



INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Environmental and Social Systems Assessment (ESSA)

ON

PROPOSED LOANS

IN THE TOTAL AMOUNT OF US\$400 MILLION EQUIVELANT

TO THE

PEOPLE'S REPUBLIC OF CHINA

FOR A

YANGTZE RIVER PROTECTION AND ECOLOGICAL RESTORATION PROGRAM

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October 2021

Water Global Practice  
East Asia And Pacific Region

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World Bank Program-for-Results Financing  
Yangtze River Protection and Ecological Restoration

Program

**Environmental and Social Systems  
Assessment (ESSA)**

(Draft)

World Bank

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October 2021

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# Abbreviation

<b>ADB</b>	Asian Development Bank
<b>DLI</b>	Disbursement-Linked Indicator
<b>DMS</b>	Detailed Measurement Survey
<b>E&amp;S</b>	Environmental and Social
<b>ESF</b>	Environmental and Social Framework
<b>ESMS</b>	Environmental and Social Management System
<b>ESSA</b>	Environmental and Social System Assessment
<b>FGD</b>	Focused Group Discussion
<b>FYP</b>	Five Year Plan
<b>IA</b>	Implementation Agency
<b>IPF</b>	Investment Project Financing
<b>GRM</b>	Grievance Redress Mechanism
<b>LA(R)</b>	Land Acquisition and Resettlement
<b>MEE</b>	Ministry of Ecology and Environment
<b>NDRC</b>	National Development and Reform Commission
<b>NIMBY</b>	Not in My Backyard
<b>OHS</b>	Occupational Health and Safety
<b>PAP</b>	Program Action Plan
<b>PDRC</b>	Provincial Development and Reform Commission
<b>PforR</b>	Program-for-Results
<b>PIA</b>	Project Implementation Agency
<b>PIU</b>	Project Implementation Unit
<b>PMO</b>	Program Management Office
<b>SIA</b>	Social Impacts Assessment
<b>SSRA</b>	Social Stability Risk Assessment
<b>TA</b>	Technical Assistance
<b>TN</b>	Total Nitrogen
<b>TP</b>	Total Phosphorus
<b>WWTP</b>	Wastewater Treatment Plant
<b>YREB</b>	Yangtze River Economic Belt

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## 1 Overview

### 1.1 Objective and Tasks

1. The Yangtze River Protection and Ecological Restoration Program (hereinafter, the “Program”) aims to improve institutional coordination, enhance ecological protection and reduce water pollution in selected regions of the Yangtze River Basin. The Program consists of two components – an Investment Project Financing (IPF) component and a Program-for-Results (PforR) financing component.

1) **IPF component:** the central basin component provides technical assistance for promoting cross-sectoral coordination and inter-jurisdictional cooperation toward the common goals of improving water quality and ecological protection in the Yangtze River Basin. Activities include strategic research, institutional coordination, capacity building, etc.

2) **PforR component:** this component supports the implementation of the Watershed Protection and Governance Plan for Five Tributaries, One Lake and One River (2020-2035) in Jiangxi Province, and the Dongting Lake Integrated Water Environment Management Plan (2018-2025) in Hunan Province under the Outline of the YREB Development Plan, and the Action Plan for the Yangtze River Conservation and Rehabilitation at the state level.

2. Environmental and social (E&S) management documents are prepared separately for the IPF Component according to the Bank’s IPF requirements and procedures. This report is the ESSA report for the PforR component in Jiangxi and Hunan Provinces.

3. The Program will manage E&S risks in accordance with the national and local existing legal framework and institutional system. The ESSA reviewed the applicable national and local E&S safeguard systems and procedures, assessed to what extent the national and local systems comply with the core principles and requirements of the Bank PforR policy and directive, and proposed actions to fill the gaps and recommendations to improve implementation effects based on the issues identified in the assessment. The main tasks of the ESSA are summarized as follows:

- Assessing the applicable national and local policies and regulations on E&S risks applicable to the Program;
- Assessing the management and implementation procedures of the applicable provincial and local E&S management systems for the PforR supported activities;
- Investigating and assessing the institutional capacity of the authorities involved in E&S impacts management; and
- Proposing recommendations and actions to improve the performance level of the existing systems according to the national system requirements and the Bank’s PforR core principles.

### 1.2 Methodologies

4. The ESSA analyzes and assesses the proposed Program activities, potential E&S impacts and risks, and national and local systems for impacts and risks management, and proposes recommendations and actions for gaps identified between the existing management systems, and the Bank’s PforR policy and directive. Assessment of the national and local systems starts from identifying the potential E&S impacts associated with the relevant Program activities, and the corresponding domestic management systems as well as related principles stipulated in the Bank’s PforR policy and directive; then, assessing the existing E&S management systems through the policies and regulations available, the institutional settings and its operation performance, and the capacities of the organizations involved; finally, assessing the past and/or ongoing projects in sample counties, and appraising the implementation of relevant policies and regulations, the capacities of related agencies involved, and public satisfaction. The following principles were applied in selecting the sample counties: i) geographic coverage and distribution to cover all relevant watersheds when possible; ii) inclusion of proposed demonstration counties; and iii) inclusion of representative areas of ethnic minority villages.

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5. To ensure effective assessment, the Bank team began to conduct consultations with various levels of governments, agencies and enterprises concerned and local communities from the beginning, including training on the Bank's PforR policy, information collection, field visits and consultations. The two provinces and the sample counties provided relevant information, and the Bank staff and consultants conducted investigation, assessment, consultation and report preparation. During the preparation of this report, the following methods were used during the information collection and consultation:

- **Secondary information collection and analysis:** Secondary information was collected and utilized where possible, such as information provided by the provincial authorities and sample counties, information from other local projects implemented by the Bank in the past two years, online public information, and national and provincial laws, regulations, policies and guidelines on E&S management;
- **Primary information collection and analysis:** Primary information was collected in multiple ways, such as interview with provincial authorities, and visits/consultations in the sample counties (November and December 2020, and March 2021 in Jiangxi; April and July 2021 in Hunan), to understand the responsibility division and implementation effectiveness of the E&S management system.
- **Whole-process stakeholder engagement:** From project identification to assessment and preparation of this report, the Bank team has kept communicating with key stakeholders at each stage. The Bank team interviewed all relevant provincial governments, selected municipal, county and township governments, and consulted the representatives of agencies and enterprises, potentially affected community leaders and residents, women, the poor, and ethnic minority residents by means of face-to-face meeting, interview and videoconference.
- **ESSA report consultation:** Consultation on the draft report was conducted with the provincial governments, the governments of 11 sample counties, and some community and enterprise representatives by means of face-to-face consultation, online meeting and written feedbacks in early August 2021. The feedbacks have been incorporated into the revised report. See Appendix 5 for main information collection activities and consultation results.

### 1.3 Program Description

6. The government program is defined by the YREB Development Plan and Action Plan, along with subsidiary provincial plans that outline the specific activities, expected results, and indicative targets within each province. The PforR Program will support two such subsidiary provincial plans: The Jiangxi "5-Rivers-1-Lake" Plan (2020-2035) (hereinafter referred as "Jiangxi program"), and the Hunan "Integrated Water and Environment Management Plan (2018-2025) (hereinafter referred as "Hunan program") for Dongting Lake Basin". The government's program at the provincial level in Jiangxi aims to "promote coordinated socio-economic development and sustainable resource management, safeguard the health of rivers and lakes, and ensure environmental protection while supporting a rich, beautiful, happy and modern Jiangxi." It outlines the basic principles, guidelines, and implementation arrangements for management and protection of Poyang Lake Basin, along with specific activities and targets within seven areas: (a) water resources protection; (b) water pollution control including solid waste management; (c) water environment improvement; (d) rehabilitation of river and lake ecosystems; and (e) enhancement of river-and-lake management capacity. The government's program at the provincial level in Hunan aim to ensure the safety of water supply and to significantly improve water and environmental quality. It outlines the basic principles, guidelines, and implementation arrangements for governance and protection, and describes specific activities, expected results and indicative targets. It states the expectation that by 2025 (a) 95 percent of rivers and waterbodies will reach water quality of Grade III, and the level of total phosphorous will be reduced by 10 percent relative to 2018; (b) the utilization rate of animal manure will remain at least 75 percent, and fertilizer consumption will remain at zero growth relative to 2020; (c) the coverage rate of rural wastewater treatment facilities will reach 90 percent, and the coverage rate of rural solid waste collection and treatment will reach 100 percent; and (d) the area of wetland restoration will reach 1 million mu (66 thousand ha).

7. The Program's geographic focus within Jiangxi Province is the Poyang Lake sub-basin. The



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target counties in Jiangxi under the PforR are Dayu county, Chongyi county, Yudu county and Yongfeng county of Ganzhou municipality, Yugan County of Shangrao municipality, and Fuliang county of Jingdezhen municipality. The Program's geographic focus within Hunan Province is the Dongting Lake sub-basin. The target counties under the PforR in Hunan are Wancheng district of Changsha municipality, Miluo county-level city of Yueyang municipality, Ziyang district of Yiyang municipality, Shimen county of Changde municipality, and Yuanling county of Huaihua municipality.

8. The Program supports select activities from the larger set of activities supported by the Government program. All activities contribute directly to the PDO, "to improve institutional coordination, enhance ecological protection and reduce water pollution in select regions of the Yangtze River Basin." Technical selection is based on four primary criteria: (1) Activities are chosen to align with the Yangtze River Protection Law (2021), a key part of the legal framework supporting the Government program. (2) Activities are selected to contribute to institutional improvements (plans and policies, data systems), and institutional sustainability and efficiency (e.g. improved integrated wastewater services) in line with the Bank's focus on filling key institutional gaps under the current CPF. (3) Activities are selected to ensure consistency across "levels" of the Program. I.e. policies and guidelines developed at provincial level address the same goals as the selected county on-ground activities. (4) Activities contribute to global public goods, such as the collection and disposal of agricultural plastics waste to prevent river-born plastic pollution, and high priority local public goods (e.g., reductions in non-point source agricultural pollution) that have been identified by the government and the Bank team's technical assessment as most likely to have substantial benefits. Activities in the government program that do not support these technical criteria are not included in the Program. The scope and spread of activities are further defined by the expenditure framework, which consists of select budget lines representing the Province's expenditure on the activities listed in Table 1-1, and the sub-basin plans (i.e. Government program). The plans cover the majority of their respective province in geographic terms, and encompass the activities listed under Table 1-1. However, activities supported by the PforR are a small proportion of the total activities proposed under the sub-basin plans in terms of both type and number of activities, as per Table 1-1. The specific activities have been further assessed against the investment plan for the 14<sup>th</sup> FYP and environmental and social exclusion criteria to avoid the inclusion of potentially high-risk activities.

9. Bank supported activities at the provincial level (and sub-basin level) are mainly TA activities (plans, policies, data systems, pollution awareness campaigns). Physical activities and investments supported under the Bank financed program are limited to eleven demonstration counties within the two provinces and include 1) improved wastewater services at the county and township level, including construction and upgrading of wastewater treatment facilities (normally refer to facilities with a capacity of equal to or less than 20,000 ton per day) and sewer lines; 2) manure recycling incentives and outreach on existing livestock farms; 3) collection and proper disposal of agricultural plastic waste. The timeline for the PforR is 2022 to 2026, with 2021 the baseline year against which outcomes are measured. The expenditure framework comprises select budget lines that underpin the implementation of the two sub-basin plans. Physical activities selected under the PforR program reinforce the key goals of the Government program, but are largely self-contained. WWTP activities focus on county and township facilities, which are largely discrete systems from either rural or urban systems. Physical activities for manure management and reuse are largely confined to the farms where the manure is produced, with limited implications for activities elsewhere.

10. The DLIs and key results of the Bank's Program are:

**DLIs:**

- (1) DLI 1: Strengthened River Chief System for institutional coordination. DLI 1 is defined as the number of counties and municipalities that have connected their river chief information platform to the provincial river chief information platform, and the number of provinces that have connected their provincial platform to the basin river chief information platform.
- (2) DLI 2: Improved integrated water environment management system in the demonstration sub-basins. DLI 2 is a composite index with a series of discrete actions with recurrent compliance monitoring, including (a) approval of water environment protection plans for

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the demonstration sub-basins (Gan River in Jiangxi and Yuan River in Hunan); (b) establishment of a water environment information platform (Hunan) or a cross-provincial river chief cooperation mechanism (Jiangxi with Guizhou); and (c) implementation of ecological flows (meeting defined flow targets) on the mainstream and major tributaries, in each of the two demonstration sub-basins.

- (3) DLI 3: Reduced pollutants entering waterways. DLI 3 includes three sub-DLIs that are aimed at reducing plastic, point and non-point source pollution in waterways:
- i. DLI 3.1 (wastewater) is defined by the number of demonstration counties with integrated wastewater systems established and meeting requirements of (a) a consolidated operator (one entity responsible for the sewer network and plant) to encourage integrated and efficient maintenance and operations, (b) an increase in chemical oxygen demand (COD) reduction by at least 10 percent during project implementation at wastewater treatment plants due to efficient utilization of plant capacity, and (c) integrated planning (a county-level strategic plan is in place for sustainable township wastewater services).
  - ii. DLI 3.2 (plastics) is defined by the quantity of agricultural plastic film (mulch) recovered through plastic collection and recycling services. Plastic film is a major contributor to waterborne plastics pollution.
  - iii. DLI 3.3 (manure) is defined by the rate of utilization of livestock and poultry manure from large-scale farms in the demonstration counties. Un-utilized and improperly managed manure is a source of NPS water pollution. Utilization of manure includes generation of biomass energy and use as organic fertilizer on fields (a partial substitute for synthetic fertilizer).

### **Key Results:**

- (1) Strengthened river chief system for institutional coordination: indicated by the number of county and municipal level information platforms connected to provincial level platforms, plus the number of provincial level platforms connected to the basin level platform (for integrated data sharing from local to basin scale).
- (2) Improved integrated water environment management system for the demonstration basins: indicated by the number of defined water environment management actions undertake at sub-basin level, including (i) approval of sub-basin water environment protection plans; (ii) enhancement of inter-jurisdictional coordination (i.e. that is, inter-provincial river chief cooperation agreement for Jiangxi and water environment information sharing platform for Hunan); and (iii) compliance of ecological flows (meeting defined flow targets) on the mainstream and major tributaries, in each of the two demonstration sub-basins.
- (3) Annual targets for key pollutant reduction met indicated by the number of key pollutant reduction targets met (yes/no) by the demonstration counties. The pollution reduction targets refer to: (i) the number of demonstration counties that have established integrated wastewater service systems, (ii) the weight (tons) of agricultural plastic film collected, and (iii) the number of demonstration counties meeting their respective annual livestock / poultry manure utilization rate targets proportion of utilized livestock/poultry waste.

