systems.

Legal framework

151. **Water and Soil Conservation Law** (2010 Amendment): For any production or construction project that may lead to soil erosion, the responsible PIU should prepare a water and soil conservation (WSC) plan and submit it to the corresponding WRB for approval. For any production or construction project that is subject to WSC plans, the related WSC works must be designed, constructed, and put into operation simultaneously with the project main parts. Once the construction is completed, the WSC works must be checked for acceptance. The project is not allowed to put into operation if the check is not conducted or accepted. Accordingly, Hunan and Hubei developed and issued provincial measures on enforcing the “Water and Soil Conservation Law” and highlight the necessity of preparing WSC plans proportionate to the impacts of production or construction projects.

152. **Wild Animal Protection Law** (2018 Amendment): If a construction project may have adverse impacts on nature reserves or wild animals’ migration routes, the EEB that is in charge of reviewing and approving EIA for a construction project, should seek opinions of the same-level wildlife protection authorities if the project involves wild animals. Any illegal hunting of wild animals and destruction of natural habitats are prohibited.

153. **Wild Plants Protection Regulations** (2017 Amendment): If a construction project may have adverse impacts on growing environment of national or local protection wild plants, the PIU must ensure the impacts be assessed appropriately in the EIA. Any entities or individuals are prohibited to illegally collect wild plants or damage their growing environment.

154. **Nature Reserve Regulations** (2017 Amendment): A nature reserve must be set up to protect an important habitat. No one is allowed to enter core zones of nature reserves (except for approved scientific research activities). No production facility is allowed to be built in core and buffer zones of nature reserves. No production facility that may pollute the environment or destroy natural resources or landscape is allowed to be built in experimental zones.

155. **Regulations on Preparation and Approval of Water and Soil Conservation Plans** (2017 Amendment): Any entities or individuals that may cause soil erosion must prepare and submit WSC plans for their construction activities. WSC plans are classified to WSC report and WSC form. The related entities or individuals are responsible for the preparation of the WSC plans. A construction project is not allowed to start construction until its WSC plans have been approved by WRBs.

156. **Measures for Construction Projects Water and Soil Conservation Supervision** (2019): PIUs are responsible for WSC check. They should independently carry out the WSC check and have the check reports produced and registered before the projects are put into operation or the construction acceptance is done. After the check results show that the WSC works are qualified for acceptance, the responsible WRBs should disclose the check reports to the public on their official websites or other websites known to the public in a timely manner for at least 20 working days.

157. **EIA Technical Guidelines - Ecological Impacts** (HJ19-2022): Efforts should be made to avoid occupation of any ecological sensitive areas when selecting site or route for a construction project. Ecological impacts at different stages should be identified, predicted, and evaluated. Feasibility of the project should be determined by taking consideration the ecological impacts. Ecological protection measures should be proposed in accordance with the mitigation hierarchy of avoidance, reduce, restoration, and compensation.

158. **Guidelines on Establishing National Park-based Nature Conservation Systems** (2019): The aim is to build a Chinese special natural protection system dominated by national parks. Nature conservation sites are classified into three categories based on the ecological value and significance: national parks, nature reserves, and natural parks.

159. **Guidance on Defining and Implementing Three Control Lines in Territorial and Spatial Planning** (2019): The three control lines in terms of ecological protection redlines, permanent basic farmlands, and urban development boundaries should be defined and implemented in an integrated way. A national IT platform should be established and improved to realize cross-sectoral information sharing and monitor the implementation of the three control lines. Occupying any ecological protection redlines or permanent basic farmlands is subject to approval by the State Council.

160. **Opinions on Defining and Implementing Ecological Protection Redlines** (2017): It aims to protect important areas by setting up redlines to keep the ecological functions from degrading, the area of scope from reducing, and the natural characteristics from changing. The objective is to protect the country's ecological safety and promote sustainable economic and social development. In principle, the ecological protection redlines should be regarded and managed as the areas within which developments are prohibited.

Implementation mechanism and procedures

161. **Mechanism of nature conservation sites**: FGBs have reorganized and reclassified all natural and ecological resources⁸, based on their nature, value, and significance, to form a nature conservation system composed of national parks, nature reserves, and natural parks. National parks and nature reserves have core areas and ordinary areas. Human activities are prohibited in core areas and restricted in ordinary areas. Natural parks are managed as ordinary areas in principle.

162. **Mechanism of ecological protection redlines**: Government authorities such as NRBs and EEBs integrate and reorganize the areas that have important ecological functions (such as water conservation, biodiversity maintenance, water and soil conservation, wind prevention and sand fixation, and coastal protection, etc.) and the areas that are extremely sensitive or fragile (e.g., soil erosion, desertification, rock desertification, and coastal erosion, etc.) and include them into the scope of ecological protection redlines. Once the redlines are defined, development activities within the redlines will be prohibited in principle. NRBs take the lead in approving site selection and land use for construction projects. PIUs should seek opinions of FGBs and EEBs to confirm that the project sites do not occupy any ecological protection redlines before NRBs complete the review of site selection and land use application and report to the corresponding government for approval.

163. **Mechanism of ecological impacts assessment**: Any kinds of ecological and/or environmental sensitive areas should be avoided in site selection of a construction project following the requirements on ecological protection redlines, land planning, and ecological environment zoning. Ecological impacts at different stages (construction, operation, and dismission) of the construction project should be identified, predicted, and evaluated properly. Ecological protection measures should be proposed in accordance with the mitigation hierarchy of avoidance, reduce, restoration, and compensation. Proper ecological management and monitoring plans should be developed, and rationality of the project should be determined by taking consideration the ecological impacts.

164. **Mechanism of WSC plan management**: (i) **Classification**: All construction projects that are subject to WSC plans should finish the WSC plan development and approval procedures as required. A project with land acquisition/occupation over 5 ha, or earthwork or stonework over 50,000

⁸ Nature reserves, scenic areas, geological parks, forest parks, ocean parks, wetland parks, glacier parks, meadow parks, desert parks, meadow scenic areas, aquatic germplasm resource conservation areas, wild plant habitat conservation areas, nature mini-reserves, and key wild animal habitats.

m³ is subject to preparation of a WSC report; a project with land acquisition/occupation below 5 ha but over 0.5 ha, or earthwork or stonework below 50,000 m³ but over 1,000 m³ is subject to preparation of a WSC form; and a project with land acquisition/occupation below 0.5 ha, or earthwork or stonework below 1,000 m³ is exempted from preparation of WSC plans proper measures should be taken to prevent soil erosion. (ii) **Approval**: For a project that is subject to approval by central government, the WSC reports should go to national or provincial WRB for approval. For a project that is subject to approval by local governments, the WSC reports should be approved by the same level WRBs, while WSC forms should be approved by county level WRBs. (iii) **WSC check at construction completion**: PIUs are responsible for organizing WSC monitoring and supervision during project implementation, fulfilling WSC “three simultaneousness” requirements, carrying out WSC check for acceptance prior to completion acceptance or project operation, preparing WSC check reports, disclosing relevant information to the public, and submitting the WSC check reports and materials to and get feedback from local WRBs. (iv) **Supervision and inspection**: WRBs are responsible for overseeing the WSC performance of construction projects, in terms of the compliance of the WSC plans, and the implementation of the WSC check, etc.

Institutional organization and performance

165. **FGBs**: Management of nature conservation sites is the responsibility of FGBs. County level FGBs usually have wildlife protection divisions or forest management divisions (4-7 staff members) responsible for planning and managing the nature conservation sites and protecting and monitoring the natural resources within the jurisdiction. They also monitor the natural conservation sites with the assistance of the forest service centers, township forest stations, state-owned forest farms, etc.

166. **NRBs**: Management of ecological protection redlines is the responsibility of NRBs. By the end of 2020, all provinces in China have completed defining local ecological protection redlines and started to put them into application. Hubei Province has also formulated the "Hubei Ecological Protection Redlines Definition Scheme" in 2018. County level NRBs usually have rural land planning divisions (1-7 staff members) responsible for defining and applying regional redlines and reviewing construction projects' land use application and site relationship with local redlines. NRBs usually use ArcGIS systems to precisely position and manage ecological redlines. In addition, the Ministry of Natural Resources monitors nationwide land changes using special satellites. Once any project site is found against the redlines, the responsible FGBs would be asked to carry out immediate correction actions and might receive punishment. The ecological redlines system has been run well.

167. **EEBs**: Management of nature conservation sites and ecological protection redlines will depend on close cooperation of EEBs. Illegal construction of mines, roads, or dams in nature conservation sites is subject to administration and punishment from EEBs. County EEBs usually have EIA divisions (2-5 staff members). They review the project siting and the related redlines through consulting with local NRBs and FGBs in EIA approval; and examine the ecological impact assessment and mitigation measures included in the EIA, etc. This mechanism has been implemented very well in the EIA process of construction projects.

168. **WRBs**: County level WRBs are the key authorities involved in WSC plans approval and supervision associated with the PforR activities. The investigation to the sample cities/counties reveals that county level WRBs have water resources divisions (3-5 staff members) responsible for approving WSC plans for construction projects that are subject to approval by local governments. The procedures of WSC plans submission, review, and approval are usually going through at local Administrative Review and Approval Hall. There are WSC stations (10-15 staff members) and water LETs (about 15 staff members) under local WRBs to carry out spot checks by means of remote sensing and site visits to examine the implementation of WSC measures, WSC check, and WSC monitoring. At least 10% of projects are randomly selected for site visit in the spot checks every year.

Brief summary

169. The proposed activities under the PforR will be implemented in rural areas that have been disturbed by human beings, including agricultural farming activities on farmland or small-scale infrastructure on rural construction land. Therefore, the PforR activities are unlikely to occupy any nature reserves or critical natural habitats. Meanwhile, the environmental exclusion principles set in this ESSA will exclude activities that might affect any environmental sensitive areas (e.g., ecological protection redlines) from the PforR scope. China has established an effective management system

for ecological protection and water and soil conservation in terms of established legal framework, rational institutional arrangement, sufficient staffing, and sound implementation mechanism. The system is capable to prevent the PforR activities from seriously affecting natural habitats and promote sustainable ecological conservation, which complies with the core principles of the Bank.

4.5 Health and Safety Management System

170. This section assesses the management system of protecting public and workers' safety and health from exposure to hazardous substances or dangerous situation. They include odor generated in rural domestic wastewater collection and treatment, rural domestic solid waste collection and transfer, and livestock and poultry manure treatment and utilization; pesticides used in agricultural cropping practices; dead animals in livestock and poultry farming activities; and risks of poisoning or oxygen deficiency in confined spaces, etc. For managing other potential health and safety risks in construction and operation of the facilities under the PforR, China has established specific OHS systems as discussed in **Chapter 5**.

Legal framework

171. **Animal Epidemic Prevention Law** (2021 Amendment): Personnel dealing with animal epidemic prevention, quarantine, inspection, and handling should take effective health protection and medical care measures and be paid appropriate allowances as.

172. **Pesticide Management Regulations** (2022 Amendment): Pesticide sellers should isolate the pesticide selling and storage places from drinking water sources, living areas, and other goods and equip protective facilities appropriate to the pesticides that they are managing. Pesticide users should abide by national regulations on safe use and storage of pesticides and take necessary PPE while applying pesticide.

173. **Technical Guidelines on Harmless Treatment of Animals Dead from Diseases** (2017): Personnel who deal with animals dead from diseases and related products should use proper PPE and make and keep related records.

174. **Construction Projects Occupational Diseases and Hazardous Risk Classification Catalogue** (2021): Twelve types of risks involving in 84 sectors and 281 activities are listed in the catalogue. Livestock and poultry farming, wastewater treatment, and domestic solid waste management are defined as activities with normal-level risk of occupational diseases.

175. **Occupational Diseases Classification and Catalogue** (2013): The catalogue lists ten categories (e.g., respiratory, dermal, chemical, physical, etc.) and 132 sub-categories of occupational diseases. Accordingly, ammonia poisoning, and hydrogen sulfide poisoning are classified as occupational diseases caused by chemical poisoning.

176. **Guidance Manual for Operation in Confined Spaces** (2020): It provides guidance on identifying risks of poisoning, oxygen deficiency, firing, and explosion, etc. in different confined spaces above ground, underground, or in enclosed equipment and suggests mitigation measures.

177. In September 2022, Hunan issued the "Occupational Diseases Prevention and Control Regulations" (2022), emphasizing that employers are the responsible entities for prevention and control of occupational diseases, and they need to develop preventive regulations and operation procedures, invest in disease prevention devices, identify potential risks, and provide on-job trainings to workers, etc. Hubei formulated the "14th FYP for Prevention and Control of Occupational Diseases", which also highlights the responsibility of employers in reporting occupational diseases, implementing "three simultaneousness" mechanism for OHS facilities, identifying and evaluating OHS risks, and providing health check and on-job training to workers, etc.

Implementation mechanism and procedures

178. **Pesticide management**: Pesticide producers are required to register their pesticide products and obtain production permits. Pesticide sellers are required to obtain selling permits. Pesticide users should abide by regulations on safe use and storage of pesticides and use necessary PPE (face masks, goggles, gloves, etc.) to avoid accidents in application of pesticides.

179. **Odor impact management**: The odor-generated enterprises, as the responsible parties, should take necessary technical or management measures to eliminate or control the risks of odor

on people's safety and health under the supervision and guidance of relevant government agencies (EMBs, HCs, and sectoral authorities). They should also ensure the safety and health management facilities be designed, constructed, and put into operation simultaneously with the project main parts and establish necessary records and archives. Workers should be provided with health and safety training, medical exams, and necessary PPE.

180. **Confined space risks management:** Entities engaged in O&M of sewage collection and treatment, livestock manure treatment, and other similar activities may involve entry into confined spaces (e.g., manholes, biogas tanks, septic tanks, sewage treatment tanks, fermentation tanks, and sewers, etc.) for cleaning, dredging, and maintenance. Workers must follow relevant operation programs to prevent toxic gas poisoning, oxygen deficiency, burning, explosion, and other accidents.

Institutional organization and performance

181. In principle, EMBs and HCs are responsible for broad coordination and instruction on health and safety management involved in production, construction, and operation activities, while PIUs or O&M entities are responsible for the implementation of risk mitigation measures under the guidance of relevant sectoral authorities (e.g., ARABs, EEBs, HURDBs, UMBs). Sectoral authorities at county level usually check OHS performance in their monthly routine inspections. For example, EEBs, HURDBs, and ARABs would ask the WWTFs, domestic solid waste transfer stations, and livestock and poultry farms to improve their odor treatment measures and enhance workers' PPE. EMBs would provide training and guidance to related sectoral authorities on safe production including confined space management. ARABs would direct farmers to store pesticides safely and wear PPE to avoid poisoning the public or themselves.

182. The ESSA team found in the due diligence to the sample counties/cities that the wastewater inlet and sludge treatment processes that usually generate more odor at WWTFs were covered or put in enclosed structures as designed, and workers could wear masks and other PPE in operations, which revealed a good odor management at WWTFs. However, at old solid waste transfer stations and traditional livestock/poultry farms, odor management still needs to improve by applying suitable measures such as covering, spraying deodorants, using biological adsorption, planting trees, and timely cleaning manure to reduce odor impacts on workers and adjacent residents. As required by UMBs and other authorities, workers have been equipped with PPE when working in confined spaces such as sewers, manholes, etc.

Brief summary

183. China, as well as Hunan and Hubei have corresponding regulations, procedures, organization, and capacity on health and safety management associated with the PforR; and the system is found equivalent to the WBG's *General EHS Guidelines*, the *EHS Guidelines for Waste Management Facilities*, and the *EHS Guidelines for Water and Sanitation*. It's suggested to reduce odor impacts in domestic solid waste transfer and livestock/poultry manure management to further secure public and occupational health and safety.

4.6 Consistency with the Bank Principles

184. After assessing the four EMSs, namely the EIA and follow-up management system, the pollution control system, the ecology protection system, and the environmental safety and health management system, the consistency with the Bank's core principles and elements is analyzed in this section with details presented in Error! Reference source not found..

Principle #1 - EIA and management: Program environmental management systems are designed to promote environmental sustainability in the Program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making related to a program's environmental effects. Other aspects are analyzed in Chapter 5.

185. China has established a complete EIA legal framework composed of laws, regulations, technical guidelines, standards, mechanisms, and procedures guided by the national "Environmental Protection Law". This EIA system requires to conduct environmental screening and classification at the early stage of project design and EIA. EIA instruments will include alternatives analysis, impacts assessment, mitigation measures, management responsibilities and budgets, public consultation, information disclosure, monitoring plans, etc. In recent years, China has been promoting

environmental management reform to change from focusing on EIA approval to strengthening follow-up inspection and progressing to project life-cycle environmental management. The ESSA team noted in the sample cities/counties that most types of activities that the PforR will support have gone through environmental management procedures in terms of EIA, “Three Simultaneousness”, environmental acceptance check, pollutant discharge permitting, and pollutant monitoring, etc. Relevant government authorities such as EEBs, ARABs, and HURDBs have clear responsibilities and institutional arrangement. Their LETs carry out regular inspections on related pollution control by means of spot check, special inspection, online investigation, and on-site supervision, etc. The EIA and follow-up supervision system is demonstrated sound by the findings from the site visits and records review. The gaps identified in the practical work (e.g., odor issues) are expected to be filled by improving technical and management measures.

Principle #2 - natural habit protection: Program environmental management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats are not eligible for PforR financing. Other aspects are analyzed in Chapter 5.

186. China has brought critical or natural habitats into the scope of ecological protection redlines. Ecological factors (including critical habitats and biodiversity) are important sensitive receptors to be identified and assessed in EIA, and ecological impact assessment is one of the important components of EIA. It's compulsory that EIA must strictly follow the requirements of ecological protection redlines. Project siting must be subject to approval by NRBs, EEBs, FGBs, and other related authorities, so the relationship between project site and natural habitats or other environmental sensitive areas will be identified in the early stage of project preparation. The PforR activities will be implemented in rural areas that have been disturbed by human beings instead of critical natural habitats. During implementation, ecological protection measures will be undertaken to mitigate any impacts on modified ecosystems as per EIA recommendations. In addition, the environmental exclusion principles developed in this ESSA will exclude any activity that might affect critical natural habitats from the PforR scope. Therefore, the PforR activities will not cause significant conversion or degradation of critical natural habitats. At the same time, the WSC mechanism will help prevent soil erosion and play an active role in ecological protection.

Principle #3 - health and safety: Program environmental management systems are designed to protect public and worker safety against the potential risks associated with exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the PforR. Other aspects are analyzed in Chapter 5.

187. To manage safety and health risks related to odor from domestic solid waste and livestock manure, pathogens from dead animals at livestock farms, and pesticide hazards, etc., China as well as Hunan and Hubei provinces have had corresponding legal framework, implementation mechanism, and institutional arrangement. The O&M entities for these facilities/activities have the capacity and experience of implementing EHS management under strict supervision of local authorities to eliminate the potential risks to the public and workers caused by odor, dead animals, and confined spaces, etc. These entities will establish safe operation and health protection systems and provide qualified PPE and EHS trainings to workers. Farmers will receive training and technical advice on purchasing, using, and managing pesticides. Relevant government authorities will conduct regular spot checks and special inspections on these activities and provide guidance to the related parties. The EHS management system is, therefore, deemed satisfactory to serve the PforR. For the gaps identified in the practical operations, improved technical and management measures are expected to help solve the odor impacts on the public and workers.

188. **Conclusion:** The comparison concludes that China's EMSs in terms of legal framework, management mechanism, and institutional arrangement are well established, and the implementation performance are demonstrated substantially satisfactory. In general, the EMSs are consistent with the Bank's PforR ESSA Guidance, the core principles, and the EHS guidelines and are qualified to manage the environmental issues associated with the PforR activities such as rural domestic wastewater collection and treatment, rural domestic solid waste collection and transfer, livestock and poultry manure treatment and utilization, aquaculture tailwater management, and polluted farmland restoration, etc. The environmental action plans have been recommended in the ESSA (as presented in **Chapter 7**) to fill the gaps identified in the due diligence investigation, and

the EMSs are expected to be improved through the implementation of the PforR.

5. Social Management System Assessment

189. The Bank's PforR ESSA Guidance lays down a set of principles and elements for assessing the borrower's E&S systems systematically. This chapter identifies and analyzes China's corresponding social management systems, and assess the relevant social management regulations, management mechanisms and capacity, and implementation performance based on the types of social risks and impacts, and against the six core principles and 13 elements stipulated in the Guidance and propose recommendations and an action plan for the identified gaps.

190. Chapter 3 shows that the social impacts and risks of the PforR activities in Hubei and Hunan fall into the following types: comprehensive social impacts (e.g., social conflict, fairness, transparency, NIMBY, etc.), tangible culture heritage, public and worker safety, land acquisition, restriction on land use and resettlement, and non-inclusiveness impacts on ethnic minorities and vulnerable groups.

191. The social risks management is achieved in China from the national to local levels by formulating and implementing a series of laws and policies and establishing and running appropriate management agencies and mechanisms. Social management systems consist of laws and regulations, management agencies and mechanisms, and management practices. In China's social management systems, different social risks and impacts are managed by different government agencies (see Table 0-1).

5.1 Correlation Analysis with the Bank's Principles

192. Generally, all the six core principles of PforR ESSA are relevant to the PforR social management system. See Table 0-1 for a correlation analysis between China's social management systems and the Bank policy.

Table 0-1: Correlation Analysis between the Chinese Social Management System and the Bank Policy

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
Comprehensive social impacts, e.g., social conflict, fairness, transparency, NIMBY	Principle #1: social impacts and risks assessment and management system Principle #6: social conflict	Notice of the National Development and Reform Commission on Issuing the Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (2021 Amendment)	State: National Development and Reform Commission (NDRC); Hubei and Hunan: <ul style="list-style-type: none"> Leading authorities: provincial DRC, provincial, municipal and county political and legal affairs committees (PLAC), public complaints and proposals bureaus (PCPB); Assessors: municipal and county competent authorities (e.g., WWTF authorities, county HURDBs and appointed third parties) Registration authorities: provincial (cross-regional / cross-departmental
		Notice of the General Office of the National Development and Reform Commission on Issuing the Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (NDRCOI [2013] No.428)	
		General Office of Hubei Provincial Party Committee and Government "Implementation Opinions on Strengthening the Social Stability Risk Assessment of Major Decisions under New Circumstances" (2021.12.13)	
		Implementation Measures for Risk Assessment of Social Stability for Major Decisions (Items) of the Judicial and Administrative System of Hunan Province (Trial) (2012.9.20)	
		Implementation Opinions on Strengthening the Risk Assessment of Social Stability of Major Decisions under New Circumstances (XBF [2021] No. 27)	
		Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1)	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		Regulations on Letters and Visits (2022.2.25) Regulation on Guaranteeing Wage Payment for Migrant Workers (2020.1.7) Notice of the Ministry of Agriculture and Rural Affairs General Office on the Training of High-quality Farmers in 2022 (2022.4.15) Notice on the Key Points of Agricultural and Rural Work in Hubei Province in 2022 (2022.3.1) Specifications for Education and Training of High-quality Farmers in Hunan Province (Trial) (XNF [2020] No. 48)	projects), or municipal and county PLACs • Decision-making authorities: municipal and county executive meetings of CPC and government leaders • Implementing agencies: assessors and entrusted operating units • Supervising agencies: municipal and county governments and their grass-root agencies (e.g., township governments)
Tangible culture heritage	Principle #2: cultural heritage conservation	Cultural Relics Protection Law (2017 Amendment)	State: National Cultural Heritage Administration Hubei and Hunan: provincial, municipal and county cultural relic protection authorities
		Regulations for the Implementation of the Cultural Relics Protection Law (2017)	
Public and worker safety	Principle #3: labor and occupational health	Civil Code of the People's Republic of China (2021.1)	<u>Public and workers' security</u> State: Ministry of Emergency Management Hubei and Hunan: emergency management department at provincial, municipal and county level, production and operation entities, associations, work safety technical supporting agencies <u>Health of the public and occupational groups</u> State: National HC Hubei and Hunan: provincial, municipal and county HCs, occupational diseases prevention and treatment agencies, occupational health technical service agencies, occupational health inspection and diagnosis agencies <u>Labor management</u> State: Ministry of Human Resources and Social Security (MHRSS), All-China Federation of
		Work Safety Law of the People's Republic of China (2021.6)	
		Law of the People's Republic of China on the Prevention and Control of Occupational Diseases (2018.12)	
		Guidelines on the Prevention and Control of Occupational Diseases for Employers (2010.8)	
		Occupational Health and Safety Management Systems—Requirements with Guidance for Use (2018.3)	
		Classification and Catalogue of Occupational Diseases (2013)	
		Catalogue for the Classified Management of Occupational Disease Hazards and Risks of Construction Projects (2021.3.12)	
		Special Rules on the Labor Protection of Female Employees (Decree No.619 of the State Council) (May 2012)	
		Notice on the Issuance of the National Plan for Occupational Diseases Prevention and Control (2021-2025) (NHC [2021] No. 39)	
		Regulations on Work-related Injury Insurance (2010.12.20)	
		Provisions of Hubei Province on Labor Protection of Female Employees (2009.2.5)	
		Hubei Province "14th Five-Year Plan for Occupational Diseases Prevention and Control" (EWT [2022] No.8)	
		Implementation Measures for Regulations on Labor Protection of Female Employees of	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		Hunan Province (2020.3.8) Law on the Prevention and Treatment of Infectious Diseases (2020) Emergency Response Law of the People's Republic of China (2007.11.1) Regulations on the Prevention and Control of Geological Disasters (2004.3.1) Regulations on the Defense against Meteorological Disasters (1 April 2010.4.1) Regulations of the People's Republic of China on Flood Control (2005.7.15) Law of the People's Republic of China on Protecting against and Mitigating Earthquake Disasters (2009.5.1)	Trade Unions Hubei and Hunan: provincial, municipal and county federations of trade unions, and industrial unions; trade unions of enterprises and public institutions
Land acquisition, restriction on land use and resettlement	Principle #4: land acquisition, livelihood restoration and public participation	Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2017)	<u>Land acquisition</u> State: Ministry of Natural Resources (MNR) Hubei and Hunan: provincial, municipal and county governments, and natural resources authorities <u>Urban house demolition</u> Municipal and county governments, HURDBs, house demolition agencies <u>Rural house demolition</u> Agriculture and rural affairs authorities, Natural resources authorities, township governments, village committees Facility agriculture land use (FALU): State: MNR, MARA Hubei and Hunan: provincial, municipal and county natural resources authorities, agriculture and rural affairs authorities, township governments Land use right transfer (LURT): State: MARA Hubei and Hunan: provincial, municipal and county agriculture and rural affairs authorities, township governments <u>Livelihood restoration</u>
		Land Administration Law (2020.1)	
		Regulations for the Implementation of the Land Administration Law (2021 Amendment)	
		Regulations on the Expropriation of Houses on State-owned Land and Compensation (Decree [2011] No.590 of the State Council) (2011.1.21)	
		Notice on Issuing the Measures for the Expropriation and Evaluation of Houses on State-owned Land (JF [2011] No.77) (2011.6.3)	
		Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238)	
		Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SCO [2006] No.29)	
		Notice of the Ministry of Labor and Social Security, and the Ministry of Land and Resources on Doing a Substantially Good Job in Social Security for Land-expropriated Farmers (MLSS [2007] No.14)	
		Notice of MNR and MARA on Issues concerning Facility Agriculture Land Use Management (MNRP [2019] No.4)	
		Guiding Opinions of the General Office of the CPC Central Committee and the State Council on the Overall Delineation and Implementation of the Three Control Lines in National Spatial Planning (TZ [2019] No. 48)	
		Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNRP[2021] No.166)	
		Guidelines on Simple Examination and Approval of Village Construction Projects issued by the National Development and Reform Commission and Other Ministries and Commissions (FGNJ [2020] No. 1337)	
		Measures for the Administration of the Land Use Right Transfer of Rural Land (Decree 2021 No.1 of MARA)	
		Notice of MNR, MEE and NFGA on	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		Strengthening the Management of Ecological Protection Red Line (Trial) (MNR [2022] 142)	State: Ministry of Human Resources and Social Security Hubei and Hunan: provincial, municipal and county human resources and social security authorities, county and township governments, community committees, village committees
		Notice of Hubei Provincial Government on Releasing Block Comprehensive Land Prices of Hubei Province (2019.11.8)	
		Measures for the Implementation of the Expropriation of Houses on State-owned Land and Compensation of Hubei Province (2015.7.6)	
		Guidelines of Hubei Provincial Government on Basic Pension Insurance for Land-expropriated Farmers (HPPG [2014] No. 53)	
		Notice of Provincial Natural Resources Department and Agriculture and Rural Affairs Department on Further Standardizing the Management of Facility Agricultural Land (ENRP [2020] No. 4)	
		Implementation Opinions of the General Office of the Provincial People's Government on Simplifying and Optimizing the Management of Small Rural Construction Projects in Hubei Province (EZBF [2021] No. 29)	
		Notice of the Provincial Agriculture and Rural Affairs Department on the Issuance of Hubei Province Rural Land Use Right Transfer Regulations (Trial) (2019.4.12)	
		Notice of Hunan Provincial People's Government on Adjustment of Compensation Standards for Land Acquisition in Hunan Province (XZBF [2021] No.3)	
		Management Measures of Hunan Province on Urban House Demolition and Removal (Order 157 of Hunan Provincial People's Government) (2002.6)	
		Notice of Hunan Provincial Natural Resources Department on Improving the Management of Facility Agricultural Land Use (XNRP [2020] No.3)	
		Several Opinions of Hunan Provincial Development and Reform Commission, Natural Resources Department, Agriculture and Rural Affairs Department on Simplifying and Optimizing the Management of Small Rural Construction Projects (Trial) (XFGNG [2021] No. 140)	
		Management Measures for Rural Contracted Land Use Rights Transfer (2021.1.26)	
		Implementation Opinions of Hunan Provincial Communist Party Committee and People's Government on Strengthening the Protection of Cultivated Land and Improving the Balance between Occupation and Replenishment (2020.7.30)	
Ethnic minorities and vulnerable groups	Principle #5: ethnic minorities and vulnerable groups	Constitution (2018 Amendment)	Ethnic minorities State: National Ethnic Affairs Commission Hubei and Hunan: provincial, municipal and county ethnic affairs
		Law of the People's Republic of China on Regional National Autonomy (2001 Amendment)	
		Several Provisions of the State Council on the Implementation of the Regional National	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		Autonomy Law (2005.5)	departments
		Notice of the State Council on Issuing the 13 th Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79)	Women State: All-China Women's Federation Hubei and Hunan: women's federations at different levels
		The 14th Five-Year Plan of Hubei Province for High Quality Development of Ethnic Affairs (2022.1)	
		The 14th Five-Year Development Plan of Hunan Province on Ethnic Work (2021)	Children Functional authorities of governments at or above the county level, township governments, sub-district offices, community committees, village committees
		Law of the People's Republic of China on the Protection of Women's Rights and Interests (2018.10.26 Amendment)	
		Law of the Peoples Republic of China on the Protection of Minors (2020.10.17)	
		Opinions on Reforming and Improving the Social Assistance System (ZBF [2020] No.18)	
		Implementation Measures of Hubei Province for the Law of the People's Republic of China on the Protection of Women's Rights and Interests (2007.10.1)	
		Implementation Measures of Hunan Province for the Protection of Rights and Interests of Women (2006.10.1)	
		Guidelines of the CPC Central Committee and the State Council on the Three-year Poverty Alleviation Action	
		The 14th Five-Year Plan of Hubei Province for the Development of Civil Affairs (2021.10. 29)	
		Strategic Plan for Countryside Revitalization of Hubei Province during 2018-2022 (2019.5)	
		Implementation Opinions of Hubei Provincial General Office of the CPC Central Committee and Government on the Reform and Improvement of the Social Assistance System (EBF [2021] No.37)	
		Plan of Hubei Province for Women's Development (2021-2030) (2021.12.25)	
		Plan of Hubei Province for Children's Development (2021-2030) (2021.12.25)	
		The 14th Five-Year Plan of Civil Affairs of Hunan Province (2021.8.31)	
		Plan of Hunan Province for Women's Development (2021-2025) (2021.9.16)	
		Plan of Hubei Province for Children's Development (2021-2025) (2021.9.16)	
		Implementation Opinions of Hunan Provincial General Office of the CPC Central Committee and Government on the Reform and Improvement of the Social Assistance System (XBF [2020] No.25)	
		Strategic Plan for Rural Revitalization of Hunan Province (2018-2022) (2018.9)	

5.2 Assessment of Social Regulations and Policies

193. China's legal framework consists of the following: 1) laws and regulations promulgated by

the National People's Congress and the State Council; 2) regulations, standards and technical specifications promulgated by ministries and commissions; and 3) regulations promulgated by local people's congresses and governments. In general, regulations, standards and policies on land acquisition and resettlement (LAR), ethnic minority development, labor rights, public participation and consultation, grievance redress, etc. have been promulgated and implemented at the national, provincial, municipal and county levels to systematically manage potential social risks and impacts in the PforR lifecycle.

194. Appendix 3 compares the Bank policy with the applicable social management regulations. This section compares the relevant social management regulations with the Bank policy based on the core principles and elements, then identifies gaps in social regulations and policies where applicable and proposes actions and recommendations for improvement.

5.2.1 Core Principle #1: Sustainable social risks management system⁹

195. Core Principle #1 includes two elements, both are relevant to social regulations and policies. The consistency analysis is summarized as follows.

Element 1: The legal framework and management agencies can direct social assessment adequately at the PforR Program level.

196. **Social stability risk assessment (SSRA):** The Chinese government uses SSRA as a tool to systematically manage the social risks and impacts that may be involved in major projects, policies and reforms, and mitigates and manages social impacts actively by establishing and implementing a whole SSRA system, so as to promote scientific decision-making, and sustainable Program and social development.

- National development and reform committee (NDRC) promulgated the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects in 2012, stating that the project organization shall investigate and analyze social stability risks when conducting preparatory work, collect opinions from relevant people, identify risks, risk possibilities and risk impacts, and propose prevention and mitigation measures, and social stability risk ratings after such measures are taken.
- The General Office of the State Council promulgated the Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) in 2012, requiring that an SSRA shall be conducted on major decisions, projects and policies.
- In February, 2020, the General Office of the CPC Central Committee and the General Office of the State Council released the Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances, requiring that an SSRA shall be carried out on major decisions including those on major construction projects. It specifies the contents, methods, procedures and management of SSRA, and application of SSRA results, and underlines that the contents of SSRA are integral to the Program's feasibility study and application reports.
- The Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) promulgated by the General Office of the State Council in 2012 was succeeded by the Rules of Hubei Province for Implementing Social Stability Risk Assessment for Major Decisions (Interim) and Implementation Measures for Risk Assessment of Social Stability for Major Decisions (Items) of the Judicial and Administrative System of Hunan Province (Trial), specifying requirements for the implementation of SSRA in Hubei and Hunan Province respectively. In December, 2021, it was superseded by the Implementation Opinions on Further Strengthen Social Stability Risk Assessment for Major Decisions under New Circumstances (EBF [2021] No.35) and Implementation Opinions on Strengthening the Risk Assessment of Social Stability of Major Decisions under New Circumstances (XBF [2021] No. 27), which particularly stipulates the contents, methods,

⁹ Chapter 5 of this report quotes the information related to social system analysis in the core principles and elements in the PforR ESSA Guidance for a consistent comparative analysis.

procedures, management and the use of results of SSRA for major decisions in Hubei and Hunan Province.

- The Land Administration Law (effective from January 1, 2020) requires that an SSRA shall be conducted before land acquisition and house demolition.

197. **Assessment:** SSRA is an important procedural requirement in project application and feasibility study. Relevant policies, mechanisms, standards, and management procedures have been formulated and implemented at the national, Hubei and Hunan provincial level to regulate SSRA. It is learned through the due diligence and assessment that the related municipal and county authorities take the SSRA seriously, and the conclusions and risk ratings of SSRA are the key reference for the governments in their decision-making. Therefore, the social regulations and policies are generally consistent with Element 1.

Element 2: Incorporate recognized elements of good practice in E&S assessment and management, including six aspects.

198. According to the social risk screening results (Appendix 2), the activities in Hubei and Hunan do not involve any induced, cumulative or cross-border social impact. See Element 1 for a consistency analysis of social impact assessment. The consistency of Elements 2 and 5 is analyzed below.

199. **(i) Early screening:** During site selection and feasibility study of related projects, the relevant authorities (e.g., NRB, cultural heritage bureau) shall be coordinated to conduct a joint survey, and risks and impacts screening. For example, the Measures for the Administration of the Pre-review on the Use of Land for Construction Projects (2017), and the Land Administration Law (effective from January 1, 2020) require that screening be conducted so that the construction project complies with the land utilization plan and avoids any acquisition of basic farmland. The Cultural Relics Protection Law (2014 Amendment) requires that a cultural relic survey shall be conducted before project site selection to minimize impacts on cultural relics. The Regulations on the Prevention and Control of Geologic Disasters (2004) require that the project area shall not be selected in disaster areas, and related disaster prevention and control requirements should be defined through a geological disaster assessment to reduce public security risks if any project to be constructed in the areas liable to geological disasters. In terms of the small rural construction projects¹⁰ which involve new construction land, the project owner should obtain the land pre-examination and site selection approval from county level natural resources department first.

200. **(ii) Alternatives:** Options should be compared and analyzed during project site selection and feasibility study. The Administrative License Law of the People's Republic of China, and the Decision of the State Council on Establishing Administrative License for Administrative Review and Approval Items Really Necessary to Be Retained require that the feasibility study of a project shall compare E&S impacts of different options to avoid or minimize local negative E&S impacts. The Notice of the General Office of the National Development and Reform Commission on Issuing the Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (2013) also stipulates, the project implementation units (PIUs) and assessment agencies shall obtain the support of the local governments and related departments, grass-root organizations, Non-governmental Organizations (NGOs), etc. for the proposed project in terms of planning, land acquisition, house demolition, compensation, resettlement, environmental protection, etc., thereby selecting an option with acceptable social stability risks.