11. The Program will be implemented on various levels to ensure supervision, and cross-sectoral and cross-level coordination. The Program Management Office (PMOs) under the Jiangxi and Hunan Provincial Development and Reform Commission (PDRC) will be responsible for overall Program guidance and management. The implementation agencies (IA) for activities include different levels and sectors of government authorities. The provincial authorities for relevant activities are responsible for overall management and supervision during the implementation stage; while the county authorities are responsible for planning, implementation and monitoring of specific projects. The water resources departments are responsible for river basin management and water pollution reduction; the agriculture and rural affairs departments are responsible for chemical fertilizer reduction and manure recycling incentives and outreach on existing livestock farms, and

housing and urban-rural development departments are responsible for the wastewater and solid waste management. Other functional departments such as ecology and environment departments, natural resources departments, health departments, emergency management departments, and so on are responsible for providing technical supports and supervising the environmental and social management related issues within their scope of responsibility.

12. Both the Jiangxi and Hunan Provincial Governments have rich experience in international financed projects, in which the Jiangxi Provincial Government has implemented about 24 projects financed by the World Bank and Asian Development Bank (ADB), and the Hunan Provincial Government has implemented over 50. The two provinces have good experience and performance for the environmental and social management and monitoring subject to the World Bank and ADB standards, as found during previous field investigations to projects either financed by international development institutions or government. For example, Jiangxi province is implementing the Poyang Lake Water Environment Project and Integrated Rural Water Supply and Wastewater Management Project financed by the World Bank, which include similar types of activities as in this Program and the environmental and social management performance so far is satisfactory. To manage the relevant E&S issues, two provinces currently provide for tens of staff for each department at provincial and county level. The specific staff number are not exactly the same in different areas, decided through official documents and procedures to allocate/maintain human and other resources for meeting the dynamic demand.

**Table 1-1 Planned Activities during the 14<sup>th</sup> Five-year Plan Period in Jiangxi and Hunan Province and the Proposed PforR Program Activities**

the Proposed PforR Program Activities			
Priority area	Planned activities during the 14 <sup>th</sup> FYP period		Activities within PforR boundary
	Type of Activity	Activities Description	
Jiangxi			
1. Water resources protection	Water source project construction (water source construction and water supply)	water source and water supply network construction and improvement	/
	Water saving transformation and efficient irrigation projects, and extension of water saving irrigation techniques for large and medium irrigation areas	Irrigation facility construction and improvement	/
2. Water pollution prevention and control	Development zone WWTP upgrading	Industrial wastewater treatment improvement	/
	County and township wastewater collection and treatment	County and township WWTP and sewer network construction and improvement	County and township WWTP and sewer network construction and improvement (normally refer to WWTPs with ≤20,000 ton per day capacity)
	Rural wastewater collection and treatment	Rural WWTP and sewer network construction and improvement	/
	Promoting chemical fertilizer reduction	Subsidization for chemical fertilizer substitution	/
	Pesticide reduction and harm control	Pesticide substitution	/
	Rehabilitation of historical polluted sites	Ecological rehabilitation of abandoned mines	/
3. Water environment improvement	River and lake water pollution management and ecological protection	Aquatic ecology integrated management, including river cleanup, livestock and poultry waste recycling, pollution prevention and control, mountain pond reinforcement, etc.	/
	County, township and village	County, township and village	Agricultural plastic mulch

	domestic waste collection, transfer and harmless treatment	waste collection, treatment and sorting, river waste cleanup	recycling
4. Aquatic ecosystem rehabilitation	Forest park nature reserve, and wetland ecological protection and rehabilitation	Wetland rehabilitation and integrated management, and forest park construction	/
	Water and soil conservation	Water and soil conservation projects, including bank management, conservation forests, forestation, etc.	/
5. Management capacity building	Institutional and capacity building	<ul style="list-style-type: none"> <li>Information platforms, and relevant policies and guidelines for water environment management, and pollution prevention and control</li> <li>Water resources distribution of the trunk and main tributaries of the Ganjiang River</li> </ul>	Information platforms, and relevant policies and guidelines for water environment management, and pollution prevention and control
Hunan			
1. Water supply security	Water diversion and replenishment, and associated networks	1) Water replenishment projects, solving water resources problem in key areas south of Dongting Lake effectively 2) Reservoir water source projects around Dongting Lake 3) Water diversion projects 4) Rural water supply water source projects, and associated water supply network construction or reconstruction 5) Township illegal work cleanup in drinking water source conserves 6) County-level and above centralized drinking water source conservation projects, setup of boundary markers and warnings signs, and water source isolation and protection measures 7) Construction of water source water quality monitoring networks 8) Zone metering management of water supply networks, and improvement of leaking and aged networks	/
	Drinking water source protection		
2. Water pollution prevention and control	County and township wastewater management	1) Construction of county and township wastewater treatment facilities, and construction or reconstruction of associated sewer networks 2) Construction or reconstruction sludge harmless disposal facilities 3) Construction or expansion of domestic waste incineration projects	1) Construction of county and township wastewater treatment facilities, and construction or reconstruction of associated sewer networks 5) Construction of township wastewater treatment facilities in the lake area 8) Construction, reconstruction or expansion of livestock and poultry manure treatment
	Domestic waste collection and treatment		
	Non-point source pollution control		

		4) Landfill improvement and inventory control 5) Construction of township wastewater treatment facilities in the lake area 6) Toilet manure management 7) Chemical pesticide reduction 8) Construction, reconstruction or expansion of livestock and poultry manure treatment demonstration projects (including manure recycling of existing breeding farms) 9) Standardization and improvement of aquaculture ponds in the Dongting Lake area 10) Measurement of formulated fertilization 11) Green manure cultivation 12) Extension of integrated water and manure application 13) Construction of demonstration areas of watershed agricultural non-point source pollution control 14) Control of above-standard industrial pollution sources 15) Wastewater collection and treatment of industrial clusters at or above the provincial level	demonstration projects (including manure recycling of existing breeding farms) 11) Green manure cultivation 13) Construction of demonstration areas of watershed agricultural non-point source pollution control
	Industrial waste management		/
3. Aquatic ecology protection and rehabilitation	Canal and pond sludge dredging	1) Dredging and storage increase action of canals and ponds in the lake area	/
	Nature reserve construction	2) Black poplar cleanup in the Dongting Lake nature reserve	
	Wetland ecological rehabilitation	3) Construction of a state-level aquatic germplasm resource conserve	
	Water and soil conservation	4) Dongting Lake wetland ecological rehabilitation 5) Forestation and forest appearance improvement around Dongting Lake and in the upper reaches of the four tributaries 6) Forest improvement	
4. Management capacity building	Institutional and capacity building	Establishing an information platform, and promulgating policies and guidelines on province-wide water environment management and pollution control	Establishing an information platform, and promulgating policies and guidelines on province-wide water environment management and pollution control

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## 2 Screening of Program's E&S Impacts

### 2.1 E&S Exclusion List

13. During the Program design and E&S assessment, the principles and requirements of E&S impacts screening in the Bank policy are fully considered, and the activities included in government programs are screened to: 1) identify those activities unsuitable for inclusion in the Program due to potential high E&S risks; and 2) areas requiring further E&S system assessment.

14. When defining the boundary of the Program, the exclusion principles are first applied, where all activities with the following potential major E&S impacts are excluded:

- 1) Significant conversion or degradation of critical natural habitats or critical cultural heritage sites;
- 2) Air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems;
- 3) Workplace conditions that expose workers to significant risks to health and personal safety;
- 4) 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;
- 5) Large-scale changes in land use or access to land and/or natural resources;
- 6) Adverse E&S impacts covering large geographical areas, e.g. new or significant expansion of large-scale water (surface and groundwater) resources infrastructure, including large dams, or activities involving the allocation or conveyance of water, including inter-basin water transfers or activities resulting in significant changes to water quality or availability<sup>1</sup>;
- 7) Significant cumulative, induced, or indirect impacts;
- 8) Activities that involve the use of forced or child labor;
- 9) Marginalization of, discrimination against, or conflict within or among, social (including ethnic and racial) groups; or
- 10) 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 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities from land and natural resources that are subject to traditional ownership or under customary use or occupation; or (c) have significant impacts on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities' cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected communities.
- 11) Activities that are classified as Class A (EIA Report category) according to the national *Catalogue for the Classified Management of the Environmental Impact Assessment of Construction Projects*.

15. Second, proposed Program activities have been subject to further E&S impact analysis. In view of great impacts of breeding farm shutdown or relocation on farmers' livelihoods, potential E&S impacts (including land acquisition and NIMBY<sup>2</sup> risks) of waste treatment and other large infrastructure, and serious impacts of river intercepting facilities on water resources and flood discharge, the Program will further exclude breeding farm relocation or closedown, construction of waste treatment and other large infrastructure, and river intercepting facilities. After activities with high E&S risks are excluded, the Program supports county and township wastewater collection and treatment, manure recycling of existing breeding farms, and agricultural plastic mulch recycling.

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<sup>1</sup> Para. 16 of Bank Guidance Program-for-Results Financing Environmental and Social Systems Assessment (September 18, 2020).

<sup>2</sup> 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.

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## 2.2 Program Activities

16. The Program activities fall into the following types:

- **Jiangxi Program:** 1) county and township wastewater collection and treatment; 2) agricultural plastic mulch recycling; 3) manure recycling of existing breeding farms; and 4) institutional and capacity building.
- **Hunan Program:** 1) county and township wastewater collection and treatment; 2) agricultural plastic mulch recovery; 3) manure recycling of existing breeding farms; and 4) institutional and capacity building.

17. As indicated in Appendix 3, 1) county and township WWTPs are proposed with the capacity of 5,000 to 20,000 ton/day, in addition, pipeline works are needed with various length subject to the site situation; 2) agricultural plastic mulch recycling is expected to establish the agricultural plastic film collection and statistics systems with inventories made by the collection sites; 3) the manure recycling of existing breed farms in Hunan aims to further increasing the resource utilization rate to no less than 75%. Based on the scale and nature of these activities, and the fieldwork results, these activities do not fall into the situations defined in the above exclusion list. The institutional and capacity building activities for the two provinces are designed to improve environmental management and promote ecological protection, and are not included in the exclusion list, either. Accordingly, these types of activities could be included in the PforR and subject to further E&S impact analysis.

## 2.3 Associated Activities

18. According to the Bank Guidance on ESSA for PforR, associated activities are those that would be required to meet Program objectives but are not explicitly defined as Program activities or included in the expenditure framework. The main types of physical Program activities are: 1) construction and upgrading of county and township wastewater treatment facilities and sewer lines; 2) construction of manure recycling facilities of existing livestock farms; 3) agricultural plastic mulch recycling. Of which, 1) the produced sludge from the county and township wastewater treatment facilities are disposed by existing solid waste treatment facilities, such as incinerators or landfills; 2) the fertilizers produced by the manure recycling facilities will go directly to the markets or the farmland; 3) the collected plastic mulch will enter the well-established waste plastic recycling and reproduction chain that are operated under commercial market mechanism. The Program does not involve any associated project that are required to meet Program objectives but are not explicitly defined as Program activities. The due diligence carried out during ESSA preparation has covered the existing operating facilities (including landfills, incineration plants and plastic recycling treatment plants) in the sample counties, and it is found that the domestic ESMS can well manage their E&S impacts and risks.

## 2.4 E&S Impacts and Risks

19. Following the above exclusion procedure, the Bank team has performed a further E&S impact analysis on the activities within the PforR boundary, giving consideration to: 1) likely E&S effects; 2) likely E&S contextual risks; 3) likely institutional capacity and complexity risks; and 4) likely political and reputational risks. Assessments are performed on all activities involved against the four dimensions concerned, and the results show that these activities have different levels of E&S risks. Activities with potentially high risks will be excluded; while other activities are of substantial, moderate or low risks, which could be mitigated through the E&S management systems. The results of E&S risks and impacts screening are shown below. See **Appendix 1** for a detailed analysis.

20. **1) Potential E&S impacts:** Ecological rehabilitation and pollution control activities will generate E&S benefits, including pollutants reduction, improved river and lake water quality and ecological environment, which will greatly improve the local ecological and living environments,

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and contribute to the ecological rehabilitation of the Yangtze River Basin.

21. The Program supports county and township wastewater collection and treatment, manure recycling of existing livestock farms, and agricultural mulching film recovery. These activities will generate E&S risks and impacts of different levels.

22. Based on the fieldwork, these activities are of low, moderate or substantial E&S risks, and their impacts can usually be avoided or mitigated through well-known mitigation and management measures. These activities' potential negative environmental impacts mainly include:

- Dust, noise, soil erosion, wastewater, solid waste, hydrological disturbance, vegetation destruction, disturbance to wild animal habitats, workers' safety, traffic disturbance, etc. at the construction stage, which are temporary and localized to construction sites, can be reduced and mitigated through good construction management, and will disappear after the completion of construction.
- Noise and wastewater during the operation of wastewater treatment facilities, wastewater and odor during the operation of waste collection and transfer facilities, workers' safety management, proper use of chemical fertilizers, etc., which are predictable, can be reduced and mitigated through well-known techniques and measures, and will not cause major environmental risks.