201. **(iii) Developing measures to avoid, minimize or mitigate social impacts:** The Notice on Issuing the Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (2013) requires that plans and

¹⁰ It refers to rural living environment improvement construction projects, such as household garbage and sewage treatment, toilet manure treatment, and village appearance improvement, as well as rural water supply and drainage, roads, cultural and sport sites etc. according to the Guidelines on Simple Examination and Approval of Village Construction Projects issued by the National Development and Reform Commission and Other Ministries and Commissions (FGNJ [2020] No. 1337)

measures shall be proposed to prevent and mitigate risks. The Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) stipulate, if the assessment report thinks that if a high risk is present, a decision of non-implementation shall be made, or a decision be made after the plan is adjusted or the risk level reduced; if an intermediate risk is present, a decision of implementation shall be made after effective risk prevention and mitigation measures are taken; if a low risk is present, a decision of implementation may be made, but actions in terms of explanation and persuasion to the people affected shall be conducted, and appeals of relevant people handled properly. SSRA shall also address the legitimacy, rationality, feasibility and controllability of the proposed activities, and require that an appropriate contingency plan be developed.

202. **(iv) Clear articulation of institutional responsibilities and resources to support implementation of plans:** The Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) requires for assessment that if the reasonability, fairness and timeliness of related compensation, resettlement or assistance measures offered are assessed, and if appropriate manpower, material and financial resources are available.

203. **(v) Public participation, information disclosure and grievance redress mechanism:** The SSRA policies of Hubei and Hunan require that public consultation be conducted with all stakeholders involved in a plan to collect their opinions and suggestions, including advice, needs and directions of public opinion on the proposed project from mass, online, mobile and other emerging media. The Notice on Issuing the Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (2013) stipulates, the PIUs and assessment agencies shall obtain supports of the local governments and related departments, grass-root organizations, NGOs, etc. for the proposed project, and the completeness of public participation shall be assessed as well, including if the procedural requirements of public participation, expert consultation and information disclosure are all well implemented. For any project involving land acquisition and house demolition, the Land Administration Law (effective from January 1, 2020) requires that once the land acquisition is approved in accordance with related law, the government at or above the county level shall disclose the key information, e.g. the purpose and boundary of land acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township (town), village and village group for at least 30 days, to collect comments from the affected rural collective economic organization and its members, village committee and other stakeholders. Whereas parties concerned refuse to accept the decisions, the disputes may be brought to the courts within 30 days after the notification on the decision is received. No party shall change the status quo of the land before the disputes over ownership and use right are settled. Whereas a construction unit or individual refuse to accept the administrative punishment decisions on dismantling the buildings and other facilities, it may bring the case to the court within 15 days starting from the day when the decision is received. The MNR issued the Standard Guidelines for Grass-root Government Affairs Disclosure in Rural Collective Land Acquisition on June 27, 2019, making detailed provisions on project land acquisition policies, and the scope, time limit and channels of disclosure during preparation, approval and implementation. In terms of the small rural construction projects, it is stipulated in the National Development and Reform Commission and Other Ministries and Commissions (FGNJ [2020] No. 1337) that villagers' participation into decision making process should be guaranteed through adopting group discussions and in-door surveys to listen to villagers' opinions and respecting their decisions. On this basis, it is encouraged to adopt the mode of "discussion by village committees - information disclosure- approval by villager representatives" to conduct project selection, construction and management, so as to fully guarantee the public's right to know, to participate, to make decisions and to supervise.

204. **Assessment:** The social impacts and risks are basically assessed and managed through regulations in terms of SSRA, land acquisition and house demolition in China, Hubei and Hunan provinces. There are clear mechanisms for impact early-stage screening, option comparison, and arrangements for measure defining on social risks (e.g., LAR, social stability risks) management. The regulations also defined the responsible agencies to manage specific impacts. Comprehensive system arrangements have been established in the regulations on social stability risk management, land acquisition and house demolition for information disclosure, public participation, and grievance redress. Therefore, the social regulations and policies are generally consistent with Element 2.

5.2.2 Core Principle #2: Cultural heritage management system

205. Elements 3 and 4 under Core Principle #2 define management requirements for natural habitats, which were discussed in Section 3. Only the consistency with Element 5 is assessed here.

Element 5: Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.

206. **Cultural relic protection:** The activities in Hubei and Hunan involve small civil works, such as the construction of rural wastewater collection and treatment systems, domestic waste collection and treatment systems, and livestock and poultry manure recycling facilities. According to the social impact screening (**Error! Reference source not found.**), the PforR Program is unlikely to affect any tangible culture heritage. China has established and implemented a sound cultural relic protection law to assess and manage potential cultural relic impacts of construction activities. The Cultural Relics Protection Law requires that no construction works or operations such as blasting, drilling and digging is allowed within the area of historical and cultural protection site. At the time of site selection for a construction project, location where immovable cultural relics located should try to be avoided. If a construction project is needed to be implemented, it should be approved by the cultural relic authority firstly, and then the urban-rural development and planning authority. Within the protection area or construction restricted area of a protected cultural relic, any facilities that may pollute such relic and its environment are not allowed to construct, and any activities that may affect its safety and environment are not allowed to conduct. Any such facilities already existed in the area shall be disposed within a specific time limit. Before launching a large-scale infrastructure construction project, the construction unit shall firstly apply to the provincial cultural relic authority for arranging a unit engaged in archaeological excavations to conduct archeological investigation at places where cultural relics may be buried underground within the project area.

207. **Assessment:** The Cultural Relics Protection Law and the Regulations for the Implementation of the Cultural Relics Protection Law give full consideration to potential impacts on cultural relics to protect cultural relics from construction. The regulations on tangible culture heritage protection of China, Hubei and Hunan are consistent with Element 5.

5.2.3 Core Principle #3: Public and worker safety management system

208. Element 7 under Core Principle #3 defines requirements for toxic and hazardous substances, and pest control related to environmental system analysis. The consistency with the public security and labor safety requirements in Elements 6 and 8 is assessed here.

Element 6: Promote adequate community, individual, and worker health, safety, and security through the safe design, construction, operation, and maintenance of Program activities; or, in carrying out activities that may be dependent on existing infrastructure, incorporate safety measures, inspections, or remedial works as appropriate.

209. **Worker safety management:** Program activities inevitably involve health and safety risks of workers, including the occupational health management of wastewater treatment facilities (WWTFs) and its' workers, worker health and safety management during the construction of industrial base ancillary facilities, and process of rural waste collection and treatment. China has established and implemented a system to manage labor safety:

- The Labor Law (2018 Amendment), and the Civil Code make provisions on child labor, discrimination, forced labor, etc. For example, employers shall not recruit minors (under 16 years); special protection shall be given to female and underage (16-18 years) workers; workers shall not be discriminated against on the basis of ethnic group, race, gender or religion; women shall enjoy the same employment rights as men; forced labor shall be prohibited.
- The Work Safety Law requires that production and operation entities must establish a sound work safety responsibility system, and relevant rules and regulations, and improve work safety conditions to ensure work safety. It also requires that reporting information be disclosed to the public for public supervision.

- The Civil Code requires that work safety and health facilities of construction, reconstruction and expansion works shall be designed, constructed and put into operation along with these works.
- The Regulations on Work-related Injury Insurance (2010 Amendment) requires that all employers in China shall participate in work-related insurance system in line with the law and purchase work-related injury insurance for all employees.
- The Occupational Health and Safety Management Systems—Requirements with Guidance for Use promulgated in 2020 require that enterprises shall identify and control potential occupational health and safety hazards systematically, and eliminate safety accidents at the beginning, thereby protecting worker's health and safety. Enterprises may apply for "occupational health and safety management system" certification, and establish a normative management system, realizing the source identification and whole-process control of hazards, and continual improvement. However, the occupational health and safety management system is not a mandatory requirement.

210. **Assessment:** A whole set of regulations on worker's health and safety has been established in China, Hubei and Hunan to fully protect worker rights. The regulations also require that appropriate safety measures, inspections or remedial works should be taken during design, construction and operation to ensure community, individual and worker safety. The regulations on public and labor safety are basically consistent with Element 6.

Element 8: Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the PforR Program activities are located in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or affected by climate events.

211. **Disaster safety management mechanisms:** The PforR is located in Hubei and Hunan, and may involve areas prone to natural disasters, such as floods, lightning and landslides. During implementation, the flow of migrant workers may lead to disease spreading (e.g., COVID-19). For urban-rural planning and major project construction, the Regulations on the Defense against Meteorological Disasters require that governments at or above the county level shall fully consider meteorological factors and natural disasters and propose measures to avoid or mitigate disasters. In addition, the Regulations on the Defense against Meteorological Disasters require that lightning protectors of newly constructed, reconstructed or expanded buildings (structures), places and facilities shall be designed, constructed, and put into operation along with these works. The Regulations of the People's Republic of China on Flood Control make systematic arrangements for floods in terms of organization, flood prevention preparation and implementation, rescue, follow-up work, funding, reward, and punishment, etc. The Regulations on the Prevention and Control of Geologic Disasters make systematic arrangements for the investigation, prevention, and management of geologic disasters, such as prevention, emergency response, governance and legal liabilities. The Law of the People's Republic of China on Protecting against and Mitigating Earthquake Disasters requires that newly constructed, reconstructed or expanded construction works shall meet seismic design requirements, and makes specific provisions on seismic safety assessment and earthquake protection. The Law on the Prevention and Treatment of Infectious Diseases (April 2020) stipulates, governments at or above the county level shall develop and implement infectious disease prevention and control plans, and establish a prevention, treatment and supervision management system; news media shall conduct public welfare publicity on infectious disease prevention and control, and public health education. According to the Notice on Targeted Health Management and Orderly People Flow (Joint Prevention and Control Mechanism (ZF [2020] No.203) promulgated by the National HC, all localities shall define prevention and control ranges precisely based on pandemic risk rating and take comprehensive measures such as restriction of people flow, nucleic acid testing and health monitoring. For medium- to high-risk areas, entry into the project area, and people gathering shall be avoided where possible, and people entering the project area may flow freely only if their body temperatures are normal and proper personal protection measures are taken. Entry into medium- to high-risk areas shall be avoided if not necessary.

212. **Assessment:** The regulations on natural disaster prevention and control measures are consistent with Element 8.

5.2.4 Core Principle #4: Involuntary resettlement management system

213. Element 9 under Core Principle #4 manages Program LAR in six aspects, all of which are related to the social regulations and policies applicable to The PforR. Consistency is analyzed as follows.

214. **(i) Minimizing negative impacts related to land acquisition:** For example, the analysis of “early-stage impact screening” under Element 2, the Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2017), the Land Administration Law (effective from January 1, 2020), and the regulations on SSRA require that projects and enterprises shall utilize existing construction land, and avoid any occupation of farmland (especially permanent basic farmland) where possible, and reduce LAR impacts through design optimization, thereby reducing social stability risks. At the preparation stage, natural resources authorities will participate in the survey to confirm the land to be used for the project, and the feasibility study will compare different options for LAR impacts. The government authorities will check if the land use plan is rational during land use review and feasibility study. For FALU, on the basis of the Notice of MNR and MARA on Issues concerning Facility Agriculture Land Use Management (MNR [2019] No.4), Hubei and Hunan have promulgated management measures based on local conditions, for example, Hubei Province promulgated Notice of Provincial Natural Resources Department and Agriculture and Rural Affairs Department on Further Standardizing the Management of Facility Agricultural Land (ENRP [2020] No. 4) in 2020, requiring that the township government shall, together with the natural resources, agriculture and rural departments at the county level, rationally distribute the land for facility agriculture and determine the location and scope of the land for facility agriculture according to the land spatial planning and agricultural development planning. The site of facility agriculture land should select unused land and inefficient idle land as possible, and shall not or less occupy cultivated land. If it is unavoidable to occupy cultivated land, the inferior cultivated land should be occupied first to avoid excessive occupation of high-quality cultivated land; Hunan Province promulgated the Notice of Hunan Provincial Natural Resources Department on Improving the Management of Facility Agricultural Land Use (XNRP [2020] No.3), requiring that the township government shall select and determine the location and scope of FALU following the national land spatial planning, agricultural development planning, village planning and the policies of protecting cultivated land, economizing and intensive use of land and facility agricultural land use, and waste hills and slopes, tidal flat, and unused construction land should be utilized where possible. Meanwhile, the MNR published the Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNR [2021] No.166) in 2021, requiring that permanent basic farmland shall not be converted into forest land, grassland, garden land and other agricultural land or agricultural facilities construction land. The annual “balance in and out” shall be carried out for any conversion of cultivated land to other agricultural land and agricultural facilities construction land, and the same amount and quality of cultivated land shall be made up by means of the consolidation of forest land, grassland, garden land, other agricultural land and agricultural facilities construction land into cultivated land. Hubei and Hunan Provinces are working out their own “balance in and out” plan for cultivated land occupation and collecting views around the province. Where LURT is involved, Measures for the Administration of the Land Use Right Transfer of Rural Land (Decree 2021 No.1 of MARA), the transferee shall submit an application, and the local government at or above county-level or the township government shall organize competent authorities, collective economic organization representatives, farmer representatives, experts, etc. to review the land use, the transferee’s operating capacity, and compliance with the food production and other industrial planning. Those who fail to submit the application for review and verification in accordance with the provisions or fail to pass the review and verification shall not carry out the transfer of land use right.

215. **(ii) Identifying and addressing economic and social impacts arising from land acquisition or loss of access to natural resources:** The Land Administration Law (effective from January 1, 2020) stipulates, “Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go to fill the compensation registration form with holding its assets ownership certificate. The people’s government at or above the county level shall organize the department concerned to estimate the relevant costs and make them fully available.” The land acquisition compensation measures of Hubei and Hunan make systematic arrangements for land acquisition compensation and resettlement in accordance with the Land Administration Law, including for those lacking legal title. During land acquisition, affected people shall confirm the results

of detailed measurement survey (DMS), and the land acquisition agency shall enter into compensation and resettlement agreements with landowners and users before submitting application for project approval. In terms of FALU, it's required to sign land use agreement and submit to township government for record in both Hubei and Hunan Province. Where LURT is involved, the Measures for the Administration of the Land Use Right Transfer of Rural Land (Decree 2021 No.1 of MARA) requires that the LURT shall follow the principle of compliance, voluntariness and compensation, a LURT contract shall be signed, and the transfer income shall be paid to the land contractor. In addition, a whole set of grievance redress mechanisms for land acquisition compensation has been established from village or community level to townships governments level, and/or to the county level or above. If any affected person is dissatisfied with the DMS result, and/or the compensation or resettlement, he/she may file a grievance with the village head or village committee, or with the township or county / municipal government. According to the Regulations on Letters and Visits (2022), Party committees and relevant departments of the government at or above the county level shall perform such duties as acceptance, transmitting, assigning, coordination, handling, supervision and inspection. If a complainant is dissatisfied with the results of settlement, he/she may settle the dispute through litigation to protect his/her lawful rights and interests.

216. **(iii) Compensation and transition subsidy to be fully paid at replacement cost before land use:** The Land Administration Law (effective from January 1, 2020) defines compensation policies, rates, principles, flows, schedules, etc. for different types of land use. Article 47 stipulates, fair and reasonable compensation shall be granted for land acquisition to ensure that the living standard of the affected farmers is not reduced, and their long-term livelihoods are secured; in case of land acquisition, the land compensation fees, resettlement subsidy, and compensation fees for rural residential houses, other ground attachments, young crops, etc. shall be paid timely and fully according to the law, and social security costs for the affected farmers be disbursed accordingly; the rates of land compensation fees and resettlement subsidy for acquired agricultural land is determined based on the block comprehensive land price formulated and disclosed by provinces, autonomous regions and municipalities, which shall be adjusted or reissued at least every three years; compensation rates for acquired land other than agricultural land, ground attachments, young crops, etc. shall be developed by provinces, autonomous regions and municipalities. For rural residential houses, fair and reasonable compensation shall be provided on the principle of compensation before relocation and residential condition improvement by such means as reallocating housing land for house construction, offering resettlement houses, or granting cash compensation, and relocation, temporary resettlement and other costs resulting from acquisition shall be compensated for in order to protect the lawful residential and property rights of rural residents.

217. Compensation rates for land acquisition are usually adjusted every two to three years based on local economic development and market conditions in each province, city and county. For example, the compensation rates for land acquisition in Hubei Province were last adjusted by the Notice of Hubei Provincial Government on Releasing Block Comprehensive Land Prices of Hubei Province promulgated in November 8, 2019, stipulating that local compensation rates for attachments and young crops on acquired land shall be determined by concerned municipal (prefecture) governments based on local economic development and market conditions and registered by the provincial natural resources department within three months after its promulgation. Hunan Province promulgated the Notice of the People's Government of Hunan Province on Adjusting the Compensation Standard for Land Requisition in Hunan Province (XZF [2021] No. 3), stating that 60% of the block comprehensive land price is the resettlement subsidy and 40% is the land compensation fee; for permanent basic farmland acquired, two times of the standard shall be applied; for paddy field (exclude permanent basic farmland) acquired, 1.2 times of the standard shall be applied, for garden land and forest land acquired, coefficient of corresponding land type shall be applied, for other agricultural land acquired, 1 times of the standard shall be applied and for unused land acquired, 0.6 times of the standard shall be applied. The municipal or prefecture government can formulate and adjust the specific implementation measures based on their own conditions, but the compensation standard and land type coefficient shall not be lower than the provincial standard. In addition, the new Land Administration Law requires that compensation should be paid before land occupation or land use.

218. The compensation and resettlement mode for expropriated houses on state-owned land is

that a compensation and resettlement agreement be signed through third party market appraisal. The state has promulgated the Regulations on the Expropriation of Houses on State-owned Land and Compensation (Decree [2011] No. 590 of the State Council) and the Notice on Issuing the Measures for the Expropriation and Evaluation of Houses on State-owned Land (JF [2011] No.77), etc. to make systematic arrangements for land appraisal, process management, public participation, compensation payment, resettlement policies, etc. Provincial, municipal and county governments also offer such supporting measures as relocation subsidy, transition subsidy, and compensation for production/business suspension losses based on local conditions. For example, according to Articles 25 to 27 of Measures for the Implementation of the Expropriation of Houses on State-owned Land and Compensation of Hubei Province (2015.7.6), 1) the value of the expropriated house and the house for property right exchange shall be equivalent to the appraisal value determined by qualified real estate appraisal agencies on the date when the decision on the expropriation is announced in accordance with the measures for expropriation and evaluation of houses on state-owned land; 2) the appraisal shall be conducted in accordance with China's technical standards and evaluation procedures and with reference to the market prices of real estate similar to the house expropriated; 3) Agencies, individuals and panels of experts responsible for real estate appraisal shall conduct independent, objective and impartial evaluation and appraisal of the expropriated house without being distracted by any organization or individual; and 4) municipal and county real estate authorities shall release the catalogue of legally registered real estate appraisal agencies with grade three or above qualifications and without bad credit records in public on a regular basis so that affected people make a choice as needed. The Measures of Hunan Province for the Expropriation of Houses on State-owned Land and Compensation (2014) stipulate, a municipal or county government making a house expropriation decision shall grant the following compensation to each displaced person: 1) compensation for the value of the expropriated house; 2) compensation for relocation and transition due to house expropriation; and 3) compensation for production / business suspension losses arising from house expropriation. The compensation for the interior decoration in the value of the expropriated house shall be agreed between the house expropriation agency and the displaced person, or failing this, appraised by a real estate appraisal agency selected hereunder.

219. For LURT, both parties shall reach an agreement through equal negotiation. Any project involving extensive transfer, many households and high operating risks, a risk security fund may be established. For projects involving the transfer of land use right of the whole village (group) with a large area, a large number of rural households and higher operational risks, risk security funds may be established, and the specific amount of the fund shall be negotiated by both parties.

220. **(iv) Policy arrangements for livelihood restoration:** The Land Administration Law (2020) requires that the living standard of the affected farmers shall not be reduced, and their long-term livelihoods shall be secured. In general, five main resettlement modes are available to land-expropriated farmers: agricultural production, reemployment, equity participation, non-local resettlement (Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238)), and endowment insurance (Article 48 of the Land Administration Law (2020), etc.). In addition to the above five modes, state policies, such as the Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29), also requires that local government shall establish a social security system suited to the characteristics and needs of land-expropriated farmers, secure employment training and social security funds, promote land-expropriated farmers to get employed and be incorporated into urban society, and ensure that the living standard of land-expropriated farmers is not reduced due to land acquisition, and their long-term livelihoods are secured. For eligible land-expropriated farmers, employment and startup supporting policies shall be implemented, occupational training should be further strengthened, and public employment services should be improved to promote their employment and startup. For example, according to the Guidelines of Hubei Provincial Government on Basic Pension Insurance for Land-expropriated Farmers (HPPG [2014] No. 53), land-expropriated farmers shall have access to the basic pension insurance if: 1) their contracted land is legally expropriated by governments at or above county level; 2) they have the Rural Land Contract or the Certificate of Contractual Right of Rural Land in hand when their land is expropriated; 3) they are registered permanent residents at the place where the expropriated land is located; 4) the area of arable land per capita is 0.3 mu or less after the land expropriation; and 5) they are 16 years old or older. Below are compensation rates for basic pension insurance of land-expropriated farmers in

Hubei Province: governments at or above county level provide land-expropriated farmers with one-off compensation no less than three times the annual per capita net income of rural residents in the city or prefecture where the land is expropriated; land-expropriated farmers who are 60 years old or older are entitled to such one-off compensation in full amount; for land-expropriated farmers under the age of 60 (16 to 59 years old), the amount of compensation shall be 1% lower than the aforesaid full amount for every 1 year of difference between their actual age and the baseline age (60 years old). While according to the Notice of the General Office of Hunan Provincial People's Government Forwarding the Provincial Human Resources and Social Security Department's Opinions on Doing a Good Job in Social Security Work for Land-expropriated Farmers (XZBF [2014] No. 31), rural people who have lost all or most of their land due to unified acquisition of collective land by the government, over the age of 16 and enjoying the contract right of rural collective land at the time of land acquisition, shall be covered by the social security system. The application shall be prepared by the land expropriated individuals, discussed, approved and disclosed by the rural collective economic organization, villagers' committee or villagers' group, submitted to the township, municipal or county level natural resources departments, agricultural land management departments and public security departments for approval and disclosure, and after there is no objection received, the application shall be approved by the municipal or county government and send to the human resources and social security department for registration. Land-expropriated farmers who meet the conditions can choose to participate in the basic endowment insurance for urban workers or social endowment insurance for urban and rural residents on their own will, and the government and collective economic organizations provide corresponding subsidies to land-expropriated farmers. The amount of premium subsidy = 60% (or 100%) of the average annual salary of the employees in the province in the previous year of when the land-expropriated farmers pay the basic endowment insurance fee for urban employees \times 12% (or 20%) \times years of subsidy.

221. **(v) Policy arrangements for infrastructure restoration:** For potential infrastructure impacts arising from land acquisition and house demolition, the Land Administration Law and the Regulations for the Implementation of the Land Administration Law stipulate, after the land acquisition plan is approved and announced, the county government shall organize a land details measurement survey within the range of land acquisition and disclose the results to the public for at least 30 days. Article 47 of the new Land Administration Law (2020) stipulates, "For rural residential houses, fair and reasonable compensation shall be provided on the principle of compensation before relocation and residential condition improvement,"

222. **(vi) Information disclosure, public participation and informed decision-making:** Public participation runs through the whole project lifecycle and is an important measure to ensure the success of LAR activities. The MNR issued the Standard Guidelines for Grass-root Government Affairs Disclosure in Rural Collective Land Acquisition in June 2019, sorting out matters to be disclosed, regulating the disclosure process, and improving modes of disclosure to protect the people's rights of information, participation, expression, and supervision practically. The main objectives of public participation at different stages of LAR are as follows:

- During option argumentation and comparison, the project owner and design agency shall conduct meaningful consultation with affected people and other stakeholders and improve the engineering measures and determine the range of land use based on feedback, thereby evading sensitive objects and minimizing LAR impacts.
- Participation at the DMS stage includes land acquisition announcement, DMS publicity, participation in the DMS, and confirmation, disclosure and review of DMS results.
- At the SSRA stage, meaningful consultation will be conducted with stakeholders to assess potential major social risks arising from land acquisition and house demolition, including other major risks that are not directly related to but may materially affect the project.
- During the drafting of the compensation plan, the plan should be disclosed to collect comments from affected people, and a public hearing held when necessary.
- Public participation at the implementation stage mainly includes production and life resettlement, and effective information disclosure and consultation should be conducted in the allocation and use of compensation.

223. If FALU is involved, before the land use agreement is signed, the township government and rural collective economic organization shall disclose the relevant matters to the public for not less than five days (in Hubei Province) or ten days (in Hunan Province), and the land use agreement shall be signed if there is no objection within this period.

224. **Assessment:** China has established a complete legal framework and policy system on land acquisition, FALU, LURT, house demolition, resettlement, and compensation. The implementation of rural land acquisition and house demolition is based mainly on the Land Administration Law (2020), the measures for the implementation of the Land Administration Law of Hubei and Hunan, and relevant compensation rates. Urban house demolition is based mainly on the Regulations on the Expropriation of Houses on State-owned Land and Compensation (2011). The Land Administration Law that was amended on August 26, 2019, and came into effect on January 1, 2020 has substantively coordinated the practices of land acquisition and house demolition in rural and urban areas. The new Land Administration Law defines the scope of land acquisition for public interests, strengthens preparatory risk management for land acquisition, and emphasizes information disclosure and public participation (including public hearings) in land acquisition and house demolition, and requires that an agreement shall be signed with the landowner and user before application for land approval, and compensation and resettlement funds should be arranged in advance. The new law requires that land acquisition compensation rates shall be determined based on block comprehensive land prices, and adjusted or reissued at least every three years, and that fair and reasonable compensation shall be granted for land acquisition to ensure that the living standard of the affected farmers is not reduced. Therefore, the new Land Administration Law will protect the rights and interests of affected persons, ensure sustainable livelihoods and improve living conditions more effectively. In general, the LAR regulations are consistent with the requirements of Core Principle #4 and Element 9.

5.2.5 Core Principle #5: Management system for ethnic minorities and vulnerable groups

225. The three elements under Core Principle #5 are related to the social regulations system of The PforR Program. Consistency is analyzed below.

Element 10: Undertake meaningful consultations if the ethnic minorities are potentially affected (positively or negatively), to determine whether there is broad community support for the PforR Program activities.

226. **Policy requirements for ethnic minority consultation:** Hubei and Hunan are multi-ethnic co-inhabited provinces with many ethnic minorities. According to the seventh national census in 2020, there were 2.7711 million ethnic minority people in Hubei Province, accounting for 4.8% of the total population, mainly include the long-dwelling ethnic minority groups like Tujia, Miao, Hui, Dong, Man, Mongolian and Bai living in the southwest autonomous areas of Hubei, Wushan city, and Jinzhou city. There were 6.8852 million ethnic minority people in Hunan Province, accounting for 10.06% of the total population. Among them, the Tujia and Miao ethnic groups were more concentrated in Xiangxi Tujia and Miao Autonomous Prefecture in Yuanjiang River and Zishui River Basin. There are some minority inhabited areas in the project areas of Hubei and Hunan Province, such as Changyang, Honghu, Yunxi in Hubei, and Hengyang, Cili, Zhijiang in Hunan. China's Constitution stipulates that all ethnic groups of China are equal. The Law of the People's Republic of China on Regional National Autonomy stipulates, in dealing with special issues concerning the various nationalities within its area, the organ of self-government of a national autonomous area must conduct full consultation with their representatives and respect their opinions; the organ of self-government of a national autonomous area shall guarantee that citizens of the various nationalities in the area enjoy the rights of citizens prescribed in the Constitution and shall educate them in the need to perform their duties as citizens. On this legal basis, when minority residents are affected similarly by land acquisition and house demolition, they will not only enjoy the same rights as citizens, but also be subject to free, prior and informed consultation in a culturally appropriate manner organized by local governments when necessary. In addition, ... the organ of self-government of a national autonomous area shall make independent arrangements for local capital construction projects in the light of local financial, physical and other conditions within the framework of national plans. When developing resources or carrying out construction projects in a national autonomy area, the state shall protect its interests, make arrangements favorable to its economic development, and local minority residents' production and livelihoods. On the other hand, according to the regulations

on SSRA, at the feasibility study stage of a project, the PIU (or through an entrusted specialized agency) shall conduct a SSRA to identify impacts, propose mitigation measures, and prepare a SSRA report; if a government at or above the county level applies for land acquisition, a current status survey and a SSRA should be conducted. Each municipal or county government has formulated local policies according to the applicable regulations, such as the Opinions on the Implementation of Measures to Strengthen Social Stability Risk Assessment for Major Decisions under New Circumstances of Hubei Province promulgated by Hubei Provincial Committee of the CPC and Hubei Provincial Government and Implementation Opinions on Strengthening the Risk Assessment of Social Stability of Major Decisions under New Circumstances (XBF [2021] No. 27) promulgated by Hunan Province in December 2021.

227. **Assessment:** Comprehensive ethnic minority development policies have been established in China, Hubei and Hunan to respect minority opinions, ensure ethnic equality, and respect minority customs, and are consistent with Core Principle #5 and Element 10.

Element 11: Ensure that ethnic minorities can participate in devising opportunities to benefit from exploitation of customary resources and indigenous knowledge, the latter to include the consent of ethnic minorities.

228. **Policy basis for ethnic minority development:** The Law of the People's Republic of China on Regional National Autonomy stipulates, when developing resources or carrying out construction in a national autonomy area, the state shall protect its interests, make arrangements favorable to its economic development, and local minority residents' production and livelihoods, and include major ecological balance and environmental protection projects in the local national economic and social development plan. From the perspective of public consultation, the Interim Regulations on Major Administrative Decision-making Procedures stipulate, when developing major economic and social development plans, and determining major local infrastructure projects, prior public participation shall be conducted, and also make systematic provisions on the schedule, form, process, recording, etc. of public participation. Based on the above regulations, five-year development plans for ethnic minority programs have been prepared in both Hubei and Hunan provinces. For example, the 14th Five-Year Plan of Hubei Province for High Quality Development of Ethnic Affairs (2022.1) was promulgated in January 2022, setting 18 concrete objectives of 4 categories (including promoting ethical values, achieving common prosperity and development, creating a good life for all, and advancing exchanges and integration between different nationalities) and specifying 8 key projects to enhance the sense of community of the Chinese nation, promote integrated and innovative development of green industries in ethnic minority areas, offer key support to rural revitalization, and construct a big data management platform for ethnic and religious affairs. The 14th Five-Year Plan of Hunan Province for Ethnic Affairs was promulgated in December 2021, putting forward six specific indicators and 42 key projects in social and economic development, people's livelihood improvement, ecological and civilization construction, rural revitalization, nation community consciousness and ethnic unity and development.

229. **Assessment:** Both central and Hubei & Hunan governments make top-down systematic planning and arrangement in ethnic minority development to create job opportunities for minority residents and improve their living standard and it's required to conduct prior public consultation for relevant plans and projects in accordance with the Interim Regulations on Major Administrative Decision-making Procedures. This is consistent with Core Principle #5 and Element 11.

Element 12: Give attention to groups vulnerable to hardship or discrimination, including, as relevant, the poor, the disabled, women and children, the elderly, ethnic minorities, racial groups, or other marginalized groups; and if necessary, take special measures to promote equitable access to PforR Program benefits

230. **Poverty and poverty reduction systems:** China has achieved an all-round poverty alleviation in 2020 and currently main focus on those who are at risk of returning to poverty due to various reasons, like household who just have been out of poverty, general farmers, and those in difficulties due to sudden increasing of rigid expenditure or reduce of income caused by emergencies. Correspondingly, the General Office of the CPC Central Committee and the State Council issued the Opinions on Reforming and Improving the Social Assistance System (ZBF [2020] No. 18) in August 2020, requiring to develop the social assistance system in a coordinated manner to consolidate our

achievements in poverty alleviation, and safeguarding the bottom line of people's basic livelihood. Minimum living subsidy shall be provided to the family whose per capita income of family members living together is lower than the local minimum standard of living security and conforms to the provisions of property status. Assistance and support subsidies for persons in extreme poverty shall be provided to elderly people, disabled people and minors in urban and rural areas who are unable to work, have no source of income, and cannot appoint the obligatory persons to support and raise them, or whose statutory obligatory persons are incapable of performing their obligations. At the same time, corresponding medical, housing, education, employment and other special social assistance shall be provided according to the actual needs. For example, special social assistance such as medical care, housing, education and employment or other necessary assistance measures shall be provided to low-income families that do not qualify for subsistence allowances or subsistence allowances and families that have serious difficulties in basic living due to high rigid expenditures. emergency social assistance shall be provided to families or individuals suffering from emergencies, accidental injuries, serious diseases, affected by public health emergencies such as infectious diseases, or other special reasons that lead to temporary difficulties in basic life, as well as people who are temporarily stranded or homeless. In case of natural disasters, assistance shall be given to the victims. On such a basis, provincial implementation opinions were promulgated in both Hubei and Hunan Provinces. Urban and rural MLS standards and subsidy standards for extreme poor people of Hubei and Hunan are fixed by local governments at or above the county level and vary from place to place. In 2022, the average urban MLS standard is 700 yuan per month per person, and the average rural MLS standard is 6,236 yuan per annum per person, the subsidy for urban extreme poor people in urban and rural area is 16,807yuan/person/year and 11,990yuan/person/year respectively in Hubei Province; the average urban MLS standard is 618 yuan per month per person, and the average rural MLS standard 5,557 yuan per annum per person, the subsidy for urban extreme poor people in urban and rural area is 9,640yuan/person/year and 7,224yuan/person/year respectively in Hunan Province.

231. The 14th Five-Year Plan of Hubei Province for the Development of Civil Affairs (2021.10.29) requires that high-quality development of civil affairs commensurate with economic and social development of Hubei Province shall be achieved by 2025: 1) basic living standards of the people shall be significantly improved by promoting the tiered and classified social assistance system underpinned by basic living assistance, social assistance for special purposes and temporary assistance in emergencies and disasters with the support of private sectors, upgrading assistance management services, putting policies in place effectively to protect orphans and de facto orphans, and further enhancing mechanisms concerning living subsidies for the financially-challenged disabled population, nursing care allowances for the severely disabled and social welfare for the elderly; and 2) the quality of basic social services shall be improved markedly by coordinating home-based and community elderly service providers, promoting the integration of medical and health care for the elderly, optimizing the supply structure and quality of elderly care services, improving the social care service system, strengthening government purchase of social services, engaging more private professional market players, improving the quality and efficiency of comprehensive marriage services, and further standardizing adoption of children. Below are the key objectives to be achieved by 2025: the annual growth rate of MLS in rural areas shall be no lower than that of per capita consumption expenditure of the previous year; the MLS standard in rural areas accounts for more than 75% of that in urban areas; living subsidies are provided to all financially-challenged disabled people; nursing care allowances are offered to all severely disabled people; trans-provincial marriage registration is fully achieved; all vagrants and beggars with known identity information are returned to their homes; nonprofit cremains burying (storage) facilities are available in all counties; at least 60% of beds in elderly care institutions meet requirements for nursing care; comprehensive elderly care institutions are accessible in 60% of townships (sub-districts); minor protection centers are available in 50% of townships (sub-districts); the number of social service professionals stands at 80,000; volunteer service centers account for 80% of comprehensive community service facilities; the area of comprehensive community service facilities accessible by every 100 residents tops 30 square meters; and the number of full-time employees of social organizations reaches 400,000. The 14th Five-Year Plan of Civil Affairs of Hunan Province (2021.9.13) clarified the tasks of development and put forwarded the key works in the nine aspects of social assistance, elderly care services, children's welfare, grassroots social governance, basic social services, social organization development, philanthropy and social work, regional name management services, "five

modernizations" of new Hunan civil affairs. The Plan requires that by 2025: the annual growth rate of MLS in rural areas shall be no lower than that of per capita consumption expenditure of the previous year; the MLS standard in urban and rural areas accounts for more than 75% of that in urban areas; living subsidies are provided to all financially-challenged disabled people; nursing care allowances are offered to all severely disabled people; trans-provincial marriage registration is fully achieved; all vagrants and beggars with known identity information are returned to their homes; nonprofit cremains burying (storage) facilities are available in all counties; at least 60% of beds in elderly care institutions meet requirements for nursing care; comprehensive elderly care institutions are accessible in 60% of townships (sub-districts); minor protection centers are available in 50% of townships (sub-districts); the number of social service professionals stands at 90,000; volunteer service centers account for 80% of comprehensive community service facilities; the area of comprehensive community service facilities accessible by every 100 residents tops 43 square meters; and the number of full-time employees of social organizations reaches 370,000.

232. **Protection of women's rights and interests:** As for gender equality and women's development, the Law of the People's Republic of China on the Protection of Women's Rights and Interests (2018 Amendment) requires that women's lawful rights and interests shall be protected, and gender equality promoted, and defines the state shall ensure that women enjoy the same labor and social security rights as men. For example, this law stipulates that woman enjoy the same rights as men in rural land contracting, distribution of the income of collective economic organizations, compensation for land acquisition or land occupation, and housing plot land, etc. No organization or individual is allowed to infringe on women's rights in the rural collective economic organizations due to non-married, marriage, divorce and widowers. In September 2022, the State Council promulgated the Outline for Women's Development in China (2021-2030), specifies the following goals: gender equality is practically put in place as a basic state policy to advance innovation in systems and mechanisms of promoting gender equality and women's all-round development shall be improved; women shall be entitled to all-round, whole-lifecycle health services to improve their health level continually; women enjoy equal rights of education to continually improve their quality and ability; women enjoy equal economic rights to steadily improve their economic status; women enjoy equal political rights to gradually improve their participation in the management of state and economic, cultural and social affairs. Women enjoy multi-level and sustainable social security as equals, and their treatment level be steadily improved. The system of laws and regulations supporting family development be more completed to widely promote the new fashion of socialist family civilization. The concept of gender equality should be greater popularized to improve the development environment for women. a more sound legal framework is established to effectively protect women's legitimate rights and interests; and women's sense of gain, happiness and security is increased significantly.

233. The Plan of Hubei Province for Women's Development (2021-2030) (2021.12.25) explicitly specifies main goals of women's development by 2030 and makes explicit provisions on assessment indicators and supporting measures in 8 aspects such as health, education, economy, participation in decision making and administration, social security, family development, environment, and law. The Plan of Hunan Province for Women's Development (2021-2025) (2021.9.16) sets 80 targets and 95 strategical methods in eight aspects, including health, education, economy, participation in decision making and administration, social security, family development, environment, and law.

234. **Child protection:** The Law of the Peoples Republic of China on the Protection of Minors (2020 Amendment) stipulates that minors shall enjoy all rights equally in accordance with the law, regardless of the nationality, race, gender, household registration, occupation, religious belief, education level, family status, physical and mental health of themselves or their parents or other guardians. The law makes detailed provisions on family, school, social, network, government and judicial protection for the minors. The Plan of Hubei Province for Children's Development (2021-2030) (2021.12.25) specifies main goals of child development by 2030 and supporting measures in health, safety, education, welfare, family, environment, and legal protection, etc., and establishes the annual monitoring, mid-term evaluation, and final evaluation mechanism for the achievement of such goals. The Plan of Hunan Province for Children's Development (2021-2025) (2021.9.16) sets 74 targets and 88 strategical methods in seven aspects, including health, safety, education, welfare, family, environment, and legal protection.

235. **Assessment:** Based on the above analysis, there are systematic plans, measures and institutional arrangements on the development, and rights and interests protection of vulnerable groups, women and children in China, Hubei and Hunan, ensuring that all relevant groups participate in the project equally, and benefit from projects fairly. Therefore, the policies on vulnerable groups and women are consistent with Core Principle #5 and Element 12.

5.2.6 Core Principle #6: Social conflict management system

236. **Element 13** requires that conflict risks be considered, including distributional equity and cultural sensitiveness, and is not related to the PforR in general. In addition, based on the analysis of Core Principle #1 and Element 1, China manages social risks and impacts comprehensively through social stability risk analysis. Therefore, the PforR will not exacerbate local social conflict.

5.3 Assessment of Social Management Mechanism and Capacity

237. Elements 1 and 2 under Core Principle #1 in the PforR ESSA Guidance propose principled requirements for the responsibilities and capacity of the social agencies of the PIUs, which requires agencies responsible must have to commit all necessary resource inputs and appropriate measures to manage social risks (**Element 1**). On the other hand, it is also required that impact assessment and management requirements should establish clear requirements on organizational responsibilities and resources, thereby supporting the implementation of relevant plans (**Aspect V under Element 2**).

238. As shown in **Table 0-1**, the provincial, municipal, and county authorities in Hubei and Hunan have established clear management agencies for different social risks, which have been equipped with qualified staff. This section analyzes the organizational setup of the social management system and assesses if the organizational settings are rational and needs for improvement. It is discussed through two levels: First, the organizational settings of each social management system; second, the rationality and capacity of each social management system against the requirements at Elements 1 and 2 under Core Principle #1. Where gaps identified, actions and recommendations will be proposed. This section will assess the roles and responsibilities of each administrative agency, working regulations/procedures, staffing and capacity, cross-departmental coordination, etc. through adequate consultation. It is observed the number of staffing is tens of staff for each provincial and county level department. The staff number of departments are not exactly the same in different areas and decided through official documents and procedures to allocate/maintain human and other resources for meeting the dynamic demand. For different social risks, the corresponding organizations or organizational groups are assessed and analyzed in this section. Table 4-1 in **Error! Reference source not found.** sets out detailed stakeholder analysis conclusions, including the responsibilities of different government authorities involved in different types of activities, and results of authority interviews under the social management system.

5.3.1 Social risk assessment management agencies¹¹

- **Provincial DRC:** approving major fixed asset investment projects based on social stability risks and other documents relevant (attaching the SSRA report when applying for project approval).
- **Provincial PLAC:** coordinating, supervising and directing SSRA. Instructing the subjects of decision making and assessment to convene different political and legal affairs committees, and authorities for cross-regional / departmental projects.
- **Municipal/county government:** conducting county-wide social stability risk assessment, decision-making, implementation, and supervision, and it is where the SSRA report is discussed and adopted by the executive meeting of the municipal and county CPC committee.
- **Municipal/county PLACs:** reviewing and registering the SSRA report, and supervising the work of the subjects of assessment.

¹¹ This section summarizes the responsibilities of the relevant agencies related to program social risk management, which may not be all responsibilities of the government authorities concerned.

- **Assessor:** conducting or appointing an independent appraisal agency to conduct SSRA, and implementing SSRA measures.
- **Independent appraisal agency:** attending SSRA training and reviews organized by NDRC and getting registered at the provincial PLAC in advance.

239. For example, the **Xiantao City PLAC in Hubei Province** has established a social stability maintenance office, responsible for directing subjects of assessment to conduct SSRA on major decisions and construction projects, providing policy advice and guidance, and supervising subjects of assessment to implement risk mitigation measures which formulated in the SSRA reports, coordinating and handling of major issues which may affect social stability, preventing and resolving social conflicts and incidents with potential social stability risks, investigating contradictions, regularly analyzing social stability situations and stability maintenance evaluation mechanism, studying and putting forward countermeasures. The assessment subjects and third-party institutions shall carry out SSRA of major decisions according to the requirements of related laws and regulations, and accurately classify the risk levels of projects; The assessment subject shall review the assessment report and procedures strictly, and issue a letter of application for record after confirming the risk assessment results, sign it by the person in charge of the local unit and submit it to the Municipal Political and Legal Committee for record. After review the content of SSRA, the Municipal Political and Legal Committee shall make a record and issue a letter of confirmation.

240. **Assessment:** The state and local regulations clearly stipulate responsibilities for the agencies concerned and their manning quotas, and the related authorities of both provinces (PLAC) require that staff concerned should attend relevant training. In addition, sufficient budgets should be available during SSRA to ensure that relevant measures can be implemented. although the project risk control measures are implemented by the assessor and supervised by the municipal and county authorities, various authorities are involved for different social risks. For example, the natural resources authority supervises land acquisition and house demolition compensation and resettlement only, while for other social risks, such as public participation in site selection, is supervised by another agency, like the PCPBs. Therefore, the SSRA mechanisms of both Hubei and Hunan provinces are effective, and consistent with the Bank policy.

5.3.2 Cultural relic protection agencies

- **Provincial culture and tourism department:** coordinating and directing cultural relic investigation, protection and utilization, archeology, and major project implementation through the cultural relic protection division.
- **Municipal/county(district) government:** responsible for the territorial management of cultural relic safety.
- **Municipal/county cultural relic authority:** coordinating and directing cultural relic protection, conducting administrative law enforcement for cultural relics, assisting the competent authority in reviewing projects involving cultural relic protection, supporting the superior cultural relic and archeological authority in conducting cultural relic investigation and exploration, and archeological excavation. where any cultural relic burial area cannot be avoided in site selection, the provincial cultural heritage bureau shall organize the archeological excavation agency to conduct cultural relic investigation and exploration at the expense of the project owner.
- **Municipal / county development and reform commission:** organizing feasibility study review for construction projects and ensuring that the project design does not affect cultural relics.
- **Planning division of natural resources authority:** assisting the cultural relic authority in defining the range of cultural relic protection and construction control area during local planning and project site selection.

241. **Assessment:** For potential adverse impacts on material cultural heritage, there are state and local regulations to avoid or minimize such impacts. The existing state and local authorities are capable to manage cultural relic risks effectively, consistent with Core Principle #2.

5.3.3 Land acquisition and house demolition Agencies

■ Land use approval agencies:

- **MNR:** reviewing project-specific basic farmland and ecological conservation redline acquisition.
- **Provincial NRBs:** reviewing project-specific permanent acquisition of collective land (except basic farmland and ecological conservation redline);
- **Municipal and County NRBs:** accepting land use applications for construction projects, directing the PIUs to prepare necessary land approval application documents, and submitting such documents to the competent government.
- **People' Government at and above the County Level:** approving land use within corresponding authority.

■ Land acquisition

- **County or above NRBs or land acquisition and house demolition authority:** implementing the applicable laws and regulations, drafting the local land utilization plan, directing land users to submit land use application materials, and reviewing and submitting such materials to the higher level authority; establishing a leading group for land acquisition and house demolition compensation and resettlement; entrusting the land and house expropriation department to take the lead, and local township people's governments and communities to cooperate with the third party to carry out SSRA and survey and mapping, especially land status survey, household visits, policy publicity, resettlement measures discussion, grievance handling, etc.; disclosing relevant land acquisition pre-announcement; drafting a compensation and resettlement plan at the municipal or county level; organizing public hearings on land acquisition and house demolition; signing land acquisition agreements with affected persons or entities, and disclosing land acquisition announcement, conducting land acquisition, compensation and resettlement after obtaining approval.
- **Township government and village committee:** participating in and supporting land acquisition and house demolition, especially DMS, door-to-door visit, policies publicity and communication, resettlement measure discussion, grievance redress, etc.
- **Municipal and county HRSSBs:** Population with a per capita cultivated area below the specified level after LA will be subject to social security. Usually, the application for covering by social security is raised by the expropriated farmers, discussed by the village collective economic organization, verified by township government or sub-district office and publicized for seven days, reviewed by the natural resources department in conjunction with the public security department, approved by the local government, then the subsidy funds will be allocated by the local finance bureau, and finally registered by the HRSSB. Land-expropriated farmers may cover basic endowment insurance for urban workers, or basic endowment insurance for urban and rural residents voluntarily.
- **Third-party appraisal agency:** A qualified real estate appraisal agency will be appointed by the affected village or community under the direction of the natural resources authority to appraise house compensation rates, where relevant.
- **Finance bureau:** preparing necessary budgetary funds according to the resettlement budget submitted by the natural resources authority and land user.
- **Audit bureau:** auditing resettlement costs regularly according to the statutory process and giving opinions.

242. **For example, in Hengnan County, Hunan Province,** the Land Acquisition and House Demolition Center of the county NRB is responsible for collective land acquisition. It is a bureau-level secondary public institution with 30 staff. Regarding to land and attachment acquisition for a specific project, the Land Acquisition and House Demolition Center forms a land acquisition management team jointly with the competent authority, township government and village committee.

For example, when the HURDB is in charge of a rural waste transfer station project, HURDB would be the competent authority and the representatives of township government and village committee where the waste transfer station located would be members of the team. Such team usually has 5-10 staff members, depending on project size. If house demolition is involved, the Land Acquisition and House Demolition Center will engage a third-party real estate appraisal agency to appraise the house value and issue an appraisal report. The whole LAR procedure is: the PIU entrusts the land acquisition task to NRB first, then the NRB issues a land acquisition announcement, conducts a detailed measurement survey and appraisal, starts the SSRA, discloses the DMS results and verifies per requests received, and finally re-discloses the DMS results. The land compensation and resettlement plan would also be disclosed at the stage. After that, pre-land acquisition agreement negotiation and signature can be initiated. When all the above activities completed, submits relevant documents to Provincial NRB for approval. After getting approval, the PIU disburses funds to the county finance bureau (land compensation fee), and HRSSB (endowment insurance) according to the agreement for further disbursement to the affected households, and the HRSSB will proceed endowment insurance for the affected households.

■ **Facility agriculture land use**

- **National and provincial NRBs, and ARABs:** regulating FALU by various technical means;
- **Municipal NRBs, and ARABs:** Municipal natural resources authorities supervise and guide the management of FALU, establish and improve the inspection system, implement the supervision of FALU, and submit FALU registration records to the provincial authority annually;
- **County NRBs, and ARABs:** responsible for routine facility agriculture land use supervision, guide the site selection of FALU in accordance with the requirements of economical and intensive use of land, identify whether the tillage layer is destroyed, check and accept the land restoration, and report the record information to the prefecture (municipal) competent department quarterly. , where natural resources authorities, upon receipt of the approval documents and relevant record information of the FALU provided by the township, shall timely review and upload to the FALU regulatory platform, carry out the annual survey on the alteration of FALU according to regulations; while ARABs at the county level should strengthen the guidance of standards for FALU. if it is unavoidable to occupy general farmland for any facility agriculture, it should be incorporated into the annual cultivated land “balance in and out” plan of the county and can only be implemented after the plan being approved;
- **Township governments:** organize village collective economic organizations and land users to select site and area for FALU properly based on the facility construction design under the guidance of NRBs and ARABs at the county level in accordance with the national spatial planning and land use planning, agricultural development planning, village development planning, natural resources, agriculture, forestry and other kinds of policies, and the premise of protection and rational utilization of cultivated land; organize rural collective economic organizations and land users to conduct site selection, complete LURT, sign land use agreement; track the construction process of FALU; supervise the land restoration and hand-over process, disclose the information of FALU and submit the record information to the NRB and ARAB at the county level on a monthly basis. The cultivated land “balance in and out” plan should be development by the township government if any contracted cultivated land converting to other land type, like forest land. After the plan being approved, the township government shall instruct the contract issuing party and contractor to resign or update the land contract certificate according to law.
- **Rural collective economic organization:** supervise whether the land users construct the FALU and fulfill the responsibility of land restoration in accordance with the agreement and disclose the information of FALU through the board in the village.

243. **For example, in Cili County, Hunan Province,** the planning office (2 staff) and national

land spatial planning office (3 staff) of NRB is responsible for routine FALU management. The land use application procedures include: the land user submit an site selection application to township government or sub-district office where the FALU located; the township government or sub-district office shall conduct site investigation, land area mapping and determine the location and scope of FALU with 5 days following the national land spatial planning, rural development planning, village development planning, etc. and on the premise of cultivated land protection, intensive land use, and in line with the FALU policies. After the preliminary examination and verification is passed by the township government or sub-district office, the NRB at the county level shall organize the relevant departments to conduct the on-site inspection and joint review. After the joint review is passed, the township government shall guide the land operator to sign the agreement, fill in the application form for FALU, and publish the application form on the township and village affairs bulletin board for no less than 10 days; After the period of publicity expires, the township government shall issue a notice for record and then the township natural resources office will upload the relevant information to the map within 5 working days and submit record documents to county NRB and ARAB on 23 of each month. the township government or sub-district office takes the primary responsibility of post-approval supervision.

■ **Land use right transfer**

- **MARA:** directing nationwide LURT and contract management.
- **ARABs at or above the county level:** establishing sound operating rules, conducting policy inquiry, information disclosure, contract signing, transaction attestation, equity appraisal, financing guarantee, file management, etc. in relation to LURT; establishing a shared rural land contracting information platform for national, provincial, municipal and county interconnection in accordance with unified standards and technical specifications, improving the management level of LURT, directing the work of township rural land contracting management authorities, encouraging transferees to develop crop production, guiding enterprises to develop modern cultivation and stockbreeding suitable for large-scale operation, guiding the transferee to develop moderately operation scale in light of the natural and economic condition, the transfer of rural labor force, the level of agricultural mechanization and other factors, establishing a hierarchical qualification and project review system, and a risk prevention system, strengthening in-process and subsequent regulation, and correcting and punishing illegal acts timely;
- **Township governments:** responsible for LURT and contract management, including providing a sample contract to both parties and directing them to sign the contract, correcting violations in the contract, establishing LURT ledger to timely and accurately record the transfer status and keeping LURT records and documents properly.

244. **Assessment:** China has established a sophisticated organizational structure for land acquisition, FALU, and LURT management from county level to township and village level with responsibilities clearly defined. The Land Administration Law requires that land occupied or used for projects shall be compensated for before occupation or use, and the finance and audit bureaus shall review the budget regularly. In addition, during the survey, it's found that the competent authorities implement or participate in land acquisition or occupation, FALU, LURT, compensation and resettlement for several different types of projects every year, and they have rich experience to implement and manage land acquisition and compensation, consistent with Core Principle #4.

■ **Livelihood restoration**

- Livelihood restoration measures are flexible, including agricultural resettlement, reemployment, shares resettlement with assets, relocation, social security, etc., which involve different management agencies. Specifically, **agricultural resettlement** is usually conducted by the village collective economic organization based on the land status and villagers opinions, which may decide to allocate undistributed collective land to households affected by land acquisition, or conduct land reallocation if no undistributed collective land is available; **reemployment** is chosen by affected households based on their own needs, where free training and employment support are

provided by the county labor and employment authority; **shares resettlement** is determined by the PIU in consultation with affected households; **relocation** is requested by the affected households for new land farming at other areas, and decided by local governments after assess and consult with the host village collective economic organizations; **social security for land-expropriated farmers** is implemented by the county human resources and social security authority with the support of the township government and village / community committee. Livelihood restoration will be discussed in detail in Section 4.4.4, including case sharing, based on field visit and consultation results.

245. **Assessment:** Livelihood restoration is part of LAR. Different livelihood restoration measures involve different implementing agencies, such as village collectives, social security authorities, employment authorities, and enterprises, which have clearly defined responsibilities. Public finance supports the implementation of these measures. In addition, different livelihood restoration measures have different funding sources. For example, in terms of shares resettlement, it is determined through the agreement reached between the land user and the village committee or villagers. Livelihood restoration measures can be well implemented in practice due to rich experience and sound regulations on measures, organizational structures and fund arrangements, consistent with Element 9 under Core Principle #4.

5.3.4 Public and worker health and safety, and emergency engagement agencies

1) Worker health and safety

- **National Health Commission:** preparing, adjusting and disclosing classes and catalogs of occupational diseases, and supervising national occupational disease prevention and treatment.
- **Provincial Health Commission:** formulating and implementing policies and standards related to occupational health and radiological health, carrying out monitoring of key occupational diseases, special investigations, occupational health risk assessment and health management of occupational populations, and coordinating the prevention and control of occupational diseases.
- **Provincial Diseases Prevention and Control Hospitals:** developing and implementing provincial occupational disease prevention and control work plan and implementation plan, providing technical guidance, training and quality control for the province's prevention and control work.
- **Municipal / County HCs:** supervising, managing and implementing the work related to local occupational health prevention and treatment, and ensuring that workers receive occupational health and safety rights according to law.
- **Municipal / County HRSSBs:** managing work-related injury insurance, establishing a tripartite mechanism in labor relations with trade unions and enterprises to solve relevant major issues.
- **Occupational health review agency:** obtaining a practicing license and registering in the provincial health commission, where medical practitioner and nurses for registered types and items of occupational health review should be equipped and at least one licensed physician with occupational disease diagnosis qualification is required.
- **Trade union:** directing workers and employers to enter into and perform employment contracts, and establish a collective bargaining mechanism to protect the lawful rights and interests of workers.
- **Women's federation:** women's federation at or above the county level is responsible for the work of women and children affairs and coordinating competent authorities to protect women's rights and interests.

246. HCs of different counties / cities have a similar organizational structure. For example, in Suixian County, Hubei Province, three organizations under the health commission are responsible for health management: 1) occupational health office of Health Commission; 2) health supervision

and law enforcement bureau; 3) disease prevention and control center. At the same time, occupational health examination agencies are set up in the township health center of Wushan and Wanhe where some key enterprises involved in occupational hazards located in. . In addition, there are part-time law enforcement personnel at township level: one health supervisor and one occupational health administrator at health center.

- Occupational health office (2 staff): formulating and implementing policies and standards related to occupational health and radiation health in the county; carrying out key occupational disease monitoring, special investigation, occupational health risk assessment and working groups health management; coordinating and carrying out the prevention and control of occupational diseases.
- Health supervision and law enforcement bureau (2 staff members): checking the implementation status of occupational health management measures of local enterprises, mainly focus on whether they conduct workplace occupational disease inductive factors testing (evaluation), whether carry out occupational health examination for workers before, during and after employment, if they make declaration in the national toxic and hazardous factor declaration system, if they prepare and urge workers to use standard protective equipment and whether they take measures to minimize the occupational diseases inductive factors.
- Disease prevention and control center (2 staff members): classifying corporate hazards into five categories (pneumoconiosis, chemical, biological, physical and radioactive factors), and checking enterprises with occupational health risks annually.
- Wushan and Wanhe health center: providing pre-job, on-the-job and post-job occupational health examinations for relevant workers of enterprises with toxic and hazardous factors, and taking measures accordingly. If there is a health problem, the enterprise and the employee shall be informed in writing and the enterprise shall not set the post, or if the employee is sick on the post, the enterprise shall transfer his position and provide treatment.

2) Safety Management

- **Production / operation entity:** The key leader, e.g., the legal person, is responsible comprehensively for its work safety, and the trade union shall supervise work safety.
- **Hazardous chemicals production / operation / storage agency:** setting up a work safety management agency, or appointing full-time work safety staff.
- **Emergency Management authority:** instructing local departments to respond to emergencies cases such as production safety and natural disasters, and to work on comprehensive disaster prevention, reduction and response, being responsible for the comprehensive supervision and administration of production safety.

247. In both Hubei and Hunan provinces, a work safety mechanism is in place, featuring the leadership of production and operation entities, participation of by workers, supervision by the government and public, and self-discipline by the industry. Safety education covers all people, and work safety trainings are provided to each level of government official.

3) Natural disaster emergency engagement

- **Provincial disaster reduction commission:** It is the natural disaster rescue and response agency of the provincial government, established at the provincial emergency management department, with members being the provincial emergency management department, finance department, and other competent authorities, such as the ARABs, WRBs, NRBs, HURDBs, EEBs, statistics bureau, meteorological bureau, earthquake bureau, HCs, broadcast and television bureau, red cross, communication bureau, and fire brigade. The provincial disaster early warning and response system is launched based on assessment, and after it is launched, the provincial disaster reduction commission starts its working mechanism immediately to organize and coordinate emergency warning and response activities, such as post-disaster relief and reconstruction, including transitional living assistance, winter and spring relief, recovery

and reconstruction of damaged houses, etc.

- **Municipal / county (district) government:** When a natural disaster occurs, the local disaster early warning and response system is launched based on assessment. For natural disasters that may affect several areas, the provincial disaster reduction office will make an analysis and assessment based on the disaster monitoring and forecast information provided by relevant departments and the natural conditions, population and social and economic conditions of relevant areas, and decide to launch a provincial-level disaster early warning and response.

248. **Assessment:** For natural disaster management, both provinces have defined departmental responsibilities, and can manage sudden natural disasters effectively, consistent with Element 8 under Core Principle #3.

5.3.5 Ethnic minority affairs management agencies

- **Provincial ethnic affairs authorities:** developing the provincial minority development plan as required by the provincial government, protecting the lawful rights and interests of minority residents, and supervising relevant work of protection of ethnic minorities' rights and interests. coordinating and promoting relevant departments to perform their duties related to ethnic affairs, promoting the implementation and integration of ethnic policies in the fields related to economic development and social affairs; formulating and supervising the implementation of special plans for ethnic minorities affairs, participating in drafting development plans for ethnic minorities and ethnic minority areas in economic and social fields; promoting the establishment and improvement of a comprehensive evaluation and monitoring system for the development of ethnic minority affairs; studying the problems of economic and social development of ethnic minorities and ethnic minority areas and developing special policy suggestions, participating in the coordination of scientific and technological development, economic and technological cooperation in ethnic minority areas, participating in drawing up plans for the talent training of ethnic minorities, and assisting relevant departments in the training, education and employment of ethnic minority officials.
- **Municipal / prefecture ethnic affairs authorities:** implementing policies, laws and regulations, and provincial and municipal / prefecture decisions on ethnic and religious work; drafting local regulations on ethnic and religious affairs; formulating relevant policies and plans, and supervising their implementation; directing and improving the institutional construction for the implementation of national regional autonomy to protect the lawful rights and interests of minority residents; drafting development plans for minority officials and talents, and studying, managing and directing relevant policy advices.
- **County ethnic affairs authorities:** identifying municipal / county minority population, applying for ethnic minority development projects, cultivating minority officials and developing the annual target indicators for minority officials training.

249. **Assessment:** Departmental responsibilities for economic and social development, and minority official training in minority areas have been defined at the provincial, municipal / prefecture and county levels, consistent with Core Principle #5.

5.3.6 Vulnerable group protection agencies

250. Rural revitalization bureaus, women's federations, and civil affairs bureaus have been established, and poverty reduction and vulnerable groups supporting policies and plans developed at the national, provincial and county levels to plan and manage low-income people assistance, women and children's development, the disabled, left-behind old people and minors, etc. in a unified manner. All authorities have appropriate staff and budgets, and evaluation mechanism for their performance.

- **Civil Affairs Bureau:** managing affairs related to old people and left-behind (distressed) minors needing assistance, including conducting survey, statistics, filing and recording, establishing a local management mechanism for left-behind (distressed) minors and a

local old-age care mechanism, and securing funds.

- **Women's federation:** guiding women to play a unique role in production and life, and protecting the lawful rights and interests of women and children, providing assistance to aggrieved women and children, building family civilization, etc.
- **Disabled persons' federation (DPF):** protecting the civil rights of the disabled, collecting their opinions and needs, mobilizing the public to understand, respect, care for and support them, and eliminate discrimination and obstacles, assisting the government in developing outlines for disabled persons' programs, promoting their rehabilitation, education, employment, rights protection, culture, sports, social security, IT application, disability prevention, etc. and improving the environment and conditions for their accessing to social life.
- **Rural Revitalization Bureau:** strengthening poverty alleviation outcomes, and preventing re-impovertment or additional impoverishment.
- **Township government and village / community committee:** A supervisor of left-behind (distressed) minors is appointed at the township level and a director for minors affairs is assigned at the village/community committee level, and a regional old age care service center and a women's federation office established at the township level, and a children's director appointed, and an old age care service station and women's federation chairman mechanism established in each village / community.

251. In each county, the elderly care service section, children welfare section or elderly care and children welfare section are responsible for work on left-behind old people and minors, with 2-6 staff members. For example, in Xiantao City, Hubei Province, an elderly care service section has been established in CAB with responsibilities include: undertaking the overall elderly welfare work, formulating plans, policies and standards of welfare subsidy system and elderly care service system, coordinating and promoting the service for old people left behind in the rural areas, guide the management of old-age service and welfare institutions and extreme poor people assistance institutions in the city, working with children welfare center to distribute living subsidies, make adoption registration for orphans and virtually unsupported children and conduct left-behind children caring activities, and leading the protection of minors work in the city. By the end of 2021, there were 333,000 people above 60 years and 36,500 people over 80 years in the city, among which, 1,092 of them were disabled and in financial difficulties and 1,148 of them were left-behind old people in rural areas. There were 213,400 minors in the whole city, 2,523 of them were left-behind minors, 55 of them were orphans, including 45 orphans living scattered and 10 of them living in the welfare centers, 289 of them were unsupported children. In addition, a leading group was established jointly by Xiantao CAB and other nice government departments to care old people left behind in rural areas. This leading group is responsible for formulating, implementing and coordinating the caring services implementation plan and related rescue and protection mechanisms for old people left-behind in rural areas. A leading group for the protection of minors was established jointly by the municipal government and 33 member units under the application of CAB to implement social work services for the care and protection of children in difficulties, left-behind children, and extracurricular specialties trainings. The social welfare section of CAB works together with the township governments and village committees, where each of the 22 townships (sub-districts) and 700 villages has at least one official responsible for left-behind old people and minors, e.g., children welfare supervisor and director.

252. In each county or city, RRB is usually responsible for consolidating and expanding the efforts to effectively link the achievements in poverty alleviation with rural revitalization, with about 20 staff members. However, a coordination agency like poverty alleviation leading group or rural revitalization strategic headquarters is established under each county / municipal government, composed of leaders of relevant authorities, which hold coordination meetings irregularly. For example, in Cili County, Hunan Province, a rural revitalization strategic headquarters was established with the county government as the leader and other industrial administration departments, associations and enterprises as members. Under this headquarters, a sub-headquarters of consolidating poverty alleviation achievement was established to manage the data quality in national information platform and application of provincial platform, dynamically monitor

and prevent people from returning to poverty, establish a sound rapid detection and response mechanism for people who are easy to return to poverty or be pushed into poverty, including managing in a grid manner, providing timely support in line with the hierarchical classification, procedures and policies, implementing various supporting policies like education, health care, housing, MLS, safe drinking water, employment support, financial support and following-up assistance for relocated impoverished residents, so as to achieve early detection, early intervention and early assistance, continue to consolidate the achievements of poverty alleviation, and prevent returning to poverty

253. **Assessment:** There are competent authorities to manage different vulnerable groups in China, such as poverty reduction offices or RRBs for poverty issues, DPF for disabled people, civil affairs bureaus for the left-behind old people and minors, and women's federations for women. These authorities are flexibly staffed and may engage extra staff as necessary in addition to their regular staff and secured with funds. Therefore, the state and local governments have clearly defined responsibilities in the rights protection of vulnerable groups, and their management capacity complies with Core Principle #5.

5.4 Assessment of the Social Effects of Implementation

254. The assessment of social effects of implementation is mainly based on the information obtained from the demonstration and sample cities/counties. The sample counties were selected considering the geographical distribution and economic development level differences and representativeness of ethnic autonomous counties in Hubei and Hunan provinces. For example, in Cili County of Hunan Province, the proportion of ethnic minorities accounts for 61% of the total population of the county, which represents the main social characteristics of different regions. The assessment of the social effects of implementation reviewed assessment reports and social risks management effects of previous similar typical activities and investigated the social risks management process and effects of these implemented activities. During the site survey, interviews were conducted with key stakeholders in all the counties visited to cross-examine their attitudes toward and satisfaction with the implementation of related activities. Special attention was paid to analyzing the implementation of policies consistent with the World Bank's principles to assess whether the objectives set out in the core principles and elements can be met. Therefore, this section provides analysis and assessment against the six core principles and elements of social relevance.

5.4.1 Core Principle #1: Sustainable social risks management system

Element 1: Operate within an adequate legal and regulatory framework to guide E&S impact assessments, mitigation, management, and monitoring at the PforR Program level.

255. Out of the PforR supported activities, some activities do not involve civil work or land use, for instance, 1) reduction of pesticide, chemical fertilizers, green agri-development, organic farming, 2) straw collection and integrated utilization, 3) solid waste sorting and collection, and 4) collection of waste plastics (agriculture film, package of pesticide and chemical fertilizers). Implementation of such activities may not lead to any direct economic loss, but raise the environment protection awareness of the farmers, and gradually change their bad habits or practice in production and living, which requires the improvement of production and living skills and competences. Therefore, systematic training has been established through the provincial to municipal and county levels. In addition, serials of technical supporting, guidance are also available to promote the improvement and changes.

Education and Training:

- **Training mechanism to Farmers:** i) **Overall Planning**, it is a long-term strategy for the Chinese national and local governments for training the farmers on economic growth, technique improvement, environment protection, health and safety. It is under the uniform deployment and arrangement of the MARA to all provinces, cities and counties, and is carried out in all counties and cities every year, which is part of the annual performance assessment of the agriculture and rural affairs departments. For example, in April 2022, MARA issued the Notice on Training of the High-Quality Farmers in 2022, putting forward the work ideas, main tasks, special actions and work requirements for the training of high-quality farmers nationwide in 2022. Accordingly, the annual work plans were developed by integrating the requirements of MARA

and local situation. For instance, in early 2022, Hubei Agriculture and Rural Affairs developed the Notice of Agriculture and Rural Work in 2022, while Hunan Agriculture and Rural Affairs issued the Implementation Plan of “Leading Goose” in Rural Industrial Development. **ii) Institution**, the county/district departments of Agriculture and Rural Affairs are responsible for implementation of trainings to the farms through dedicated organization, some county governments like Hengnan county in Hunan province established the leading groups of high-quality farmer training. In Hengnan, it is called the Leading Group of the New Professional Farmer Training. **iii) Budget**, the training is free for farmers, including the cost on meals and dormitory during the training. The budget of training is mainly covered by the special finance support of the central and provincial governments, for example, the budget of Xiantao city in Hubei province was RMB 0.93 million in 2020 and 1.05 million in 2021. Most of the budget are spent on training courses, experiments and in-field observation, like Hengnan county in Hunan, more than 80% of the budget are used on this part, and the rest are normally spent on in-field services or others, e.g., training promotion, enrollment work. **iv) Application**, farmers who intend to join the training can apply through the village committees/community offices, or through the official website or APPs of local agriculture and rural departments. For example, people can join the training through the website of China Rural Remote Education (www.ngx.net.cn) or APPs on the cloud platforms established by Hubei/Hunan Agriculture Educations. **v) Teachers**, all the teachers must be selected from the list of teachers issued by the MARA. Priority will be given to those who are recommended by levels of government departments. All teachers should be those with required certificates, i.e., teacher qualification certificate, or valid certificates approved by qualified official units. More than half of teachers in a class should be certificated as provincial or higher level

- **Context:** the training contents are suiting the development level of agriculture and rural, times improvement, changes of society, economics and ecological environment. For example, the Skills Training for Leaders of Getting Rich in Rural Areas in 2003 was focusing on economic increase, while the focus in the new period is more on high quality development with the improvement of production and living levels of the people. In the Notice of Agriculture and Rural Work in 2022 of Hubei Province, 30,000 farmers will be trained, of which the trainings covered agriculture planting, poultry and livestock. Of the training courses, topics on use of organic fertilizers, prevention of nonpoint pollution, use of agriculture film are included. According to the Implementation Plan of “Leading Goose” in Rural Industrial Development for 2022, the province intends to educate some leading people/entities in agriculture development, by which demonstrate the development practice of social and environment friendly.
- **Performance Effect:** 932 people with 8 trainings were provided in Xiantao City of Hubei province in 2021; 400 people were trained in Hengnan County of Hunan province in 2021; 400 people (including 112 females) were trained by 6 phases in Lixian County.

Technical Support

- **Technical Support by the Government:** investigation in the 6 demonstration counties of Hubei and Hunan indicated that dedicates offices are established in each county, responsible for in-field training and guidance. Offices providing these types of supports include soil and fertilizer stations, cultivation and protection station, in addition, each township government also arranged 1-2 representatives from its agriculture affairs service center joining the in-field support. As suggested, this type of supports is normally undertaken in the sowing season from November to February of the second year, and land management season from February to August. The technical people are normally scouting around the fields and providing supports as requested. The supports include not only agriculture technologies, but also environment protection during farming, reduction of pesticides and chemical fertilizers, recycling of agri-wastes.
- **Leading by the Agriculture Cooperatives:** the site investigation found that the agricultural mode of “cooperative plus smallholders” are broadly developing in Hubei and Hunan, which means a cooperative operates hundreds or thousands of mu of land in an area with planting or breeding, in parallel, it also leads tens or dozens of smallholders to plan or breed by using the unified plan and standard, while the cooperative will be responsible for technical supports, product purchase and sell. In order to improve the quality, reputation and price of the products, the cooperative always leads the smallholders to operate in green and environment protective

ways. For example, a citrus planting cooperative in Hengnan County, Hunan Province, led more than 20 small farmers around the village to promote a wider range of agricultural planting and carry out environment-friendly agriculture according to the planting standards of the cooperative which is also renting 170 mu of farmland to plant citrus by itself in parallel. The cooperative of Old Fishermen in Honghu City, Hubei Province, leased 500 mu of water from farmers engaging in crab breeding, and in parallel, it is also guiding more than 30 surrounding farmers breeding crabs according to the cooperative's standards. Regardless of planting and breeding, these cooperatives have joined in the application for geographic annotation being created by the agricultural and rural departments of the county. According to the Measures for the Administration of Geographical Indications of Agricultural Products, the applicants shall formulate corresponding technical specifications for quality control, including environmental conditions at the place of origin, technical specifications for production and technical specifications for quality safety, against the environmental characteristics of the place of origin and typical characteristics of product quality of agricultural products applied for registration. Fig 16 in Appendix 7 indicated the pesticide control of the cooperative of Aerdi Geen Agriculture Planting in Xiantao city of Hubei province. As introduced by the cooperative lead, it operates 1,700 mu of land, none any pesticide used for pest management.

- **Technique Application:** Scientific and technological support has created favorable conditions for farmers to transform and improve their business methods. For example, Hunan Province has established the "Hunan mobile phone soil testing and formula fertilization system". From 2022, farmers can input their planned planting type, expected yield and other parameters through the APP of soil testing and formula fertilization system. The APP will automatically locate the region and compare with the latest results of the soil testing formula in the region, so as to provide farmers with the best fertilization scheme.

Policy Guidance and Demonstration:

- **Straw:** In 2021 and 2022, the MARA successively issued the Notice on Comprehensive Utilization of Crop Straw, implemented the action of comprehensive utilization of crop straw, insisted on the strategy of fertilization, feeding and energization. 300 counties and 600 demonstration bases for comprehensive utilization of crop straw has been established in nationwide. The objective is to ensure that the comprehensive utilization rate of straw across the country remains above 86%. In 2021, Hunan Province carried out the pilot project of straw comprehensive utilization in 10 counties and cities across the province, including Li County which is one of the demonstration counties of the PforR. Hubei Province plans to initially improve its straw collection, storage and transportation system within three years from 2021, and strive to stabilize the comprehensive utilization rate of straw above 95%, establishing 40 demonstration counties. The mode of "government guiding + enterprise/cooperative leading + farmer participating" is adopted for straw collection, storage and transportation. The government guides the farmers to collect and use straw, and subsidizes large cooperatives or agricultural enterprises to collect, transport and treat straw, including straw produced by cooperatives themselves, and also straw produced by other farmers, so as to achieve the targets of fertilization, feeding and energization. For example, the Tianxia Agricultural Science and Technology Professional Cooperative of Hubei Sui County is engaged in the processing of various kinds of crop straw, 70% of which are processed into breeding feed, and the rest are made into organic fertilizer and returned to the field. For this reason, the cooperative has signed a service agreement on crop straw recycling with the surrounding village committees. The village committee is requested to be responsible for collecting the agricultural straw in the village and sending it to the cooperative as feed or organic fertilizer raw materials at a service fee of 200-240 yuan/mu; in return, it is sold to farmers or fertilizer enterprises at 450-650 yuan/ton. As Fig 27 of Annex 7, a sample of service agreement signed between the cooperative and a village committee. In Li County of Hunan province, the government provide subsidy to the cooperatives at a price of 10 per package of straw, and the cooperatives pack the straw by machinery operation, and return it as breeding feed or organic fertilizers.
- **Agriculture Film:** i) Compulsory requirements are formulated for agricultural film products in the production and marketing process. According to the newly revised Polyethylene Blow Molding Agricultural Floor Covering Film (GB 13735-2017) on May 1, 2018, the minimum

nominal thickness of the film is not less than 0.01 mm; ii) Regulations on use and disposal of agricultural film, the MARA and the ecological environment departments jointly issued the Measures for the Administration of Agricultural Film in 2020. The users of agricultural film should pick up the non-fully biodegradable agricultural film wastes in the field before the expiration of the product life and hand them over to the recycling network or recycling workers. The film should not be discarded, buried or burn at will. During the site visit, it learned that all regions complied with the above regulatory requirements and formulated local implementation measures. For example, Li County in Hunan Province popularized the use of thicker agriculture film of more than 0.015mm, ensuring the recyclability of agriculture film from the source. Pilot of recycling are undertaking with some large agricultural producers and specialized organizations. Meanwhile, various forms of recycling mechanisms were established, such as exchange of old for new, handover to the origin of business, establishment of specialized recycling units, recycling through processing enterprises, etc. Sui County of Hubei Province has built agricultural film collection points as convenient as possible for farmers to collect and operate. 85 spontaneous agricultural film collection points in the county are established and distributed around towns and market towns, and a few are distributed in villages along the main roads for convenience of transportation.