23. Potential social impacts include:

- **Cultural heritage impacts:** Although some construction activities are included in the Program, they are all small-scale and unlikely to affect cultural heritages.
- **Labor impacts:** protection of the rights and interests of the workers of contractors and agencies, living environment risks in camps and living areas, risks of disturbance to nearby communities, workers' occupational health and safety (OHS) risks, etc.
- **Community impacts:** The site selection of wastewater treatment facilities may lead to NIMBY risks, such as impacts on the living environment and property value of community residents, disease brought by labor influx, and potential environmental, traffic and safety problems during construction and operation.
- **Involuntary resettlement:** Construction of county and township wastewater facilities and livestock and poultry manure treatment facilities involve a small amount of land acquisition, and the construction of pipelines involves temporary land use. With those impacts, the livelihoods of farmers will be affected. On the other hand, the replacement of chemical fertilizers with organic fertilizer may lead to extra costs, and farmers may lack guidance.
- **Impacts on ethnic minorities:** Some Program activities are located in ethnic minority areas, and thus, meaningful consultation with ethnic 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.
- **Rights and interests of vulnerable groups:** The Program may bring additional living costs to vulnerable groups, such as wastewater treatment charges and costs of sewer connection to houses. On the other hand, the rights and interests of vulnerable groups in design, construction and operation should not be neglected, such as the site selection of wastewater treatment facilities.
- **Women's rights and interests:** Many rural women will benefit from wastewater management, and their opinions should be respected in design, construction and maintenance.

24. In addition to physical works, the Program also includes TA activities, including monitoring system establishment, coordination and cooperation, staff training, training for public awareness raising on river and lake protection, public participation in river and lake protection activities, water allocation for the mainstream and tributaries and basin protection policy research, including the determination, implementation, monitoring and supervision of ecological flow requirements. Implementation of these activities will help improve capacities of IAs, raise the awareness of public in river and lake protection, enhance the rural living environment and improve the health of rural population. There are minimal or no direct adverse environmental and social risks, except for some small number of workers will be involved. Meanwhile, outcomes of research activities, if



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implemented, may have potential downstream E&S implications. Assessment of such indirect downstream impacts are presented in Annex 1 for each TA activities. Activities related to public participation on river and lake environment protection may involve some outdoor work, and the related research and activities may require inter-departments coordination. The water allocation study may have potentially substantial downstream E&S implications, while, such study is essentially an optimization exercise of the existing water allocation scheme that has been running for decades, with integrated consideration of ecological flows and environmental considerations, along with urban and rural, industrial and agricultural demands. E&S consideration is inherently built in the study, with a focus on ecological flows and it is unlikely that the TA recommendations would imply significant adverse E&S impacts. Therefore, there is no potentially high risks from the TA activities under the Program, and the envisaged E&S considerations are integrated into the TA activity itself.

25. Besides the above-mentioned project-specific E&S impacts, the cumulative impacts of PforR activities are also taken into account for the overall likely E&S effects analysis. In this regard, it is worth noting that all the individual activities under the PforR are all small scale, pro-environmental protection activities which scatter around in multiple counties in a vast geographical region of two provinces. Provided that the local authorities are prioritizing the equal distribution of these investments across municipalities, it is not envisaged that multiple activities will concentrate in one location. As designed, the Program will not involve sensitive environmental areas. Since all the activities are inherently environmental protection and enhancement activities, the net effects will be significant add-up of pollution reduction and environmental improvement in the two provinces, and there are minimum or no cumulative negative E&S impacts envisaged at the regional scale. The cumulative positive environmental effects would mainly be reflected in the following aspects:

- **Pollution reduction through wastewater treatment plants:** The construction of county and township and associated sewer networks will substantially reduce the pollutants into surface water bodies at each county and township area. Such WWTPs will typically reduce the discharge of pollutants such as COD by 70-95%, NH<sub>3</sub>-N by 80-97%, total phosphorus (TP) by 50-90% and total nitrogen (TN) by 70-90% respectively<sup>3</sup>. The cumulative benefits of such pollution reduction of all WWTPs would be significant in the geographical scale of two provinces.
- **Pollution reduction due to livestock waste treatment and utilization:** Treatment and utilization of livestock waste will significantly reduce pollution discharge from such farms. According to statistics<sup>4</sup>, the livestock manure treatment system would typically achieve pollutant reduction of COD by about 40-95%, BOD<sub>5</sub> by 60-96%, coliform by 70-97%, TP by 50-95%. In the case of full utilization as fertilizers for land application, a more robust reduction can be achieved. The add-up of multiple livestock waste treatment systems under the PforR (likely several tens to several hundreds) would certainly bring significant positive environmental benefits for Yangtze river basin.
- **Pollution reduction due to substitution of chemical fertilizer with organic fertilizer produced from manure:** In addition to the direct reduction of pollution through livestock waste treatment utilization, additional environmental benefits from livestock manure utilization can be achieved from the substitution of chemical fertilizers. The organic fertilizers are expected to substitute about one-third of the chemical fertilizers, which implies significant positive benefits in terms of environmental pollution reduction, soil quality improvement, and environmental and community health.

26. In sum, the Program's E&S risk rating is "substantial".

27. **2) Likely E&S contextual risk factors:** Except TA activities that cover the whole basin, physical works are mostly conducted in small towns and villages, where wastewater treatment, waste collection and transfer facilities are close to townships or villages, and not located in natural habitats. Livestock and poultry manure recycling facilities are mostly located in existing breeding farms, either do not involve additional land, or small-scale of land use. No facility will convert farmland into construction land, but will be located on planned rural infrastructure land, and must

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<sup>3</sup> Estimate is based on statistics of existing WWTPs in Hunan.

<sup>4</sup> Environmental monitoring reports from the World Bank/GEF funded Guangdong Agriculture Pollution Control Project.

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comply with the land use planning. On the other hand, such land will be leased through consultation with farmers, which has low involuntary resettlement risks. Low-emission chemical fertilizers will be used on existing farmland, and involve no newly reclaimed land. The replacement of chemical fertilizers with organic fertilizer is through mixed use, but not full replacement, and farmers have the option of not using organic fertilizers. Given China's strict nature reserve and ecological red line systems, and the exclusion criteria of the Program, the Program activities will not be located in any environmentally sensitive area.

28. Some activities will be located in ethnic minority areas, and no outstanding E&S issue has been identified. If any such issue is identified, the relevant activity will not be included in the Program. The Program does not involve the relocation of any large farm, or the suspension of chemical fertilizers. Rural residents and government authorities have weak awareness of solid waste sorting, the public cannot judge river and lake ecological health, and no guiding policy on rural non-point source pollution control is in place. These problems will be solved through facility improvement, management and supervision, awareness and capacity building, etc.

29. In sum, the Program's overall E&S contextual risk rating is "moderate".

30. **3) Likely institutional risks:** The Program's E&S impacts management will involve many government authorities, such as ecology and environment, construction, natural resources, labor, water resources, agriculture and rural affairs, etc. All authorities conduct management according to the prevailing regulations, and have appropriate agencies, staff and budgets. Since the Program activities have wide coverage, and involves different regions and numerous management agencies, different authorities will need effective communication and coordinated work. For the PforR implementation, PMOs are established in both provinces (housed in the Provincial Development and Reform Commission, the most powerful government department with strong cross-sectoral coordination mandate), and all relevant sectoral authorities are on board to implement activities in line with their mandate and obligations under the overall governmental program.

31. Therefore, the Program's overall institutional risk rating is "moderate".

32. **4) Likely political and reputational risks:** The Program will help improve the ecological environment and reduce pollution, which is consistent with national and local policies and plans, and is an important measure to implement the protection and development strategy for the Yangtze River Basin, so there is no political risk. Past projects have improved the local water and ecological environments, and local residents have benefited greatly from these projects. Accordingly, the rating of political and reputational risks is low.

33. Based on the above four dimensions assessment, the overall rating of E&S risks and impacts is "substantial".

### 3 Environmental Management System Assessment

#### 3.1 Description of Environmental Management Systems

34. Based on the E&S impact analysis in Chapter 2 and consideration of the relevant laws/regulations and institutional setup of China, the environmental risks and impacts management of the Program activities involves the following management systems:

**Table 3-1 Environmental Management Systems Related to Program Activities**

Potential environmental impacts	Environmental management system	Regulators
<ul style="list-style-type: none"><li>- Environmental impacts during construction, including dust, noise, waste gases, wastewater, solid waste, vegetation damage, traffic disturbance, community safety, etc.;</li><li>- Waste gases, wastewater, noise, and solid waste discharge during facility operation;</li><li>- Impacts of construction activities and facilities on natural habitats and biodiversity</li></ul>	<ul style="list-style-type: none"><li>- Ecological environment protection and pollution control systems (including EIA management system, pollution control system)</li><li>- Water and soil conservation management system</li></ul>	<ul style="list-style-type: none"><li>- Ecology and environment authorities</li><li>- Water resources authorities</li></ul>
<ul style="list-style-type: none"><li>- Worker and community health and safety risks during construction and operation</li></ul>	<ul style="list-style-type: none"><li>- Health and safety management system</li></ul>	<ul style="list-style-type: none"><li>- Sectoral authorities for their specific sector</li><li>- Emergency management authorities as overall supervisor</li><li>- Health authorities</li></ul>
<ul style="list-style-type: none"><li>- Environmental and safety risks during fertilization application</li></ul>	<ul style="list-style-type: none"><li>- Fertilizer management system</li></ul>	<ul style="list-style-type: none"><li>- Agriculture and rural affairs authorities</li></ul>

35. This section mainly describes and analyzes the above main environmental management systems, including the (1) ecological environment protection and pollution control system (including EIA management system, pollution control system, and water and soil conservation management system), (2) occupational health and safety management system, and (3) fertilizer management system in terms of laws and regulations, implementation mechanism, performance, and organizational structure and capacity. Other social related management systems for social stability risks, land acquisition and resettlement, ethnic minority etc. are assessed in the social management system assessment in Chapter 4.

##### 3.1.1 Ecological Environment Protection and Pollution Control System

###### 3.1.1.1 Legal framework

36. Since the promulgation of the Environmental Protection Law in 1979, China has established an integrated legal framework for environmental protection, and pollution prevention and control gradually. This framework includes over 80 laws, 120 departmental bylaws, and over 1,000 technical standards at the state level, and constitutes the main regulatory framework for the environmental risks and impacts involved in the Program activities, covering EIA, pollution prevention and control, ecology, biodiversity protection, etc.

37. **The Environmental Protection Law** is the fundamental law in China's environmental protection, and pollution prevention and control system. Its 2014 amendment is called the strictest environmental law in China's history, and aims to protect and improve the environment, prevent and control pollution, protect public health, and promote sustainable development, where an EIA should be conducted for projects with environmental impacts. In addition, it stipulates that the state practices an environmental protection target responsibility system, an evaluation system, an ecological protection compensation

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system, “three simultaneities” system<sup>5</sup>, ecological red line protection system, total emission control system for key pollutants, pollutant discharge permit system, etc., and becomes a main tool for the Chinese environmental safeguard system. Its key points are:

- EIA system: An environmental impact assessment shall be conducted for all construction projects and related development plans<sup>6</sup>.
- pollution prevention and control “three simultaneities” system: Facilities for the prevention and control of pollution at a construction project must be designed, built and commissioned together with the principal part of the project. The three simultaneities system shall be implemented by local environmental protection authorities.
- Total emission control system: A total emission control system for key pollutants is practiced. The total emission control targets for key pollutants are issued by the State Council, and broken down and fulfilled by the governments of the provinces, autonomous regions and municipalities directly under the central government. Enterprises and public institutions shall obey targets assigned to them while complying with the national and local pollutant emission standards.
- Pollutant discharge permit system: All enterprises shall apply for a pollutant discharge permit, which specifies the type, limit and effective period of pollutant discharge, and local environmental protection authorities shall be responsible for permit review and approval.
- Ecological protection red line system: The State shall draw a red line for strict ecological protection in the key ecological function areas, ecological sensitive areas and vulnerable areas.
- Ecological compensation system: The State shall strengthen the efforts in the financial transfer payment for ecological protection areas. The relevant local governments shall allocate the ecological protection compensation fund and make sure such fund is used for compensating ecological protection.
- EIA information disclosure and public participation system: including the requirements for government authorities to disclose environmental information and improve public participation procedures according to law, and the requirements for public participation in EIA report preparation

38. **Under** the general management system of the Environmental Protection Law, the systems related to the environmental risks and impacts management of the Program activities are:

#### 1) EIA system

39. **Environmental Impact Assessment Law**: This law is the specialized law on EIA under the Environmental Protection Law, and constitutes the full system for project and plan EIA along with a series of technical standards.

40. The Environmental Impact Assessment Law stipulates statutory EIA requirements for construction projects and certain types of plans, and requires that potential environmental impacts be screened at the early stage, project impacts assessed, prevention and mitigation measures developed, and public participation conducted and supervised. An EIA must be objective, fair and open, and give full consideration potential impacts on various environmental factors and ecosystems, thereby providing a scientific basis for decision-making. Its core elements are:

- **Classified management**: Construction projects are divided into three types based on environmental impact level, namely EIA report (potentially significant impacts), EIA report form (potentially moderate impacts) and EIA registration form (low impacts).
- **Public participation**: For any construction project with potentially significant environmental impacts for which an EIA report should be prepared, the project proponent shall hold expert review meeting and public hearing before the EIA report is submitted for approval,

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<sup>5</sup>“Three simultaneities” system: Facilities for the prevention and control of pollution at a construction project must be designed, built and commissioned together with the principal part of the project. The three simultaneities system shall be implemented by local environmental protection authorities.

<sup>6</sup> This means land utilization plans, and construction, development and utilization plans of areas, watersheds and sea areas.

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or collect opinions from agencies concerned, experts and the public through other appropriate methods.

- Prerequisites to construction commencement: If the EIA documents of a construction project have not been reviewed or approved by the approval authority according to law, the project proponent shall not commence construction.
- Responsibility system: The project proponent shall be responsible for the contents and conclusions of the EIA report and EIA report form of the construction project, and the technical consultant that prepares the EIA report and EIA report form shall be responsible for these documents.
- In-process and subsequent regulation: The Environmental Impact Assessment Law also requires that relevant authorities for environmental protection shall follow up environmental impacts after construction projects are put into production or operation based on EIA conclusions.