- Classification and Treatment of Solid Domestic Waste:** i) **Policy framework.** Since 2017, the state and local governments have successively issued a serial of policies, standards, guidelines, etc. for the classified management of domestic waste. For example, the National Development and Reform Commission and the Ministry of Housing and Urban Rural Development jointly issued the Implementation Plan of the Domestic Waste Classification System in 2017, and the Ministry of Housing and Urban Rural Development also issued the Classification Marks of Domestic Waste (GB/T 19095-2019) in 2019; Correspondingly, each province, city and county has successively issued the implementation plans of domestic waste classification in their own regions, such as the Implementation Plan of Hubei Province for Promoting the Classification of Urban and Rural Domestic Waste (EZBH [2019] No. 47), and formulated the goals during the 14th Five Year Plan period, and the Implementation Plan of Hunan Province for the Classification of Municipal Domestic Waste (2020); ii) **Publicity and guidance of the government.** Based on the policy requirements of the country and Hubei and Hunan provinces, local governments publicize and guide all over the region, and mobilize all villages and communities to carry out garbage classification and recycling. During the survey in 6 counties and cities of the two provinces, villages and communities in all regions are vigorously promoting garbage classification and recycling. In many places of the community, signs and slogans and materials related to garbage classification can be found; iii) **Financial support and pilot projects.** Some local governments have gone beyond the stage of publicity to promote garbage classification and recycling. They have begun to implement some demonstration pilot projects to encourage and guide ordinary residents to participate in garbage classification and recycling campaigns, mainly to reduce garbage from the source. For example, Sui County, Hubei Province, when signing an agreement on domestic waste collection, operation and treatment with a third-party company, it also included a pilot program by carrying out public participation activities in the pilot communities to guide community residents to classify and recycle domestic waste, including the classified placement of household waste, the exchange of credits for the classified recyclable waste and hazardous waste, the recycling of kitchen waste, etc. The third-party company set up a community garbage classification management team, which arranges dedicated personnel to guide ordinary residents to classify garbage at the garbage collection points in the pilot community. The situation in Hunan Province is similar to that in Hubei Province, with different forms. For example, through training and supporting the operators of the existing waste purchase stations and the villagers' cleaners, Li County in Hunan Province upgraded the existing site of the waste purchase stations to store all kinds of recyclable waste, and recorded the garbage sent by the villagers each time and give a credit point at the same time, which can be exchange some daily necessities. At the same time, the villagers' cleaners play a role in the community grids that they were assigned, guiding residents in their grids doing garbage classification. Fig 28 and Fig 29 show the facilities of solid waste classification, recycling and credit exchanging in Anju town of Sui County in Hubei, and Chennan village in Li County of Hunan province.

256. Among the activities supported by the PforR, the other part involves civil works and land acquisition/use, including 1) rural sewage collection and treatment; 2) collection, transfer and storage of rural domestic solid waste; 3) livestock and poultry manure treatment facilities; 4) straw storage and processing facilities, etc. For those projects involving land acquisition, the social impacts and risks are mainly identified, evaluated and managed through the feasibility study or SSRA in the early assessment stage of the project. Especially for projects implemented after January 1, 2020, the newly revised Land Management Law clearly requires that construction projects involving land acquisition must prepare SSRA in the early stage. During the field investigation and consultation, it is observed that the feasibility study or construction design of relevant facilities in each county is carried out in the preliminary preparation stage, such as the sewage project in Shuiyuan Village of Fenglin Town, Yangxin County, Huangshi City, Hubei Province, and the sewage system construction project in Li County, Hunan Province. Most of the facilities basically include the analysis of social impact in the feasibility study, design and other documents, but some of the evaluation reports only cover the positive benefits of the project. There is no identification and analysis of the possible negative social impacts and risks of the project, such as the impacts of land use, employment, community environment and traffic that may be caused by the project construction, and the impacts and risks of employment, environment and emergency on surrounding residents during the project operation. Therefore, there is no corresponding management plan and monitoring plan. On the other hand, some projects have carried out separate social impact and risk identification analysis according to the requirements of SSRA and Land Management Law. For example, Chongyang County Political and Legal Committee of Xianning City, Hubei Province introduced that the county carried out SSRA of three related projects for the above facilities in 2020 and 2021. The stability assessment report has assessed the potential social impacts and risks on the project during the construction and operation stages. And the opinions of the community residents, such as the impacts of permanent land acquisition, temporary land occupation and ground young crops attachments, etc. Based on the actual survey and research and the opinions of the village residents, risk mitigation and control measures were developed, so as to ensure that the social risks that may be caused by the project were identified and controlled.

257. There are also some activities that may not require permanent acquisition of rural collective land, such as fecal sewage treatment facilities, small sewage treatment facilities, small rural garbage collection and transfer facilities, rural toilet reconstruction, irrigation and drainage facilities and cold chain storage facilities. The main impact is occupation of land. This will be discussed in detail in the following sections. For other impacts, such as community health and safety, impact during construction, operation and maintenance, and community complaints, it is found in the surveys that most projects have carried out feasibility studies or designs in the early stage.

258. **Assessment:** The field survey and consultation on sample counties in Hubei and Hunan provinces showed that the overall social impact of the PforR related activities was not significant. For various possible social impacts, each region has formulated implementation plans or rules in accordance with related laws and regulations issued by the national and local relevant departments, including institutionalized training arrangement, SSRA and land use management system, to ensure that the corresponding risks can be effectively controlled. The project implementation units identified, screened and assessed the potential social impacts and risks in the project construction and operation stages in the feasibility study, SSRA or other assessment documents at the early assessment stage, and formulated corresponding social impact and risk management and monitoring plans.

Element 2: Incorporate recognized elements of good practice in E&S assessment and management.

259. (i) **Early screening:** according to the documents provided by the natural resources departments of the two provinces as well as the site investigations, it is confirmed investigation and verification are implemented at pre-construction stages of proposal making, feasibility study, and design. Land preliminary assessment or site selection for those projects with the land use form of FALU are mandatory at the early stage. The feasibility study reports are required to be appraised through the panels of related professionals under the organization of local development and reform commission, and the result of site selection that must be compliance with local land use plan are appraised and approved during the appraisal sessions.

260. The NRB of Cili County in Hunan Province introduced that the natural resources department needs the implementing agency to provide the natural resources department with the approval of the local development and reform commission on the feasibility study for projects such as the sewage treatment facilities and garbage collection stations that need land acquisition, including the approvals of the land preliminary review and the approvals of the site selection proposal, the red line map of land acquisition, the classification table of the acquired land, and the SSRA report, etc., prior to accepting the entrustment of the implementing agency. Only when the risk level is medium or below, or risk mitigation measures are taken to reduce the risk level to medium or below, can the SSRA report be approved by experts.

261. For projected constructed in the form of FALU, such as the straw recycling and treatment facility of the Tianxia Agricultural Science and Technology Professional Cooperative in Sui County, Hubei Province, the project site selection process was conducted according to the requirements of Hubei Province for the management of FALU, the land use agreements were signed with towns and villages, and the record was filed with Sui County NRB and ARAB. When communicating with the natural resources departments of the six sample counties, it was confirmed that the registration process of facility agricultural land use usually requires the consent of the relevant village committee/community (to confirm the information), the review of the natural resources department of the township government (to confirm the information and compliance with the local land use planning), the review of the county water bureau (to review whether it is near the important water source), the review of the forestry department (to put forward technical requirements for the use of forest land), review by the transportation department (no farms and related facilities can be built within 2km on both sides of the kilometer), review by the NRB (compliance of land use planning, confirmation of non-occupation of basic farmland or ecological protection red line), and review by the cultural relics management department (review whether it is within the scope of cultural relics protection units). Fig 30 in Annex 7 shows a sample of registration of FALU with the Tianxia Agricultural Science and Technology Professional Cooperative in Sui County, Hubei Province.

262. As sum, the related government authorities are implementing the risk screening and assessment under their liabilities, and therefore, there are systems in place and effecting from the authorities.

263. **(ii) Alternatives:** The feasibility study process of the construction project requires comparison of different proposals of site selection. For example, in the preliminary preparation process of the Township Sewage System Construction Project of Li County in Hunan and the 50000 tons/year Organic Fertilizer Project in Xishui County of Hubei, the two feasibility studies carried out comparison in different proposals in terms of technology, engineering construction, LAR, and operation and maintenance. The mature technologies of China and oversea were reviewed, integrating the consideration of construction difficulties and cost, convenience of transportation in operation, and avoidance or minimalizing of LAR. The 50000 ton organic fertilizer project in Xi County of Hubei Province has set up special site selection principles, including: 1) convenience of transportation, ensuring the access of large trucks, and keeping a certain distance from the main roads; 2) close to the origin of raw materials, reducing the cost of raw materials transportation, and avoiding the pollution of raw materials transportation; 3) away from residential and industrial areas; 4) in the downstream direction of the farm; 5) guarantee of water and power supply; 6) Good terrain, drainage and ventilation conditions.

264. **(iii) Avoidance, Minimum and Reduction of Impacts and Risks:** According to the interviews with the relevant departments for SSRA at the county level, NRBs and ARABs in Hubei Province, the social impact identification, analysis and management measures of the project must be analyzed in the feasibility study reports or similar project preliminary assessment documents. For projects that are required by law to carry out SSRA, such as those involving resettlement or land use, there must be a special management plan for risk identification, analysis, prevention and resolution in the SSRA. For example, Chapter 13 of the feasibility study report of the township sewage system construction project in Li County of Hunan Province, and Chapter 18 of the feasibility study report of the township sewage treatment plant and supporting pipe network construction project in Honghu City of Hubei Province are special chapters for SSRA, which required corresponding prevention and resolution measures to be formulated for the social impacts and risks identified, and conclusions of whether it recommends to implement the projects.

265. **(iv) Institution and Budget:** In terms of government responsibility division of rural sewage, garbage and non-point source pollution control, agricultural and rural departments are responsible for the overall guidance and management on pesticide reduction, fertilizer reduction, livestock manure treatment and utilization, straw collection and comprehensive utilization, agricultural film and pesticide fertilizer packaging waste recycling, the urban construction department is responsible for the overall management of construction and operation of urban sewage collection and treatment facilities, the agricultural and rural or rural revitalization department is responsible for the construction and management of rural sewage facilities, and the housing construction department is responsible for the management of rural domestic waste and the construction of related facilities. These responsible departments shall take overall responsibility for the construction cost, facility operation mode and management mechanism of relevant projects, such as land acquisition and compensation cost, and the safety and environmental sanitation around the waste transfer facilities of the management subsidiaries or the third party. For example, Huchang Township Sewage Treatment Plant in Xiantao City of Hubei Province is built and operated by a third-party company invited by the Housing and Urban Rural Development Bureau in the mode of government and social capital cooperation (PPP, Public-Private Partnership). The third party, or the partnership company, raised funds to build and operate the plant, while the benefits are gained by obtaining the rights of operation a certain period of time in the later period, and the previous construction and later operation costs are compensated through the return of revenue. For the 17 township sewage treatment plants in the county, the operation company has set up a special management team with 42 staffs performing daily inspection, management and maintenance to ensure the stable operation of the equipment. Another example is the household toilet renovation project of Xiantao city. The special departments of the County Agriculture and Rural Bureau, such as the Social Affairs Unit, are responsible for project site selection, fund application, construction management and inspection. For example, since 2013, Sui County of Hubei Province has implemented household toilet renovation for more than 5700 households, with a cost of about 1500 yuan/household. Rural residents voluntarily apply for toilet renovation, and the cost is all borne by financial funds; meanwhile, farmers are responsible for land provision (about 5m²) and labor support during construction. After the transformation of toilets, the Agricultural and Rural Bureau and its enterprises providing equipment also provide a training to the household with basic skills of operation and maintenance.

266. In addition, each unit shall accept the daily guidance and supervision of departments such as ecological environment protection, natural resources, labor employment, health committee, finance, audit etc. in the project preparation, construction and operation management stages to ensure the implementation of environmental and social management measures.

267. **(v) Public Participation, Information Disclosure and Grievance Redress Mechanism (GRM):** During the survey in the sample counties, the natural resources departments of each county introduced the management process of permanent land acquisition and the process of facility agricultural land use undertaken by the department, and sorted out the information disclosure and public participation mechanisms contained in the two systems, of which the land acquisition process strictly follows the process of land detail measurement survey (DMS) and verification of LAR in line with the Land Management Law. The results of the DMS, the compensation plan for land acquisition and the announcement of land acquisition shall be disclosed in the affected communities, of which the results of DMS and the compensation plan shall be disclosed in the affected communities for at least 30 days. For the use of facility agricultural land use, the land user needs to consult the village community and township government at the start-up stage. After reaching a preliminary agreement, the land user needs to consult the county water affairs bureau, forestry department, transportation department, scenic area competent department (if involved), NRB, cultural relics management department and other departments for review and acceptance. After approval obtained, the land user will make a public disclosure in the village community where the land is located for at least 10 days. If there is no objection, the village community organization can sign a land use agreement with the operator. At the specific project level, in addition to the above public appeal channels, some other evaluation documents such as the SSRA and EIA also contained the requirements for information disclosure, public participation and grievance redress mechanisms, and included in the monitoring and supervision mechanisms.

268. The investigation to the sample counties in Hubei and Hunan confirmed that local government departments implemented the regulation, and there was a complete set of grievance

redress mechanisms. Taking Xiantao City, Hubei Province as an example, the community appeal mechanism includes four levels: first, directly report the situation to the relevant implementation units and seek solutions; The second is to reflect and seek solutions through village committees or neighborhood committees, and the third is to report and coordinate with township governments or sub-district offices; The forth is to handle complaints through the PCPB of the county government or the county head's hotline/mailbox. The process includes the mechanism of collection, starting within 7 days, and processing and feedback within 2 months. In addition, residents can also resolve major disputes through civil litigation in the court. Overall, the grievance redress mechanism is sound and effective.

269. **Assessment:** The field survey to Hubei and Hunan provinces and relevant project counties shows that relevant design and assessments on the facilities have been undertaken implemented and approved as required in the early stage of the project, such as sewage treatment facilities and solid waste transfer stations. The screening process of environmental and social impacts and risks and public consultation were also conducted are basically conducted in the project preparation stage. Some small decentralized facilities, such as livestock manure treatment facilities, small sewage treatment facilities, small rural garbage collection and transportation facilities, have carried out social risk or impact assessment as well in the project preparation stage through the special sections of the feasibility study, and some of them were carried out by dedicated SSRA.

5.4.2 Core Principle #2: Cultural heritage management system

Element 5: Take into account potential adverse effects on tangible cultural heritage and provide adequate measures to avoid, minimize, or mitigate such effects.

270. During the communication with the cultural relics protection departments and natural resources departments of Hubei and Hunan provinces and sample counties, it was learned that the planning department consulted and listened to the opinions of the cultural relics management department when formulating and updating the local land use planning, including obtaining the regional cultural relics distribution data, and integrating the cultural relics census results into the local land use planning. For example, Sui County in Suizhou City of Hubei Province is a famous place where chimes were discovered. There is now one national cultural relics protection unit in Sui County, 13 provincial protection units, 71 municipal protection units, and 24 county-level protection unit. In addition, many common cultural relics have been discovered. These cultural relics reflected the production and living conditions of different ages and Chinese civilization. Therefore, the boundary of relevant cultural relics has been determined in the local land use planning. At the preliminary examination and site selection stage of the project, the project site selection shall comply with the local overall land use planning, which ensures that no other construction activities, e.g., blasting, drilling, excavation and other operations, are allowed within the protection scope of the cultural relics protection units required by the Law on the Protection of Cultural Relics. At the project review stage, the local development and reform commission invited experts from the cultural relics protection department to participate in the project review. If cultural relics are found during the construction of the project, the construction unit will, in accordance with the provisions of the Law on the Protection of Cultural Relics, report to the cultural relics administrative department of the provincial government to organize archaeological investigation and exploration of the places where cultural relics are buried within the scope of the project. Fig 31 of Annex 8 shows a sample of approval on a rural energy project issued by the Relics Protection Bureau of Li County in Hunan province, which demonstrates the system of relics protection is functioning in the management of construction projects.

271. **Assessment:** In the process of project management, all relevant departments fully considered the potential impact on cultural relics resources according to the requirements of cultural relics protection laws and regulations, and avoided the impact on cultural relics as much as possible through optimization of project designs. For unavoidable impacts, strict management plans need to be formulated and approved before implementation.

5.4.3 Core Principle #3: Public and worker safety management system

Element 6: Promote adequate community, individual, and worker health, safety, and security through the safe design, construction, operation, and maintenance of Program activities; or, in carrying out activities that may be dependent on existing infrastructure, incorporate safety measures, inspections, or remedial works as appropriate.

272. As mentioned in Chapter 5.2 and 5.3, a workers management system has been established by government at all levels, including related laws and regulations, and corresponding management institutions. It is confirmed through survey on sampling project counties that this management system is effective. It's also found during the survey that no child labor (under 16 years old) involved in any enterprises or companies.

273. **Occupational health management:** The project activities include the construction and management of livestock and poultry manure resource utilization facilities, crop straw recycling and resource treatment facilities, rural solid waste collection and transfer facilities, and rural wastewater collection and treatment facilities. It's learnt from the survey of the sampled project counties, the potential safety risks during the construction and operation of these facilities were analyzed and the corresponding management measures were formulated through a special chapter of the feasibility study report during in the project preparation and evaluation stage according to the requirements of the construction project management. In the feasibility study report of some large-scale projects, the occupational hazard factors of workers during the construction and operation periods were also pre-evaluated, and management measures were formulated. For example, each of the occupational-disease-inductive factors like natural disasters, pipeline toxic and harmful gases, mosquito-borne diseases factors was identified and analyzed and corresponding mitigation measures were developed in Chapter 10 Labor Protection, Safety and Health of FSR of 150,000 chicken farm and its manure resources utilization treatment project of Junlin livestock breeding specialized cooperatives in Xiantao County, Hubei Province and Chapter 12 Labor Protection, Occupational Safety and Health of FSR of township wastewater treatment system construction project in Lixian County, Hunan Province respectively. The township wastewater treatment plant is operated by a third-party company, which has formulated enterprise occupational health management rules and regulations according to the health hazard factors identified in the pre-assessment of occupational diseases. For example, the enterprise arranged 2 operators in each transfer station. It can be seen from the provided employee occupational disease training materials that the occupational hazard factors of the transfer station include vibration and noise. Therefore, the operation unit has formulated a training and daily management system for the hazard factors specifically. In addition to large-scale construction projects, feasibility study report or other similar reports were prepared for most of the small-scale wastewater treatment facilities, solid waste collection and transfer facilities, livestock and poultry manure treatment facilities and crop straw recycling treatment facilities in the early preparation stage. For example, the preliminary design has been prepared for the high standard farmland construction project of Yangxin County, Hubei Province in accordance with the regulations of the Provincial Agriculture and Rural Affairs Department (Article 10 of ENF [2020] No.18). The assessment of occupational hazards and the design of relevant management measures were included in the relevant assessment and design documents. However, there were a small number of such facilities not carrying out related assessment mentioned above. In terms of operation and management, physical health examination, personal protective equipment, occupational health and safety training for employees were provided by related facilities and enterprises in accordance with the requirements of occupational health management, but there were also some facilities not strictly follow the requirements. For example, according to the Management Measures for Occupational Disease Diagnosis and Identification (2020), occupational health examination is usually carried out by the medical and health units designated by the health administrative department, but some small enterprises lack awareness of such requirements and need further guidance and training. On the other hand, the health commission organized human resources and social security department and the health department to conduct joint random checking of related enterprises each year, to check whether the occupational health and safety measures are in place, whether the "three simultaneous" measures implemented and whether relevant facilities carried out occupational-disease-inductive factors monitoring, etc. and urged the facilities to take corrective actions for problems found during the inspection. While, it's found during the survey that the frequency of such inspection on wastewater treatment facilities, solid waste collection and transfer facilities, livestock and poultry manure treatment facilities and crop straw recycling treatment facilities was relatively low.

274. **Labor dispute settlement mechanism:** Labor dispute settlement mechanisms have been established at three levels from enterprises to county governments, including the corporate internal settlement mechanism, township labor dispute mediation center, and county labor dispute mediation

center. Workers can choose to resolve labor disputes through mediation and arbitration, or lawsuit to the court or negotiation. It's learnt that labor dispute mediation is the most common way in most of the project counties. For example, in 2021, the HRSSB of Hengnan County, Hunan Province accepted 82 labor dispute cases, among which, 60 of them (accounting for 73%) were resolved through mediation and 22 of them were resolved through arbitration, whilst the HRSSB of Xiantao County, Hubei Province accepted 189 cases, among which, 135 of them (accounting for 73%) were resolved through mediation and 54 of them were resolved through arbitration. These disputes were mainly related to labor injury, labor relations termination, economic compensation, wage arrears, etc. In addition, local HRSSBs said that the labor union and the human resources department of each enterprise are also one of the channels to solve labor safety and labor disputes, and the labor union can help employees obtain rights and interests in terms of safety training, health examination, working environment and living needs. As the result of survey, the labor dispute settlement mechanisms are largely consistent from locality to locality, when a labor or personnel dispute arises, worker can seek help from the labor inspection and enforcement authorities of the labor authority, or it can directly submit to labor disputes arbitration. The labor inspection and enforcement authorities investigate and determine whether to file a case within five days after receiving the complaint and requires the case that meet the acceptance principle (e.g., the violation occurred within two years, etc.) to be closed in 60 working days. It can be extended to 30 working days for complicated cases upon approval. If the worker is not satisfied with the result, he/she can resort to labor disputes arbitration within six months. The application for labor arbitration is valid for a period of one year. The labor arbitration consists of two levels, including mediation and arbitration. Usually, labor mediation is recommended as the priority, and the mediation will be completed within 15 days since receiving the application. If the mediation is successful, the labor and management will sign a mediation agreement, and if not, the worker may apply for labor arbitration. The cases subject to arbitration by an arbitral tribunal shall be ended within 45 days after the arbitration committee accepts the application for arbitration. If an extension is required due to the complexity of the case, it may be extended and notified in writing to the parties upon approval of the chairman of the arbitration committee, but the extension period shall not exceed 15 days. If the arbitration decision has not been made within the time limit, the worker may bring a lawsuit to the people's court concerning the labor dispute. The results include pre-case mediation, case acceptance, and no acceptance. If not accepted, a written explanation should be provided to the applicant

275. **Female workers rights and interests:** it's learnt from the women's federations of sampled project counties that women's federation participated in the joint inspections organized by municipal/county HRSSBs and HCs and inspected the protection of women's rights and interests every year. The inspected enterprises include township wastewater treatment facilities, livestock and poultry manure resources utilization facilities, and domestic solid waste collection and treatment enterprises. On the other hand, the enterprises strictly followed the laws and regulations and company rules and regulations on the protection of female worker's rights and interests, such as gender equality, equal pay for equal work, and developed special preferential policies for female employees, like providing free cervical and breast cancer screening and physical examination, listening to their opinions when arranging jobs, not arranging pregnant women to engage in positions with high strength demanding or poor working environment, providing maternity leave and other protection measures and welfares in accordance with the law.

276. **Assessment:** Generally, the relevant facilities can fulfill the requirements and measures of workers' health and safety management in accordance with the national laws and regulations during the project preparation, design, construction and operation stages. The knowledge and awareness of some small-scale enterprises on occupational health and safety management related laws and regulations still needs to be improved. And the supervision of some local health departments on occupational health management for employees in small facilities needs to be strengthened. It is suggested to strengthen the related trainings and guidance to relevant enterprises on the one hand, and to strengthen the supervision of occupational health management of employees in relevant enterprises on the other hand.

Element 8: Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the PforR Program activities are located in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or affected by climate events.

277. **Construction project and enterprises management:** It is found during the visit to and survey on of several solid waste collection and transfer enterprises, livestock and poultry manure resource utilization enterprises and crop straw recycling and treatment enterprises in Hubei and Hunan that, in the project evaluation phase, a special chapter of geological hazard analysis was included in the feasibility study report or the evaluation report of project construction design plan, or a separate geological hazard assessment was carried out to identify the impact and risk of potential natural disasters on the project construction and operation stage and the management plan was formulated accordingly; before entering into construction, the conclusion of feasibility study report and special assessment would be considered when signing the agreement with contractors, and the responsibilities and obligations of the construction party in managing the health and safety of the community and workers were listed clearly in the agreement; during the project construction, various safety management posts and responsible persons were set up according to the proposed safety management plan, including safety supervision personnel to manage the health and safety of the construction site, and a monitoring mechanism was developed to ensure all safety and health management measures for workers on the construction site are implemented in accordance with the management plan; during the project operation phase, each unit developed various forms of rules and regulations or "staff management manual", as well as infectious diseases and epidemic management mechanism according to the relevant evaluation conclusions and management plans, and implemented relevant measures like training, registration and supervision. The requirements and process diagrams of staff epidemic management were disclosed in the public area of each unit.

278. **Government administrative management:** Great efforts have been put by all city/county governments, health commissions and competent departments on infectious disease prevention and control, like issuing special policies every year, and strictly supervising the implementation of relevant units within their jurisdiction. Take Honghu City in Hubei Province as an example, the Honghu government issued five COVID-19 control and management policies through the Health Commission in 2021, such as the Notice on Strengthening Epidemic Prevention and Control Measures. To strictly curb the spread of the epidemic and ensure all measures of "preventing the importation and rebound" can be implemented, the city government also assigned the duty to the leaders of township governments and village committees to conduct grid management of subordinate units, enterprises and institutions, self-employed households and residents within the administration area, such as vaccination and floating people registration management.

279. **Assessment:** As for the management of community residents and workers' safety and infectious diseases control, it can be effectively managed through government systems and enterprise self-management systems during the project construction and operation.

5.4.4 Core Principle #4: Involuntary resettlement management system

280. It is identified through site survey of sampling project counties that the Program may involves four types of land use: 1) permanent land acquisition, which mainly caused by the construction of rural domestic solid waste collection and transfer facilities and some centralized township wastewater treatment facilities, livestock and poultry manure resource utilization facilities and crops straw treatment facilities that have reached a certain scale; 2) FALU, the land used for some livestock and poultry manure resource utilization facilities and crops straw treatment facilities in the manner of facility agriculture land; 3) use of unutilized land in the village, the land area of most rural wastewater treatment facilities is about 100-400m², and usually occupies the rural collective land, especially unused collective construction land or unutilized land; 4) LURT for green agriculture and its related facilities, such as irrigation facilities.

281. The negative impacts of each type of land use are managed by different system. The six aspects under Element 9 are analyzed as follows.

(i) Minimizing negative impacts related to land acquisition

282. For those projects involved permanent land acquisition, construction land use pre-examination approval and site selection approval were obtained in line with the legal land acquisition procedures, e.g., the 17 township wastewater treatment plants in Xiantao City, Hubei Province and the township rural domestic solid waste collection and transfer facilities in Cili County, Hunan Province. It means the related government departments conducted site investigation and screening according to law at the project preparation stage. (Fig 32, Fig 33, Fig 34 and Fig 35, shows the

documents of site selection application, land use pre-examination approval, land acquisition approval and land use right certificate of the solid waste transfer station of Jiangya Town, Cili County).

283. In terms of the project involved FALU, such as Zhenbang livestock and poultry manure treatment facilities in Chongyang County, Xianning City, crops straw treatment facilities of Tianxia Agricultural Technology Specialized Cooperatives in Suixian County, Hubei Province, and Changyuan poultry breeding and manure treatment facilities in Lixian County, Hunan Province, it was reviewed by relevant departments at county, township and village level during the permitting process, like the county WRB (check whether the project located around any important water source areas), forestry bureau (put forward technical requirements for the use of forestland), transportation bureau (no breeding farm and related facilities can be built within 2km on either side of the highway), authorities in charge of scenic spots (review whether the project located in the area of scenic spots), NRB (check whether it is in line with the planning, whether to occupy basic farmland, whether to breach redline line of ecological protection areas), cultural relics administration bureau (check whether the project located in the scope of cultural relic protection units). (The FALU approvals of Zhenbang livestock and poultry manure treatment facilities in Chongyang County, Xianning City, Hubei Province is shown in Fig 36 of Appendix 7)

284. Regarding the rural wastewater collection and treatment facilities, it usually occupies the collective unutilized land or waste land and tries to avoid occupying any farmland. If it is unavoidable to occupy farmland, it should be applied in line with the Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNR[2021] No.166) and approved by natural resources department at county and township level to ensure the land use is consistent with local land use planning, replenishment should be undertaken within the administrative area to achieve the balance in and out of cultivated land and no reduction of cultivated land quality, and necessary public participation should also be conducted within the village to negotiate about the issues like land adjustment and compensation. This type of land use is based on voluntary negotiation. If it is failed to reach an agreement with farmers, the project would usually choose another location. Take the Changyupu dry grains storage project in Cili County, Hunan Province as an example, the project involves occupying a small scale of general cultivated land (7.6mu). The project unit negotiated and reached an agreement on land use with the village committee and villagers first, and then submitted a land use application to township government and reported to county NRB for review and record. (The approval for occupying general cultivated land issued by Cili county NRB in Hunan Province is shown as Fig 37 of Appendix 7)

285. Land use right transfer is usually applied to green agricultural cultivation and its related facility activities. According to law, the land transferred can only be used for activities related to agricultural planting to ensure the agricultural use of agricultural land, and the land tenure and usage of the contracted land shall not be changed. A routine supervision mechanism has been established by local natural resources law enforcement team to manage cultivated land "non-agricultural" use activities. Thus, the LURT management system can effectively minimize the negative impacts caused by land occupation as much as possible.

(ii) Identifying and addressing economic and social impacts arising from land acquisition or loss of access to natural resources

286. It's learnt from the county NRBs, project implementation agencies and enterprises that, for both permanent acquisition of collective land and FALU, joint site investigations by relevant departments and reconnaissance demarcation should be conducted before land use approval to determine the redline of the project, and DMS should be conducted to identify the impacts of land use and the DMS results should be confirmed by affected villagers. The DMS results and resettlement and compensation plans for permanent land acquisition should be announced to the affected communities for at least 30 days, and the DMS results and draft agreements for FALU should be announced to the affected communities for at least 10 days. Only when there is no objection at the end of the announcement period, can the signing of the land acquisition/land use agreement be initiated. After the signing of the agreement and relevant land approvals obtained, the department for approval will indicate in the approval documents that the land user shall make full compensation for the losses caused by the land use according to the resettlement and compensation resettlement plan or other similar compensation policies. For the land no longer to use, land restoration should be conducted and compensation for the loss of land fertility should be made as

required before returning the land. For example, in the land pre-examination approval of Jiangya township solid waste transfer station project in Cili County, the local NRB calculated and indicated the amount of land compensation fee, resettlement subsidies and other compensation and subsidies and confirmed the land compensation and resettlement subsidies provided by land user meets the principle of market replacement, the living standard of land-expropriated farmers won't be not lower than before and their long-term livelihood can be guaranteed. As shown in Fig 36 of Appendix 7, In the approvals of FALU for Zhenbang livestock and poultry manure treatment facilities in Chongyang County, Xianning City, Hubei Province, relevant competent authorities gave their opinions, e.g., the natural resources and planning bureau of Chongyang County confirmed that the land was in line with local land use planning and land use policies, and the County EEB confirmed that the project was in line with environmental protection policies. Meanwhile, the Guihua Township government and the village committee of Longfei village, where the project is located, also agreed with the FALU and confirmed that the land use compensation agreement and fees have been solved as required.

(iii) Compensation and transition subsidy to be fully paid at replacement cost before land use

287. It's learnt from the Department of Natural Resources of Hubei Province that compensation rates for land acquisition are usually adjusted every three to five years based on local economic development and market conditions in Hubei Province. The compensation rates for land acquisition of Hubei Province were last adjusted in the Notice on Releasing Block Comprehensive Land Prices of Hubei Province promulgated in October 2019. The compensation rates for house demolition within the urban planning area of counties/cities concerned were subject to the market price at the time of LA to ensure that the compensation is consistent with the replacement cost. As to Program activities where land is leased rather than obtained through permanent land acquisition (e.g., the fecal residue and wastewater recycling facilities), the land rent was agreed by concerned parties through consultation on the basis of equality. Hunan and Hubei Province are in a similar situation in terms of the management of compensation standards for land acquisition. For example, in 2021, Hunan promulgated the Notice of Hunan Provincial People's Government on Adjusting Compensation Standards for Land Acquisition in Hunan Province (XZF [2021] No. 3), which is an adjustment according to the latest economic development and market performance, and the county-level natural resources departments made corresponding adjustments according to provincial requirements in the following, e.g., Hengnan County promulgated the "Hengnan County People's Government Office on Printing and Distributing" Hengnan County Collective Land Acquisition and Housing Demolition Compensation and Resettlement Measures "(QZBF [2021] No.11) based on the provincial policy adjustment.

288. For small scale wastewater treatment facilities and other cases involving small-scale occupation of farmers' contracted land, it is the collective economic organizations usually signing land acquisition contracts with farmers and giving full compensation according to the current local land acquisition and compensation policy, while the nature of the land remains unchanged and is still collectively owned.

(iv) Livelihood restoration

289. The municipal/county social security authorities confirmed that the basic endowment insurance, employment trainings and support policies for land-expropriated farmers ensured that land-expropriated farmers do not lose their livelihoods after land acquisition. Land-expropriated farmers can choose to participate in different types of social security schemes as needed: 1) respective basic pension insurance for urban and rural residents. The minimum amount of basic pension was 115 yuan per month each person in Hubei Province and 103 yuan in Hunan Province in 2021. Those who have not reached the retirement age will receive the social security subsidies paid by local governments to their personal pension accounts directly, and the pensions will be paid by the local human resources and social security authority on a monthly basis after they reach the retirement age; affected people may choose to pay higher pension contributions to receive more pensions after reaching the lawful retirement age; 2) pension insurance for urban workers. For those who chose this type of insurance, one-time subsidies will be provided and connected to the pension insurance in line with the law at the time of retirement. In 2021, the basic pension for retired urban workers in Hubei and Hunan Province was 3,000 yuan per capita per month. Those under the retirement age may make money by finding jobs with the aid of training and employment support

offered by the government. For the rural areas, farmers can get income from land leasing and temporary work at local. For example, there is a A'erdí Organic Agricultural Ecological Park in Xiantao City, Hubei Province, which is engaged in the development of comprehensive organic agriculture, including characteristic fruits and vegetables planting, as well as poultry stocking, agricultural tourism, catering, etc. Its land is leased through voluntary negotiation with the surrounding village collectives and farmers at a rent of 600-800 yuan/mu/year. In addition to the income from land leasing, farmers can also sign employment agreements with the park to work as temporary or long-term workers at a salary of 150 yuan/day for temporary workers and about 4000 yuan/month for long-term workers. While if farmers grow traditional rice by themselves, the output value per mu is 1,500 yuan/year, and the profit is only 300 yuan/mu/year after deducting the cost of agricultural inputs. In contrast, farmers' income is significantly improved by cooperating with agricultural cooperatives or agricultural companies. The survey of counties in Hubei and Hunan provinces shows that similar agricultural development patterns are common in all counties and cities visited.

(v) Policy arrangements for infrastructure restoration

290. As confirmed by the municipal/county NRBs, any potential social impacts and risks caused by land acquisition and house demolition or FALU to infrastructure were identified and evaluated by professional agencies during the land investigation and DMS, and related management plans were developed accordingly. Moreover, the SSRA should be carried out at the preparatory stage to identify all relevant social impacts and risks may arise from the Program, which involves the solicitation of public opinions and suggestions. These measures are meant to ensure that infrastructure and community services affected by the Program are protected, or restored as soon as possible, or improved in the light of public opinions.

(vi) Information disclosure, public participation and informed decision-making

291. As analyzed above, information disclosure, public hearing and publicity were conducted according to law during the implementation process of collective land acquisition and FALU, because the records of information disclosure and public participation are one of the necessary materials of land use application materials. For LURT, the qualification of land user shall be reviewed by the local village committee and township government where the project is located in the application stage. If the project reaches a certain scale, such as more than 1,000 mu, the Agriculture and Rural Affairs Bureau at county level shall make a review. After the review and approval, while the two parties negotiating the LURT agreement, the land user shall ensure that the information related to the project is free and unconditional open to the township government, collective economic organizations and farmers involved by LURT. The LURT agreement can only be signed after the two parties reach an agreement on the terms of the agreement (such as boundary, area, period, price, etc.). Thus, LURT is the result of mutual recognition.

292. **Assessment** : Hubei and Hunan Provinces have established the systematic impacts screening and management mechanism by strictly following the relevant provisions of the regulations in the aspect of land acquisition, FALU and LURT. The mechanism includes impact identification, management plan development, compensation and resettlement for affected people's loss, livelihood restoration, roles and responsibility of implementation agencies and financial support, etc., which ensures that the LAR impacts are properly managed.

5.4.5 Core Principle #5: Management system for ethnic minorities and vulnerable groups

Element 10: Undertake meaningful consultations if the ethnic minorities are potentially affected (positively or negatively), to determine whether there is broad community support for the PforR Program activities.

293. Few ethnic minority areas will be involved in the project area in Hubei and Hunan Province, such as Xianfeng county in Enshi Tujia and Miao Autonomous Prefecture, Hubei Province and Cili County in Zhangjiajie, Hunan Province. There are 288 villages of 10 townships in Xianfeng County, Hubei Province with a total population of 367,400. Among which, the population of 17 EM groups accounting for 85%; mainly are Tujia and Miao people. There are 97 villages, 7 townships in Cili County, Hunan Province, with a total population of 148,000. Among which, the EM population accounts for over 80%, mainly are Tujia, Miao, Bai, etc.