41. Based on the Environmental Impact Assessment Law, China has formulated a full set of policies, procedures and technical guidelines, which have formed a comprehensive EIA system that covers all environmental aspects of construction projects and plans, mainly including:

- **Regulations on the Administration of Construction Project Environmental Protection** (2017 Amendment): These regulations make detailed provisions on EIA classification, contents and classified approval, and define the requirements for project proponent to disclose completion acceptance reports of environmental facilities.
- **Catalogue for the Classified Management of the Environmental Impact Assessment of Construction Projects** (updated in 2021): It provides an EIA classification guide for 55 industrial sectors (173 types of projects), and proposes detailed technical criteria for significant, moderate and low impacts classification based on project type, scale and contextual environmental sensitivity.
- **Technical Guidelines for Environmental Impact Assessment**: To regulate the preparation of EIA documents, China has promulgated 24 sets of technical guidelines for environmental impact assessment, providing methodological and technical support for EIA in different types of projects and key industries. These guidelines include a general guideline, and a series of guidelines for specific environmental factors (water, air, noise, ecology, biodiversity, risk assessment), and key industries. The Technical Guidelines for Environmental Impact Assessment—General Program propose overall requirements for EIA documents, including early intervention in early-stage site selection, alternative selection, extensive public participation, rational utilization of resources, an analysis of positive vs. negative, long-term vs. short-term, direct vs. indirect, cumulative impacts, etc., an environmental economic benefit and loss analysis, development of environmental management measures, monitoring indicators, and an investment budget, preparation of management and monitoring plans, etc.
- **Environmental Impact Assessment Information Disclosure Mechanism for Construction Projects** (2015): The project proponent shall disclose project EIA information throughout the process and with full coverage, including information disclosure before the preparation of EIA documents, full disclosure of the completed report (and report form), and information disclosure before, during and after construction. The environmental protection authority shall also fully disclose the EIA report and report form, and disclose the approval information afterwards.
- **Measures for Public Participation in Environmental Impact Assessment** (2018 Amendment): These measures propose three-round disclosure requirements for construction agencies, namely information disclosure at the beginning of the EIA, disclosure of the draft report, and disclosure of the final report (along with a description of public participation). In addition, these measures also specify requirements for in-depth public participation for projects with many public opinions and/or professional comments, including two-round disclosure, discussion meeting / public hearing preparation, etc., as well as disclosure requirements for the review and approval of the EIA documents by government authorities.

42. In addition, there are a large number of other sectoral laws and regulations that provide direct

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and indirect requirements for construction projects in the EIA process, mainly including:

- **Water and Soil Conservation Law (2010 Amendment):** This law requires that for any production or construction project that may lead to soil erosion, the project proponent shall prepare a water and soil conservation plan, and submit it to the water and soil conservation authority for approval. The soil erosion impact assessment and measures are also included in the EIA documents. (See subparagraph (3) below for details.)
- **Regulations on Nature Reserves (2017 Amendment):** A nature reserve shall be set up for an important habitat. Activities like timber felling, herding, fishing, picking, reclamation, burning, mining, quarrying and sand digging shall be not conducted in nature reserves. No one shall enter core zones of nature reserves (except approved scientific research activities). No production facility shall be conducted in core and buffer zones of nature reserves, and no production facility that pollutes the environment, or destroys resources or landscape shall be constructed in experimental zones. For any construction project involving any nature reserve, a detailed impact analysis shall be made in the EIA, avoidance and mitigation measures proposed, and the approval of the conserve authority obtained.
- **Wild Animal Conservation Law (2018 Amendment), Regulations on Wild Plants Protection (2017 Amendment):** It specifies conservation requirements for wild animals and their natural habitats, and wild plants and their growth environments. Impacts of construction projects on wildlife and habitats, and mitigation measures are a key aspect of the EIA documents. The Technical Guidelines for Environmental Impact Assessment—Ecological Impacts require that the EIA documents shall pay attention to positive vs. negative, direct vs. indirect, and cumulative impacts, and mitigation measures shall be developed in order of avoidance, mitigation, compensation and reconstruction.
- **Cultural Relics Protection Law (2017 Amendment):** This law requires that protection areas shall be defined for protected cultural relics, in which construction projects unrelated to cultural relic protection shall not be conducted, and any necessary construction activity shall be approved by the local government and cultural relic authority. Before the construction of any large capital construction project, an archeological survey must be conducted with the approval of the cultural relic authority. Impacts of construction projects on cultural relics and protection measures are included in the EIA documents. This law also specifies chance find requirements, that is, when any organization or individual finds any cultural relic during construction or agricultural production, it shall protect the site, and report to the local cultural relic authority immediately; when any organization or individual finds any important cultural relic, it shall suspend construction, protect the site and report to the local cultural relic authority immediately.
- **Flood Control Law (2016 Amendment):** This law prohibits the construction of buildings and structures that may impede flood discharge within river and lake management areas. For all projects located in flood-affected areas, a qualified professional agency shall conduct a flood impact assessment, and the report shall be approved by the water authority. In addition, flood risks and preventive measures shall also be included in the EIA documents and project design.
- **Regulations on the Prevention and Control of Geologic Disasters (2003):** For all projects in areas where geological disasters are likely to occur, a qualified professional agency shall prepare a geological disaster assessment report, which shall be approved by the land and resources authority. In addition, geological disaster risks and preventive measures shall also be included in the EIA documents and project design.

## 2) Pollution prevention and control system

43. The above EIA system is for the EIA process at the planning / preparation stage, while environmental protection and pollution control measures at the construction and operation stages are regulated by the pollution prevention and control system. The relevant laws and regulations include:

- **Water Pollution Prevention and Control Law (2017 Amendment):** It specifies standards and plans for water pollution prevention and control. It requires that a river chief system be established at the provincial, municipal, county and township levels to lead water resources protection, shoreline management, water pollution prevention and control,

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water environment management, etc. for rivers and lakes within their administrative divisions. Newly constructed, reconstructed or expanded construction projects and other water facilities that discharge pollutants directly or indirectly to waters shall be subject to an EIA according to law. It also specifies wastewater prevention and treatment measures for industry, urban areas, agriculture and rural areas.

- **Solid Waste Pollution Prevention and Control Law (2020 Amendment):** This law requires that an EIA be conducted and the “three simultaneities” system implemented for all projects generating solid waste, and that organizations and individuals generating, collecting, storing, transporting, utilizing and disposing of solid waste shall take measures to prevent or reduce solid waste pollution, and assume responsibility for pollution. This law stipulates management requirements for industrial solid waste, domestic waste, construction waste, agricultural solid waste, and hazardous waste.
- **Air Pollution Prevention and Control Law (2018 Amendment):** This law is the basic law for air pollution prevention and control, and requires that pollutant discharging enterprise meet emission standards and total emission control requirements for key atmospheric pollutants, and that an EIA be conducted for projects with atmospheric impacts.
- **Environmental Noise Pollution Prevention and Control Law (2018 Amendment):** If a construction project may generate environmental noise, the project proponent must submit an EIA report to the ecology and environment authority according to the procedure specified by the state, which shall specify prevention and treatment measures for environmental noise. The environmental noise pollution prevention and control facility of a construction project must be designed, constructed and put into operation together with the main part of the project. If industrial noise is emitted to the surrounding environment in urban areas, the national industrial factory boundary environmental noise emission standard shall be complied with.
- **Measures for Environmental Administrative Punishment (2009):** These measures specify rules of administrative punishment for citizens and organizations violating laws, regulations or bylaws on environmental protection, including warning, fine, production suspension and correction, shutdown, detention, etc.
- **Measures for Environmental Complaint Letters and Visits (2006):** These measures specify the public grievance redress mechanism for environmental issues, including relevant procedures and time limits.

### 3) Water and soil conservation management system

44. For a construction project, water and soil conservation impacts and measures are reflected in the EIA system. In addition, China has established a professional water and soil conservation regulation system for construction projects, consisting of hundreds of laws, regulations, policies, management measures, technical standards, including:

- **Water and Soil Conservation Law (2010 Amendment):** This law requires that for any production construction project that may lead to water loss and soil erosion, the project proponent shall prepare a water and soil conservation plan, and submit to the water and soil conservation authority for approval, and that such project shall not break ground if no water and soil conservation plan is prepared, or such plan is not approved.
- **Administrative Regulations on the Compilation, Submission and Approval of Water and Soil Conservation Plans, and Opinions of the Ministry of Water Resources on Further Deepening the Reform of Simplification and Decentralization, and Strengthening Water and Soil Conservation Regulation Comprehensively:** Any project proponent or individual that may cause water loss and soil erosion must prepare and submit a water and soil conservation plan. For any construction project with a land acquisition / occupation area of 5 hectares or more, or earthwork or stonework of 50,000 m<sup>3</sup> or more, a water and soil conservation report shall be prepared and submitted; for any construction project with a land acquisition / occupation area of 0.5-5 hectares, or earthwork or stonework of 1,000-50,000 m<sup>3</sup>, a water and soil conservation report form shall be prepared and submitted. Water authorities shall approve water and soil conservation plans at different levels based on the nature and scales.

- **Technical Code for Water and Soil Conservation of Construction Projects:** It specifies technical details for various water and soil conservation plans and measures.
- **Technical Code for Comprehensive Control of Water and Soil Conservation:** It includes general rules, and six special technical codes, covering slope land, wasteland, gullies, etc.
- **Rules for Technical Review of Water and Soil Conservation Plans of Production and Construction Projects:** These rules specify procedural requirements for the review of water and soil conservation plans of construction projects.
- **Administrative Measures for Water and Soil Conservation Supervision of Production and Construction Projects:** These measures specify supervision and management responsibilities for water and soil conservation of competent authorities.

#### 4) Other sectoral and local regulations, policies and action plans

45. Except the EIA, and pollution prevention and control systems for ecology and environment authorities, and the water loss and soil erosion prevention and treatment system of water and soil conservation authorities, which are related to the environmental risk management of the Program, there are extensive sectoral and local regulations, policies, plans, etc. that support the Program's positive environmental benefits and minimize its negative impacts directly or indirectly, mainly including:

- **Opinions on Accelerating the Development of Ecological Civilization (2015):** These opinions propose to draw ecological red lines in key ecological areas, environmentally sensitive areas, and vulnerable areas to ensure that ecological areas do not degrade in function and area, and do not change in nature. Subsequently, the Chinese government has promulgated the Technical Guide to the Delineation of Ecological Protection Red Lines, Guidelines on Strengthening Ecological Red Line Control, Technical Guide to the Preparation of Resource Consumption Disclosure, Environmental Quality Baselines, Ecological Protection Red Lines, and Environmental Quality Negative Lists, etc. By the end of 2020, ecological protection red lines had been delineated in all provinces of China.
- **Opinions on Implementing the River Chief System (2016), and Guidelines on Implementing the Lake Chief System (2017):** A river / lake chief system has been established at the provincial, municipal, county and township levels, and evaluation results are taken as an important basis for the integrated evaluation of local leaders. A lake management and protection information release platform has been established, the list of river chiefs disclosed through main media, and a river / lake chief signboard set up along rivers and lakes, indicating the chief's responsibilities, river / lake overview, control objectives, supervision hotline, etc. for public supervision<sup>7</sup>.
- **Opinions on Improving the Ecological Protection Compensation Mechanism (2016):** The opinions require that a national framework be established to compensate for and prohibit relevant impacts in development areas and key ecological areas (including key watersheds), and that pilots on horizontal ecological protection compensation be conducted key basins, such as the Yangtze and Yellow River Basins. In the **Pilot Plan for Integrated Ecological Compensation (2019)**, one of the pilot tasks is to promote horizontal ecological compensation between upper and lower reaches, and 50 pilot counties (5 in Jiangxi Province) are selected among key ecological areas in 10 provinces to develop their own implementation plans.
- **Action plan for Water Pollution Prevention and Control (2015):** This plan proposes measures to strengthen water pollution control and improve ecosystem services in ten aspects, and aims to increase the proportion of water quality of Class III or above in seven key basins (including the Yangtze River Basin) to 70% by 2020 and 75% by 2030.
- **Yangtze River Protection Law (2021):** This law clarifies the responsibilities of the central and local governments at all levels for the protection and restoration of the Yangtze River's ecological environment, promoting the rational and efficient use of resources,

<sup>7</sup> According to a report on the enforcement of the water pollution prevention and control law submitted in August 2019 to the Standing Committee of the National People's Congress (NPC), China now has over 1.2 million rivers and lakes, with more than 200,000 in the Yangtze River Basin.



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optimizing the industrial structure and layout, and maintaining the ecological safety of the Yangtze River Basin.

- **Measures for Agricultural Plastic Mulching Film Management (2020):** These measures make provisions on the production, marketing, use, recovery, recycling and management of agricultural films, and require that county agriculture and rural affairs authorities manage the use and recovery of agricultural films, and direct the building of an agricultural film recovery system. Agricultural film producers shall keep agricultural film release records, agricultural film sellers shall keep sales records, agriculture enterprises, farmers' specialized cooperatives and other users shall keep use records, and agricultural film recycling enterprises shall keep recycling records. The measures require that agricultural film users shall collect non-fully biodegradable agricultural film waste before the end of the useful life, and deliver it to recovery outlets or workers without discarding, burial or incineration.
- **Regulations on Pollution Prevention and Control for Large-scale Stockbreeding (2013):** These regulations specify pollution prevention and control requirements in stockbreeding for breeding farms and breeding zones. For large breeding farms and breeding zones with potentially material environmental impacts, an EIA report shall be prepared; for other breeding farms and breeding zones, an EIA registration form shall be filled up and submitted. Breeding farms and breeding zones shall construct livestock and poultry manure treatment and recycling facilities. Methods such as manure reuse, biogas generation and organic fertilizer production are encouraged to utilize livestock and poultry waste comprehensively.
- **Action Plan for Livestock and Poultry Manure Recycling (2017-2020) (2017):** The Ministry of Agriculture has developed this plan to implement the Opinions of the General Office of the State Council on Accelerating Livestock and Poultry Waste Recycling. The plan requires that a livestock and poultry waste recycling system be established to reduce and recycle livestock and poultry manure, and make it harmless. By 2020, the national overall utilization rate of livestock and poultry manure shall reach 75%, and the availability of treatment equipment of large-scale breeding farms shall reach 95%.
- A number of technical guides and standards on the disposal and utilization of livestock and poultry manure, including the **Technical Code for Sanitation Treatment of Livestock and Poultry Manure (GBT36195-2018)**, **Technical Code for Land Application of Livestock and Poultry Manure (GBT25246-2010)**, **Emission Standard for Livestock and Poultry Waste (GB18596-2001)**, **Technical Guide to Land Carrying Capacity of Livestock and Poultry Manure**, etc., provide a comprehensive technical guide to the disposal and recycling of livestock and poultry manure.

46. Under the national environmental management legal framework, provincial governments have formulated local regulations and measures, such as:

47. Jiangxi Province has formulated a number of relevant local regulations and measures, including the Regulations on Environmental Pollution Prevention and Control of Jiangxi Province, Regulations on Construction Project Environmental Protection of Jiangxi Province, Regulations on the Classified Approval of EIA Documents of Construction Projects of Jiangxi Province, Catalogue of Construction Projects Exempt from EIA Management of Jiangxi Province (for trial implementation, 2019), Regulations on Lake Protection of Jiangxi Province, Regulations on River Management of Jiangxi Province, Watershed Protection and Governance Plan for Five Tributaries, One Lake and One River of Jiangxi Province, Rules for the Implementation of the Negative List for the Development of the Yangtze River Economic Belt of Jiangxi Province, Measures for Watershed Ecological Compensation of Jiangxi Province, Ecological Protection Red Lines of Jiangxi Province, Regulations on the Implementation of the River / Lake Chief System of Jiangxi Province, etc.

48. Hunan Province has also formulated a number of relevant local regulations and measures, including Regulations on Environmental Protection of Hunan Province, Measures for Construction Project Management of Hunan Province, Implementation Plan for Water Environment Management and Planning of Dongting Lake of Hunan Province (2018—2025), Ecological Protection Red Lines of Hunan Province, Rules for the Implementation of the Negative List for the Development of the Yangtze River Economic Belt of Hunan Province, Notice on Accelerating Agricultural Film

Recovery, Implementation Plan for Agricultural Film Recovery of 2020, Opinions on Accelerating Agricultural Film Pollution Prevention and Control, and Opinions on Accelerating Livestock and Poultry Waste Recycling, etc.

49. In sum, China has established a sound legal framework on environmental protection, and pollution prevention and control, covering early-stage screening of project impacts, impact assessment, public participation, in-process and subsequent regulation, etc. For the Program activities, this comprehensive management system can ensure the whole-process management of the Program's environmental impacts.

### 3.1.1.2 Implementation mechanism

#### 1) EIA system implementation

##### EIA document preparation

50. As discussed above, China has established a very detailed and comprehensive catalogue for the classified management of the environmental impact assessment of construction projects for screening at the preparation stage based on industry, nature, location, scale, environmental sensitivity, etc.

51. For projects with potentially significant environmental impacts, a comprehensive EIA report shall be prepared; for projects with potentially moderate environmental impacts, an EIA report form shall be prepared; for projects with low environmental impacts, an EIA registration form shall be prepared.

52. According to the latest Catalogue for the Classified Management of the Environmental Impact Assessment of Construction Projects (2021), the EIA classification of some Program activities is as follows:

Activity	Report (Class A)	Report form (Class B)	Registration form (Class C)
3. Livestock and poultry breeding; other stockbreeding	Large-scale stockbreeding with an annual output of 5,000 live pigs or above (other livestock and poultry converted into pigs); and large-scale stockbreeding with 2,500 live pigs in stock without output, and large-scale stockbreeding involving environmentally sensitive areas	/	Other (except below designated size)
95. Wastewater treatment and recycling	Construction or expansion of urban and rural wastewater treatment facilities with a daily treatment capacity of 100,000 tons or above	Construction or expansion of urban and rural wastewater treatment facilities with a daily treatment capacity of ≥500 tons and <100,000 tons	Other (excluding upgrading, septic tank and water recycling, and settling tank construction)

53. Other activities are environmental rehabilitation or improvement measures themselves, no separate EIA document is to be prepared.

54. None of the Program activities in Jiangxi and Hunan Provinces falls into the report class (Class A). In Hunan Province, livestock and poultry manure recycling involves the improvement of existing manure treatment and utilization facilities of large-scale breeding farms or breeding farmers to realize zero pollutant discharge only, and does not involve new breeding farm construction. County and township WWTPs are all small-scale treatment facilities for counties and townships. In general, all Program activities are report form and registration form type of activities in the domestic EIA system.

55. For EIA reports, China currently adopts a national uniform EIA engineer qualification system, where technicians preparing EIA documents must pass a national qualification examination to

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obtain the EIA engineer qualification.

56. During the preparation of the EIA report, the owner (EIA agency) must conduct public participation as required by means of interview, meeting and questionnaire survey. During EIA report preparation, the project proponent has to conduct three rounds of disclosure, namely information disclosure at the beginning of the EIA (within seven days), disclosure of the draft report (not less than 10 days); and disclosure of the final report (along with a description of public participation). For projects with many public concerns and/or professional comments, expert discussion meetings / public hearing meetings should be held for in-depth public participation.

### **EIA review and approval**

57. According to the Chinese regulations on classified EIA approval, EIA reports are approved by ecology and environment authorities at different levels based on project nature, scale, environmental sensitivity, etc. The Program activities are usually approved by county / district ecology and environment bureaus. Municipal ecology and environment bureaus review seriously polluting or cross-county/district projects only, and provincial ecology and environment departments review seriously polluting or cross-city projects only. Such activities are unlikely to be included in the Program.

58. After the EIA report is received, the ecology and environment bureau will disclose the full report in accordance with the Measures for Public Participation in Environmental Impact Assessment for public comment for not less than 10 days. In addition, the ecology and environment bureau will disclose the approval opinions and decision before and after approval.

59. The EIA report is reviewed by a committee composed of independent experts. The EIA report form is reviewed by an expert committee in some counties, or by the EIA section of the ecology and environment bureau. EIA review experts are selected randomly from the expert base set up by the provincial or municipal ecology and environment authority; a review organized by a municipal or county ecology and environment bureau usually involves at least three experts.

### **Acceptance Inspection**

60. Based on the approval of the EIA documents, the project proponent will implement the required measures. At the construction stage, the construction agency is responsible for implementation, and the project proponent and supervision agency for supervision. At project completion, the project proponent will engage a capable technical agency for acceptance inspection, and prepare an acceptance inspection report. Only if the inspection (also covering construction, safety, occupational diseases, etc.) is passed can the project be put into operation.

61. According to the applicable regulations, the project proponent will disclose the inspection report within five working days after its completion for not less than 20 working days. During disclosure, relevant information will be submitted to the environmental protection authority at or above the county level for supervision and inspection. Within five working days after disclosure, the project proponent will log into the national environmental protection inspection information platform of completed construction projects to submit the basic information of the construction project, the inspection of the environmental protection facility, and other relevant construction project, which will be disclosed by the environmental protection competent authority.

62. Environmental protection authorities at different levels will select subjects of inspection and assign inspectors randomly, and disclose inspection results the public timely in accordance with the Measures for the In-process and Subsequent Environmental Protection Supervision and Management of Construction Projects (for trial implementation).

### **Contractor management**

63. The contractor shall implement environmental protection measures at the construction stage. The Standard Construction Bidding Documents of the People's Republic of China require that the technical specification include an environmental protection chapter that includes the environmental protection measures in the EIA documents. The general conditions of the standard construction contract have a chapter on work safety and environmental protection that defines safety, health, on-site management and environmental protection measures.

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64. After the construction contract is signed, the contractor will prepare a construction organization design, which is the specific construction plan of the contractor, and must include an environmental protection program and a work safety management program. During construction, the supervision agency will supervise construction quality, safety and environmental protection work of the contractor. The construction and supervision agencies will review the construction organization design before construction, and supervise the safety and environmental protection work of the contractor during construction.

65. The above EIA management system for construction projects has been implemented in China for decades. Based on the field visit in Yongfeng, Chongyi and Dexing Counties in Jiangxi Province, and Miluo County, Wangcheng District, Xupu County, Yuanling County and Shimen County in Hunan Province at the preparation stage, the relevant facilities under the Program (e.g., WWTPs, livestock and poultry manure recycling facilities, agricultural film recovery and treatment plants) all followed the requirements in terms of EIA preparation and approval.

66. An EIA is conducted in strict conformity with the state regulations and technical standards, and local ecology and environment bureaus require that public participation and information disclosure be conducted, and public opinions included in the EIA and project design. For projects requiring a report form, although public participation is not compulsory, local ecology and environment bureaus usually require public participation for projects with any environmentally sensitive site nearby. Local ecology and environment bureaus have established a website for EIA document disclosure to disclose EIA-related information according to the applicable laws. An environmental protection chapter is included, and its implementation is supervised by an independent supervision agency. All projects are inspected as required at completion, and inspection reports disclosed, and submitted to ecology and environment bureaus for filing.

67. With regards to strategic assessments that inform the planning process, the government initiated the 2017 Strategic Environmental Impact Assessment (SEIA) of Yangtze River Economic Belt Program led by the National Environmental Engineering Assessment Center (associated with MEE) to guide and to plan overall investments in the Yangtze River Basin area, and contribute to the integration of environmental considerations therein. The complex SEIA guides river basin management and control requirements and the overall plan for strategic protection of the Basin's ecological environment, through formulation and implementation of "three lines and one list" (ecological redline<sup>8</sup>, environmental quality baseline<sup>9</sup>, resource utilization threshold<sup>10</sup>, and environment negative list<sup>11</sup>) at the national, provincial and municipal levels. Provincial-level "three lines and one list" reports have been cleared by provincial Ecology and Environment Bureau, and a consolidated report at national level has been approved by MEE, which summarizes the findings and recommendations from the provincial reports. Municipal-level reports are under preparation on the basis of national and provincial reports.

## **2) Implementation of pollution prevention and control regulatory system**

68. According to the Environmental Protection Law, and the laws on water pollution, atmospheric

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<sup>8</sup> Ecological redline: refers to areas with important ecological functions and therefore must be protected strictly. Example areas include those with important functions for water source protection, biodiversity, water and soil conservation, wind prevention and sand fixation, and coastal ecological stability, and those sensitive and fragile areas suffering from water and soil erosion, desertification, rocky desertification and salinization.

<sup>9</sup> Environmental quality baseline: refers to regional and phased environmental quality objectives and corresponding environmental and pollutant emission control requirements determined in accordance with the principle of continuous improvement of water, atmosphere and soil environmental quality, in combination with the current situation of environmental quality and relevant planning and functional zoning requirements, and considering the potential for environmental quality improvement.

<sup>10</sup> Resource utilization threshold: refers to regional and phased threshold for the total amount, intensity and efficiency of resource extraction and utilization, in accordance with the principle of "no depreciation" of natural resource assets.

<sup>11</sup> Environment negative list: refers to a list of prohibited or restricted activities in terms of spatial layout, pollutant discharge, environmental risk, and resource utilization.

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pollution, solid waste, and noise pollution prevention and control, enterprises shall comply with national pollutant discharge standards and total emission control indicators for key pollutants when discharging pollutants to the environment. Pollutant discharging entities should apply for a pollutant discharge permit according to law before pollutant discharge.

69. According to the regulations on pollutant discharge permit management, pollutant discharging entities should comply with the provisions on the pollutant discharge permit, construct standard discharge outlets, set up signs, conduct self-monitoring according to law, and keep original monitoring records, which should be kept for not less than five years. Key regulated entities must install automatic monitoring equipment, and connect it to the monitoring equipment of the ecology and environment authority in real time.

70. Ecology and environment bureaus are responsible for the operation regulation of pollutant discharge. Except online monitoring equipment monitoring, provincial, municipal and county / district ecology and environment bureaus also conduct on-site inspection and supervision (through supervision teams). Small enterprises do not have to install continuous monitoring equipment, and are monitored by local ecology and environment bureaus (through random monitoring without prior notice).

71. The Program activities involving routine operation and pollution management are mainly county and township WWTPs, livestock and poultry manure recycling facilities, and agricultural film recovery. Normal monitoring and supervision practice is as follows:

- County and township WWTPs are managed by local housing and urban-rural development bureaus (urban management bureaus in some cities or counties), and their pollutant discharge is monitored regularly (or in real time), and supervised by local ecology and environment bureaus regularly. In Jiangxi Province, over 90% of county towns are covered by WWTPs, all WWTPs have online monitoring equipment (aided with daily manual sampling inspection), and monitoring data is transmitted to county ecology and environment bureaus in real time. 65% of incorporated towns are covered by wastewater treatment facilities, all of which have been improved to reach the Class I-A wastewater discharge standard. Due to small size, town WWTPs mostly have no online monitoring equipment, and drainage is monitored by manual sampling, usually monthly. Relevant authorities would supervise the compliance of WWTPs routinely in day-to-day management. Law enforcement brigades under county ecology and environment bureaus would inspect WWTP operation irregularly by means of random sampling and assignment, and result disclosure<sup>12</sup>. In Dexing, Chongyi and Yongfeng Counties in Jiangxi Province, and Yuanling, Xupu and Shimen Counties in Hunan Province, all the existing WWTPs meet the discharge standard, but few town WWTPs have a financial gap, and can hardly operate sustainably.
- In Hunan Province, the upgrading of livestock and poultry manure recycling of existing breeding farms / farmers is conducted themselves, and managed and supervised by county agriculture and rural affairs bureaus. Hunan Province attaches greatly importance of livestock and poultry manure recycling, and has set targets (the overall utilization rate of livestock and poultry manure of 75%, and the availability of treatment equipment of large-scale breeding farms of 95% by 2020, and overall utilization rate of livestock and poultry manure of 82% by 2025, 85% by 2030), and promulgated a series of promotional policies and implementation plans. Leading groups have been established, and implementation plans developed in all cities and counties for this purpose. The provincial agriculture and rural affairs department conducts two province-level third party evaluations on livestock and poultry manure recycling annually, and on randomly sampled breeding farms / farmers in one or two counties in each city. Except agriculture and rural affairs authorities, law enforcement brigades under county ecology and environment bureaus would supervise the routine environmental management of breeding farms irregularly by means of random sampling and assignment, and result disclosure. According to the field visits in Hunan Province, existing breeding farms progress smoothly in livestock and poultry

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<sup>12</sup> Subjects of inspection are sampled and inspectors assigned randomly, and inspection results are disclosed to the public timely.

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manure recycling. For example, in Miluo City, an organic fertilizer processing plant and 29 cultivation bases have been set up in an intensive stockbreeding area to collect livestock and poultry manure from nearby small breeding farms for processing into organic fertilizers or application to farmland and woodland, basically realizing zero pollutant discharge. Currently, 100% of breeding farms are provided with environmental protection equipment, and 90% of livestock and poultry manure is recycled in the city.