294. It is learned in the interviews with the provincial/county ethnic affairs authorities that the

Program impacts on ethnic minorities are effectively managed in two ways. On the one hand, in accordance with the Constitution and relevant ethnic affairs management laws and regulations, the representatives of affected ethnic minorities are fully consulted on special issues to ensure that their opinions are respected. The organ of self-government in the national autonomous area is also responsible for safeguarding minority citizens' constitutional rights. On the other hand, public consultations are carried out in accordance with the relevant requirements for assessment of general construction projects. In each county, a Five-year development plan was formulated according to the development characteristics of local ethnic minority areas, and projects for the development of ethnic minority areas and cultural protection were implemented. Ethnic features were considered by the ESSA consulting team during the selection of sampling project counties for site survey, so Enshi Autonomous Prefecture in Hubei and Cili county in Hunan was visited respectively. It's learnt that the ethnic and religion administration bureau (ERAB) is the responsible authority for ethnic related affairs in each county. It's acknowledged from the ERABs that economic development projects in ethnic minority areas are usually proposed based on the specific village or township development needs. In each year, the village committee conduct diversified public consultation activities through cultural-sensitive and generally accepted methods like villager meetings, talks, courtyard meetings to collect resident's opinions from bottom and submit the proposals to township government; then the township government will submit the project construction application to ERAB or other competent departments at county level (e.g., HURDB for domestic solid waste management, RRB or EED for rural wastewater management); after receiving the applications, the ERAB and other competent departments would conduct site investigation for verification, classify the projects based on its necessity and urgency, submit the project lists to upper management authorities in batches and apply for funds to implement. It can be seen that the Program is constructed based on the actual needs of ethnic minority areas, opinions of EM areas are fully considered and respected and support of a wide range of ethnic minority residents are obtained. When implementing a specific Program activity in EM areas, existing management mechanisms are applicable, for example, feasibility study at project preparation stage, SSRA, etc. Systematic public consultations and negotiations has been included in the assessments and evaluations to ensure EM people's opinions being respected.

295. **Assessment :** It's learnt from the provincial and county level management system that fully consultation and negotiation with EM residents can be implemented when dealing with EM related affairs through existing EM management system. When implementing projects in ethnic minority areas, the interests of EM are fully protected according to law and the right to be informed are guaranteed. The efficient implementation of these management systems will ensure the Program receives broad support from residents in ethnic minority areas. Thus, the social practice effects are consistent with the bank policy.

Element 11: Ensure that ethnic minorities can participate in devising opportunities to benefit from exploitation of customary resources and indigenous knowledge, the latter to include the consent of ethnic minorities.

296. According to the investigations in Enshi Tujia and Miao Autonomous Prefecture of Hubei Province and Cili county of Hunan Province, local minority groups and Han people show almost no difference in language, manners and customs and no tangible cultural heritage of special concern is found. In addition, ethnic minority development funds are available at national, provincial, municipal and county levels every year. For example, Hubei Province received the state-level ethnic minority development fund totaling 130 million yuan in 2021. Xianfeng county received state-level fund of 12.68 million yuan, provincial-level fund of 2.35 million yuan, and prefecture level fund of 100,000yuan. In the past, special financial funds for ethnic minorities development from the central government were only applicable for identified ethnic minority counties/cities in Hunan. Considering the fact that the ethnic minority population in Cili County is more than half of the total population, a separate fund for ethnic minority development has been arranged every year since 2020, and the total fund was up to 2.3 million yuan by 2021. The funds were fully used for the development of characteristic agricultural and tourism products and infrastructure improvement in ethnic minority areas. For example, both Xianfeng County and Cili County focus on the improvement and transformation of infrastructures like roads in ethnic villages and the construction of some ethnic customs streets to solve the bottleneck problem of the development of ethnic areas.

297. **Assessment:** Despite varying cultures in ethnic minority areas involved in the Program,

plans and relevant protective projects are put in place every year to protect the cultures of ethnic minorities. The implementation of the Program is a promotion and support for the local systematic development planning of ethnic minorities and will bring more development opportunities to the people in ethnic minority areas.

Element 12: Give attention to groups vulnerable to hardship or discrimination, including, as relevant, the poor, the disabled, women and children, the elderly, ethnic minorities, racial groups, or other marginalized groups; and if necessary, take special measures to promote equitable access to PforR Program benefits.

298. According to law, the protection of women's rights and interests is part of the routine management work of all departments and units, which is mainly implemented through women's federations at all levels and women's affairs management departments within enterprises and units. Projects and funds for the protection of women's rights and interests and women's development are prepared by governments and women's federations at all levels and the internal management departments of enterprises arrange every year. At the same time, local women's federations have also set up specific department like rights and interests department, family and children department, women's development department, organizational building and coordination department, propaganda department for the protection of women's rights and interests, family, children, women's development, health, gender equality, etc. Women's federation at county level is also responsible for guiding the establishment and division of responsibilities of grass-root women's federations. For example, the arrangement of grass-root women's organizations in Suixian county, Hubei Province is: the chairman of the township women's federation shall be a female member of the Party Committee, a full-time vice chairman shall be assigned, the chairman of the village women's federation shall be a female member of the village/community committee, and the executive committee of each town and village women's federation shall have no less than 11 members. It is learnt from the women's federation of Lixian county, Hunan Province that the district women's federation received 53 cases through women's rights hotline 12338 in 2021, including 8 cases of domestic violence. The district women's federation hired a professional lawyer and actively coordinated with women's federation at township and village level to mediate the disputes, and worked with the public security, court, judicial department, and other departments to help women solve problems in a timely manner and protect the rights and interests. It's confirmed through the investigation that supporting women's development is one of the main tasks of the local women's federations, and a large amount of manpower and financial resources are arranged every year. Take Xiantao city in Hubei Province as an example, skill trainings and women employment and entrepreneurship support are provided by county level women's federation every year. In 2021, nice employment skills trainings were conducted, servicing more than 900 person-times of women; 11 free childcare trainings and 8 elderly nursing skill trainings were conducted in villages and communities with a total of 843 junior students and 120 senior students trained; the completion rate of women was 100% and the employment rate reached 90%. In addition, small-sum guaranteed loans for rural women were implemented to alleviates the financing difficulties for rural women when starting their own business. A total of 97.46million yuan of loans was provided to 705 rural women in 2020 and 46.873 million yuan was provided to 326 rural women in 2021. For example, Ms. Chen, a big planter of female broccoli at group 1, Hongqi Village, Zhanggou Town, Xiantao City, applied for a loan of 200,000yuan in March 2021 and planted an area of 120mu. She not only increased her own income, but also provided employment opportunities for local villagers. The loan Ms. Chen applied is the woman's re-employment guarantee loan with an actual annual interest rate of 2.2% after discount, and it's also a kind of policy-based loan for purchasing agricultural materials, fertilizers and seeds specifically, which can enjoy a preferential price.

299. The civil affairs bureaus and disabled person's federations at each county are responsible for information collection and assistance for orphans, minors and old people left-behind, disabled persons and extremely poor persons within the administrative areas. Special financial funds are arranged by government to protect these groups rights and interests. For example, there were 2,323 left-behind children and 960 left-behind old people in Chongyang County, Xianning city, Hubei Province in 2021. The county has established a joint conference system for the care and protection of the "three left-behind" rural people, including left-behind women, children and old people. In terms of the institutional arrangement, the civil affairs bureau is taking charge of the related overall coordination and management within the administrative area, 163 nursing centers for rural old

people have been established to provide daily caring and nursing services for left-behind old people, and at least one supervisor for children affairs equipped in each township government. In terms of budget arrangement, special funds and routine work funds are arranged and incorporated into the financial budget of county and township levels every year to ensure that relevant management work and support can be implemented. In addition, the qualified "three left-behind" people have been included in the scope of assistances like minimum living security, two subsidies for the disabled, old age allowance, living subsidies for orphans, and welfare lottery funding for education, etc.; regular meetings were held every year to arrange and deploy the work for the whole year and related policies were promulgated, like the Implementation Plan of Chongyang County to Strengthen the Care and Protection Work of Left-behind Children in Rural Areas and the Implementation Plan of Chongyang County to Strengthen the Care and Protection Work of the "Three Left-behind" people in rural areas, which greatly improved the caring and service system of "family taking responsibilities, government providing supports, social participating".

300. It's learnt from the site survey that rural revitalization departments at all levels are the competent authorities for consolidating and expanding the efforts to effectively link the achievements in poverty alleviation with rural revitalization. At the county level, a complete database of poor people and families has been established by the rural revitalization bureau. Although all regions have been lifted out of poverty in 2020, the local governments still track and record the names and family conditions of the people who have been lifted out of poverty in each village. At the same time, the governments still implement the "four measures" for households lifted out of poverty, namely, responsibility, policies, assistance, and supervision. For example, in Hengnan County of Hunan Province, the local government still adhere to the management system of poverty alleviation regarding to each of the four measures: 1) ensuring the command system at county, township and village level remain unchanged, with the county head as the group leader; 2) Implementing policies, including central and provincial funding, education and medical assistance policies; 3) providing assistances through assigning the first secretary and task team to the village; 4) supervision, a monitoring mechanism has been established for those who are unstable in poverty alleviation, close to the poverty line and being in difficulties due to emergencies. Special personnel have been assigned to take charge of monitoring, recording, regularly tracking the situation of each household. In general, the governments expect to take five years transition period to consolidate and expand the achievements of poverty alleviation and provide a smooth transition period for poverty-lifted rural households to become self-reliant and self-improvement through orderly adjustment.

301. Assessment : In terms of women's development and protection of women's rights and interests, it can be fully guaranteed through women's federations, women's organizations in enterprises and grass-roots women's organizations. For left-behind minors and old people, the government has established relevant databases mainly through civil affairs departments, and provided timely assistance through towns governments and villages/communities. In terms of the support to poor families, the national and local governments have established a complete system and mechanism from policies, budgets to institutional arrangements, which can not only protect the legitimate rights and interests of poor families in various projects, but also effectively manage the support and development of poor families.

6. Public Participation and Grievance Redress Mechanisms

6.1 Public Participation

302. Stakeholder engagement is an important aspect of this ESSA and a requirement of the Bank policy. During the ESSA, stakeholders have been identified subject to the impacts of activities, interest in the activities and power of influence on decisions, mainly including government authorities at different levels, villages and communities, activity implementation agencies, women's federations and other social organizations, affected persons, etc. (see Appendix 4). During the ESSA preparation, extensive participation and consultation activities were conducted in the relevant counties and districts in both provinces, including the consultation meetings with CPMO, provincial and county authorities held in Hubei and Hunan in August 2022 and relevant government consultations on ESSA in October 2022.

6.1.1 Initial Participation Activities

303. At the preparation stage, the Bank team and ESSA consulting team engaged with relevant authorities of the Hubei and Hunan Provincial and County/City Governments from June to August 2022, covering the Bank's PforR provisions, E&S policies, implementation management practices, operating processes, assessment document preparation, etc.

304. From August 2021, extensive public participation has been conducted in Hubei and Hunan to prepare and improve this report (see **Error! Reference source not found.**), including six consultation meetings of provincial authorities, involving provincial DRCs, FDs, ARABs, RRBs, HURDBs, EEBs, NRBs, women's federations, ERABs, etc. At the county level, Xiantao, Suixian and Honghu County/City in Hubei, and Hengnan, Cili and Lixian County in Hunan Province were visited, and focus group discussions (FGDs) held with government authorities with over 100 participants cumulatively. In addition, information was also collected from other project counties, like Yangxin, Xishui, Congyang, Xianfeng etc. 7 County in Hubei and 10 counties in Hunan, like Huayuan, Jiangyong, Linxiang, Yongding, Taojiang, etc. In the various surveys and FGDs as mentioned above, exchanges were made with government authorities, relevant enterprises (domestic waste disposal, domestic wastewater treatment, crops planting, livestock and poultry breeding, fishery, straw treatment, agricultural mulch film recycling, etc.), village officials, villager representatives, etc., and rural domestic waste collection and transfer, land filling, waste incineration, wastewater treatment, livestock and poultry breeding, livestock and poultry manure recycling, straw recycling and agricultural mulch film recycling sites visited. These activities cover the following items:

- Responsibilities and organizational setup of each authority
- Prevailing main sectoral policies and regulations
- Scope of implementation, policy requirements, implementation progress, effects and main issues related to wastewater collection and treatment, agricultural non-point-source pollution control, river management, etc. in work of different authorities
- Enterprise scale, recruitment mode, worker benefits, safety and skills training, occupational health hazards and inspection, availability of protective equipment, facility land approval, EIA, SSRA, social impact assessment (SIA), geological disasters, management, etc.
- Community domestic waste collection, transfer, separation and disposal (including recycling);
- Villager employment, especially participation in waste, wastewater, and river management projects
- Rural wastewater collection and treatment, house connection, charging, issues, and suggestions
- Local use of chemical and organic fertilizers, and effects
- livestock and poultry manure recycling, straw recycling and agricultural mulch film recycling, and effects

6.1.2 Public Consultation on the ESSA

305. The first version of the draft ESSA was provided to Hubei and Hunan provinces for public consultation on 11 October 2022. The PPMOs then shared the draft ESSA report with all relevant government departments at provincial and county levels to seek their comments. The Hunan and Hubei PPMOs organized all relevant provincial and county-level government authorities to have

consultation meetings with the ESSA team on 26 and 27 October 2022, respectively. The participants include officials from the provincial authorities such as RRAs, ARABs, EEBs, HURHBs, HRSSBs, CABs, etc., and relevant county-level government authorities of 10 counties/cities of Hubei and 13 counties/cities of Hunan. At the meetings, the PforR and the draft ESSA report were introduced, including the purpose, scope, methods, conclusions, and recommendations of the ESSA. The main concerns of the meetings include:

- 1) Whether the laws and regulations quoted in the ESSA are accurate and relevant.
- 2) Whether the analysis of the laws and regulations is pertinent.
- 3) Whether the description of the organizational setup in the report is accurate, and whether the assessment of institutional capacity is appropriate.
- 4) Whether the conclusions of this report are acceptable; in particular, whether the gaps identified between domestic ESMSs and the Bank's PforR policy are correct, and if the recommendations proposed are feasible and acceptable.

306. At the meetings, the participants gave positive opinions on the ESSA report, accepted the recommendations, and provided valuable comments on revision, such as validity of some policies, latest institutional arrangements, and organizational responsibilities, etc. The ESSA team listened to, recorded, and studied the comments carefully, and revised the report accordingly. The written feedbacks from the governments and the responses made by the ESSA team are presented in **Appendix 6**.

6.2 GRMs

307. **Existing GRMs** usually include community and enterprise GRMs. The community grievance redress mechanism (GRM) consists of four levels: firstly, grievances are reported directly to the relevant PIUs to seek a solution; second, grievances are reported to the village or community committee for address; thirdly, grievances are reported to the township government or sub-district office for coordination and address; fourthly, grievances are reported to the county PCPBs or the county head's hotline/mailbox, etc., which includes a mechanism of collection, initiation within 7 days, and solving within two months. In addition, residents can resolve more serious disputes through civil actions at court. In general, the GRM is normative and effective. An enterprise GRM basically has two aspects: First, workers' grievances: Workers' grievances are handled through a three-tier labor dispute resolution mechanism, namely, the enterprise labor disputes and redressing mechanism, the township government's labor dispute mediation center and the county government's labor mediation center. On the enterprise level, workers can seek a solution through the enterprise/factory manager mailbox, or the trade union. If any dispute cannot be addressed satisfactory, the worker can go through the government mediation mechanism, or seek solution by labor arbitration (see Principle #3 under Element 8 in Section 5.4). Second, the enterprise sets up an external relations department, and assigns a contact and a telephone number to collect complaints and suggestions from the public.

308. **Assessment:** Based on interviews with village committees and villager representatives, village-level GRMs are sophisticated in general, and most (as reportedly over 90%) grievances can be solved effectively at the village level, with very few solved through civil litigation. GRMs for labors of enterprises are quite normative and can solve worker grievances. However, some enterprises have not disclosed the grievance contacts and telephone numbers to the public, therefore, it is necessary for enterprises to establish a GRM at the construction and operation stages.

7. Conclusions, Recommendations, and Action Plans

7.1 Conclusions

309. The PforR aims to promote green and sustainable agriculture and rural development of the selected provinces. Although the PforR will inevitably have some temporary, small-scale, and mitigatable adverse impacts on the environment and local communities during the implementation, it will largely improve the quality of regional environment and the well-being of local people. Through E&S screening, activities with high E&S risks have been excluded. Provided that the existing E&S systems are implemented effectively, the PforR will not have any major negative E&S impacts, and the PforR's overall E&S risk rating is **Substantial** considering that the PforR will be implemented by local governments in a wide region of the province.

310. It's identified in the ESSA that proper E&S management systems have been established in Hubei and Hunan to identify, assess, avoid, mitigate, manage, and monitor the E&S impacts and risks related to the PforR activities, including (1) a complete regulatory system, including applicable laws, regulations, policies, standards, and technical guidelines at the state and local levels; (2) clear implementation mechanisms, including clear administrative procedures, institutional arrangements, and responsibilities for E&S impacts and risk management, and necessary professionals and financial resources; and (3) outcome performance of the E&S systems. The random surveys on the past cases in the sample counties show that E&S impacts and risk management measures have been implemented effectively. Based on the assessment, the E&S systems related to the PforR are generally consistent with the requirements of the Bank's PforR policy and guidance.

311. The ESSA has also identified the following areas for improvement:

- 1) The OHS awareness and knowledge of some small enterprises/facilities need to be improved and the OHS management supervision of some small-scale enterprises/facilities needs to be strengthened.
- 2) Odor issues exist in traditional livestock and poultry farms and some domestic solid waste transfer stations.

7.2 Recommendations

312. Against the above-mentioned E&S issues, following recommendations have been proposed:

- 1) **Recommendation 1:** OHS trainings and guidance for managers and employees of livestock and poultry breeding and manure resources utilization enterprises, crop straw storage and processing enterprises, waste compression and transfer facilities, urban wastewater treatment facilities and other units should be strengthened and management supervision of these enterprises/facilities should be strengthened.
- 2) **Recommendation 2:** Measures should be taken to strengthen odor control in livestock/poultry manure management and domestic solid waste transfer to reduce odor impacts. It is suggested that (i) local ARABs and HURDBs ensure the odor treatment facilities are well designed, constructed, and operated for new or upgraded livestock/poultry manure treatment facilities and domestic solid waste transfer stations; (ii) local ARABs and HURDBs enhance technical guidance and training to these facilities; and (iii) local EEBs strengthen monitoring and inspection on odor emission and management.

7.3 Action Plan

313. To effectively execute the above recommendations, following actions should be included in the Program Action Plan (PAP) and taken during the PforR implementation.

Table 0-1: E&S Action Plans

No.	Action	Responsibility	Timing	Completion Measurement
1	OHS trainings and guidance for managers and employees of livestock and poultry breeding and manure resources utilization enterprises, crop straw storage and processing enterprises, waste compression and transfer facilities, urban wastewater treatment facilities and other units should be strengthened, and management supervision of these enterprise/facilities should be strengthened.	PPMO, Provincial and county level HCs, and related facilities and enterprises	project construction stage Project operation stage	<p>Relevant information should be included in the provincial and county-level occupational health management training plan, implementation records and monitoring reports, like date, location, sign-in form of participants, photos, etc.</p> <p>The county-level health department shall monitor the preparation and implementation of occupational health training plan of the said facilities or enterprises, and report in the monitoring reports.</p>
2	Implement measures to ensure the odor treatment and monitoring facilities are well designed, constructed, and operated for new or upgraded livestock/poultry manure treatment facilities and domestic solid waste transfer stations and to enhance technical guidance, training, monitoring, and inspection.	PPMOs; Provincial and county level ARABs; Provincial and county level HURDBs; Provincial and county level EEBs	Throughout Program implementation stage	<p>PPMOs will provide following information that can be included in the semi-annual progress reports to the Bank:</p> <ul style="list-style-type: none"> • Progress of new or upgraded odor treatment facilities, and completion acceptance comments • Odor monitoring arrangement and monitoring data • Track records of training, guidance, and inspection on odor management

8. Management and Monitoring

314. As per the Bank PforR Policy¹² and the agreements between the Bank and the Borrower, the two parties will manage and monitor the PforR implementation from different perspectives.

8.1 The borrower

315. The Borrower is responsible for implementing the PforR, monitoring the implementation progress, evaluating the indicators, and performing relevant commitments as per the legal documents including the PAP. Such responsibilities include that the Borrower should keep the E&S management systems effective, implement monitoring plans, and identify and solve issues in a timely and effective manner. The Borrower should:

- Prepare and implement the environment and social risk management manual.
- Implement the agreed E&S actions as per the PAP and maintain the E&S management systems and the implementation capacity as recommended by the ESSA.
- Submit semiannual progress reports on the PAP implementation to prove continuous compliance with the applicable E&S management mechanism.
- Monitor, evaluate and audit the system performance regularly as necessary.
- Review GRM performance, procedures, and results regularly, and include specific grievance cases in the progress reports.
- Consult the Bank for any change made to the E&S systems during implementation.

316. Hubei and Hunan provincial PMOs are responsible for overall management of their PforR activities. The RRBs or ARABs at county level (county PMOs) are responsible for overall implementation of county-level activities. The PIUs may include RRBs, ARABs, EEBs, HURDB, TABs and WABs, etc., and they are also responsible for implementing the proposed E&S actions. The PIUs should have specific divisions and staff to implement the E&S actions, report to the county PMOs, and provide information to the provincial PMOs and the Bank for supervision and monitoring.

8.2 The Bank

317. The Bank is to provide supports to the implementation of the PforR and oversee the E&S management performance against the ESSA requirements especially the PAP. The Bank will monitor the Borrower's commitment to compliance with E&S risk management, including actions to strengthen institutional capacity. The Bank will evaluate the PforR performance based on the risk assessment conducted at the preparation stage and hence help the Borrower handle expected and unexpected risks and give recommendations to manage the risks. The Bank will also conduct field visits and provide supports to the PIUs and stakeholders and review audit and progress reports. The Bank team will submit memorandum to the Bank management group to report the PforR implementation performance regularly, by the way of document review, consultation with the PIUs and stakeholders, field visits, etc. The main activities are as follows:

- Verify the implementation of agreed actions, including any agreed capacity building activity and any designated E&S mitigation measure.
- Conduct regular monitoring to ensure that the Borrower's ESMS performance at the implementation stage is accepted by the Bank.
- Identify any extra management measure that may be taken to underperformance or any unexpected challenge during implementation.
- Ensure the effective operation of the GRMs through semiannual reports.
- The Bank will conduct field visits regularly as a supplement to the self-supervisions of the PIUs, and provide other support agreed on between both parties.

¹² As per the Bank's PforR Policy (paragraph 12), the Borrower is responsible for preparing and implementing the PforR Program. The PforR Program's scope and objectives and the Borrower's contractual obligations to the Bank are set out in the legal agreements with the Bank. These obligations include the requirement to carry out the PforR Program with due diligence, and to maintain appropriate monitoring and evaluation arrangements (including credible disbursement-linked indicator verification protocols), fiduciary and environmental and social PforR Program Systems, and governance arrangements.

Appendix 1: Boundary of Government Programs and the PforR

A-1: Hubei Provincial Government Program and the PforR Boundary

Hubei 14 th FYP to Promote Agricultural and Rural Modernization			Activities to be included in the PforR	Related result areas of the PforR	Reason for non-inclusion	
Development Areas	Categories of developments		Main activities at provincial and county levels			
1. Consolidate poverty alleviation and link to rural revitalization	Push the development of poverty alleviated areas		Consolidate and expand the achievements of poverty alleviation, connect them with rural revitalization, improve low-income population supporting mechanism, develop rural industries in poverty alleviated areas, and promote integrated urban and rural development, etc.	None	None	Not a PforR priority
2. Guarantee effective supply of important agricultural products	Stabilize agricultural production		Ensure food security, promote green supply of livestock/poultry products, improve aquacultural quality and efficiency, and optimize vegetable varieties, etc.	None	None	Not a PforR priority
	Secure safety of food and agricultural products		Promote standardized production, develop safe, good, and green agricultural products, improve quality control and risk prevention, etc.	None	None	Not a PforR priority
	Accelerate green agricultural development	Green farming practices	Stabilize grain production and increase farming efficiency, develop healthy and ecological aquaculture farming, develop standardized livestock and poultry farming, etc.	None	None	Not a PforR priority
			Control gross irrigation water use, promote water saving in agricultural development, etc.	None	None	Not a PforR priority
			Accelerate the actions of zero growth in chemical fertilizer use, extend organic fertilizer use, promote test-based fertilization. For example, Xiantao City is to implement chemical fertilizer reduction projects in all townships and farms covering 160,000 mu of farmland.	Same as the left column	RA2: Greening selected agricultural value chains	
			Accelerate the actions of zero growth in pesticide use, strengthen unified control of plant diseases and whole-process green pest control. For example, Xiantao City is to implement green pest control projects in all townships and farms covering 100,000 mu of farmland.	Same as the left column	RA2: Greening selected agricultural value chains	
			Agricultural waste recycling	Promote county-wide livestock and poultry manure utilization. For example, Xiantao City is to implement livestock and poultry manure treatment and utilization projects in all townships and farms by investing RMB 1.5 billion.	Same as the left column	RA2: Greening selected agricultural value chains
	Strengthen aquaculture tailwater management. For example, Xiantao City is to invest RMB 500 million to apply tailwater treatment techniques (e.g., use of two filtration dams plus sedimentation tank, aeration tank, and ecological purification tank; and use of solid-liquid separation tower plus constructed wetland, etc.) in all townships and farms to reduce the concentrations of N and P in tailwater and ensure the effluent meet relevant discharge standards.	Same as the left column		RA4: Restoring and protecting degraded agricultural ecosystems		

Hubei 14 th FYP to Promote Agricultural and Rural Modernization				Activities to be included in the PforR	Related result areas of the PforR	Reason for non-inclusion
Development Areas	Categories of developments		Main activities at provincial and county levels			
			Popularize standard mulch films, push research on degradable films, and promote mechanized collection and professional service, etc.	None	None	Not a PforR priority
		Agroecology protection	Protect agricultural wild plants, carry out census of alien species, and forbid fishing in the Yangtze River for ten years, etc.	None	None	Not a PforR priority
	Promote farmland protection	Farmland protection and use	Forbid illegal farmland acquisition, restrict farmland acquisition by non-agricultural developments, and regulate the rice-fish development, etc.	None	None	Not a PforR priority
		High standard farmland development	Develop 11.19 million mu of high standard farmland by integrating various factors such as land, soil, water, road, forest, power, technique, and management, etc.	None	None	Not a PforR priority
		Improve farmland fertility	Develop farmland quality monitoring network and big data platform, and conduct annual survey and evaluation of farmland quality, etc.	None	None	Not a PforR priority
3. Build modern agricultural industry chains	Optimize agricultural industry distribution		Optimize industrial layout of planting, breeding, agricultural product processing, rural tourism, etc.	None	None	Not a PforR priority
	Build modern agricultural industry systems		Develop key agricultural industries (rice, pig, crayfish, vegetables, etc.), strengthen leading enterprises for agricultural industrialization, and create domestic and international well-known brands, etc.	None	None	Not a PforR priority
	Improve modern agricultural operation systems		Upgrade agricultural cooperatives and family farms, improve specialized and socialized services, promote integrated development of rural industries, and deepen external cooperation, etc.	None	None	Not a PforR priority
4. Strengthen agricultural technology innovation	Agricultural science and technology innovation		Establish agricultural technology innovation platforms, make breakthroughs in key technologies, push agricultural technology transformation, improve agricultural mechanization, promote agricultural informatization, etc.	None	None	Not a PforR priority
5. Take action to promote rural village development	Village development plans	Improvement of village planning systems	Push the preparation of spatial Integrated Village Development Plans (IVDPs) and realize that all villages with suitable conditions and strong needs have the IVDPs in place by the end of the 14 th FY.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
		Scientific village development	Develop villages based on actual conditions, establish village development permitting and registration systems, produce county-wide rural house design drawings, establish rural house design, approval, construction, acceptance, and management system.	None	None	Not a PforR priority
	Improve rural	Rural toilet	Upgrade rural household toilets considering local conditions based	Same as the	RA3: Increasing	

Hubei 14 th FYP to Promote Agricultural and Rural Modernization				Activities to be included in the PforR	Related result areas of the PforR	Reason for non-inclusion
Development Areas	Categories of developments		Main activities at provincial and county levels			
	living environment	revolution	on scientific planning and increase the coverage of rural sanitary toilets to 95% by the end of the 14 th FY.	left column	access to rural solid waste and wastewater services	
		Rural domestic wastewater management	Apply various techniques in rural domestic wastewater management such as township WWTPs, minor powered WWTFs, household three-cell septic tanks, artificial wetlands, and ecological circulating water networks, etc. For example, Sui County is to build 110 small-scale WWTFs (5-25 m ³ /d) for 22 villages with 16,500m ² of total land use and 1450m ³ /d of total capacity.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
		Rural domestic solid waste management	Construct township solid waste transfer stations and village solid waste collection sites. For example, Sui County is to build some domestic solid waste collection and transfer facilities with 1160m ² of total land use.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
			Construct a series of county-level solid waste incineration plants	None	None	High potential E&S risks
		Overall village appearance	Protect rural mountain landscape, rivers, lakes, wetlands, native vegetations, old or famous trees, etc., green barren mountains and wastelands based on local conditions, and construct and restore farmland protective forests, etc.	None	None	Not a PforR priority
	Construct rural infrastructure	Rural facilities	Implement rural road connections, improve rural water supply, upgrade rural information infrastructure, optimize rural energy structure, develop healthy villages, and establish county, township and village three-level logistics system, etc.	None	None	Not a PforR priority
		Storage and cold chain facilities	Construct small-scale cold storage facilities in the fields, build low-temperature distribution centres, and set up national-level cold chain logistics base, etc.	None	None	Not a PforR priority
6. Strengthen institutional capacity for rural governance	Improve administration		Strengthen local CPC institutions, improve local administration, develop rural culture, strengthen rural collective economy, etc.	None	None	Not a PforR priority
	Motivate farmers to increase income	Support farmers to create or find jobs, and establish/improve long-term mechanism of inclusive farmers' subsidies, etc.		None	None	Not a PforR priority
		Nurture green skills and talents through training of FCs, FAs, WUAs, input suppliers, agro-enterprises, and rural extension staff, etc.		Same as the left column	RA1.2: Strengthening institutional capacity for governance (provincial level)	

A-2: Hunan Provincial Government Program and the PforR Boundary

Hunan 14 th FYP to Promote Agricultural and Rural Modernization			Activities to be included in the PforR	Related result areas of the PforR	Reason for non-inclusion
Development Areas	Categories of developments	Main activities at provincial and county levels			
1. Secure grain and other agricultural products supply	Ensure food security	Stabilize grain planting areas, promote technologies of increasing production and efficiency, etc.	None	None	Not a PforR priority
	Ensure agricultural products supply	Support the production of pigs, vegetables, cooking oil, fruits, aquatic products, etc.	None	None	Not a PforR priority
	Ensure agricultural products safety	Develop green, organic, geographical indications and qualified agro-products, and establish a system for tracing agricultural products' quality and safety, etc.	None	None	Not a PforR priority
		Promote pesticide reduction. For example, Cili County is to adopt integrated pest management measures to reduce pesticide use by 80 tons; Hengnan County plans to reduce pesticide use by 220 tons; Lixian County is to purchase 260 solar insect-killing lamps, 80000 pieces of insect traps, 10 tones of biological pesticides, and 10 drones to cover 3333.33 ha of farmland, etc.	Same as the left column	RA2: Greening selected agricultural value chains	
	Implement farmland protection and construction	Establish protection zones for rice, rapeseed, corn, etc.	None	None	Not a PforR priority
		Pilot soil improvement at degraded farmland due to acidic soil	Same as the left column	RA4: Restoring and protecting degraded agricultural ecosystems	
	Construct high-level farmland	Construct new 10 million mu of high-level farmland, upgrade 4.5 million mu, and develop water-saving irrigation for 800000 mu, etc.	None	None	Not a PforR priority
	Construct rural water facilities	Rehabilitate 8 large irrigation areas and 100 moderate ones, and reinforce different sizes of dams, etc.	None	None	Not a PforR priority
2. Largely develop precision agriculture	Increase risk resistance capacity	Develop standardized rural disaster prevention systems, and strengthen animal and plant diseases prevent and control, etc.	None	None	Not a PforR priority
	Develop characteristic agriculture	Create large-scale characteristic agricultural industries, cultivate Hunan special products, and develop rural tourism, etc.	None	None	Not a PforR priority
3. Strengthen agro technology	Develop agricultural industry chains	Develop chains for core products e.g., rice, pig, vegetables, tea, cooking oil, fruits, traditional Chinese medicine, etc.	None	None	Not a PforR priority
	Motivate innovation	Promote seed industry innovation, develop intelligent agricultural machinery industry, and construct digital countryside, etc.	None	None	Not a PforR priority
4. Consolidate poverty alleviation and link to rural revitalization	Develop poverty alleviated areas	Consolidate and expand the achievements of poverty alleviation, connect them with rural revitalization, and provide support to key targets, etc.	None	None	Not a PforR priority
	Increase farmers income towards full development	Create or provide job opportunities for farmers, increase farmers' income, etc.	None	None	Not a PforR priority

Hunan 14 th FYP to Promote Agricultural and Rural Modernization			Activities to be included in the PforR	Related result areas of the PforR	Reason for non-inclusion
Development Areas	Categories of developments	Main activities at provincial and county levels			
5. Implement village development actions	Prepare village development plans in a scientific manner	Mobilize important villages to prepare IVDPs. For example, Li County will select 5 villages to prepare IVDPs; and Hengnan County is to select 16 villages to prepare IVDPs, etc.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
	Improve rural living environment	Promote rural toilet revolution. For example, Cili County will build 5000 rural sanitary toilets; and Hengnan County will build 6000 rural sanitary toilets, etc.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
		Improve rural domestic wastewater management. For example, Li County will build 4.42km of rural sewers, 1000 household wastewater purifiers, 5000m ² of constructed wetland, and 20 ecological ponds, etc. Cili County will build 58km of rural sewers, 6000 household wastewater purifiers, 8000m ² of constructed wetland, and 5000m ² of ecological ponds, etc. Hengnan County is to build 72km of rural sewers, 6000 household wastewater purifiers, 7200m ² of constructed wetland, and 5000m ² of ecological ponds, etc.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
		Improve rural solid waste management. For example, Li County will establish 4 demonstration villages to build small scale solid waste transfer stations (land use less than 500m ² for each), and equip 15 movable waste compactors, etc.; Cili County will equip one movable waste compactor and build one transfer station; and Hengnan is to equip 2 movable compactors and build 2 transfer stations, etc.	Same as the left column	RA3: Increasing access to rural solid waste and wastewater services	
		Improve village appearance by building new houses, planting vegetation, rehabilitating public spaces, etc.	None	None	Not a PforR priority
		Take actions such as developing village cleaning standards and guidelines, etc.	None	None	Not a PforR priority
	Construct beautiful villages	Develop pilot counties and townships that have beautiful villages, and develop demonstration beautiful villages and special villages	None	None	Not a PforR priority
	Upgrade rural infrastructure	Build rural roads that are well constructed, operated, maintained, and managed, improve rural water supply and logistic systems, etc.	None	None	Not a PforR priority
		Strengthen county-level cold chains construction, and improve county-level agricultural products supply chains, etc.	None	None	Not a PforR priority
	Improve rural public service level	Improve conditions of rural education, public health, and elderly care services, etc.	None	None	Not a PforR priority
6. Strengthen rural and agricultural ecological	Yangtze River 10-year fishing ban	Implement the 10-year fishing ban for the Yangtze River, and conduct monitoring and evaluation on the effects, etc.	None	None	Not a PforR priority
	Strengthen agricultural NPS pollution	Promote livestock and poultry manure utilization. For example, Cili County will implement a manure utilization project by adopting biogas	Same as the left column	RA2: Greening selected agricultural	

Hunan 14 th FYP to Promote Agricultural and Rural Modernization			Activities to be included in the PforR	Related result areas of the PforR	Reason for non-inclusion
Development Areas	Categories of developments	Main activities at provincial and county levels			
development	management	systems, fermentation beds, aerobic composting, and other techniques to utilize 29000 tones of manure; and similarly, Henan County plans to utilize 31875 tones of manure. Li County will build 2 organic fertilizer factories (12t/d for each), 20 ectopic fermentation beds, 50 fermentation ponds to treat agricultural waste, and 10 tanks to keep biogas slurry for farming, etc.		value chains	
		Implement agricultural mulch film and pesticide package recycling actions, support relevant recycling activities, etc.	None	None	Not a PforR priority
	Reduce chemical fertilizer use and increase fertilization efficiency	For example, Cili County is to use test-based fertilization, green fertilizers, fertigation, application of organic fertilizer and slow-release fertilizer, and other measures to reduce chemical fertilizer consumption by 1520 tones. Hengnan County plans to reduce chemical fertilizer use by 6200 tones. Li County is to use organic fertilizer to replace 8000 tons of chemical fertilizer, conduct test-based fertilization for 6000 ha of farmland, build new fertigation facilities for 200 ha of farmland, plant 2000 ha of green fertilizer, and purchase 20 organic fertilizer application machines and 20 manure trucks, etc.	Same as the left column	RA2: Greening selected agricultural value chains	
	Promote farmland safe use	Control pollution sources, and safely use and well manage the polluted farmland. For example, Cili County will restore 2000 ha of polluted farmland; and Hengnan County will restore 451 ha.	Same as the left column	RA4: Restoring and protecting degraded agricultural ecosystems	
	Agricultural and rural carbon reduction and fixation	Reduce carbon in the fields of cropping, breeding, aquaculture, farm machinery, renewable energy, etc.	None	None	Not a PforR priority
	Develop agricultural cleaner production and ecological circular agriculture	Implement efficient water-saving irrigation schemes, rice-and-fish farming, ecological aquaculture, etc.	None	None	Not a PforR priority
		Upgrade fishery ponds to become ecological and standardized ponds, and comprehensively manage aquaculture tail water, etc.	Same as the left column	RA4: Restoring and protecting degraded agricultural ecosystems	
7. Improve rural administration	Strengthen rural administration capacity	Implement projects of democracy improvement, village financial disclosure, and rural governance sampling, etc.	None	None	Not a PforR priority
8. Enhance government programs implementation mechanism	Strengthen talents nurturing	Nurture green skills and talents through training of FCs, FAs, WUAs, input suppliers, agro-enterprises, and rural extension staff, etc.	Same as the left column	RA1.2: Strengthening institutional capacity for governance (provincial level)	
	Public participation and examination mechanism	Ensure agricultural and rural investment, strengthen land use management, mobilize social resources, etc.	None	None	Not a PforR priority

Appendix 2: E&S Risks/Impacts Assessment

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
RA1.1: Strengthening institutional capacity for governance (national level)	<p>Developing national IT-based platform for mapping and M&E of delivery of rural infrastructure and public services</p> <p>Developing national methodologies for monitoring, reporting, and verifying (MRV) GHG emissions reduction from main agriculture sector sources</p>	<ul style="list-style-type: none"> • Implementation of research activities does not have direct negative E&S risks and only involves OHS risks of PMOs and research staff. • These activities belong to software development or methods study that will not trigger downstream constructions and have no significant indirect negative E&S impacts but will promote subsequent E&S management and capacity building. • Risk is low. 	<ul style="list-style-type: none"> • There is no physical construction under the TA activities so there is not environmental or social sensitive area involved. • Risk is low. 	<ul style="list-style-type: none"> • Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, HURDBs, NRBs, EEBs, WRBs, etc. • Risk is moderate. 	<ul style="list-style-type: none"> • The activities are in line with national and local laws, regulations, and procedures with no political risks. • The activities will improve green agriculture development, promote rural revitalization, and benefit to local people, so will be widely supported by the public with no reputation risk. • Risk is low. 	Moderate
RA1.2: Strengthening institutional capacity for governance (provincial level)	Developing regulations, standards, and guidelines for green agricultural practices (GAP), and delivery of rural infrastructure and public services	<ul style="list-style-type: none"> • Implementation of research activities does not have direct negative E&S risks and only involves OHS risks of PMO and research staff. • Implementation of the prepared regulations, standards, and guidelines may trigger downstream activities that produce indirect E&S impacts, such as NPS pollution risks in pesticide and fertilizer use, risks in livestock and poultry manure management, and risks of land occupation, wastewater, and solid waste in rural infrastructure construction, etc. 	<ul style="list-style-type: none"> • There is no physical construction under the TA activities so there is not environmental or social sensitive area involved. • Implementation of the research outputs may cover broad regions including minority villages. • Subsequent agricultural production and rural development activities will be conducted on existing farmland or rural construction land, and China has a strict 	<ul style="list-style-type: none"> • Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, HURDBs, NRBs, EEBs, WRBs, etc. • Risk is moderate. 	<ul style="list-style-type: none"> • The activities are in line with national and local laws, regulations, and procedures with no political risks. • The activities will improve green agriculture development, promote rural revitalization, and benefit to local people, so will be widely supported by the public with no reputation risk. • Risk is low. 	Moderate

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
		<ul style="list-style-type: none"> •Risk is moderate. 	<p>system on nature reserves and ecological redlines, so natural habitats or other environmentally sensitive areas are unlikely to be touched.</p> <ul style="list-style-type: none"> •Risk is moderate. 			
	Developing mechanisms for program-based budgeting, expenditure tracking and reporting	<ul style="list-style-type: none"> •Implementation of research activities does not have direct negative E&S risks and only involves OHS risks of PMO and research staff. •These activities belong to methods study or software utilization that will not trigger downstream constructions and have no significant indirect negative E&S impacts but will promote subsequent E&S management and capacity building. •Risk is low. 	<ul style="list-style-type: none"> •There is no physical construction under the TA activities so there is not environmental or social sensitive area involved. •Risk is low. 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, etc. •Risk is moderate. 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve green agriculture management level and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	Moderate
	Implementing the IT-based platform for mapping and M&E of the delivery of rural infrastructure and public services					
	Establishing frameworks for nurturing green skills and talents					
RA2: Greening selected agricultural value chains	Reducing use of chemical fertilizer and toxic pesticide, and treating and recycling livestock and poultry wastes	<ul style="list-style-type: none"> •Fertilizer reduction will improve soil quality, reduce NPS pollution, and gain environmental benefits. However, if it results in additional costs and reduced income, proper measures should be taken to reduce farmers' losses, especially for vulnerable groups, and it may involve worker and community 	<ul style="list-style-type: none"> •NPS pollution caused by pesticide, chemical fertilizer, and livestock and poultry waste is still widespread in agricultural areas, which are under improvement. •Activities will be conducted in rural areas and do not involve 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will reduce NPS pollution, improve green agriculture 	Substantial

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
		<p>health and safety, small-scale employment, etc.</p> <ul style="list-style-type: none"> •Pesticide reduction will improve soil quality and food safety and reduce NPS pollution to gain E&S benefits. Pesticides should be well managed to prevent environmental and health risks. •Livestock and poultry manure treatment and utilization may produce wastewater that affects the environment, odor that affects workers and resident health, and dead animals that have risks to public sanitation. Poor quality or improper use of manure as fertilizer might pollute soil. •Risk is substantial. 	<p>undisturbed critical or natural habitats.</p> <ul style="list-style-type: none"> •There will be some minority villages in the affected areas. •Risk is moderate. 	<p>FBs, ARABs, RRBs, EEBs, market supervision bureaus, HCs, etc.</p> <ul style="list-style-type: none"> •Any of the authorities failing in coordination in any part of pesticide and manure management would make the whole system unable to operate effectively and hence increase pollution risks or health hazards. •Risk is substantial. 	<p>development, and benefit to local people, so will be widely supported by the public with no reputation risk.</p> <ul style="list-style-type: none"> •Risk is low. 	
	Adopting climate-smart agricultural practices—increasing productivity, building resilience, and reducing GHG emissions (CO ₂ , CH ₄ , N ₂ O)	<ul style="list-style-type: none"> •Green agriculture development may involve social issues of land transfer, moderate or low risks to workers and/or community health and safety, small-scale employment, etc. •The climate-smart agricultural practices may induce widespread downstream GHG reduction activities, such as pest control, fertilizer reduction, straw reuse, manure treatment and utilization, or closure of livestock farms which will have indirect E&S impacts and risks if the activities are not well managed. •Risk is substantial. 	<ul style="list-style-type: none"> •NPS pollution caused by pesticide, chemical fertilizer, and livestock and poultry waste is still widespread in agricultural areas, which are under improvement. •Activities will be conducted in rural areas and do not involve undisturbed critical or natural habitats. •There will be some minority villages in the affected areas. •Risk is moderate. 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, EEBs, etc. •Risk is moderate. 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve green agriculture development, protect the environment, and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	Substantial
	Training FCs, FAs, WUAs,	<ul style="list-style-type: none"> •Such activities have little or no negative E&S impacts and may only 	<ul style="list-style-type: none"> •There is no physical construction under the TA 	<ul style="list-style-type: none"> •Implementation of the activities will 	<ul style="list-style-type: none"> •The activities are in line with national and local 	Moderate

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
	input suppliers, agro-enterprises, and rural extension staff	involve OHS risks to PMO staff and training staff in activities of training and study tours. •Risk is Low.	activities so there is not environmental or social sensitive area involved. •Risk is low.	require strong cross-sectoral coordination and cooperation among various government authorities including FBs, education bureaus, ARABs, RRBs, etc. •Risk is moderate.	laws, regulations, and procedures with no political risks. •The activities will increase farmers' knowledge and capacity and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low.	
	Implementing the MRVs for GHG emissions reduction from major agriculture sector sources	•These monitoring, reporting, or verifying activities will not trigger downstream constructions and have no significant indirect negative E&S impacts but will promote subsequent E&S management and capacity building. •Risk is low.	•There is no physical construction under the TA activities so there is not environmental or social sensitive area involved. •Risk is low.	•Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including FBs, ARABs, RRBs, EEBs, etc. •Risk is moderate.	•The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve green agriculture management level and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low.	Moderate
RA3: Increasing access to rural solid waste and wastewater services	Preparing spatial Integrated Village Development Plans (IVDPs)	•The planning activities do not have direct negative E&S risks and may only involve OHS risks to PMO and research staff. •Implementation of the IVDPs may trigger widespread rural infrastructure construction activities that will produce indirect E&S impacts. As per the domestic requirements, since village plans are small in range, no EIA is required, and the downstream activities are	•There is no physical construction under the IVDPs preparation activities so there is not environmental or social sensitive area involved. •Downstream investments following the prepared IVDPs will be implemented in broad areas that will have some minority villages. •Downstream investments will be conducted on rural	•Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, HURDBs, NRBs, EEBs, transportation	•The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve rural living conditions and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low.	Moderate

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
		<p>relatively simple in type and small in scope and scale, so the overall E&S risks are expected to be limited.</p> <ul style="list-style-type: none"> •Risk is moderate. 	<p>construction land and not involve undisturbed critical or natural habitats, and China has a strict system on nature reserves and ecological redlines, so natural habitats or other environmentally sensitive areas are unlikely to be touched.</p> <ul style="list-style-type: none"> •Risk is moderate. 	<p>bureaus, power bureaus, WRBs, etc.</p> <ul style="list-style-type: none"> •Risk is moderate. 		
	<p>Constructing rural wastewater management systems e.g., rural decentralized facilities, connections to township systems</p> <p>Constructing rural solid wastes management systems e.g., rural sorting, township transfer and recycling</p>	<ul style="list-style-type: none"> •WWTFs may involve social issues such as temporary small-scale land use and/or reclamation, household connection costs, small- to medium-scale employment, vulnerable groups' interests, and community health and safety risks. •Domestic solid waste transfer stations may involve small-scale land acquisition and OHS risks in construction and operation stages. •Construction of these facilities will produce short-term, site specific, and limited environmental impacts, such as dust, noise, solid waste, wastewater, disturbance to modified ecosystem, soil erosion, etc. Operation activities will generate odor, sludge, leachate, noise, solid waste, etc., and may affect health and safety of workers and nearby residents. •Risk is substantial. 	<ul style="list-style-type: none"> •Activities will be conducted in rural areas and do not involve undisturbed critical or natural habitats. WWTFs and solid transfer stations will be excluded from the PforR if their siting involves environmental sensitive areas. •There will be some minority villages in the affected areas. •Risk is moderate. 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various authorities including DRCs, FBs, EEBs, HURDBs, UMBs, ARABs, NRBs, labor bureaus, WRBs, RRBs, HCs, EMBs, etc. •Any of the authorities failing in coordination in any part of wastewater and solid waste management would make the whole system unable to operate effectively and hence increase pollution risks or health hazards. •Risk is substantial. 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve rural infrastructure, control rural pollution, improve rural living environment, and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	Substantial

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
	Providing training on (O&M) of wastewater and solid waste management systems	<ul style="list-style-type: none"> •Such activities have little or no negative E&S impacts and only involve OHS risks to PMO and training staff. •Risk is low. 	<ul style="list-style-type: none"> •There is no physical construction under the TA activities so there is not environmental or social sensitive area involved. •Risk is low. 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including EEBs, HURDBs, UMBs, ARABs, RRBs, etc. •Risk is moderate. 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve O&M capacity, prevent environmental pollution, and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	Moderate
RA4: Restoring and protecting degraded agricultural ecosystems	Preparing sustainable agricultural ecosystems management plans	<ul style="list-style-type: none"> •Such activities of preparing management plans have little or no negative E&S impacts and only involve OHS risks to PMO and research staff. •Implementation of the prepared plans would induce downstream activities of agricultural industry transformation or upgrading, which would produce indirect E&S impacts. •Risk is moderate. 	<ul style="list-style-type: none"> •There is no physical construction under the plans preparation activities so there is not environmental or social sensitive area involved. •Downstream investments following the prepared plans will be implemented in broad areas that will have some minority villages. •Downstream investments will be conducted on rural construction land and not involve critical or natural habitats; and China has a strict system on nature reserves and ecological redlines, so natural habitats or other environmentally sensitive areas are unlikely to be touched. •Risk is moderate. 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, NRBs, EEBs, WRBs, etc. •Risk is moderate. 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve rural environment and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	Moderate
	Returning crops	•The simple agronomic activity of	•Polluted farmland caused by	•Implementation of	•The activities are in line	Moderate

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
	straw to the farmland to increase soil organic carbon	<p>returning straw to farmland will improve soil environment, but it is necessary to prevent applying any straw that contains excessive heavy metals to farmland.</p> <ul style="list-style-type: none"> •Risk is moderate. 	<p>heavy metal may exist broadly in rural areas, which are under improvement.</p> <ul style="list-style-type: none"> •There will be some minority villages in the affected areas. •Risk is moderate. 	<p>the activities will require strong cross-sectoral coordination and cooperation among various government authorities including ARABs, RRBs, NRBs, etc.</p> <ul style="list-style-type: none"> •Risk is moderate. 	<p>with national and local laws, regulations, and procedures with no political risks.</p> <ul style="list-style-type: none"> •The activities will improve farmland soil quality and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	
	Managing acidity and heavy metals to improve soil health and food safety	<ul style="list-style-type: none"> •During restoring heavy metal polluted farmland, if polluted straws, rice, and wine residues that contain excessive heavy metals are not properly treated or disposed of, they would enter food chains and threaten food safety. Replacement of low Cd accumulating crops and adjustment of planting patterns may affect farmers' economic benefits. •Risk is substantial. 	<ul style="list-style-type: none"> •Polluted farmland caused by heavy metal may exist broadly in rural areas, which are under improvement. •There will be some minority villages in the affected areas. •Risk is moderate. 	<ul style="list-style-type: none"> •Implementation of the activities will require strong cross-sectoral coordination and cooperation among various authorities including DRCs, FBs, ARABs, RRBs, NRBs, EEBs, HCs, market supervision, etc. •Any of the authorities failing in coordination in any part of pollution sources, polluted soil, and polluted rice management would make the whole system unable to operate effectively and hence increase the risks of food safety. •Risk is substantial. 	<ul style="list-style-type: none"> •The activities are in line with national and local laws, regulations, and procedures with no political risks. •The activities will improve farmland soil quality and benefit to local people, so will be widely supported by the public with no reputation risk. •Risk is low. 	Substantial

Results Areas	Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
	Treating aquaculture waters to reduce GHG emissions and pollutant loads entering waterways	<ul style="list-style-type: none"> • If aquaculture tailwater is recycled or discharged following proper treatment as per relevant standards, it would not have significant impacts on the environment. At present, aquaculture tailwater management is still in the initial stage, and the related monitoring arrangement, management mechanism, and regulatory framework still need to be established or strengthened. • Risk is substantial. 	<ul style="list-style-type: none"> • Water pollution caused by aquacultural farming may be widespread in some counties/cities, which are under improvement. • There will be some minority villages in the affected areas. • Risk is moderate. 	<ul style="list-style-type: none"> • Implementation of the activities will require strong cross-sectoral coordination and cooperation among various government authorities including DRCs, FBs, ARABs, RRBs, NRBs, EEBs, WRBs, etc. • Any of the authorities failing in coordination in any part of tailwater management would make the whole system unable to operate effectively. And tailwater management is in the initial stage and needs to improve. • Risk is substantial. 	<ul style="list-style-type: none"> • The activities are in line with national and local laws, regulations, and procedures with no political risks. • The activities will improve water environment and benefit to local people, so will be widely supported by the public with no reputation risk. • Risk is low. 	Substantial

Appendix 3: Comparison with the Bank PforR Policy and Directive

Principle #1: Program E&S management systems are designed to promote E&S sustainability in the program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to a program's E&S effects.

PforR core principles/elements	China's E&S management requirements and practices	Consistency and recommendations
<p>Element 1: Operate within an adequate legal and regulatory framework to guide E&S impact assessments, mitigation, management, and monitoring at the PforR level.</p>	<p>Environmental: China has established a complete legal framework on environmental management. (1) Based on the “Environmental Protection Law”, China has developed a variety of environmental management laws, regulations, standards, technical guidelines, such as the “Environmental Impact Assessment Law” (2018), the “Water Pollution Prevention and Control Law” (2017), the “Air Pollution Prevention and Control Law” (2018), the “Solid Waste Pollution Prevention and Control Law” (2020), the “Soil Pollution Prevention and Control Law” (2018), the “Construction Projects Environmental Protection Management Regulations” (2017), the “Construction Projects EIA Classification Catalogue” (2021), the “EIA Technical Guidelines”, etc., which constitutes the legal framework for guiding the assessment of environmental impacts and managing the environmental risks of the PforR activities. (2) Hunan and Hubei provinces have established PPMOs, coordinating various provincial authorities (e.g., EEBs, ARABs, HURDBs, NRBs, WRBs, FGBs, etc.) to jointly implement the PforR. These provincial government authorities, together with local counterparts will be responsible for mobilizing their resources, taking necessary actions and designating their statutory regulatory bodies to manage the PforR environmental impacts/risks. Through review of the adequacy of China's environmental management systems, it's demonstrated to have a sound legal and regulatory framework to guide E&S impact assessments, mitigation, management, and monitoring at the PforR level.</p> <p>Specifically, the national environmental management systems are also compared with the Bank's EHS guidelines and GIIP.</p> <p>The domestic solid waste management system is found equivalent to the WBG's “EHS Guidelines for Waste Management Facilities” and covers GIIP such as use of waste containers or bags at collection site of each household, separation of recyclable materials at the point of generation, covering collection and transfer vehicles along the entire route of transport to avoid windblown litter, and encouraging residents to put waste out at designated locations, etc.</p> <p>The domestic wastewater management system is found equivalent to the WBG's “EHS Guidelines for Water and Sanitation” and it covers GIIP such as improving septic tank design and O&M; considering separate sewer systems for domestic wastewater and storm water runoff in the overall planning and design of new sewerage systems; establishing routine maintenance programs; operating and maintaining wastewater treatment facilities and achieving effluent water quality consistent with applicable national requirements; covering emission points (e.g., aeration basins, sludge thickeners) as needed to reduce odors, etc. The national “Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant” (GB18918-2002) has set limits on allowable concentrations of BOD, COD, SS, nitrogen, and phosphorous as same as the recommendation of the WBG's EHS Guidelines.</p>	<p>Consistent</p>
	<p>Social: i) Notice of the National Development and Reform Commission on Issuing the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2012): For any major fixed asset investment project in China, the owner shall conduct an SSRA at the preparatory stage to identify risks and degree of impact, solicit opinions from the affected people, propose measures to prevent and mitigate risks, and determine the recommended social stability risk rating after such measures are taken. ii) Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) (CPCCCO [2012] No.2): An SSRA shall be conducted for any decision-making on major project or matter that concerns the immediate interests of the public, and is likely to cause social stability risks, such as LA and HD, farmers' burden, state-owned enterprise restructuring, environmental impacts, social security, and public welfare. iii)</p>	<p>Consistent.</p>

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
	<p>The Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances promulgated by the General Office of the CPC Central Committee and the General Office of the State Council in February 2020: An SSRA shall be carried out on major decisions including those on major construction projects. It specifies the contents, methods, procedures, and management of SSRA, and application of SSRA results, and underlines that the contents of SSRA are integral to the Program's feasibility study and application reports.</p> <p>The SIA system applicable to the Program is adequate. Specific laws and regulations are sorted out by the following principles and elements.</p>	
Element 2: Incorporate recognized elements of good practice in E&S assessment and management, including	Environment: China has established a complete EIA system, covering environmental impacts screening, alternatives comparison, site selection, impacts assessment (positive vs. vegetative, direct vs. indirect, cumulative, etc.), mitigation measures, environmental management institutional arrangement, environmental management costs, public consultation, and information disclosure, etc. In the due diligence investigation, the ESSA team collected a variety of primary and secondary data and sample EIA documents for similar projects, which demonstrate that the EIA system is well established. Details are given below.	Consistent.
	Social: The state laws and regulations on project screening include the Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2008.11.29), Cultural Relics Protection Law (2017 Amendment), Land Administration Law (2020.1.1), Regulations on the Prevention and Control of Geologic Disasters (2004.3.1), and Notice of the National Development and Reform Commission on Issuing the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2012), and Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances (GOSC, 2020.2.22)	Consistent.
(i) early screening of potential impacts;	Environment: The <i>Environmental Impact Assessment Law</i> clearly requires that early screening should be conducted to confirm EIA category for each construction project. The <i>Construction Projects EIA Classification Catalogue</i> (2021) provides a guidance on classifying EIA instruments for 173 types of projects in 55 sectors. Environmental impacts are classified to Class A – significant impacts, Class BB – moderate impacts, and Class C - minor impacts based on project nature, scale, and environmental sensitivity. EIA report, EIA form, and EIA registration will then be development for Class A, Class B, and Class C, respectively. All construction projects are subject to environmental identification and screening.	Consistent.
	Social: Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim): Scope of assessment: The Party and government institutions shall conduct an SSRA before making any decision on any major project or policy or matter that concerns the immediate interests of the public, and is likely to cause social stability risks, such as LA and HD, farmers' burden, state-owned enterprise restructuring, environmental impacts, social security, and public welfare. Decisions subject to SSRA shall be made by relevant local authorities according to the above regulations and in the light of the realities, and the SSRA of any major construction project shall be an integral part of its feasibility study. Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects: The area and type of the land used for the project shall be identified before the feasibility study report or project proposal is reviewed to avoid the expropriation of basic farmland, and nature reserves, etc.	Consistent
(ii) consideration of strategic, technical, and site alternatives	Environment: EIAs for construction projects are required to include comparison of different natural background conditions especially environmental sensitive areas, site alternatives, pollution control options, pollutants treatment techniques, as well as environmental benefits and costs of different designs. In addition, EIAs will review historical environmental issues and clarify how the environment will continue deteriorating without the proposed project, which is equivalent to analysis of “with” and “without” project alternatives.	Consistent.

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
(including the “no action” alternative);	Social: Cultural Relics Protection Law: Article 20: The site selected for a construction project shall keep away from immovable cultural relics as far as possible. If the impact on a protected culture relic can't be avoided for special circumstances, the original site shall be protected by whatever possible means. Article 29: Before launching a large-scale capital construction project, the construction contractor shall firstly apply to the cultural relic authority of concerned province, autonomous region and municipality for an archaeological investigation at places where cultural relics may be buried underground within the project area. Regulations on the Prevention and Control of Geologic Disasters: Article 13: The development and implementation of overall plan for land utilization and other plans for the construction of a major project shall take full account of the requirements on prevention and control of geologic disasters so as to avoid and mitigate the losses arising from geologic disasters. The plans on prevention and control of geologic disasters shall be an integral part of overall plans developed at municipal, village or township levels.	Consistent
(iii) explicit assessment of potential induced, cumulative, and trans-boundary impacts;	Environment : According to the “Technical Guidelines on Environmental Impact Assessment”, EIA documents will include the assessment of cumulative impacts in temporal and spatial aspects if construction projects are likely to have cumulative impacts on the environment.	Consistent.
	Social: Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (NDRCOI [2013] No.428): Analysis of potential induced and cumulative risks shall be conducted, with effective risks management measures being taken.	Consistent
(iv) identification of measures to mitigate adverse E&S risks and impacts that cannot be otherwise avoided or minimized;	Environment: According to the “Environmental Impact Assessment Law”, EIA documents will include proper measures to avoid or mitigate negative environmental impacts. As per the “Technical Guidelines on Environmental Impact Assessment”, EIAs will also include specific and operational mitigation measures to manage the identified environmental impacts, and the measures will be incorporated into EMPs. Any EIA documents without appropriate mitigation measures and institutional arrangement will not pass review and approval.	Consistent.
	Social: Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim): The SSRA report shall specify the scope and procedures of SSRA, opinions of relevant parties and opinions accepted, social stability risks potentially caused by any major decision, conclusions of SSRA, proposals, risks prevention and mitigation measures, and emergency response plans, etc. If the assessment report thinks that a high risk is present, a decision of non-implementation shall be made, or a decision may be made after the plan is adjusted or the risk level is reduced; if an moderate risk is present, a decision of implementation shall be made after effective risk prevention and mitigation measures are taken; and if a low risk is present, a decision of implementation may be made, provided that actions like explanation and persuasion to the people affected are taken and reasonable requests of people affected are handled properly. The SSRA report, signed by person in charge of the assessor, shall be submitted to the decision-making authority for review step by step, with copies being sent to the decision implementation, political and legislative affairs, comprehensive social governance, stability maintenance, legislative affairs, and letters and visits authorities.	Consistent
(v) clear articulation of institutional responsibilities and resources	Environment: According to the “Technical Guidelines on Environmental Impact Assessment”, EIA documents should clearly define institutional organization and responsibilities, environmental management costs and financial resources, and environmental monitoring and supervision arrangement in terms of parameters, timing, and frequency, etc.	Consistent.
	Social: Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim): Implementation agency of SSRA: SSRA of any major decision shall be conducted by the assessor. For	Consistent

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
to support implementation of plans;	decisions made by the local party committee and government, the assessor shall be designated by such party committee and government; for decisions made by any department of the local party committee and government, the assessor shall be designated by such department or the leading department in consultation with other relevant departments; for decisions made by multiple party and government institutions at different levels, the assessor shall be designated by the initial decision-making authority. During the SSRA, the assessor may organize an assessment group composed of officials from the political and legislative affairs, comprehensive social governance, stability maintenance, legislative affairs, and letters and visits authorities, NGOs, specialized agencies, experts, and representatives of the affected people. Notice of the National Development and Reform Commission on Issuing the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects: Article 3: At the feasibility study stage of a project, the PIU (or through a specialized agency) shall conduct an SSRA to identify impacts, carry out public consultation, propose mitigation measures, and prepare an SSRA report. Regulations for the Implementation of the Land Administration Law: Article 25: In accordance with approved land acquisition plans, the land administration authority of the municipal/county government shall, in conjunction with other relevant departments, formulate land acquisition compensation and resettlement plans, announce such plans at the townships and villages affected, consider the opinions of rural collective economic organizations and farmers affected. All costs arising from land acquisition shall be fully disbursed within 3 months after the approval of land acquisition compensation and resettlement plans.	
(vi) responsiveness and accountability through stakeholder consultation, timely dissemination of the PforR information, and responsive GRMs.	Environment: It is stipulated in “Environmental Impact Assessment Law” that Class A projects subject to full EIA reports should go through public consultation. Though it's not compulsory for Class B projects to carry out public consultation, local EEBs usually suggest the PIUs to seek public opinions if the proposed facilities would have potential impacts on adjacent receptors, for example, livestock and poultry manure treatment facilities emit odor. As per the “Mechanism of Information Disclosure for Construction Project EIA”, all PIUs shall disclose the environmental information including the project siting, and the process of construction and operation, etc., and local EEBs shall disclose the management information including the progress of review and approval of EIA documents and the supervision findings, etc.	Consistent.
	Social: Land Administration Law: Article 47: For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic organization and its members, village committee and other stakeholders affected.	Consistent.

Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the program.

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
Element 3: Identify, and screen for adverse effects on potentially important biodiversity and cultural resource	Environment: As per the “Technical Guidelines for Environmental Impact Assessment - Ecological Impacts”, identifying and screening of ecological elements (such as wild animals, wild plants, natural or critical habitats, biodiversity, etc.) is one of the important components of EIA to identify environmental protection targets. At the early stage of project proposal and EIA preparation, local NRB and EEB will strictly follow the national “Opinions on Defining and Implementing Ecological Protection Redlines” and local programs of ecological redlines when reviewing and approving the proposed site for a	Consistent.

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
<p>areas and provide adequate measures to avoid, minimize, or mitigate adverse effects.</p>	<p>construction project and disagree the site selection once it's found to touch any redlines and may cause adverse impacts on natural systems. The main activities under the PforR will be implemented on rural construction land or agricultural farmland that have been disturbed by human beings and are dominated by modified ecosystems. Furthermore, any activities that may have negative impacts on natural or critical habitats will be excluded from the PforR scope based on the exclusion principles set up in the ESSA. Therefore, the PforR will not have adverse impacts on important biodiversity.</p>	
	<p>Social: Cultural Relics Protection Law: Article 20: The site selected for a construction project shall keep away from immovable cultural relics as far as possible. If the impact on a protected culture relic can't be avoided for special circumstances, the original site shall be protected by whatever possible means. Article 29: Before launching a large-scale capital construction project, the construction contractor shall firstly apply to the cultural relic authority of concerned province, autonomous region and municipality for an archaeological investigation at places where cultural relics may be buried underground within the project area.</p>	Consistent.
<p>Element 4: Support and promote the protection, conservation, maintenance, and rehabilitation of natural habitats. Avoid significant conversion or degradation of critical natural habitats. If avoiding the significant conversion of natural habitats is not technically feasible, include measures to mitigate or offset the adverse impacts of the PforR activities.</p>	<p>Environment: The PforR activities will be implemented on rural construction land or agricultural farmland that have been disturbed by human beings and are dominated by modified ecosystems. The activities will only have limited coverage in rural areas and are unlikely to involve natural or critical habitats. (1) China has a variety of laws and regulations on conserving and managing natural ecology, e.g., the "Law on Wetland Conservation", the "Wild Animal Protection Law", the "Wild Plants Protection Regulations", the "Natural Reserves Regulations", the "Opinions on Defining and Implementing Ecological Protection Redlines", etc. Activities to be supported by the PforR will be designed, constructed, and operated following the requirements of these laws and regulations to protect local natural and modified ecosystems from being disturbed by the PforR. (2) All important animals and plants and natural/critical habitats have been included in the scope of ecological protection redlines. Site selection for any construction projects will be subject to the ecological redline mechanism and under strict supervision of government authorities such as NRBs and EEBs, so the PforR activities are unlikely to touch the ecological protection redlines or any natural/critical habitats. (3) As per the PforR exclusion principles, any activities that may have negative impacts on natural or critical habitats have been excluded from the PforR scope. (4) In the EIA documents for the subprojects under the PforR, proper ecological protection measures will be developed and included in the EMPs. (5) Contractors will be required to perform their contractual responsibilities on eco-environment protection to reduce disturbance to modified and natural ecosystems and restore vegetation as soon as the construction is completed. (6) The water and soil conservation system implemented in China will effectively prevent soil erosion and help protect rural and agricultural ecosystems. In summary, the PforR activities will not cause significant conversion or degradation of critical or natural habitats.</p>	Consistent.
<p>Element 5: Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects</p>	<p>Social: Cultural Relics Protection Law: Article 17: No construction works or operations such as blasting, drilling and digging are allowed within the area of a protected cultural relic. If such works or operations are unavoidable, measures must be taken to ensure the safety of the protected cultural relic, and such works or operations shall be subject to the approval by the government approving and announcing its status as a protected cultural relic. Article 20: The site selected for a construction project shall keep away from immovable cultural relics as far as possible. If the impact on a protected culture relic can't be avoided for special circumstances, the original site shall be protected by whatever possible means. Article 29: Before launching a large-scale capital construction project, the construction contractor shall firstly apply to the cultural relic authority of concerned province, autonomous region and municipality for an archaeological investigation at places where cultural relics may be buried underground within the project area. Article 31: The expenses needed for</p>	Consistent.

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
	archaeological investigation, prospecting, or excavation, which have to be carried out because of capital construction or construction for productive purposes, shall be included in the budget of the construction contractor for the construction project. Regulations for the Implementation of the Cultural Relics Protection Law: Article 25: The scope and rates of funds for archaeological investigation, exploration and excavation shall be in line with applicable Chinese regulations.	

Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
Element 6: Promote adequate community, individual, and worker health, safety, and security through the safe design, construction, operation, and maintenance of program activities; or, in carrying out activities that may be dependent on existing infrastructure, incorporate safety measures, inspections, or remedial work as appropriate.	Environment: China has developed specific guidelines such as the "Guidance Manual for Operation in Confined Spaces" (2020) for preventing and managing the risks of poisoning, oxygen deficiency, firing, explosion, and drowning in operations (e.g., cleaning, dredging, or maintaining) in confined spaces such as manholes, biogas digesters, septic tanks, wastewater treatment tanks, fermentation tanks, and pipelines, etc. The Manual provides specific methods to identify main risks and corresponding protection measures for working in different confined spaces over ground, underground, or in enclosed equipment, etc. The responsible entities must strictly abide by the operation procedures to prevent personal injuries and other incidents. UMBs will provide regular training and guidance on safety management, and the related sectoral authorities will carry out spot checks and regular inspections. China's health and safety management system is substantially compliant with the WBG's <i>General EHS Guidelines</i> , the <i>EHS Guidelines for Waste Management Facilities</i> , and the <i>EHS Guidelines for Water and Sanitation</i> . It covers GIIP such as installing railings around process tanks within WWTFs; implementing confined spaces entry programs consistent with applicable national requirements; providing field workers with proper PPE and training on its proper use and maintenance; ventilating enclosed processing areas and ventilate equipment prior to maintenance; and avoiding siting WWTPs or solid waste management facilities near densely populated neighborhoods, etc.	Consistent
	Social: China has established a full set of work safety management systems at the design, construction, and operation stages of projects. Safety management is the top priority during project implementation. The implementation of safety management measures is subject to all-round supervision by competent industry supervision and emergency management (work safety) authorities. The owner, construction contractor and operator of a project must establish a well-staffed safety management organization, and competent administrative authorities have developed work safety management mechanisms to supervise the effectiveness and outcomes of work safety in the project. In addition, the emergency management bureau (work safety authority) is responsible for supervising and regulating all industries and key sectors. Thus, China's work safety management system is adequate for safety supervision of the PforR Program activities. i) Labor Law: Article 53: Labor health and safety facilities shall comply with the national standards. Newly constructed, reconstructed or expanded labor health and safety facilities must be designed, constructed, and put into operation together with main parts of the project. Article 54: The employer must provide labor health and safety conditions, and necessary labor protection articles complying with the state provisions to workers, and workers dealing with operations with occupational hazards shall receive health checkup regularly. Article 57: The state shall establish a statistical reporting and handling system of accidents and occupational diseases. Article 61: Pregnant female workers shall not be arranged to deal with physical labor of	Consistent.