- In Hunan Province, agricultural film recovery is an important measure of agricultural pollution prevention and control. The provincial agriculture and rural affairs department (together with five other authorities) has promulgated the Implementation Opinions on Accelerating Agricultural Film Pollution Prevention and Control (2020), proposing to establish a province-wide supervision and management system for agricultural film production, marketing, use, recovery and processing by 2020, and reach an agricultural film recovery rate of over 80%, realize almost full agricultural film recovery, and control farmland white pollution effectively by 2025. An implementation plan for agricultural film recovery has also been developed, where county agriculture authorities are responsible for guidance and supervision. The plan requires that agriculture enterprises, farmers' specialized cooperatives and other users shall keep use records, and agricultural film recycling enterprises shall keep recycling records, recovery outlets shall be set up in villages, township governments (recovery enterprises) shall be responsible for recovery and utilization, and the government shall grant subsidies. The field visits in Xupu and Shimen Counties in Hunan Province shows that agricultural film recovery has low environmental risks, and the main problem is low recovery rate due to the weak awareness of farmers on the environmental pollution of plastic film waste. This seems to be a general issue in the sample counties visited, and warrant a robust awareness training plan in the Program.

### **3) Implementation of water and soil conservation management system**

72. According to the Water and Soil Conservation Law, for any construction project with potential water loss and soil erosion risks, a water and soil conservation plan must be prepared and submitted by a qualified agency and staff.

73. The water and soil conservation report of a project will be submitted to the relevant water resources authority for approval. All construction activities under the Program are within the mandate of county-level water resources bureaus.

74. Water and soil conservation measures will be implemented by the contractor under the direction of the owner, and monitoring will be conducted according to the water and soil conservation plan. After project completion, according to the Measures for Water and Soil Conservation Supervision and Management of Construction Projects, the owner shall appoint a third party to inspect the water and soil conservation facility, and submit the completion inspection conclusion to the water resources bureau for filing.

75. Water resources authorities are responsible for water and soil conservation supervision and inspection by means of remote sensing, on-site visit, written report, and "Internet+ regulation". On-site inspection is subject to random sampling and assignment, and result disclosure, with an annual on-site sampling rate of not less than 10%.

#### **3.1.1.3 Organizational structure and capacity**

76. Due to China's unified organizational setup system, the setup of government authorities at all levels is almost the same in Jiangxi and Hunan Provinces. The main authorities involved in environmental management under the Program include ecology and environment authorities (overall regulation of environmental protection, and pollution prevention and control), urban construction authorities (wastewater treatment management), urban management authorities (waste collection and treatment), agriculture and rural affairs authorities (livestock and poultry manure utilization, and agricultural film recovery), etc., as detailed below:

##### **1) Ecology and environment authorities**

77. In the above environmental management systems, main regulators are ecology and

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environment authorities, including the provincial ecology and environment department, municipal and county ecology and environment bureaus, and one or two full-time environmental officials at the township level.

78. The Ecology and Environment Department of Jiangxi Province is responsible for province-wide ecological protection, and urban and rural pollutant discharge regulation and law enforcement. The department has 19 divisions, in which those involved in project EIA management and law enforcement are the EIA and Discharge Management Division (implementation of EIA and the “three simultaneities” system), Environmental Engineering Assessment Center(responsible for the evaluation of EIA report forms, EIA outlines and EIA reports, subsequent EIA, and technical review of province-level construction projects), and Environmental Supervision Bureau(responsible for environmental law enforcement supervision). The Ecology and Environment Department of Hunan Province has 17 divisions and 10 subordinate units, in which the divisions involved in environmental management are the EIA and Discharge Management Division, Ecological Affairs Service Center, Environmental Supervision Bureau, etc.

79. The 10 municipal ecology and environment bureaus in Jiangxi Province have an organizational structure similar to that of the provincial department, and the relevant sections are the EIA and Discharge Management section, Environmental Engineering Assessment Center, and Environmental Supervision Detachment (Environmental Law Enforcement Detachment). Under the municipal level, each county has an ecology and environment bureau. The Program activities are mostly regulated by county ecology and environment bureaus. A county ecology and environment bureau has a section responsible for EIA approval (usually 1-3 members), which reviews EIA documents with the aid of the expert base set up by the provincial or municipal ecology and environment authority. It also has an environmental law enforcement brigade (usually with several tens of staff members), responsible for supervising the implementation of environmental protection measures of pollution sources and construction projects. There are 14 municipal ecology and environment bureaus in Hunan Province, and their organizational structure and functions are largely the same as those of Jiangxi Province.

80. For the Program activities with EIA requirements, supervision is performed by law enforcement brigades under county ecology and environment bureaus by means of random sampling and assignment, and result disclosure (usually 2-3 times per month).

81. China has set up a national uniform environmental complaint hotline (12369) and a WeChat environmental public account (12369), where citizens may call the hotline anywhere to file environmental complaints. Each county government has set up a public complaint channel on its website and a national uniform government service hotline (12345) to receive public feedback, including environmental complaints. Each county ecology and environment bureau has a section handling public environmental complaints in accordance with the Measures for Environmental Complaint Letters and Visits. According to the field observation in Yongfeng and Chongyi Counties, 88, 86 and 128 environmental complaints were received in Chongyi County, and 66, 67 and 61 received in Yongfeng County in the past three years, all closed timely with a satisfaction rate of 100%.

82. Based on the fieldwork, county ecology and environment bureaus are well staffed, operate efficiently, and adequately budgeted for environmental work.

## **2) Water resources bureaus**

83. Water resources bureaus are responsible for the river and lake waste cleanup. The Program activities involve county water resources bureaus mainly.

84. County water resources bureaus are responsible for conducting county-wide water resources planning and supervision, and giving guidance on water resources works, water resources protection, river and lake protection, water and soil conservation, rural drinking water and irrigation, flood and drought prevention and control, etc. The county-level water resources bureau normally has about 10 staff, while, there are more subordinate units under the bureau, including a water and soil conservation station (typically with 10-20 technical staff) for supervision and monitoring of water and soil conservation performance of projects, based on random target selection and random supervision staff approach. A river chief system has been established at the provincial,

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municipal, county and township levels nationwide since 2016 to lead water resources protection, shoreline management, water pollution prevention and control, water environment management, etc. for rivers and lakes within their administrative divisions. A river / lake chief signboard is set up along rivers and lakes, indicating the chief's responsibilities, river / lake overview, control objectives, supervision hotline, etc. for public supervision.

85. Based on the fieldwork, a river chief office has been established and provided with full-time staff in each county (at the water resources bureau), and a signboard set up along every river for public supervision. For example, the River Chief Office of Chongyi County in Jiangxi Province received six complaints in 2020, involving river waste, silting, illegal sand excavation, etc., all solved timely.

### **3) Other sectoral authorities**

86. Authorities related to the Program also include authorities for county and township wastewater, domestic waste treatment, livestock and poultry manure recycling, and agricultural film recovery. At the provincial level, the authority for county and township wastewater and domestic waste treatment is the provincial housing and urban-rural development department, in which the Urban Construction Division(responsible for wastewater treatment) and Urban Management Division(responsible for waste treatment) are responsible respectively. However, specific construction and management functions for county and township wastewater treatment, and waste collection and treatment are at the county level. In Hunan Province, the provincial authority for livestock and poultry manure recycling, and agricultural film recovery is the agriculture and rural affairs department, and specific management functions are performed by county agriculture and rural affairs bureaus. The detailed arrangements are:

87. County and township wastewater treatment management: County and township wastewater treatment authorities at the county level are housing and urban-rural development bureaus (typically with 10-15 staff). A county housing and urban-rural development bureau has a number of subordinate institutions, including a construction management station and a quality supervision station (normally with several tens of technical staff), supervising the quality, safety and environmental performance of construction projects. For example, the county housing and urban-rural development bureau in Yongfeng county has ten staff in the bureau, while the quality supervision station under the bureau has 35 technical staff to implement daily quality and safety supervision works. Housing and urban-rural development bureaus perform an on-site inspection on county and township WWTPs at least monthly. In Jiangxi and Hunan Provinces, all county housing and urban-rural development bureaus are well staffed and budgeted, have clearly defined responsibilities, and supervise WWTP operation effectively.

88. County and township domestic waste management: County and township domestic waste management authorities are county urban management bureaus. A county urban management bureau normally has 5-10 staff, with a number subordinate institutions, including an environmental sanitation management station, responsible for county and township and rural waste management, and an urban management supervision brigade, responsible for routine inspection. Waste collection and transfer is conducted by third party cleaning companies. In Jiangxi and Hunan Provinces, all county urban management bureaus are well staffed and have clearly defined responsibilities. For example, in Yudu county of Jiangxi, the sanitation management station has over 80 staff and the urban management supervision brigade also has over 80 staff.

89. Agricultural film recovery management: Agricultural film recovery is managed by county agriculture and rural affairs bureaus, which investigate agricultural film recovery, check sales and recovery files, and organize publicity activities. Each county agriculture and rural affairs bureau has established a supervision team that performs supervision monthly. Based on the field work, the agricultural film recovery rate is yet to be improved due to the relatively weak awareness of environmental protection and agricultural film recovery of farmers, so relevant publicity and training should be strengthened.

90. Livestock and poultry manure recycling management: Livestock and poultry manure recycling is also supervised by county agriculture and rural affairs bureaus, and performed by breeding farms and farmers to which the government provides grants subsidies for accepted recycling tasks.



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In Hunan Province, leading groups have been established, and implementation plans developed in all cities and counties for this purpose. The provincial agriculture and rural affairs department conducts one or two province-level third party evaluations on livestock and poultry manure recycling annually, and on randomly sampled breeding farms / farmers in one or two counties in each city. Except agriculture and rural affairs authorities, law enforcement brigades under county ecology and environment bureaus would supervise the routine environmental management of breeding farms irregularly by means of random sampling and assignment, and result disclosure.

91. In sum, relevant authorities related to the Program activities are well established, staffed and budgeted, and have adequate knowledge and capacity to manage relevant environmental impacts.

### **3.1.2 Health and Safety Management System**

#### **3.1.2.1 Legal framework**

92. In China, there is a special management system on work safety, which includes a series of laws, regulations, measures and technical standards, including:

- **Labor Law (2018 Amendment):** This law requires that labor contracts guarantee health and safety, and that employers must establish sound labor health and safety regulations, comply strictly with the state labor health and safety regulations standards, and provide labor health and safety education, healthy and safe working conditions, and necessary labor protection articles to workers to prevent accidents and reduce occupational hazards.
- **Labor Contract Law (2012 Amendment):** Labor contracts shall ensure working conditions and protection against occupational hazards.
- **Work Safety Law (2021 Amendment):** This law is the basic law on work safety, requiring that a production and operation agency must comply with this Law, and other laws and regulations related to work safety, establish a work safety responsibility system, and work safety rules and regulations, and improve work safety conditions. It stipulates that the principal of the production and operation agency shall take overall responsibility for the work safety of the agency, including institutional building, responsibility definition, staff qualification and training, work safety facility “three simultaneousities”<sup>13</sup>, safety assessment, safety design and construction, safety marking, emergency response, personal protective equipment, etc. When producing, dealing with, transporting, storing, using or disposing of hazardous materials, the production and operation agency must comply with the applicable laws, regulations, and national or industrial standards, take effective safety measures, and accept supervision by relevant authorities. Work safety supervision authorities shall supervise work safety generally within their jurisdictions.
- **Regulations on Work Safety Management of Construction Works (2003):** These regulations are important regulations on the work safety of construction projects, and specify the overall framework and procedures for work safety supervision and management of construction, reconstruction, expansion and demolition activities of construction projects in China, and the work safety responsibilities of the project proponent, supervision agency and relevant authorities. These regulations make provisions on work safety in the whole process, including safety design, safety review, construction and supervision, and the safety management of the project proponent, including setting up a work safety management organization, providing full-time work safety management staff, developing work safety rules and regulations, taking safety measures in the construction organization design, ensuring that special operators are certified, and ensuring that meals, drinking water, resting places, etc. of workers shall meet the hygiene standard, and providing personal protective equipment and training to operators, etc.
- **Regulations on Safety Management of Hazardous Chemicals (2013 Amendment):** These regulations cover safety management in the production, storage, use, operation and transport of hazardous chemicals, and define relevant responsibilities: Enterprises

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<sup>13</sup>This is further elaborated in the Regulations on Supervision and Management of Three Simultaneousness for Safety Facility in Construction Projects (SAWS, amended in 2015). Work safety facility be designed, constructed and operated simultaneously with the main project.

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take primary responsibility for the safety management of hazardous chemicals; safety supervision, public security, quality inspection, environmental protection, transport, health, industry and commerce, and postal authorities have their respective responsibilities, in which safety supervision authorities are responsible for overall management, including reviewing safety conditions of construction, reconstruction and expansion projects that produce or store hazardous chemicals, issuing work safety permits, safe use permits and operating permits for hazardous chemicals, etc. A permit is needed for all construction projects that produce, deal with and use hazardous chemicals. Enterprises using hazardous chemicals must have qualified safety facilities, management systems and staff. Workers exposed to hazardous chemicals should receive compulsory training. The transport of hazardous chemicals needs a special permit, where relevant staff (drivers, handlers, etc.) must be qualified. Safety regulators at or above the county shall develop a contingency plan for hazardous chemicals. Each enterprise shall develop its own contingency plan, and provide staff and equipment, and organize drills regularly.

93. In addition, extensive sectoral laws and regulations are an integral part of safety management, including the Flood Control Law, Regulations on the Prevention and Control of Geologic Disasters, Fire Control Law (2019 Amendment), Road Traffic Safety Law (2011 Amendment), Emergency Response Law (2007), Special Equipment Safety Law (2013), etc.

94. On this basis, a number of local regulations and implementation rules on safety management have been promulgated in Jiangxi Province, including the Regulations on Work Safety Management (2017), Regulations on the Work Safety Supervision of Construction Projects (2019), Regulations on the Safety Supervision of Special Equipment (2011), Fire Control Regulations (2010), Financial Punishment Measures for Work Safety (2009), etc. Many municipal governments have also promulgated similar implementation rules to provide for specific requirements. Similar sets of local regulations are also developed in Hunan Province.

95. The above work safety system covers overall health and safety management, which is supervised by safety supervision authorities. The management of occupational disease prevention and treatment for workers is governed by the specialized management system based on the Law on the Prevention and Control of Occupational Diseases in China, including:

- **Law on the Prevention and Control of Occupational Diseases:** This law stipulates occupational disease prevention and treatment requirements related to exposure to dust, radioactive substances, and other toxic and hazardous factors at work. A “three simultaneities” system has been established, i.e., facilities for the prevention and control of pollution at a construction project must be designed, built and commissioned together with the principal part of the project. This law also establishes an occupational disease and hazard declaration system, requiring that employers shall declare workplace hazards listed in the **Catalogue for the Classified Management of Occupational Disease Hazards and Risks of Construction Projects** to local health authorities timely and truthfully. To implement this system, the Catalogue specifies 12 risk categories (covering 84 industries and 281 production activities).
- Under the framework of occupational disease prevention and treatment, the **Regulations on the Administration of Occupational Health at Workplaces** require that enterprises shall provide occupational health training to workers before and during work, develop an occupational disease prevention and treatment plan, provide personal protective equipment, install alarm and emergency rescue facilities, etc. The **Measures for the Monitoring, Supervision and Administration of Employers' Occupational Health** further define the requirements for employers, including annual health checkup, pre-job occupational health examination, and occupational health examination at separation.

### 3.1.2.2 Implementation mechanism

96. According to the above legal framework, safety management has become a top priority in project construction and facility operation management, and a complete practical system has been established for whole-process implementation and regulation. The main practices include:

#### Design stage:

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- The design agency should consider construction safety and protection needs, and the project proponent should determine the budget for safety measures;
  - The project proponent should organize experts to review safety risks before construction;
  - “Three simultaneousness” for occupational health facilities, i.e. design, construction and operation of occupational health facilities simultaneously with main project;

#### **Construction stage:**

- The principal of the project proponent shall be shall take overall responsibility for the construction quality and safety of the agency. The project proponent shall establish a sound work safety responsibility system, a work safety education and training system, and rules and regulations on work safety, perform regular and special safety inspections, and keep inspection records properly;
- The project proponent shall establish a work safety management agency, and be provided with qualified management staff;
- Operators shall receive work safety education and training before going to a new job or a new construction site;
- Special operators must receive special safety training, and be qualified before going to work;
- Before construction, the technical staff of the project proponent responsible for project management shall explain the technical requirements to the construction team and staff in detail;
- The project proponent shall set up conspicuous safety warning signs at positions with potential risks, such as construction site entrances, lifting machinery, scaffolding, tunnel openings, foundation pit edges, and depositories of explosives, and hazardous gases and liquids;
- The project proponent shall set up the office, living and operating areas of the construction site separately, maintain a safe distance, and ensure that the health and safety requirements are met;
- The project proponent shall provide personal protective equipment to operators, emergency rescue facilities, and notify safety operation protocols for hazardous jobs;
- The principal, project leaders, and full-time work safety management staff of the project proponent should go to work after passing an examination by the relevant authority only;
- The project proponent shall offer work safety education and training to the management and operating staff at least annually, and anyone who does not pass the examination shall not go to work;
- The supervision agency and supervising engineer shall perform supervision in accordance with the applicable laws, regulations and compulsory standards.

#### **Operation stage:**

- The production and operation entity must establish a sound work safety responsibility system, and relevant rules, regulations and protocols, appoint staff responsible, and ensure required financial inputs;
- The production and operation entity shall inspect its own work safety, and eliminate potential risks timely;
- The production and operation entity shall prepare its emergency rescue plan, and conduct drills regularly;
- The principal and work safety management staff must have work safety knowledge and management capacity required for production and operation activities;
- Workers shall receive work safety education and training before going to work, and special operators must receive special safety training, and be qualified before going to work;
- The production and operation entity must provide personal protective equipment complying with the national or industrial standard to workers, educate them on proper use, and supervise the proper use thereof;
- The operation entity shall establish occupational health records for its employees.

97. Project owners, and production and operation entities are responsible subjects of work safety management, sectoral authorities (e.g., housing and urban-rural development authorities, urban

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management authorities) have regulatory responsibilities, and overall supervision is the responsibility of emergency management authorities.

98. According to the field visits, the above work safety management procedures and measures have been well implemented in project construction and operation. During construction, work safety is a top priority of project management; the contractor should establish a special unit, appoint full-time staff, develop a safety plan, and implement safety measures; the supervision company should have a full-time safety supervising engineer. Under the Program, wastewater treatment and waste transfer stations involve routine operation management, and are able to implement such measures properly. For example, at the Dexing County WWTP, the safety management unit set up by the operator has full-time staff, sound safety management regulations, and over 20 operation protocols (covering equipment operations, hazardous material management, waste management, etc.). On the site, safety protocols and safety signs are posted at conspicuous positions on all relevant equipment, and the enterprise has established an emergency command center, developed a detailed contingency plan, and provided emergency equipment and materials, and would conduct a drill annually.

99. According to the investigation on the domestic waste collection and transfer enterprise (Qiaoyin) in Yongfeng County, Jiangxi Province, the enterprise has established a work safety leading group, and offered systematic training to workers. For example, risks facing frontline cleaners include traffic, cuts / scratches, drowning, etc. Eight slight accidents occurred in 2020. The enterprise has established operation protocols accordingly to regulate operations, including: 1) code of conduct for civilized operation; 2) management standard for cleaning vehicles; 3) operation guide for sprinkling trucks; 4) work guide for river cleaners; and 5) rules on work safety management. In addition, the enterprise has invited professionals from the county traffic police to provide traffic safety guidance to drivers, and established a safety management mechanism, including: 1) holding a regular safety meeting weekly; 2) holding a meeting every day before the start of work to define the daily scope of work and safety requirements; 3) vehicle inspection, and route / speed control; 4) proper use of reflective vests and traffic signs; and 5) installation of GPS positioning system for all vehicles for tracking; 6) monthly safety performance evaluation. It was found that training on occupational health and safety for some workers, mostly contract workers or/and temporary workers, is inadequate due to their frequent job changes. This is only observed in one sample county of Yongfeng. However, given the importance of worker's health and safety and the high possibility of quick changes of temporary workers, strengthening of health and safety for such worker group is emphasized and included in the PAP.

100. In respect of **occupational disease prevention and treatment**, mainly the WWTPs under the Program involve occupational disease hazards and risks (hazards being noise and chemicals). Enterprises shall report to health authorities, and take the following occupational disease prevention and treatment management measures: 1) setting up or appointing an occupational health management agency, and appoint full-time or part-time occupational health management staff; 2) developing an occupational disease prevention and treatment plan; 3) establishing sound regulations and operation protocols on occupational health management, and providing personal protective equipment; 4) establishing occupational health and worker health files; 5) establishing a sound workplace occupational disease hazard monitoring and evaluation system; and 6) developing an emergency rescue plan for occupational disease accidents. Occupational disease prevention and treatment is supervised and inspected by county health commissions annually. Other Program activities that are not included in the catalogue of occupational disease hazards and risks are not covered by the occupational disease prevention and treatment system, but by the general work safety management system.

101. In addition, some parts of Jiangxi Province are epidemic areas of schistosomiasis<sup>14</sup>. Schistosomiasis is not an occupational disease but an endemic, with snail in water being the intermediate host, and would affect the health and safety of construction workers of water-related projects. China has gained over 70 years of successful experience in schistosomiasis prevention

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<sup>14</sup> Schistosomiasis is a chronic parasitic disease caused by schistosome infection, and the human body is usually infected by skin contact with infested water containing schistosomelarvae. In the wild, the snail is the only schistosome host, so controlling snails is a main measure for schistosomiasis prevention.

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and treatment, and established a complete monitoring, prevention and treatment system. Jiangxi Province has promulgated the Regulations on schistosomiasis prevention and treatment of Jiangxi Province, which applies an integrated prevention and treatment approach to the disease vector based on physical preventive measures to change its breeding environment and inhibit its growth. For example, agriculture authorities are responsible for crop restructuring, and biogas tank construction (reducing fecal discharge), water resources authorities for river and lake management, and canal reconstruction, forestry authorities for forestation, and natural resources authorities for land consolidation. In epidemic areas, health authorities conduct a population and snail survey every year, and kill snails with drugs once or twice a year. There were formerly 39 epidemic counties of schistosomiasis in Jiangxi Province. By 2019, schistosomiasis had been eliminated in 24 counties. In the other counties, preventive measures are taken for water-related projects during construction, including wearing protective articles (including clothes coated with protective drugs), applying protective drugs, taking protective drugs, etc. Safety drugs and therapies are available for schistosomiasis treatment. Therefore, schistosomiasis can be prevented and treated effectively during the implementation of the Program.

### **3.1.2.3 Organizational structure and capacity**

102. The Program activities are implemented by county (and township) authorities mainly. Safety management mainly includes construction safety at the construction stage, and safety management during the subsequent operation of county and township wastewater treatment facilities and waste transfer facilities.

103. For safety management at the construction stage, except that the contractor implements specific measures, and the supervision company conducts work safety supervision, each sectoral authority has work safety supervision and management responsibilities. According to the Work Safety Law, each sectoral authority is responsible for both sectoral management and work safety regulation in this sector.

104. It is learned that a work safety committee has been established in each county, headed by a chief county leader, and composed of leaders of different authorities. The committee is responsible for county-wide work safety direction and supervision, holds a plenary session quarterly, and a comprehensive inspection at least quarterly. The committee governs over 10 specialized work safety subcommittees, covering different fields, including industrial manufacturing, mines, hazardous goods, construction, road safety, agriculture, stockbreeding, forestry, fishing, etc. All Program activities are managed by sectoral authorities, and generally supervised by county emergency management bureaus.

105. Each sectoral authority at the county level has a work safety leading group to supervise work safety in the construction and operation of relevant projects. The sectoral authority usually inspects work safety in monthly routine supervision, which includes the performance of work safety measures.

106. Except supervision by sectoral authorities, the county emergency management bureau conducts general work safety supervision and management, and evaluates the work safety management performance of all sectoral authorities annually.

107. In respect of occupational disease prevention and treatment, the health commission of each county is responsible for health management, mainly including inspecting enterprises with occupational disease hazards on site, investigating occupational disease hazards, organizing training on occupational disease prevention and treatment, etc. For example, the Yongfeng County Health Commission inspects all enterprises with occupational disease hazards within its jurisdiction every year, trains all enterprise principals and occupational health managers, and asks all enterprises to conduct occupational health checkup for workers. In Chongyi County, law enforcement bureau of the county health commission conducts an inspection on occupational disease prevention and treatment for the county WWTP annually, with focus on workplace ventilation and hazard monitoring, the use of personal protective equipment by workers at work, and pre-job, on-the-job and post-job occupational health checkup.

108. For schistosomiasis prevention and treatment, an schistosomiasis prevention station has been established under the county health commission in each epidemic area, responsible for

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specifically for schistosomiasis prevention and treatment, including planning, survey, snail killing, treatment, training, etc.

109. Based on the field visits, China has established a comprehensive management system for work safety and occupational health. The work safety authorities, and sectoral authorities responsible for work safety management in all localities of Jiangxi and Hunan Provinces have formed a sound organizational structure, and established an effective management and supervision system. For the Program activities, this management system can respond to relevant health and safety risks effectively.

### 3.1.3 Fertilizer Management System

#### 3.1.3.1 Legal framework

110. A main activity under the Program is reducing chemical fertilizer consumption. Chemical fertilizers are not toxic or hazardous chemicals themselves, and the main problem is that overuse will lead to soil degradation and agricultural non-point source pollution. The main laws and regulations on fertilizer management are:

- **Agriculture Law (2012 Amendment):** A registration or permit system shall be practiced for fertilizer production and operation. Chemical fertilizers, pesticides and agricultural films shall be used rationally, and organic fertilizers used more extensively to prevent farmland pollution and destruction, and fertility decline.
- **Measures for Fertilizer Registration and Management (2017 Amendment):** A fertilizer product registration management system shall be practiced, where any unregistered fertilizer shall not be imported, produced, sold, used or advertised. A producer shall perform a normative field test in China, and pass a chemical, effect and safety review organized by the Ministry of Agriculture before applying for fertilizer registration. If a registered fertilizer is proven harmful to humans, animals or crops in the effective period, the Ministry of Agriculture will announce its restricted use or prohibition after review by the fertilizer registration review committee.
- **Action Plan for Zero Growth in Chemical Fertilizer Consumption by 2020 (2015):** This plan proposes a zero growth target by 2020, and such actions as promoting formulated fertilization, improving fertilization modes, and increasing organic fertilizer consumption in view of the overuse and blind application of chemical fertilizers.
- **The Technical Guidelines on the Environmentally Safe Application of Chemical fertilizers (2010):** These guidelines specify the principles, and control and management measures for the environmental safe application of chemical fertilizers with the aim of reducing chemical fertilizer consumption, losses, and non-point source pollution.

111. In addition, extensive industry and sector laws and regulations contain relevant provisions, including the Environmental Protection Law, Water Pollution Prevention and Control Law, Law on the Popularization of Agricultural Technology, Marine Environmental Protection Law, Agricultural Product Quality Safety Law, etc.

#### 3.1.3.2 Implementation mechanism

112. According to the Measures for Fertilizer Registration and Management, the Ministry of Agriculture and Rural Affairs is responsible for nationwide fertilizer registration and approval, announcement and supervision. Only registered chemical fertilizers can be produced.

113. Since chemical fertilizers are not toxic or hazardous chemicals, there is no permit system for their sale, marketing and use similar to that for pesticides. Chemical fertilizers are operated and sold in a market-based manner, and their production and operation enterprises carry out sales activities themselves, usually selling them to agricultural material companies, agricultural technique extension stations, soil fertilizer stations, plant protection stations or sales agents for resale to farmers.

114. Chemical fertilizers are used by farmers themselves. County agriculture and rural affairs bureaus are responsible for fertilizer supervision and management within their own jurisdictions, and county and township agricultural technology extension stations (soil fertilizer stations, plant protection stations) offer training and technical guidance to farmers. For example, the soil fertilizer

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stations, plant protection stations and farmer schools under the Dexing County Agriculture Bureau in Jiangxi Province offer training to farmers regularly, totaling 40-50 times per annum.

115. According to the national Action Plan for Zero Growth in Chemical Fertilizer Consumption by 2020 (2015), Jiangxi Province extends formulated fertilization, and promotes targeted fertilizer reduction and soil improvement greatly, reducing chemical fertilizer consumption for four consecutive years, and reaching a fertilizer utilization rate of 41.5%.