PforR core principles/elements	China's E&S management requirements and practices	Consistency and recommendations
	<p>intensity level III stipulated by the state and prohibited labor, and female workers pregnant for seven months or more shall not work overtime or at night.</p> <p>ii) Work Safety Law: Article 21: The primary person in charge of a production and operation entity shall be responsible for establishing and improving its work safety responsibility system, developing policies, rules, and operating procedures for work safety, developing and implementing work safety education and training plans, supervising and inspecting work safety to eliminate hidden risks of work safety accidents in a timely manner, preparing and implementing emergency rescue plans for work safety accidents, and reporting work safety accidents in a timely and honest manner. Article 73: Departments in charge of supervision and control over work safety shall set up a complaint system, such internet reporting platforms as the complaint telephone numbers, mailbox numbers or e-mail addresses known to the public, to facilitate receipt of complaints related to work safety. Article 74: All units and individuals shall have the right to report or complain about hidden dangers that may lead to accidents and practices violating work safety laws to the departments in charge of supervision and control over work safety. Article 75: When neighborhood committees or villagers committees discover hidden dangers that may lead to accidents or practices violating work safety laws in production and business units located in their areas, they shall report the matter to the local people's governments or the departments concerned.</p> <p>iii) Law on the Prevention and Control of Occupational Diseases (2018 Amendment): Article 4: Employees shall be entitled to occupational health protection according to law. Employers shall create work environment and conditions meeting the national occupational health standards and health requirements and take measures to ensure that employees receive occupational health protection. Trade unions shall oversee the prevention and control of occupational diseases and protect the lawful rights and interests of employees according to law. When formulating or amending rules and regulations on the prevention and control of occupational diseases, employers shall solicit the opinions of trade unions. Article 5: Employers shall establish and improve a responsibility system for the prevention and control of occupational diseases, strengthen the management of prevention and control of occupational diseases, improve their capabilities of prevention and control of occupational diseases, and assume responsibilities for their own occupational hazards. Article 6: The primary person in charge of an employer shall assume the overall responsibility for the employer's prevention and control of occupational diseases. Article 7: Employers must make work-related injury insurance available for its employees according to law. Article 9: An occupational health supervision system shall be implemented in China. Article 10: The State Council and the local governments at and above the county level shall prepare plans on the prevention and control of occupational diseases, which shall be included in the national economic and social development plan and organize the implementation of such plans.</p>	
<p>Element 7: (i) Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous</p>	<p>Environment: To manage the potential risks of dead animals as well as odor from livestock/poultry manure and domestic solid waste, China has corresponding laws and regulations such as the "Law on Prevention and Control of Occupational Disease" and the "Law on Amina Epidemic Prevention" setting up requirements to relevant entities on their responsibilities for OHS management. When constructing facilities that generate odor and dead animals, proper treatment facilities/measures are equipped/implemented simultaneously to eliminate odor and pathogens from generating from the source and to prevent the hazards from threatening the public and workers' health and safety. Related entities develop and implement proper systems of safe production and OHS management. Workers are provided with on-job training and wear standard PPE at work. Relevant government authorities (e.g., ARABs, HURDBs, UMBs, EEBs, etc.) carry out regular inspection and supervision and provide technical guidance on odor and dead animals management. This system can basically satisfy the needs of managing the hazardous materials associated with the PforR. There is still room for improvement such as old solid waste transfer stations</p>	<p>Largely consistent.</p> <p>Measures should be taken to strengthen odor control in livestock/poultry manure management and domestic solid waste transfer to</p>

PforR core principles/elements	China's E&S management requirements and practices	Consistency and recommendations
materials generated under the PforR.	<p>and small livestock/poultry farms should enhance odor management performance.</p> <p>Social: i) Work Safety Law: Article 24: An entity engaged in mining, metal smelting, building construction or road transportation, or an entity manufacturing, marketing, or storing hazardous substances shall establish a work safety management body or have full-time work safety management personnel. Article 25: The work safety management body and work safety management personnel of a production and operation entity shall be responsible for: (1) organizing or participating in the development of the work safety policies, rules and operating procedures and the emergency rescue plans for work safety accidents; (2) organizing or participating in and honestly recording its work safety education and training; (3) supervising the implementation of safety control measures for the major hazard installations of the production and operation entity; (4) organizing or participating in the emergency rescue rehearsals of the production and operation entity; (5) inspecting its work safety condition, conducting screening for any work safety risks in a timely manner, and offering recommendations for improving work safety management; (6) prohibiting and redressing any command against rules, forced operation at risk, or violation of the operating procedures; and, (7) supervising the work safety related corrective actions taken by the production and operation entity.</p> <p>ii) Regulations on the Safety Management of Hazardous Chemicals: Article 4: A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to its employees. Employees shall accept education and training and may not hold office until they have passed the relevant examinations.</p> <p>iii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use: This is a regional standard on OHS management systems, designed to systematically identify and control occupational health and safety risks that may arise in organizational activities, products and services, prevent safety accidents, and protect workers' health and safety. Enterprises may apply for OHS management system certification, establish a normative management system for the source identification and whole-process control of hazards, and realize continual improvement and compliance. An assessment includes: 1) OHS pre-assessment; 2) inspection reports on OHS and fire protection; 3) test reports on OHS and fire protection; 4) chemical safety reports for hazardous chemicals; 5) copy of manufacturing license (when required); and 6) copy of business license. The following shall be reviewed comprehensively: 1) the organization's work safety permit; 2) production or service flowchart; 3) organizational chart; 4) list of applicable laws and regulations; 5) location map; 6) factory layout; 7) workshop layout; 8) list of major hazards; 9) OHS targets, indicators and management plan; and 10) certificate of compliance, etc.</p> <p>iv) Guidelines for Occupational Disease Prevention and Control for Employers: The general requirements for occupational disease prevention and control, classified and tiered management, occupational health file management, and OHS assessment, etc. are stipulated, including: a corporate occupational health policy shall be developed, and an occupational disease prevention and treatment agency and an occupational health management agency shall be established, with relevant functions being clearly defined and full/part-time occupational health officers being appointed; occupational disease prevention and control shall be included in the management-by-objective responsibility system; an occupational disease prevention and control plan, and an implementation plan shall be developed; a sound occupational health management system and job SOPs shall be established; sound occupational health files shall be established; efforts shall be made to establish a sound workplace occupational hazard monitoring and evaluation system, provide necessary financial support for occupational disease prevention and control, develop a sound emergency rescue plan for occupational diseases, and make work-related injury insurance available.</p>	<p>reduce odor impacts.</p> <p>Largely consistent. Sound safety and health management systems are put in place at national and local levels, and the PIUs have followed regulatory requirements for safety and health during construction or operation. However, occupational health examination of workers needs to be strengthened. Problems include the absence of early-stage occupational health assessment and declaration of occupational hazards; the lack of knowledge of occupational health management laws and regulations; the failure to include small scale enterprises or those exposed to "moderate" occupational</p>

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	<p>v) The 14th Five-Year Plan for Prevention and Control of Occupational Diseases of Hubei Province (HPHC [2022] No.8): By 2025, Hubei Province shall establish a sounder occupational health management system, enhance the occupational health management capacity, significantly promote the quality of occupational health management, improve the workers' health, and strengthen treatment and support of patients with occupational diseases and work-related injury insurance. Below are the main objectives: the number of contributors of work-related injury insurance is increased steadily; over 90% of industrial enterprises and projects exposed to occupational hazards are declared; over 85% of workplaces pass the occupational hazard monitoring; over 90 of non-medical radiation workers receive the radiation dose monitoring; over 85% of key groups exposed to occupational hazards have a good knowledge of occupational health protection; the rate of accessibility of centralized pneumoconiosis rehabilitation service in townships (communities) is over 90%; occupational health violations are fully investigated and handled; existing medical resources are made use of to establish provincial medical institutions providing occupational diseases treatment; at least one provincial agency is designated to provide technical guidance on the protection against occupational hazards such as dust, poisonous chemicals, noise and radiation; at least one public medical and health institution in every city (prefecture) is designated to provide diagnosis of occupational diseases; at least one public medical and health institution in every city, county and district to provide occupational health examination.</p> <p>vi) The 14th Five-Year Plan for Health of Hunan Province (XZBF [2021] NO.48) requiring to strengthen the occupational diseases treatment of key industries and push enterprises to implement responsibilities and obligations of occupational diseases prevention and control according to law; improve the policies and regulations of occupational hazards declaration, reporting and monitoring that the qualified rate of occupational hazard factor monitoring in workplaces of key industries should reach 85%; implement the occupational health examination, care, diagnosis, treatment and other management measures; strengthen occupational health supervision and law enforcement, urge employers with serious occupational hazards to conduct occupational hazards status assessment and construction units to perform the "three simultaneous" procedures of occupational disease protection facilities; strengthen safeguards for occupational diseases treatment, and carry out a special campaign to expand the coverage of work-related injury insurance for key occupational diseases in key industries.</p>	<p>hazards in the local health management system.</p> <p>Recommendation: The implementation of OHS management systems and related trainings at some enterprises (e.g., WWTPs, fecal residue and wastewater recycling facilities, and refuse treatment facilities) is yet to be improved.</p>
(ii) Promote the use of integrated pest management practices to manage or reduce the adverse impacts of pests or disease vectors	<p>Environment: China has an established pesticide management system with a variety of regulatory documents such as the "Pesticide Management Regulations" and the "Crop Pest Control Regulations" in place. Pesticide producing and selling should be subject to permitting requirements. Pesticide users are required to apply pesticides as prescribed. In crop farming, Integrated pest management (IPM) is encouraged to push pesticide reduction using combined or multiple tactics such as ecological management, healthy cultivation, biological control, physical control and other green pest control technologies. ARABs through their subsidiary organizations undertake comprehensive management on pest control and pesticide reduction.</p>	Consistent.
(iii) Provide training for workers involved in the production,	<p>Environment: Odor from livestock/poultry manure and domestic solid waste contains such hazardous chemicals as H₂S and NH₃ that are harmful to people's health. In accordance with the regulations such as the "Regulations on the Safety Management of Hazardous Chemicals", the "Hazardous Chemicals Catalogue", the "Safe Production Law", and the "Occupational Diseases Prevention Law", etc., responsible entities should improve their odor management facilities/measures, workers should be equipped with and wear standard PPE at work, and relevant government authorities such as ARABs, HURDBs and UMBs</p>	Consistent.

PforR core principles/elements	China's E&S management requirements and practices	Consistency and recommendations
procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with the relevant international guidelines and conventions.	<p>should strengthen supervision on the odor management performance.</p> <p>Social:</p> <p>i) Regulations on the Safety Management of Hazardous Chemicals: Article 4: A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to its employees. Employees shall accept education and training and may not hold office until they have passed the relevant examinations.</p> <p>ii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use: This is a regional standard on OHS management systems, designed to systematically identify and control occupational health and safety risks that may arise in organizational activities, products, and services, prevent safety accidents, and protect workers' health and safety. Enterprises may apply for OHS management system certification, establish a normative management system for the source identification and whole-process control of hazards, and realize continual improvement and compliance. An assessment includes: 1) OHS pre-assessment; 2) inspection reports on OHS and fire protection; 3) test reports on OHS and fire protection; 4) chemical safety reports for hazardous chemicals; 5) copy of manufacturing license (when required); and 6) copy of business license. The following shall be reviewed comprehensively: 1) the organization's work safety permit; 2) production or service flowchart; 3) organizational chart; 4) list of applicable laws and regulations; 5) location map; 6) factory layout; 7) workshop layout; 8) list of major hazards; 9) OHS targets, indicators and management plan; and 10) certificate of compliance, etc.</p> <p>iii) Guidelines for Occupational Disease Prevention and Control for Employers: The general requirements for occupational disease prevention and treatment, tiered and classified management, occupational health file management, and OHS assessment, etc. are stipulated, including: a corporate occupational health policy shall be developed, and an occupational disease prevention and treatment agency and an occupational health management agency shall be established, with relevant functions being clearly defined and full/part-time occupational health officers being appointed; occupational disease prevention and control shall be included in the management-by-objective responsibility system; an occupational disease prevention and control plan, and an implementation plan shall be developed; a sound occupational health management system and job SOPs shall be established; sound occupational health files shall be established; efforts shall be made to establish a sound workplace occupational hazard monitoring and evaluation system, provide necessary financial support for occupational disease prevention and control, develop a sound emergency rescue plan for occupational diseases, and make work-related injury insurance available.</p>	Consistent.
Element 8: Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the PforR activities are located in areas	<p>Social:</p> <p>i) Regulations on the Defense against Meteorological Disasters: Article 27: When implementing major national construction projects and major regional economic development projects, and preparing urban and rural development plans, governments at or above the county level shall consider climatic feasibility and risks of meteorological disasters and take actions to avoid or mitigate such impacts. Article 23: Lightning protection devices of buildings, places and facilities shall comply with the national lightning protection standards. Lightning protection devices of newly constructed, reconstructed or expanded buildings, places and facilities must be designed, constructed, and put into operation together with main parts of the project.</p> <p>ii) Regulations of the People's Republic of China on Flood Control: Systematic arrangements for flood control in terms of organization, preparation, implementation, emergency rescue, recovery, and funding, etc. are made.</p> <p>iii) Regulations on the Prevention and Control of Geologic Disasters: Article 10: A geologic disaster investigation system shall be practiced at the state, provincial and county levels. The land and resources authority shall work out the planning on prevention and control of geologic disasters within its own jurisdiction according to the result from investigation of geologic</p>	Consistent.

PforR core principles/ elements	China's E&S management requirements and practices	Consistency and recommendations
prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or affected by climate events.	<p>disasters within such jurisdiction as well as the planning of the next higher level on prevention and control of geologic disasters and submit it to the government at the same level for approval and promulgation after expert evaluation. Systematic arrangements for the investigation, prevention and control of geological disasters are made in terms of the prevention, emergency response and control of geological disasters, and legal responsibilities, etc.</p> <p>iv) Law on Protecting Against and Mitigating Earthquake Disasters: Article 35: The construction projects newly built, expanded or rebuilt shall meet the seismic fortification requirements. The major construction projects and the construction projects which may induce serious secondary disasters shall be subject to the seismic safety evaluation as required, and the seismic fortification shall be conducted in accordance with the seismic fortification requirements determined by the approved seismic safety evaluation reports. The seismic safety evaluation entities of construction projects shall, in accordance with the relevant standards of the state, carry out seismic safety evaluation, and be responsible for the quality of the seismic safety evaluation reports. The construction projects other than those prescribed in the preceding paragraph shall be fortified against earthquakes according to the seismic fortification requirements determined by the seismic intensity zoning map or the ground motion parameter zoning map. The construction projects in densely populated places such as schools and hospitals shall be designed and constructed in compliance with the seismic fortification requirements higher than those for other buildings in the locality, and effective measures shall be taken to increase the capability of seismic fortification.</p> <p>v) Notice on Targeted Health Management and Orderly People Flow (Joint Prevention and Control Mechanism ZF [2020] No. 203: Pandemic control areas shall be defined accurately based on pandemic risk level, and such prevention and control measures as people flow restriction, nucleic acid testing and health monitoring shall be taken timely. For medium and high-risk areas, entry into project areas and people gathering shall be avoided where possible, and people entering the project area may flow freely only if their body temperatures are normal and proper personal protection measures are taken. Entry into medium-to-high-risk areas shall be avoided if not necessary.</p>	

Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.

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Element 9: i) Avoid or minimize land acquisition and related adverse impacts.	<p>i) Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects: The area and type of the land used for the project shall be identified before the feasibility study report or project proposal is reviewed to avoid the acquisition of basic farmland, and nature reserves, etc.</p> <p>ii) Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) (CPCCCO [2012] No.2): An SSRA shall be conducted for any project involving LA and HD, farmers' burden or social security.</p> <p>iii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim): If the assessment report thinks that a high risk is present, a decision of non-implementation shall be made, or a decision may be made after the plan is adjusted or the risk level is reduced; if an moderate risk is present, a decision of implementation shall be made after effective risk prevention and mitigation measures are taken; and if a low risk is present, a decision of implementation may be made, provided that actions like explanation and persuasion to the people affected are taken and reasonable requests</p>	Consistent

PforR core principles/elements	China's social management requirements	Consistency analysis and recommendation
	<p>of people affected are handled properly. For impact and risk management, the legitimacy, rationality, feasibility and controllability of measures shall be assessed.</p> <p>iv) Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances: SSRA, if required, shall be an important part of the feasibility study of any major construction project. Major decisions, items and matters with low social stability risks decided to be put in place when conditions are ripe shall be advanced in a well-planned way in accordance with the risk control plan. If social stability risks are identified and the conditions are not ripe, the decision making shall be subject to approval or be postponed until the original plan is improved, the conditions are ripe and risks are eliminated. Decisions, items and matters urgently needed to be put in place despite high risks shall be advanced prudently and carefully after precautionary and mitigation measures are taken. Those with major social stability risks and fall short of relevant requirements shall in no case be put in place.</p> <p>v) Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNRP [2021] No.166), requiring that permanent basic farmland shall not be converted into forest land, grassland, garden land and other agricultural land or agricultural facilities construction land. The annual "balance in and out" shall be carried out for any conversion of cultivated land to other agricultural land and agricultural facilities construction land, and the same amount and quality of cultivated land shall be made up by means of the consolidation of forest land, grassland, garden land, other agricultural land and agricultural facilities construction land into cultivated land.</p> <p>v) Notice of Hubei Provincial Government on Implementing the Strictest Farmland Protection System: Detailed provisions on the occupation of farmland are formulated.</p> <p>1) The occupation of permanent basic farmland for greening, afforestation, lake digging, landscaping, non-agricultural construction and other non-agricultural purposes shall be included in the scope of assessment under the target-based responsibility system for farmland protection, and efforts shall be made to more effectively investigate and punish illegal acts. 2) Illegal occupation of arable land for greening, afforestation, lake digging and landscaping is strictly prohibited. Occupation of permanent basic farmland for growing trees, turf and other plants for greening and afforestation is prohibited. The scale and scope of land to be occupied shall be subject to the approval of the government authority, and the type of land to be occupied shall be identified carefully. No project involving the occupation of arable land in violation of laws and regulations shall be approved, in which case neither the afforestation area is recognized nor the forestry subsidy will be provided. Occupation of arable land for lake digging and filling and landscaping in the guise of river, wetland and lake improvement is prohibited. Projects where approval procedures are not completed and illegal occupation of arable land occurs must be stopped immediately and rectifications shall be made within a specified time limit. 3) Occupation of arable land for constructing excessive landscaped roadways is prohibited. Approval procedures must be completed for land for landscaping of transportation and water conservancy projects in strict accordance with regulations, and a balance between land occupation and compensation must be maintained if any arable land is occupied. The scale of landscaped roadways shall be strictly controlled, and excessive construction of green belts on arable land on either side of any railway, national and provincial highway (including expressway), and county/township road in violation of laws and regulations shall be stopped immediately. 4) Occupation of permanent basic farmland for expanding nature reserves is prohibited. New nature reserves shall conform to the national land and space planning, and no permanent basic farmland shall be occupied. 5) No arable land shall be occupied for non-agricultural purposes in violation of laws and regulations. No approval or permit shall be granted for the occupation of rural land for construction projects. 6) Illegal land use and approval are prohibited. No unauthorized adjustment of county/township land and space planning shall be made to</p>	

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	<p>circumvent the approval of the occupation of permanent basic farmland. Occupation of land to be used for any construction project shall be subject to approval, and project construction shall be carried out on the land in line with the approved purposes, requirements for location and quantity of land, and standards. Temporary use of land shall be managed stringently, and any land user shall apply for temporary use of land as per legal procedures. Engineering and technical measures such as removal and reuse of soil of cultivated soil horizon shall be taken to minimize damage to such soil horizon if any permanent basic farmland is to be temporarily occupied. The land reclamation plan shall be subject to the review by the municipal/prefecture natural resources authority, and the approval by the county natural resources authority before the land is temporarily occupied. Upon the expiration of the term of temporary use of land, the land user shall stop using the land in violation of laws and regulations, and timely carry out land reclamation to restore the original land conditions for growing crops. Where arable land and permanent basic farmland are temporarily occupied or used for any construction project without approval or in violation of regulations, severe punishment shall be imposed according to laws and regulations and the original land conditions for growing crops shall be restored within the specified time limit. 7) The red lines for ecological conservation, permanent basic farmland protection and urban development shall be coordinated to give priority to farmland protection and conservation and improve the spatial layout of farmland and land used for ecological conservation and construction projects. Land use control shall be strengthened, and the red lines for farmland protection and the quotas for land used for construction projects shall be put in place to strictly control non-agricultural use of farmland. 8) The requisition–compensation balance policy for arable land shall be effectively put in place to ensure that arable land occupied by construction projects are adequately compensated by equivalent arable land. 9) Special protection for permanent basic farmland shall be enhanced. Designated permanent basic farmland shall in no way be occupied or used by any entity or individual for unauthorized purposes. No entity or individual shall destroy the cultivated soil horizon of permanent basic farmland.</p> <p>vii) Implementation Opinions of Hunan CPC Provincial Committee and People's Government on Strengthening the Protection of Cultivated Land and Improving the Balance between Occupation and replenishment: 1) strengthen the land use control, the planning of urban-rural development, infrastructures, environmental protection, etc. should be connected with the overall land use planning and shall not breach the determined boundary of cultivated land protection, permanent basic farmland and urban development area.2) any entity or individual shall not occupy or change the land use type without permission once the permanent basic farmland determined. General construction projects shall not occupy permanent basic farmland. If the site selection of a major construction project is indeed difficult to avoid occupying permanent basic farmland, on-site verification, argumentation and approval shall be carried out in strict accordance with the regulations. It is strictly prohibited to circumvent the examination and approval of the occupation of permanent basic farmland by arbitrarily adjusting the general land use plans of counties and townships. 3) use land economically and intensively to relieve the pressure of land occupation by construction and strictly control the total amount and intensity of land used for construction. 4) Scientifically and reasonably determine the layout and scale of rural residential land, guide farmers to build centralized houses or rebuild on their original sites, make full use of the existing construction land and unused land in villages, and try to occupy as little or no cultivated land as possible. Farmers who are approved to accurately occupy cultivated land for building houses shall fulfill the obligation of compensating and balancing cultivated land occupation according to law. If they cannot fulfill the obligation of cultivated land occupation and replenishment balance according to law, they shall pay farmland reclamation fees according to regulations if it is failed to fulfill replenishment, and the county-level governments shall make overall plans to implement the balance of cultivated land occupation and replenishment. 5) crack down on all types of indiscriminate occupation and destruction of cultivated land, seriously investigate</p>	

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	<p>and punish cases of illegally approving the occupation of cultivated land, and resolutely curb acts that seriously damage cultivated land, such as digging fields to lakes and building artificial water features. 6) strictly implement the responsibility of cultivated land occupation and replenishment balance and complete the task of replenishing cultivated land.</p> <p>viii) Notice of Provincial Natural Resources Department and Agriculture and Rural Affairs Department on Further Standardizing the Management of Facility Agricultural Land (ENRP [2020] No. 4), requiring that the township government shall, together with the natural resources, agriculture and rural departments at the county level, rationally distribute the land for facility agriculture and determine the location and scope of the land for facility agriculture according to the land spatial planning and agricultural development planning. The site of facility agriculture land should select unused land and inefficient idle land as possible and shall not or less occupy cultivated land. If it is unavoidable to occupy cultivated land, the inferior cultivated land should be occupied first to avoid excessive occupation of high-quality cultivated land.</p> <p>ix) Notice of Hunan Provincial Natural Resources Department on Improving the Management of Facility Agricultural Land Use (XNRP [2020] No.3), requiring that the township government shall select and determine the facility agriculture land use location and scope following the national land spatial planning, agricultural development planning, village planning and the policies of protecting cultivated land, economizing and intensive use of land and facility agricultural land use, and waste hills and slopes, tidal flat, and unused construction land should be utilized where possible.</p>	
(ii) Identifying and addressing economic and social impacts arising from land acquisition or loss of access to natural resources:	<p>i) Land Administration Law: Article 26: Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate as required by the local land and resources authority. For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures.</p> <p>ii) Regulations for the Implementation of the Land Administration Law: Article 25: Municipal/county government of the locality whose land has been expropriated shall, upon approval of the LA plan according to law, organize its implementation, and make an announcement in the township and village where land acquisition occurs on the approval organ of the LA, number of the approval document, use, scope and area of the acquired land as well as the rates for compensation of LA, measures for the resettlement of agricultural workers and duration for processing LA compensation. Article 26: Land compensation fee shall go to the rural collective economic organization, and compensation for ground attachments and standing crops shall be disbursed to their owners.</p>	Consistent
iii) Provide compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid	<p>i) Real Right Law: Article 42: For collective land acquired, land compensation, resettlement subsidy, compensation for ground attachments and standing crops, etc. shall be fully paid according to law, and social security funds for land-expropriated farmers shall be appropriated to secure their livelihoods and protect their lawful rights and interests. Where any house or other immovable property of any entity or individual is expropriated, compensation shall be granted according to law to protect the lawful rights and interests of the affected entity or individual. Where any personal residence is expropriated, the affected person's housing conditions shall be secured.</p> <p>ii) Land Administration Law: Article 48: Fair and reasonable compensation shall be granted for land acquisition. In case of land acquisition, the land compensation, resettlement subsidy, and compensation for rural residential houses, other ground attachments and standing crops, etc. shall be paid timely and fully according to law, and social security costs for the affected farmers shall be disbursed.</p> <p>iii) Regulations on the Expropriation of Houses on State-owned Land and Compensation (Decree [2011] No.590 of the State Council) (2011.1.21): Article 19: The compensation for the value of houses to be expropriated shall not be less than the</p>	Consistent

PforR core principles/elements	China's social management requirements	Consistency analysis and recommendation
before taking land or restricting access.	<p>market price of the equivalent real estate on the date of the public notice of the house expropriation decisions. The value of the houses to be expropriated shall be assessed and determined by real estate appraisal agencies with appropriate qualifications in accordance with the procedures for evaluating houses to be expropriated. Anyone who has objection to the appraised value of the houses to be expropriated may apply for reassessment. Anyone who disagrees with the result of re-assessment may apply for appraisal by the real estate appraisal expert panel.</p> <p>iv) Measures for the Expropriation and Evaluation of Houses on State-owned Land (JF [2011] No.77) (2011-6-3): Article 16: The real estate appraisal agency shall, in line with the power of attorney or entrustment contract, disclose preliminary house appraisal results to the house expropriation authority. The house expropriation authority shall disclose such results to the affected people. During disclosure, the real estate appraisal agency shall appoint a registered appraiser to explain such results on site and correct any error.</p> <p>v) Notice of Hubei Provincial Government on Releasing Block Comprehensive Land Prices of Hubei Province (2019.11.8): Block comprehensive land price consists of land compensation (40%) and resettlement subsidy (60%). Permanent basic farmland to be expropriated upon approval shall be compensated at the highest compensate rate effective in the city/district/county concerned. Provisions herein shall be applicable for the expropriation of land of state-owned farms, forestry centers, meadows and fisheries for non-agricultural purposes. In addition, there are concrete provisions on the compensation rates for ground attachments and standing crops, the expropriation of land of state-owned farms, forestry centers, meadows and fisheries for non-agricultural purposes, and the requisition of paddy fields, grasslands and unexploited land.</p> <p>vi) Measures for the Implementation of the Expropriation of Houses on State-owned Land and Compensation of Hubei Province (2015.7.6): Articles 25 to 27: 1) The value of the expropriated house and the house for property right exchange shall be equivalent to the appraisal value determined by qualified real estate appraisal agencies on the date when the decision on the expropriation is announced in accordance with the measures for expropriation and evaluation of houses on state-owned land; 2) The appraisal shall be conducted in accordance with China's technical standards and evaluation procedures and with reference to the market prices of real estate similar to the house expropriated; 3) Agencies, individuals and panels of experts responsible for real estate appraisal shall conduct independent, objective and impartial evaluation and appraisal of the expropriated house without being distracted by any organization or individual; 4) Municipal and county real estate authorities shall release the catalogue of legally registered real estate appraisal agencies with qualifications of grade three or above and without bad credit records in public on a regular basis so that affected people make a choice as needed.</p> <p>vii) Notice of the People's Government of Hunan Province on Adjusting the Compensation Standard for Land Requisition in Hunan Province (XZF [2021] No. 3), stating that 60% of the block comprehensive land price is the resettlement subsidy and 40% is the land compensation fee; for permanent basic farmland acquired, two times of the standard shall be applied; for paddy field (exclude permanent basic farmland) acquired, 1.2 times of the standard shall be applied, for garden land and forest land acquired, coefficient of corresponding land type shall be applied, for other agricultural land acquired, 1 times of the standard shall be applied and for unused land acquired, 0.6 times of the standard shall be applied. The municipal or prefecture government can formulate and adjust the specific implementation measures based on their own conditions, but the compensation standard and land type coefficient shall not be lower than the provincial standard.</p> <p>viii) The Measures of Hunan Province for the Expropriation of Houses on State-owned Land and Compensation (2014) stipulate, a municipal or county government making a house expropriation decision shall grant the following compensation to each displaced person: 1) compensation for the value of the expropriated house; 2) compensation for relocation and transition</p>	

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	due to house expropriation; and 3) compensation for production / business suspension losses arising from house expropriation. The compensation for the interior decoration in the value of the expropriated house shall be agreed between the house expropriation agency and the displaced person, or failing this, appraised by a real estate appraisal agency selected hereunder.	
iv) 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>i) Land Administration Law: Article 48: Efforts shall be made to ensure that living standard of farmers affected by land expropriation are not reduced, and that their long-term livelihoods are secured.</p> <p>ii) Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238): 1) Agricultural resettlement: When rural collective land out of urban planning areas is acquired, land-expropriated farmers shall be first provided with necessary arable land in forms of mobile collective land, contracted land turned over by contractors and arable land arising from land development so that they continue to pursue agricultural production. 2) Reemployment resettlement: conditions shall be created actively to provide free labor skills training to land-expropriated farmers and place them to corresponding jobs. Under equal conditions, land users shall first employ land-expropriated farmers. When rural collective land within urban planning areas is acquired, land-expropriated farmers shall be included in the urban employment system and the social security system. 3) Dividend distribution resettlement: when any land with long-term stable yields is to be used for a project, the affected rural collective economic organization may become a project shareholder with compensation fees for LA or rights to use construction land in consultation with the land user. The rural collective economic organization and rural households will receive dividends as agreed. 4) Non-local resettlement: if basic production and living conditions are not available locally to land-expropriated farmers, non-local resettlement may be practiced under the leadership of the government in consultation with the rural collective economic organization and rural households.</p> <p>iii) Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29): Employment training and social security for land-expropriated farmers shall be an important part of land acquisition system reform. Local governments shall, against the backdrop of coordinating economic and social development in urban and rural areas, enhance employment training and social security, include employment of land-expropriated farmers in the economic and social development plans and annual plans of local governments, establish a social security system suited to the characteristics and needs of land-expropriated farmers, take effective measures to secure employment training and social security funds, help land-expropriated farmers get employed and assimilate into the urban community, and ensure that the living standard of land-expropriated farmers is not reduced due to land expropriation and that their long-term livelihoods are secured.</p> <p>iv) Notice of the Ministry of Labor and Social Security and the Ministry of Land and Resources on Doing a Substantially Good Job in Social Security for Land-expropriated Farmers (MLSS [2007] No.14): All localities shall establish a social security system for land-expropriated farmers as soon as possible. Funds required for social security for land-expropriated farmers shall be fully transferred to the special account and credited to the individual or pooling account within 3 months after the approval of the land acquisition compensation and resettlement plan.</p> <p>v) Guidelines of Hubei Provincial Government on Basic Pension Insurance for Land-expropriated Farmers (HPPG [2014] No. 53): Land-expropriated farmers shall have access to the basic pension insurance if: 1) their contracted land is legally expropriated by governments at or above county level; 2) they have the Rural Land Contract or the Certificate of Contractual Right of Rural Land in hand when their land is expropriated; 3) they are registered permanent residents at the place where the expropriated land is located; 4) the area of arable land per capita is 0.3 mu or less after the land expropriation; and 5) they are 16 years old or older. Below are compensation rates for basic pension insurance of land-expropriated farmers in Hubei Province: governments at or above county level provide land-expropriated farmers with one-off compensation no less than three times the</p>	Consistent

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	<p>annual per capita net income of rural residents in the city or prefecture where the land is expropriated; land-expropriated farmers who are 60 years old or older are entitled to such one-off compensation in full amount; for land-expropriated farmers under the age of 60 (16 to 59 years old), the amount of compensation shall be 1% lower than the aforesaid full amount for every 1 year of difference between their actual age and the baseline age (60 years old).</p> <p>vi) Notice of the General Office of Hunan Provincial People's Government Forwarding the Provincial Human Resources and Social Security Department's Opinions on Doing a Good Job in Social Security Work for Land-expropriated Farmers (XZBF [2014] No. 31), regulated that rural people who have lost all or most of their land due to unified acquisition of collective land by the government, over the age of 16 and enjoying the contract right of rural collective land at the time of land acquisition, shall be covered by the social security system. The application shall be prepared by the land expropriated individuals, discussed, approved and disclosed by the rural collective economic organization, villagers' committee or villagers' group, submitted to the township, municipal or county level natural resources departments, agricultural land management departments and public security departments for approval and disclosure, and after there is no objection received, the application shall be approved by the municipal or county government and send to the human resources and social security department for registration. Land-expropriated farmers who meet the conditions can choose to participate in the basic endowment insurance for urban workers or social endowment insurance for urban and rural residents on their own will, and the government and collective economic organizations provide corresponding subsidies to land-expropriated farmers. The amount of premium subsidy = 60% (or 100%) of the average annual salary of the employees in the province in the previous year of when the land-expropriated farmers pay the basic endowment insurance fee for urban employees×12% (or 20%) ×years of subsidy.</p>	
v) Restore or replace public infrastructure and community services that may be adversely affected by the Program.	<p>i) Land Administration Law: Article 47: For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic organization and its members, village committee and other stakeholders affected.</p> <p>ii) Regulations for the Implementation of the Land Administration Law: Article 25: Municipal/county government of the locality whose land has been acquired shall, upon approval of the LA plan according to law, organize its implementation, and make an announcement in the township and village where land acquisition occurs on the approval organ of the LA, number of the approval document, use, scope and area of the acquired land as well as the rates for compensation of LA, measures for the resettlement of agricultural workers and time limit for completing LA compensation.</p> <p>iii) Real Right Law: Article 36: If any immovable or movable property is damaged, the right holder may request repair, rework, replacement or restoration.</p>	Consistent
(vi) Information disclosure, public participation and informed decision-making:	<p>i) Land Administration Law: Article 26: Owners or users of the land to be expropriated shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate as required by the local land and resources authority. For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. Article 47: If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic</p>	Consistent

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	<p>organization and its members, village committee and other stakeholders affected.</p> <p>ii) Regulations on Letters and Visits: Article 14: The Party Committee and relevant departments of the people's government at all level, as the specific administrative organ in charge of complaint letters and visits, shall perform the following duties: (1) to accept, transmit and assign another organ to handle the letter-or-visit matters; (2) to coordinate efforts in handling important letter-or-visit matters;; (3) to urge and examine the handling of letter-or-visit matters; (4) to reflect the information of letters and visits, analyze and judge the situation of both letters and visits, provide suggestions to party committees and governments for decision making; (5) to provide guidance to other relevant departments of the people's government at the corresponding level and the department or units for letters and visits of the people's government at lower level in their work regarding letters and visit; (6) to provide suggestions for work, policy and accountability improvement; and (7) to undertake other tasks assigned by the Party Committee and people's government at the corresponding level.</p> <p>iii) Document No.1 of the Central Government (2020): Leaders, especially municipal and county leaders, shall pay regular visits to departments at grass-roots level to deal with complaints proactively. Diversified legal services like designating one legal adviser for each village shall be offered, and civil mediation shall be strengthened to ensure that disputes and conflicts are resolved at the village and township level where possible. Unblocked complaint channels shall be made available for farmers to have their reasonable complaints resolved timely and properly.</p> <p>iv) Standard Guide to Grass-root Government Affairs Disclosure on Collective Land Acquisition (June 2019, Ministry of Natural Resources): Efforts shall be made to define matters to be disclosed and the scope of disclosure, standardize the disclosure procedures, improve modes of disclosure, and practically safeguard the people's rights to know, participate, oversee and be heard. The main objectives of public participation at different stages of LAR are as follows:</p> <ul style="list-style-type: none"> • During project preparation, option argumentation and comparison, the project owner and design agency shall conduct meaningful consultation with affected people and other stakeholders, improve the engineering measures, and determine the range of land use based on feedback, thereby evading sensitive objects and minimizing LAR impacts. • Participation at the DMS stage includes land acquisition announcement, DMS publicity, participation in the DMS, and confirmation, disclosure and review of DMS results. • At the SSRA stage, meaningful consultation shall be conducted with stakeholders to assess potential major social risks arising from land expropriation and house demolition, including other major risks that are not directly related to but may materially affect the project. • During the drafting of the compensation plan, the plan should be disclosed to collect comments from affected people, and a public hearing will be held when necessary. • Public participation at the implementation stage mainly includes effective information disclosure and consultation in relation to production and livelihood restoration and the allocation and use of compensation to ensure that opinions of the affected people are heard and agreements are signed through negotiation. <p>v) Notice of Provincial Natural Resources Department and Agriculture and Rural Affairs Department on Further Standardizing the Management of Facility Agricultural Land (ENRP [2020] No. 4), requiring that the construction plan and land use information should be open to the public through village bulletin board with no less than 5 working days after the land operation reached an agreement with collective economic organization on land use.</p> <p>vi) Notice of Hunan Provincial Natural Resources Department on Improving the Management of Facility Agricultural Land Use (XNRP [2020] No.3), requiring that the land operation shall negotiate with rural village economic organization on land</p>	

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	use agreement. the village committee shall disclose the construction plan and land use agreement through the bulletin boards at township government and village committee with no less than 10 days after the land operation reached an agreement with collective economic organization on land use.	

Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of indigenous people and vulnerable groups.

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Element 10: Undertake prior informed consultations if the ethnic minorities are potentially affected (positively or negatively) free of charge, to determine whether there is broad community support for the PforR Program activities.	<p>i) Constitution: Article 4: All ethnic groups in the People's Republic of China are equal.</p> <p>ii) Law of the People's Republic of China on Regional National Autonomy: Article 51: In dealing with special issues concerning the various nationalities within its area, the organ of self-government of a national autonomous area must conduct full consultation with their representatives and respect their opinions. Article 52: The organ of self-government of a national autonomous area shall guarantee that citizens of the various nationalities in the area enjoy the rights of citizens as prescribed in the Constitution.</p> <p>iii) Social Stability Risk Assessment of Major Fixed Asset Investment Projects: Article 3: At the feasibility study stage of a project, the PIU (or through a specialized agency) shall conduct an SSRA to identify impacts, propose mitigation measures, and prepare an SSRA report. On the other hand, if a government at or above the county level applies for land acquisition, a current status survey and an SSRA should be conducted for the land to be expropriated. The SSRA report shall be reviewed by experts organized by the designated authority of the county government before being approved. Local governments have issued opinions/notices on the implementation of SSRA, such as the Opinions on the Implementation of Measures to Strengthen Social Stability Risk Assessment Mechanism for Major Decisions under New Circumstances of Hubei Provincial Committee of the CPC and the General Office of Hubei Provincial Government (2021.12.13) and Implementation Opinions on Strengthening the Risk Assessment of Social Stability of Major Decisions under New Circumstances (XBF [2021] No. 27).</p> <p>iv) Land Administration Law (2020): Article 47: For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic organization and its members, village committee and other stakeholders affected.</p>	Consistent
Element 11: Ensure that ethnic minorities can participate in devising opportunities to benefit from	<p>i) Law of the People's Republic of China on Regional National Autonomy: Article 65: While exploiting resources and carrying out construction in national autonomous areas, the state shall give consideration to the interests of these areas, make arrangements favorable to local economic development and pay proper attention to the productive pursuits and the life of local minority nationalities. Article 66: State organs at higher levels shall incorporate major projects for maintaining ecological balance and achieving comprehensive environmental protection in national autonomous areas into national economic and social development plans.</p> <p>ii) Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1): Prior public consultation shall be conducted for decision makings in relation to the development of important plans for economic and social development and other</p>	Consistent

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
exploitation of customary resources and indigenous knowledge, the latter to include the consent of ethnic minorities.	<p>aspects, the development of major public policies and measures to develop, utilize and protect important natural and cultural resources, the implementation of major public construction projects in the administrative region, and other major matters that have a significant impact on economic and social development, involve material public interests, or the immediate interests of the public. Article 14: The decision-making entity shall fully solicit opinions in the form widely available for public participation. Opinions may be solicited in such forms as symposiums, hearings, field visits, written solicitation of opinions from the public, questionnaires, and opinion polls, etc. Article 15: If public opinions are solicited for a matter subject to decision-making, the decision-making entity shall disclose the draft decision and its explanation, and the mode and period of solicitation of public opinions by publicly available means, such as government website, new media, newspapers, radio and TV, etc. The period of solicitation of public opinions is usually not less than 30 days, and explanations shall be made when the solicitation of public opinions begins if such period is to be shortened due to emergencies. For matters of extensive public concern, or highly technical matters, the decision-making entity may make explanations by means of expert interview, etc. Article 16: If any matter subject to decision-making concerns immediate interests of citizens, legal persons or other organizations, or involves a major dispute, a public hearing may be held in accordance with any applicable laws, regulations and rules. The decision-making entity or the organizer of the public hearing shall disclose the draft decision and its explanation in advance, and make clear the time and venue of the public hearing. Article 29: If the public participation procedure is performed, the decision-making entity shall submit the draft decision together with main accepted public opinions to the decision-making authority for discussion. Article 30: When the draft decision is discussed, the meeting attendees shall give opinions adequately, and chief administrative officer shall give a final opinion. If such final opinion differs from the majority opinion, the reason shall be given at the meeting.</p> <p>iii) The 14th Five-Year Plan of Hubei Province for High Quality Development of Ethnic Affairs (2022.1): Efforts shall be made to achieve high-quality development of ethnic affairs in Hubei Province in the new era by accomplishing 6 key tasks, including enhancing the sense of community of the Chinese nation in an innovative way, promoting the sense of belonging for the Chinese nation in all aspects, advancing socialist modernization for all nationalities, promoting extensive exchanges and integration among all nationalities, improving modernization of governance of ethnic affairs, and strengthening centralized and unified leadership of the CPC over ethnic affairs. In addition, 18 objectives of 4 categories (including promoting the sense of belonging, achieving common prosperity and development, creating a good life for all, and advancing exchanges and integration among different nationalities), and 8 key projects (enhancing the sense of community of the Chinese nation, promoting integrated and innovative development of green industries in ethnic minority areas, offering key support to rural revitalization, and constructing a big data management platform for ethnic and religious affairs) are also specified.</p> <p>iv) The 14th Five-Year Plan of Hunan Province for Ethnic Affairs, putting forward six specific indicators and 42 key projects in social and economic development, people's livelihood improvement, ecological and civilization construction, rural revitalization, nation community consciousness and ethnic unity and development</p>	
Element 12: Give attention to groups vulnerable to hardship or discrimination, including, as	<p>i) Notice of the State Council on Issuing the 13th Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79): The development of advantaged and characteristic industries, especially stockbreeding and traditional handicrafts, of poor ethnic minority areas and villages shall be supported, and efforts shall be made to achieve rural revitalization and poverty alleviation by developing village-specific leading products and industries and making use of the Internet in poor villages. Poverty alleviation by e-commerce, photovoltaic, rural tourism, etc. shall be implemented to increase local residents' income, and major infrastructure and construction projects shall be carried out in ethnic minority areas to improve livelihoods. Basic social service mechanisms in ethnic minority areas shall be improved to provide support in old-age</p>	Consistent

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
<p>relevant, the poor, the disabled, women and children, the elderly, ethnic minorities, racial groups, or other marginalized groups; and if necessary, take special measures to promote equitable access to PforR Program benefits. and if necessary, take special measures to promote equitable access to PforR Program benefits.</p>	<p>services, social assistance, social welfare, special care and resettlement. The disaster assistance and emergency relief system for natural disasters shall be improved in ethnic minority areas. Urban and rural minimum living security (MLS) standards for ethnic minority areas shall be fixed rationally, and the sound development of public welfare and charity programs shall be supported.</p> <p>ii) The 14th Five-Year Plan of Hubei Province for the Development of Civil Affairs (2021.10. 29): High-quality development of civil affairs commensurate with economic and social development of Hubei Province shall be achieved by 2025: 1) basic living standards of the people shall be significantly improved by promoting the tiered and classified social assistance system underpinned by basic livelihood assistance, social assistance for special purposes and temporary assistance in emergencies and disasters with the support of private sectors, upgrading assistance management services, putting policies in place effectively to protect orphans and de facto orphans, and further enhancing mechanisms concerning living subsidies for the financially-challenged disabled population, nursing care allowances for the severely disabled and social welfare for the elderly; and 2) the quality of basic social services shall be improved markedly by coordinating home-based and community elderly service providers, promoting the integration of medical and health care for the elderly, optimizing the supply structure and quality of elderly care services, improving the social care service system, strengthening government purchase of social services, engaging more private professional market players, improving the quality and efficiency of comprehensive marriage services, and further standardizing adoption of children. Below are the key objectives to be achieved by 2025: the annual growth rate of MLS in rural areas shall be no lower than that of per capita consumption expenditure of the previous year; the MLS standard in rural areas accounts for more than 75% of that in urban areas; living subsidies are provided to all financially-challenged disabled people; nursing care allowances are offered to all severely disabled people; trans-provincial marriage registration is fully achieved; all vagrants and beggars with known identity information are returned to their homes; nonprofit cremains burying (storage) facilities are available in all counties; at least 60% of beds in elderly care institutions meet requirements for nursing care; comprehensive elderly care institutions are accessible in 60% of townships (sub-districts); minor protection centers are available in 50% of townships (sub-districts); the number of social service professionals stands at 80,000; volunteer service centers account for 80% of comprehensive community service facilities; the area of comprehensive community service facilities accessible by every 100 residents tops 30 square meters; and the number of full-time employees of social organizations reaches 400,000.</p> <p>iii) The 14th Five-Year Plan of Civil Affairs of Hunan Province (2021.9.13) clarified the tasks of development and put forwarded the key works in the nine aspects of social assistance, elderly care services, children's welfare, grassroots social governance, basic social services, social organization development, philanthropy and social work, regional name management services, "five modernizations" of new Hunan civil affairs. The Plan requires that by 2025: the annual growth rate of MLS in rural areas shall be no lower than that of per capita consumption expenditure of the previous year; the MLS standard in urban and rural areas accounts for more than 75% of that in urban areas; living subsidies are provided to all financially-challenged disabled people; nursing care allowances are offered to all severely disabled people; trans-provincial marriage registration is fully achieved; all vagrants and beggars with known identity information are returned to their homes; nonprofit cremains burying (storage) facilities are available in all counties; at least 60% of beds in elderly care institutions meet requirements for nursing care; comprehensive elderly care institutions are accessible in 60% of townships (sub-districts); minor protection centers are available in 50% of townships (sub-districts); the number of social service professionals stands at 90,000; volunteer service centers account for 80% of comprehensive community service facilities; the area of comprehensive community service facilities accessible by every 100 residents tops 43 square meters; and the number of full-time employees of social organizations reaches 370,000.</p>	

PforR core principles/ elements	China's social management requirements	Consistency analysis and recommendation
	<p>iv) Other poverty alleviation policies: In China, poor households refer mainly to those below the minimum living security (MLS) standard, and are classified into: a) MLS households, whose per capita annual income is below the MLS standard. MLS standards and relevant policies are updated by the local governments every year. In 2022, the MLS standard was 8,400 yuan per capita per annum in urban areas and 6,236 yuan per capita per annum in rural areas in Hubei Province and the MLS standard was 7,416 yuan per capita per annum in urban areas and 5,557 yuan per capita per annum in rural areas in Hunan Province; and b) extremely poor persons, old and disabled persons and persons under 16 years with no ability to work, no income source, or statutory supporter, or whose statutory supporter is incapable to support. In 2022, extremely poor persons in urban and rural areas of Hubei Province were eligible for financial support of 16,807 yuan per person per annum and 11,990 yuan per person per annum respectively and that of 9,640 yuan per person per annum and 7,224 yuan per person per annum respectively in Hunan Province. These poor households receive full support from the Chinese government in food, clothing, medical care, housing, children education, and basic income which is no less than the local MLS standard. All localities shall establish files for the poor households, and offer living and housing subsidies, free children education, interest-free loans, special occupational training, and priority in job placement, etc.</p> <p>v) Law of the People's Republic of China on the Protection of Women's Rights and Interests (2018 Amendment): Article 22: Women shall enjoy the same labor and social security rights as men. Article 24: Men and women shall receive equal pay for equal work, and women shall enjoy the same remuneration rights as men. Article 26: Any employer shall protect women's health and safety at work and shall not assign women to unsuitable jobs. Women shall receive special protection during menstruation, pregnancy, lying-in and breastfeeding. Article 27: No employer shall reduce female workers' salaries or dismiss female workers or unilaterally terminate the labor (employment) contract or service agreement with them on the basis of marriage, pregnancy, lying-in and breastfeeding. Article 28: The state shall ensure that women are entitled to social insurance, social assistance, social welfare and healthcare rights, and encourage and support public welfare activities for women. Article 29: The state shall put maternity insurance system in place and establish a sound security system for women in other aspects related to maternity.</p> <p>vi) Outline for Women's Development in China (2021-2030): The overall objective is to fully implement the basic state policy of gender equality to innovate and improve the systems and mechanisms for promotion gender equality and women's all-round development. Women have equal access to a full range and whole life-cycle health services, and their health will be improved continuously. Women enjoy equal rights to education, and their quality and ability will be continuously improved. Women enjoy equal economic rights and interests, and their economic status will be steadily improved. Women enjoy equal political rights, and their participation in the administration of country, economic, cultural and social affairs will be gradually improved. Women enjoy equal access to multi-level and sustainable social security, and their treatment levels will be steadily improved. The policies and regulations for supporting family development will be improved, and the new trend of socialist family civilization will be widely promoted. The concept of gender equality become more popular, and the environment for women's development will be improved. The legal system will be improved to protect women's legitimate rights and interests effectively. Women's sense of gain, happiness and security will be increased significantly.</p>	

Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

Element 13: Consider conflict risks, including distributional equity and cultural sensitivities.

Not relevant.

Appendix 4: Stakeholder Analysis

The ESMS of the PforR Program will involve different stakeholders, including individuals, government authorities and other agencies. Stakeholders are either affected by any activity or affect the construction and operation of any activity. Therefore, for each activity under the Program, stakeholders involved will be identified through a mechanism. Stakeholders under each type of outcomes under the ESMS of the PforR Program are consistent, including affected parties, interested parties and management authorities. Refer to Appendix 4-1 for the result of stakeholder identification and analysis on the basis of the investigations conducted for the Program.

Appendix 4-1: Stakeholder identification and analysis

Result Area	Typical activities	Affected entities	Interested entities	Management agencies
RA1.1 - Strengthening central level institutional capacity for governance	<ul style="list-style-type: none"> developing national IT-based platform for mapping and M&E of delivery of rural infrastructure and public services developing national methodologies for monitoring, reporting and verifying (MRV) GHG emissions reduction from main agriculture sector sources 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> individuals or organizations concerned about environmental quality 	<ul style="list-style-type: none"> Government department at different levels, like ARABs, EEBs, NRBs, etc.
RA1.2 - Strengthening provincial level institutional capacity for governance	<ul style="list-style-type: none"> developing regulations, standards and guidelines for green agricultural practices (GAP) and delivery of rural infrastructure and public services developing mechanisms for program-based budgeting, expenditure tracking and reporting implementing the IT-based platform for mapping and M&E of the delivery of rural infrastructure and public services establishing frameworks for nurturing green skills and talents 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> individuals or organizations concerned about environmental quality 	<ul style="list-style-type: none"> Central and provincial government departments, like ARABs, EEBs, NRBs, etc.
RA2 - Greening agricultural value chains	<ul style="list-style-type: none"> reducing use of chemical fertilizer and toxic pesticide, and treating and recycling livestock and poultry wastes 	<ul style="list-style-type: none"> planters and livestock farmers people affected by land acquisition/occupation 	<ul style="list-style-type: none"> individuals or organizations concerned about environmental quality agricultural inputs suppliers organic fertilizer manufactories organizations concerned about poverty 	<ul style="list-style-type: none"> competent authorities, e.g., provincial and county level ARABs, EEBs county government township government village committees

Result Area	Typical activities	Affected entities	Interested entities	Management agencies
	<ul style="list-style-type: none"> adopting climate-smart agricultural practices—increasing productivity, building resilience, reducing GHG emissions (CO₂, CH₄, N₂O) 	<ul style="list-style-type: none"> planters and livestock farmers 	<ul style="list-style-type: none"> individuals or organizations concerned about environmental quality service providers 	<ul style="list-style-type: none"> competent authorities, e.g., provincial and county level ARABs, EEBs county government township government village committees
	<ul style="list-style-type: none"> training FCs, FAs, WUAs, input suppliers, agro-enterprises, and rural extension staff 	<ul style="list-style-type: none"> planters, livestock farmers, members of FCs, WUCs, input suppliers, agricultural professional managers 	<ul style="list-style-type: none"> Service providers organizations concerned about poverty and women's development individuals or organizations concerned about environmental quality 	<ul style="list-style-type: none"> competent authorities, e.g., provincial and county level ARABs, county government township government village committees
	<ul style="list-style-type: none"> implementing the MRVs for GHG emissions reduction from major agriculture sector sources 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> individuals or organizations concerned about environmental quality 	<ul style="list-style-type: none"> competent authorities, e.g., provincial and county level ARABs, county government township government village committees
RA3 - Increasing access to rural solid waste and wastewater services	<ul style="list-style-type: none"> preparing spatial Integrated Village Development Plans (IVDP) 	<ul style="list-style-type: none"> planters, livestock farmers and other rural residents 	<ul style="list-style-type: none"> individuals or organizations concerned about environmental quality service providers organizations concerned about poverty and women's development 	<ul style="list-style-type: none"> competent government departments at different levels, such as central and provincial ARABs, EEBs, NRBs, etc. county government township government village committees
	<ul style="list-style-type: none"> constructing rural wastewater management systems (e.g., rural decentralized facilities, connections to township systems) 	<ul style="list-style-type: none"> people affected by land acquisition/occupation residents paying for wastewater treatment 	<ul style="list-style-type: none"> Operation unit of wastewater management facilities Service and facility providers individuals or organizations concerned about environmental quality organizations concerned about poverty and women's development 	<ul style="list-style-type: none"> competent authorities, e.g., provincial and county level ARABs, EEBs, HURDBs county government township government village committees affected by land acquisition and house demolition/land occupation
	<ul style="list-style-type: none"> constructing rural solid wastes management systems (e.g., rural sorting, township transfer and recycling) 	<ul style="list-style-type: none"> people affected by land acquisition/occupation residents paying for solid waste 	<ul style="list-style-type: none"> operation unit of solid waste management facilities service and facility providers individuals or organizations concerned about environmental 	<ul style="list-style-type: none"> competent authorities, e.g., provincial and county level ARABs, EEBs, HURDBs county government township government

Result Area	Typical activities	Affected entities	Interested entities	Management agencies
		treatment	quality • organizations concerned about poverty and women's development	• village committees affected by land acquisition and house demolition/land occupation
	• providing training on (O&M) of wastewater and solid waste management systems	• residents paying for wastewater and solid waste management	• O&M units of wastewater and solid waste management systems • O&M service and facility providers • individuals or organizations concerned about environmental quality	• competent authorities, e.g., provincial and county level ARABs, EEBs, HURDBs • county government • township government • village committees affected by land acquisition and house demolition/land occupation
4. Restoring and protecting agricultural ecological ecosystems	• preparing sustainable agricultural ecosystems management plans	• planters and livestock farmers	• individuals or organizations concerned about environmental quality • service provider • organizations concerned about poverty and women's development	• competent authorities, e.g., provincial and county level ARABs, EEBs, • county government • township government • village committees
	• returning crops straw to the farmland to increase soil organic carbon	• planters	• service providers for crops straw recycling/treatment • individuals or organizations concerned about environmental quality • organizations concerned about poverty	• competent authorities, e.g., provincial and county level ARABs • county government • township government • village committees
	• managing acidity and heavy metals to improve soil health and food safety	• planters	• individuals or organizations concerned about environmental quality • service providers • organizations concerned about poverty	• competent authorities, e.g., provincial and county level ARABs • county government • township government • village committees
	• treating aquaculture wastewaters to reduce GHG emissions and pollutant loads entering waterways	• aquaculture farmers	• individuals or organizations concerned about environmental quality • service and facility providers • organizations concerned about poverty	• competent authorities, e.g., provincial and county level ARABs • county government • township government • village committees

Appendix 5: Stakeholder Engagement

No.	Date	Venue	Authorities involved	E&S topics
1	3 Aug 2022	Hunan Provincial ARAB (online)	IPRCC; Hubei PPMO; Hunan PPMO; provincial RRBs, ARABs, and FBs; and county level ARABs, RRBs, etc.	Kick-off meeting: <ul style="list-style-type: none"> Program objectives, scope, fields, DLIs, etc. ESSA arrangements
2	8 Aug 2022	Hongshan Assembly Hall, Wuhan, Hubei	IPRCC, Hubei PPMO, and Hubei provincial authorities incl. RRB, DRC, FB, ARAB, EEB, HURDB, NRB, public resource trading center, etc.	Kick-off meeting of preparation mission in Hubei <ul style="list-style-type: none"> Program objectives, scope, fields, DLIs, etc. ESSA arrangements
3	9 Aug 2022	Hongshan Assembly Hall, Wuhan, Hubei	IPRCC, Hubei PPMO, and provincial authorities incl. EEB, ARAB, FGB, WRB, HURDB, NRB, HC, HRSSB, Women's federation, CAB, RRB, ERB, CTB, PLAC, etc.	E&S seminars with provincial government departments <ul style="list-style-type: none"> Fertilizer and pesticide reduction Livestock and poultry manure disposal Agricultural mulch film, and packaging waste pollution prevention and control Farm product processing Rural waste management Rural wastewater management Rural water supply management EIA requirement for village planning 14th FYP on rural environmental protection 14th FYP on rural revitalization
4	10-11 Aug 2022	Xiantao City, Hubei	IPRCC, Hubei PPMO, and county-level authorities incl. ARABs, HURDBs, WRBs, NRB, EEBs, planning commission offices, women's federation, HCs, CABs, ERABs, CTBs, LSSBs, RRBs, PCPBs, and PLACs	E&S FGDs with relevant government department of project counties/cities and site survey <ul style="list-style-type: none"> Agricultural waste plastic and straw collection and utilization Pesticide and fertilizer reduction Livestock and poultry manure management Rural domestic waste collection and treatment Toilet upgrading Rural domestic wastewater collection and treatment High-caliber farmer training LAR, land transfer, facility farmland management and implementation SSRA and implementation Occupational health supervision and management GRM operation Ethnic minority development Support for vulnerable groups, and management and monitoring of population lifted out of poverty Protection of women's rights and interests Cultural relic protection
5	11-12 Aug 2022	Suixian County, Hubei		
6	13-14 Aug 2022	Honghu City, Hubei		
7	15 Aug 2022	Hongshan Assembly Hall, Wuhan, Hubei	IPRCC, Hubei PPMO, and Hubei provincial authorities incl. RRB, FB, ARAB, EEB, HURDB, EMB, HC, etc.	Summary meeting in Hubei <ul style="list-style-type: none"> Key findings of the environmental survey, Subsequent ESSA arrangements

No.	Date	Venue	Authorities involved	E&S topics
8	16 Aug 2022	Hunan Provincial ARAB	IPRCC, Hunan PPMO, and Hunan provincial authorities incl. ARAB, RRB, FB, NRB, EEB, HURDB, HC, etc.	Kick-off meeting of preparation mission in Hunan <ul style="list-style-type: none"> • Program objectives, scope, fields, DLIs, etc. • ESSA arrangements • E&S seminars with provincial government departments • Fertilizer and pesticide reduction • Livestock and poultry manure disposal • Agricultural mulch film, and packaging waste pollution prevention and control • Farm product processing • Rural waste management • Rural wastewater management • Rural water supply management • EIA requirement for village planning • 14th FYP on rural environmental protection • 14th FYP on rural revitalization
9	17-18 Aug 2022	Hengnan County, Hunan	IPRCC, Hunan PPMO, and county-level authorities incl. ARABs, HURDBs, WRBs, NRBs, EEBs, planning commission offices, women's federation, HCs, CABs, ERABs, CTBs, LSSBs, RRBs, PCPBs, and PLACs	E&S FGDs with relevant government department of project counties/cities and site survey <ul style="list-style-type: none"> • Agricultural waste plastic and straw collection and utilization • Pesticide and fertilizer reduction • Livestock and poultry manure management • Rural domestic waste collection and treatment • Toilet upgrading • Rural domestic wastewater collection and treatment • High-caliber farmer training • LAR, land transfer, facility farmland management and implementation • SSRA and implementation • Occupational health supervision and management • GRM operation • Ethnic minority development • Support for vulnerable groups, and management and monitoring of population lifted out of poverty • Protection of women's rights and interests • Cultural relic protection
10	19-20 Aug 2022	Cili County, Hunan		
11	21-22 Aug 2022	Li County, Hunan		
12	24 Aug 2022	Hunan Provincial ARAB (online)	IPRCC, Hunan PPMO, and Hunan provincial authorities incl. RRB, DRC, FB, ARAB, etc.	Summary meeting in Hunan <ul style="list-style-type: none"> • Further discussion of Program objectives, scope, fields, DLIs, etc. • Key findings of the environmental survey, and subsequent ESSA arrangements

Appendix 6: Feedback of Public Consultation on the ESSA

No.	Issues	Comments	Advised by	Report Revision
About the PforR activities and the government program investments				
1	Section 2.2, Table 2-2: The expected outputs and DLI of preparing spatial IVDPs should be reconsidered.	It's suggested to change them to "number of IVDPs prepared by Program Counties"	Hubei Provincial NRB	Will keep it consistent with the PAD that is to be updated by the Bank's technical team after discussing with the two provinces.
2	Section 2.2, Table 2-2: As the expected outcomes, the "increased quantity of livestock and poultry manure treatment achieved" should be reconsidered.	It's suggested to change it to "increased quantity of livestock and poultry manure recycled"	Hunan Provincial ARAB	Will keep it consistent with the PAD that is to be updated by the Bank's technical team after discussing with the two provinces.
3	Section 2.2, Table 2-2: "DLI2.2-Increased quantity of treated and recycled livestock and poultry manure (Provincial Level)"	It's suggested to change them to "DLI2.2-Increased quantity of recycled livestock and poultry manure (Provincial Level)"	Hunan Provincial ARAB	Will keep it consistent with the PAD that is to be updated by the Bank's technical team after discussing with the two provinces.
4	Appendix 1: The statements of pesticides, pest control, mulch film, and alien species, etc. should be revised.	It's suggested to change them following the comments of Hubei Provincial ARAB	Hubei Provincial ARAB	Remain them unchanged since they originate from the approved "Hubei 14 th FYP for Agricultural and Rural Modernization"
About the E&S risks rating				
5	Section 3.5: The overall E&S risks rating is deemed too high as Substantial	It's suggested to re-rate the overall E&S risks level	Hubei Provincial ARAB, and Hubei Provincial EEB	There will be diverse negative E&S impacts due to the wide coverage and large varieties of the PforR activities, and the overall E&S risks are rated as per the Bank's four criteria. The final rating will follow RSA's comments
6	Section 3.1: About the exclusion criteria	It's suggested to add a criterion "affect the implementation of basic state policy of gender equality and harm to women's rights and interests"	Hunan Provincial Women's Federation	Remain it unchanged as the exclusion criteria was defined in the Bank PforR Policy
About the versions and sufficiency of regulatory documents				
7	Section 4.3, Table 4-4: The "Hubei Water Pollution Prevention and Control Ordinance" for the year of 2019 is outdated.	It should be updated to the year of 2022.	Hubei Provincial ARAB	Updated.
8	Section 4.3, Table 4-4: The "Hubei Soil Pollution Prevention and Control Ordinance" for the year of 2016 is outdated.	It should be updated to the year of 2019.	Hubei Provincial ARAB	Updated.
9	Section 4.3.2: The "Pesticides Management Regulations" for the	It should be updated to the year of 2022.	Hubei Provincial	Updated.

No.	Issues	Comments	Advised by	Report Revision
	year of 2017 is outdated.		ARAB	
10	Section 4.3.3: The legal framework for livestock and poultry pollution management	It's suggested to add the "Hunan Livestock and Poultry Farming Pollution Control Regulations" (2022)	Hunan Provincial ARAB	Updated.
11	Section 4.3.4: The "Fishery Law" for the year of 2000 is outdated.	It should be updated to the year of 2013.	Hubei Provincial ARAB	Updated.
12	Section 4.3.6: The "Technical Guidelines on Domestic Solid Waste Transfer Stations" (GJJ47-2006) is outdated.	It should be replaced with the CJJ/T47-2016 version.	Hubei Provincial ARAB	Revised.
13	Section 4.4: The legal framework for ecological protection	It's suggested to add the regulations on Three Control Lines	Hubei Provincial NRB	Updated.
14	Section 4.4: The legal framework for water and soil conservation	It's suggested to add the "Hubei Specific Measures on Implementing the Water and Soil Conservation Law"	Hubei Provincial WRB	Updated.
15	Section 4.5: The legal framework for health and safety management	It's suggested to add the "Hunan Occupational Diseases Prevention and Control Regulations" (2022)	Hunan Provincial HC	Updated.
16	Table 5-1 in Section 5.1: The Regulations on Letters and Visits is outdated.	It's suggested to update to "Regulations on Letters and Visits (2022)" and updated corresponding terms and contents in the ESSA	Hunan Provincial PCPB, and Hubei Chongyang County PCPB Taojiang PCPB	Updated
17	Table 5-1 in Section 5.1: The Work Safety Law of the People's Republic of China is outdated	It should be updated to The Work Safety Law of the People's Republic of China (June 2022)	Hubei Chongyang County RRB	Updated
18	Appendix 3: The article 6 of Regulations on Letters and Visits is outdated.	It should be updated to article 14 of the Regulations on Letters and Visits	Hunan Provincial PCPB	Updated
19	Table 5-1 of Section 5.1, Section 5.2.5: the publish date of the Plan of Hunan Province for Women's Development (2021-2025), Plan of Hunan Province for Children's Development (2021-2025) and the Outline for Women's Development in China are not exact.	It should be updated to Plan of Hunan Province for Women's Development (2021-2025) (2021.9.16), Plan of Hunan Province for Children's Development (2021-2025) (2021.9.16) and the state council published the Outline for Women's Development in China in September 2022.	Hunan Provincial Women's Federation	Updated
20	Elements 12, Core principle 5 of Appendix 3: the Outline for Women's Development in China (2011-2020) is outdated.	It's suggested to update to Outline for Women's Development in China (2021-2030)	Hunan Provincial Women's Federation	Updated
21	Table 5-1 in Section 5.1: The listed policy for labor protection is not completed.	It's suggested to add the Regulation on Guaranteeing Wage Payment for Migrant Workers	Yongding HRSSB	Updated

No.	Issues	Comments	Advised by	Report Revision
22	Table 5-1 in Section 5.1: The listed policy for land acquisition, resettlement and land use restriction is not completed.	It's suggested to add the Guiding Opinions of the General Office of the CPC Central Committee and the State Council on the Overall Delineation and Implementation of the Three Control Lines in National Spatial Planning (TZ [2019] No. 48) and Notice of MNR, MEE and NFGA on Strengthening the Management of Ecological Protection Red Line (Trial) (MNR [2022] 142)	Hunan Provincial NRB	Updated
About policy analysis and understanding				
23	Section 4.5: Defining pesticides as "hazardous chemicals" is not appropriate.	It's suggested to delete "hazardous chemicals" because only a few pesticides are defined as hazardous chemicals in China.	Hubei Provincial ARAB	Updated
24	Section 4.2.2: The methods of pesticide reduction are incomplete.	It's suggested to add "ecological methods" as another reduction way.	Hubei Provincial ARAB	Updated
25	Section 5.3.1: The description of "Provincial development and reform commission: approving major fixed asset investment projects based on social stability risks and other documents relevant (attaching the SSRA report when applying for project approval)" is not exact.	Currently, ESSA is not a precondition for FSR or project approval. It's suggested to update as "...and conducting SSRA synchronously"	Hubei Consulting Company	Remain it unchanged. According to Article 6 of Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (2012), the results of SSRA should be included in the project FSR and application documents to NDRC and SSRA should be attached.
26	Section 5.4.4: The description of "pension insurance for urban workers. For those who chose this type of insurance, subsidies will be provided in cash for a period equivalent to the number of contributory years to encourage more individuals to join such insurance schemes so as to receive higher pensions after reaching the retirement age." is not exact	It should be updated to "one-time social security subsidies will be paid to individual's urban and rural residents endowment insurance account. For those who participated in pension insurance for urban workers, it will be connected to the pension system according to law at the time of retirement".	Hubei Provincial HRSSB	Updated.
27	Section 5.2.3: about the policies for labor protection	It's suggested to add "the implementing agency shall purchase work-related injury insurance for workers during the project implementation"	Yongding HRSSB	Updated.
About analysis of E&S management systems				
28	Section 4.3.2: Mechanism of	It's suggested to improve	Hunan & Hubei	Updated.

No.	Issues	Comments	Advised by	Report Revision
	pesticide reduction	pesticide reduction measures	provincial ARABs	
29	Section 4.3.3: Mechanism of livestock and poultry farming pollution management	It's suggested to add more techniques such as dry-and-wet manure separation, and wastewater and storm water separation, etc.	Hunan Provincial ARAB	Updated.
30	Section 4.4: Mechanism of water and soil conservation	It's suggested to improve the mechanism of WSC check at construction completion	Hunan & Hubei provincial WRBs	Updated.
31	Section 5.2.3: the sentence of "The Labor Law (2018 Amendment), and the Civil Code, child labor, discrimination, forced labor, etc." is not completed.	It should be updated.	Hubei Provincial HRSSB	Updated.
32	Section 5.4.2: the number of cultural relics in Suixian County is not correct.	It should be updated to "There is now one national cultural relics protection unit in Sui County, 13 provincial protection units, 71 municipal protection units, and 24 county-level protection unit and 824 unclassified immovable cultural relics."	Hubei Suixian County RRB	Updated.
33	Section 5.4.3: The description of "the main channel for labor disputes settlement mechanism is labor arbitration" is not exact.	It should be updated to "labor dispute settlement mechanism includes mediation and arbitration, lawsuit to the court and negotiation. It's a multi-level settlement mechanism".	Hubei Provincial HRSSB	Updated.
34	Section 5.2.1, 5.3.1 and 5.4.1: the description of "monitoring mechanism for implementation progress and effects of social risks mitigation measures", "records of public participation, information disclosure and GRM", etc. are not exact.	There are some related requirements on risk mitigation measures tracking and monitoring and public participation. Thus, it's suggested to update.	Hubei Provincial PLAC	The related description has been deleted.
35	Section 5.3.6: "Women's Development Plan"	It's suggested to update to "Women and Children's Development Plan".	Hunan Provincial Women's Federation	Updated.
36	Section 5.2.5, 5.3.5 and 5.4.5: the description about RRBs is not exact.	It's suggested to update to "usually, it's RRBs at municipal and county level responsible for the effective link between the consolidation and expansion of poverty alleviation achievements and rural vitalization", etc.	Hunan Provincial RRB	Updated
About institutional organization, roles, and responsibilities				
37	Para 2: About the "International Poverty Reduction Center in China (IPRCC) under the Ministry of Agricultural and Rural Affairs	It should be updated to "International Poverty Reduction Center in China (IPRCC) under the National	CPMO	Updated

No.	Issues	Comments	Advised by	Report Revision
	(MARA)" is not correct.	Rural Revitalization Administration (NRRRA)".		
38	Section 5.3.1: the description of municipal/county PLAC is not exact	It's suggested to delete "implementing agency" and "with 2 staff members", update the "project owners" to "subjects of assessment", update "...according to regulations" to "...according to the requirements of related laws and regulations"	Hubei Xiantao PLAC	Updated.
39	Section 5.4.5: the description of "Projects and funds for the protection of women's rights and interests and women's development are prepared by women's federations of governments at all levels and the internal management departments of enterprises arrange every year. At the same time, local women's federations have also set up specific department for the protection of women's rights and interests, children, letters and visits, family disputes mediation, health, and women's development." is not exact	It's suggested to update as "Projects and funds for the protection of women's rights and interests and women's development are prepared by governments and women's federations of governments at all levels and the internal management departments of enterprises arrange every year. At the same time, local women's federations have also set up specific department like rights and interests department, family and children department, women's development department, organizational building and coordination department, propaganda department for the protection of women's rights and interests, family, children, letters and visits, family disputes mediation, health, and women's development, health, gender equality, etc."	Hubei Provincial Women's Federation, and Hunan Provincial Women's Federation	Updated.
40	Section 5.3.1: the responsibilities of provincial PLAC is not exact.	It's suggested to update as "urge and guide the subjects of decision making and assessment to convening different political and legal affairs committees, and authorities for cross-regional / departmental projects"	Hubei Provincial PLAC	Updated.
41	Section 5.3.4: The Suixian Chinese traditional medical hospital is not one of the occupational health examination agency and staff number of occupational Health office is not correct.	It's suggested to delete Suixian Chinese traditional medical hospital, and update the staff of occupational health office from 1 to 2	Hubei Suixian County RRB	Updated
42	About the name of PCPB is not consistent in the ESSA	It's suggested to updated "petition office" and "office for letters and visits" to "PCPB"	Hunan Provincial PCPB	Updated.
About action plans				

No.	Issues	Comments	Advised by	Report Revision
43	Chapter 7: As one of the suggested completion measurements, it's thought difficult to undertake regular odor monitoring at solid waste transfer stations which are short of monitoring devices due to the far locations in rural areas.	It's suggested to consider if the completion measurement is practical.	Hubei Provincial HURDB	It's suggested to undertake odor monitoring by the O&M entities themselves or third-party agencies or other means adaptive to actual situation.
44	Chapter 7: about the recommendation on risk management	It is suggested to update to "first, SSRA, as the initial action, is the most effective and cost-saving measure for social risks management; second, the process of risks mitigation should be people-oriented and reflecting the Party Committee and government's care about the people; third, effective measures should be taken to mitigate risks in a timely manner. Attention to sensitive speculation should be paid when events happen, to prevent adverse effects".	Hubei Provincial PLAC	According to the feedback, there are provisions on social risks identification, tracking, monitoring and public participation. Therefore, this recommendation has been deleted from the action plan.

Appendix 7: Field Visit Records



Fig 1: Manure treatment facilities of a large-scale pig farm, Hengnan, Hunan



Fig 2: Chicken manure composting, Cili, Hunan



Fig 3: A small-scale cattle farm, Cili, Hunan



Fig 4: Aquaculture farming, Xiantao, Hubei



Fig 5: Aquaculture farming, Honghu, Hubei



Fig 6: Aquaculture tailwater treatment, Honghu, Hubei



Fig 7: Township solid waste transfer station, Xiantao, Hubei



Fig 8: Gaoqiao township solid waste transfer station, Cili, Hunan



Fig 9: Solid waste incineration plant, Xiantao, Hubei



Fig 10: Domestic solid waste sorting, Xiantao, Hubei



Fig 11: Three-cell septic tank, Hengnan, Hunan



Fig 12: Rural WWTF (80t/d) operated by a third party, Honghu, Hubei



Fig 13: Township WWTF (300t/d) operated by a third party, Li County, Hunan



Fig 14: Gaoqiao township WWTF (400t/d) operated by a third party, Cili, Hunan



Fig 15: Fertigation, Xiantao, Hubei



Fig 16: Green pest control, Xiantao, Hubei





Fig 17: Small pig farm manure treatment, Cili, Hubei



Fig 18: Aquaculture tail water treatment, Honghu, Hubei



Fig 19: Township solid waste transfer station (compacting facilities, leachate collection tank), Cili, Hubei



Fig 20: Township solid waste transfer station (kitchen waste treatment, goods for credits exchange), Sui County, Hubei



Fig 21: Incineration power plant (waste pool and control room), Hengnan, Hunan



Fig 22: Demonstration area of fertilizer reduction and efficiency improvement in rice field, Honghu, Hubei



Fig 23: Rural wastewater treatment facilities (underground tanks, information disclosure board), Honghu, Hubei



Fig 24: Constructed wetland to treat rural wastewater, Hengnan, Hunan



Fig 25: Crops straw utilization (forage, biomass fuel), Cili, Hunan



Fig 26: Crop straw utilization (forage), Sui County, Hubei

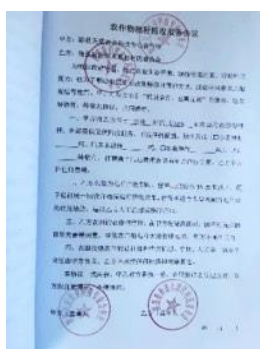


Fig 27: Village-level cooperation agreement on crop straw collection of Tianxia Agricultural Science and Technology Specialized Cooperative, Sui County, Hubei (Sample)



Fig 28: Waste recycling and utilization facilities and bonus points record of Anju town, Sui County, Hubei

积分兑换表			
积分	兑换物品	兑换数量	兑换日期
100	大米	10斤	
200	食用油	5斤	
300	洗衣粉	10斤	
400	肥皂	10斤	
500	鸡蛋	10斤	
600	鸭蛋	10斤	
700	鸭蛋	10斤	
800	鸭蛋	10斤	
900	鸭蛋	10斤	
1000	鸭蛋	10斤	
1100	鸭蛋	10斤	
1200	鸭蛋	10斤	
1300	鸭蛋	10斤	
1400	鸭蛋	10斤	
1500	鸭蛋	10斤	
1600	鸭蛋	10斤	
1700	鸭蛋	10斤	
1800	鸭蛋	10斤	
1900	鸭蛋	10斤	
2000	鸭蛋	10斤	



Fig 29: Waste recycling and utilization facilities, bonus points record, products for exchange of Shennan Village, Li County, Hunan

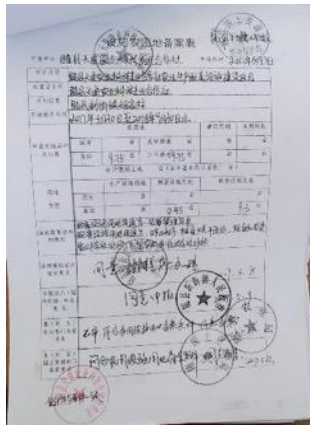


Fig 30: FALU registration form for crop straw recycling and treatment facilities of Tianxia Agricultural Science and Technology Specialized Cooperative, Sui County, Hubei

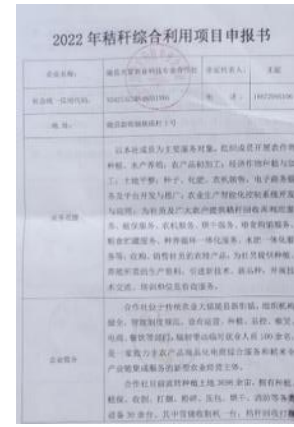


Fig 31: Cultural Relics Bureau's reply on site selection of a rural energy project, Li County, Hunan



Fig 32: Application for site selection of Jiangya township solid waste transfer station, Cili, Hunan



Fig 33: Land pre-examination approval for Jiangya township solid waste transfer station, Cili, Hunan



Fig 34: Land acquisition approval for Jiangya township solid waste transfer station in Cili, Hunan



Fig 35: Land use right certificate of Jiangya township solid waste transfer station in Cili, Hunan



Fig 36: FALU registration form of Zhenbang livestock breeding and manure treatment facilities in Chongyang, Xianning, Hubei



Fig 37: Examination and registration document of Changyupu dry grain industry cold storage project occupying village collective general cultivated land issued by NRB, Cili, Hunan