116. Based on the field visits, fertilizer overuse still exists in order to pursue higher outputs. Farmers' awareness of scientific fertilization needs improvement through more training. This is not uncommon as observed in the sample counties, therefore, training plan for the farmer's awareness and technology in terms of fertilizer application is designed in the Program.

### **3.1.3.3 Organizational structure and capacity**

117. The Jiangxi Provincial Agriculture and Rural Affairs Department is the provincial authority for agriculture and rural affairs, composed of 24 divisions / offices and over 30 subordinate units, in which those related to chemical fertilizer management are:

- Cultivation Management Division: implementing laws, regulations and bylaws on cultivation, fertilizer management and plant quarantine, developing and implementing provincial plans for soil and fertilizer technology extension, and introducing and testing new technologies and products;
- Soil Fertilizer Technology Promotion Station: developing and implementing provincial plans for soil and fertilizer technology extension, introducing and testing new technologies and products, and implementing farmland quality management, soil improvement, scientific fertilization and water-saving agriculture projects

118. For fertilizer management, the provincial agriculture and rural affairs department is responsible mainly for province-level planning and guidance. The relevant activities under the Program are conducted at the county level, and involve county agriculture and rural affairs bureaus, which have soil fertilizer stations and plant protection stations in townships, and offer skills training to farmers every year (including the rational and efficient use of chemical fertilizers). In Dexing County, each soil fertilizer station or plant protection station has a workforce of 5-6, and trains farmers over 20 times a year, and the county farmer school has 10 technicians and trains farmers over 10 times a year.

119. Based on the field visits, all county agriculture authorities in Jiangxi Province can direct farmers to use fertilizers rationally, and reduce waste and non-point source pollution.

120. The Hunan Provincial Agriculture and Rural Affairs Department is the provincial authority for agriculture and rural affairs, composed of 23 divisions / offices and over 29 subordinate units, in which those involved in agricultural film recovery, and livestock and poultry manure recycling are:

- Agricultural Resources Protection and Utilization Division: responsible for the environmental protection and management of farmland, biological resources and farm products, conducting agricultural EIAs, constructing agricultural pollution prevention and treatment demonstration areas, conducting agricultural waste recycling and agricultural film recovery, etc.
- Stockbreeding and Veterinary Medicine Division: supervising and managing stockbreeding, feeding, slaughtering, and veterinary medicine, registering breeding farms, conducting livestock and poultry manure recycling, directing livestock and poultry pollution prevention and control, etc.

121. Specific tasks of agricultural film recovery, and livestock and poultry manure recycling are managed by county agriculture and rural affairs bureaus. For agricultural film recovery, each county agriculture and rural affairs bureau has established a task force headed by a leader of the bureau. For example, the Ziyang District Agriculture and Rural Affairs Bureau provides eight staff members for the agricultural film recovery task force, which operates well. For livestock and poultry manure recycling, each county has established a leading group, and the county agriculture and rural affairs bureau is responsible for drafting implementation plans, and providing technical guidance and services. According to the fieldwork in Yuanling, Xupu and Shimen Counties, the

county agriculture and rural affairs bureaus are well established, staffed and budgeted to carry out management.

### 3.2 Consistency Analysis between Environmental Management Systems and the World Bank Policy

122. Through the above analysis of the environmental management systems related to environmental impacts of the Program activities, this section makes a comparative analysis between these environmental management systems, and the principles and elements in the World Bank PforR policy<sup>15</sup>.

123. The table below gives a summary of such comparative analysis. See **Appendix 2** for details.

Element	National and local environmental management systems	Consistency
<b>Principle #1: Program E&amp;S management systems are designed to promote E&amp;S sustainability in the Program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to a Program's E&amp;S effects.</b>		
1. Operate within an adequate legal and regulatory framework to guide E&S impact assessments, mitigation, management and monitoring at the PforR Program level.	For the potential environmental impacts involved in the Program, China has established a complete EIA management system, including laws, regulations, technical guidelines, standards, mechanisms, and management procedures, which is approaching the world class. In addition, a sound environmental management mechanism has been established for whole-process EIA management. The performance of this system in managing potential environmental impacts related to the Program activities complies with the Bank principles.	Consistent
2. Incorporate recognized elements of good practice in E&S assessment and management, including: i) early screening of potential impacts; ii) consideration of strategic, technical, and site alternatives (including the "no action" alternative); iii) explicit assessment of potential induced, cumulative, and trans-boundary impacts.; iv) identification of measures to mitigate adverse E&S risks and impacts that cannot be otherwise avoided or minimized; v) clear articulation of institutional responsibilities and resources to support implementation of plans; vi) responsiveness and accountability through stakeholder consultation, timely dissemination of the PforR information, and responsive GRMs	As discussed in Section 4.1.1, China's EIA system includes early-stage impact screening requirements, and classification based on the degree of impact. The Technical Guidelines for Environmental Impact Assessment specify impact screening, option comparison and impact analysis (including positive vs. negative, long-term vs. short-term, direct vs. indirect, cumulative, etc.), defines measures, management responsibilities and budgets, and requires extensive public participation and information disclosure. The Measures for Public Participation in Environmental Impact Assessment specify specific modes and channels of public participation, and feedback requirements.  In practice, for all projects requiring EIA (e.g., WWTP), relevant work has been conducted as required in the EIA system, and its whole implementation process is effectively regulated.	Consistent

<sup>15</sup>The latter three of the six principles (4, 5 and 6) of the Bank PforR policy are for land acquisition, ethnic minorities, areas of conflict, etc. A comparative analysis of these principles is included in the social management system assessment in Chapter 5 of this report.



<b>Principle #2: Program E&amp;S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program.</b>		
3. Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.	Ecological factors (including wildlife, important habitats, and biodiversity) and cultural resources are environmental protection targets defined in the Technical Guidelines for Environmental Impact Assessment, and important factors in the EIA documents. In the preparation of practical EIA documents, identifying important natural habitats and cultural resources is essential. For natural habitats or cultural resources involved, measures are designed in order to avoidance, reduction, mitigation and compensation, and included in the Environmental Management Plan. In addition, any project involving nature reserve or protected cultural relic must be approved by the competent authority.	Consistent
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 Program activities.	China has established a strict nature conservation system, and set up conserves for important natural habitats for strict conservation. In addition, from 2015, China has begun to draw ecological protection red lines on a large scale. By the end of 2020, the drawing of ecological protection red lines had been completed in all provinces and municipalities. During the EIA, nature reserves and ecological protection red lines should be avoided, and reduction, mitigation or compensation measures developed for other inevitable ecological environmental impacts.	Consistent
5. Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.	The Cultural Relics Protection Law defines protected cultural relics of different levels for important cultural resources. During the EIA of a construction project, an environmental protection target survey should be conducted; before the commencement of a large capital construction project, it must be reported to the cultural relic authority for an archeological survey. All protective measures for cultural resources are included in the EIA documents. In addition, the Cultural Relics Protection Law defines chance find requirements.	Consistent
<b>Principle #3: Program E&amp;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.</b>		
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  Promote measures to address child and forced labor.	As discussed in Section 3.1.2, China has established a comprehensive work safety management system, including sound work safety measures for the design, construction and operation stages (see Section 3.1.2.2). During project implementation, safety management is the first priority, and all relevant measures are regulated by sectoral authorities and emergency management (work safety) authorities. Except that project construction and operation agencies must set up a safety management agency, and have appropriate staff and measures, all sectoral authorities should establish a work safety management mechanism, and supervise work safety performance in the industry. Emergency management bureaus (work safety authorities) supervise all industries and key areas. This system ensures the safety regulation of the Program activities.  See Chapter 5 for child labor and forced labor.	Consistent

7. Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the PforR.	As part of the safety management system, China has established a sound hazardous chemicals management system. A permit is needed for all construction projects that produce, deal with and use hazardous chemicals. Enterprises using hazardous chemicals must have qualified safety facilities, management systems and staff. Workers exposed to hazardous chemicals should receive compulsory training. The transport of hazardous chemicals needs a special permit, where relevant staff (drivers, handlers, etc.) must be qualified. Under the Program, only WWTP operation involves the use of hazardous chemicals (acids or disinfectants). According to the fieldwork, all existing WWTPs comply strictly with the laws, regulations and standards on work safety, with an appropriate management system and safety regulations established, full-time staff and protection equipment provided, a contingency plan developed, and drills conducted. Industry authorities and emergency management bureaus conduct regular inspection on WWTPs.	Consistent
8. Promote the use of integrated pest management practices to manage or reduce the adverse impacts of pests or disease vectors.	The Program activities involve schistosomiasis prevention and treatment. As discussed in Section 3.1.2.2, schistosomiasis prevention and treatment has been conducted for over 70 years in China, and a sophisticated management system is in place. An integrated approach is applied, with comprehensive control measures taken by agriculture, water resources, forestry, land and resources, transport, and other authorities During the construction of projects involving water, active protection (clothes, drug application, etc.) is provided to workers for prevention.	Consistent
9. Provide training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with the relevant international guidelines and conventions.	China's safety management system requires that safety training be provided to workers exposed to hazardous chemicals. Its implementation is regulated by sectoral authorities and work safety supervision authorities.	Consistent
10. 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.	For natural disasters, China has established a prevention system. For projects involving flood and geological disaster risks, a flood and geological disaster risk assessment should be conducted, and avoidance, reduction or mitigation measures taken, which must be approved by sectoral authorities before implementation.	Consistent

124. Based on the description of the domestic environmental management systems, implementation mechanisms, and organizational structure related to the Program activities in Section 3.1, and the comparison with the Bank PforR policy in Section 3.2, it can be thought that the relevant environmental management systems in China are consistent with the Bank PforR policy and its key elements, and can provide a generally effective management framework for the implementation of the Program activities. During field visits at the preparation stage, the Bank team also found inadequacies in the implementation of some environmental management systems, mainly including weak environmental protection and participation awareness of farmers in chemical fertilizer reduction and agricultural film recovery, and inadequate occupational health and safety training for contract workers or/and temporary workers in waste collection activities due to the temporary and flowing nature of workers. This report proposes recommended actions for these inadequacies (see Chapter 6).

## 4 Social Management System Assessment

125. **Table 1-1** shows that the social impacts and risks involved in the Program activities in Jiangxi and Hunan fall into the following types: comprehensive social impacts (e.g., fairness, transparency, NIMBY, etc.), tangible culture heritage, public and worker safety, land acquisition, restriction on land use and resettlement, and impacts of ethnic minorities and vulnerable groups.

126. 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. Therefore, the social management system assessment consists of the three parts: review of laws and regulations, appraisal of management agencies and mechanisms, and due diligence of implementation performance. In China's social management system, different social risks and impacts are managed by regulations and different government agencies (see Table 4-1).

127. The Program-for-Results (PforR) Financing Environmental and Social Systems Assessment (ESSA) Guidance lays down a set of principles and elements for assessing the borrower's environmental and social systems systematically. This chapter will assess the social management regulations, management mechanisms and capacity, and implementation performance related to the Program based on the types of social risks and impacts of the Program, and the six core principles and 13 elements stipulated in the Guidance.

### 4.1 Correlation Analysis with Bank Principles

128. Generally, all the six core principles of PforR ESSA are relevant to the Program social management system. See **Table 4-1** for a correlation analysis between the Chinese social management system and the Bank policy.

**Table 4-1: 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	<b>Principle #1:</b> social impacts and risks assessment and management system	Notice of the National Development and Reform Commission on Issuing the Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2021 Amendment)	<b>State:</b> NDRC; <b>Jiangxi and Hunan Provinces:</b> <ul style="list-style-type: none"> <li><b>Leading authorities:</b> provincial development and reform commissions, provincial, municipal and county political and legislative affairs committees, offices for letters and visits;</li> <li><b>Assessors:</b> municipal and county competent authorities (e.g., WWTP authorities, county housing and construction bureaus) and appointed third parties</li> <li><b>Registration authorities:</b> provincial (cross-regional / cross-departmental projects), or municipal and county political and legislative affairs committees</li> <li><b>Decision-making authorities:</b> municipal and</li> </ul>
		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)	
	<b>Principle #6:</b> social conflict	Notice on the Opinions on the Establishment of the Social Stability Risk Assessment Mechanism for Major Matters of Jiangxi Province (JPGO [2010] No.21)	
		Measures for the Implementation of the Social Stability Risk Assessment of Major Decisions (Matters) of the Judicial Administrative System of Hunan Province (Interim) (2012.9.20)	
		Interim Regulations on Major Administrative Decision-Making Procedures (2019.9)	
		Regulations on Complaint Letters and Visits (2005.5)	

			<p>county executive meetings of CPC and government leaders</p> <ul style="list-style-type: none"> <li>• <b>Implementing agencies:</b> assessors and entrusted operating agencies</li> <li>• <b>Supervising agencies:</b> municipal and county governments and their grass-root agencies (e.g., township governments)</li> </ul>
Tangible culture heritage	<b>Principle #2:</b> cultural heritage conservation	Cultural Relics Protection Law (2017 Amendment)	<p><b>State:</b> National Cultural Heritage Administration</p> <p><b>Jiangxi and Hunan</b></p> <p><b>Provinces:</b> provincial, municipal and county cultural relic protection authorities</p>
		Regulations for the Implementation of the Cultural Relics Protection Law (2017)	
Public and worker safety	<b>Principle #3:</b> labor and occupational health	Civil Code of the People's Republic of China (2021)	<p><b>Public security</b></p> <p><b>State:</b> Ministry of Emergency Management</p> <p><b>Jiangxi and Hunan</b></p> <p><b>Provinces:</b> county governments, emergency management bureaus, production and operation entities, associations, agencies providing technical management services for work safety</p> <p><b>Labor safety</b></p> <p><b>State:</b> National Health Commission</p> <p><b>Jiangxi and Hunan</b></p> <p><b>Provinces:</b> provincial, municipal and county health commissions, provincial occupational disease prevention and treatment institutes, occupational health examination agencies</p> <p><b>Labor management</b></p> <p><b>State:</b> Ministry of Human Resources and Social Security, All-China Federation of Trade Unions</p> <p><b>Jiangxi and Hunan</b></p> <p><b>Provinces:</b> provincial, municipal and county federations of trade unions, and industrial unions; trade unions of enterprises and public institutions</p>
		Work Safety Law of the People's Republic of China (2014.12)	
		Law of the People's Republic of China on the Prevention and Control of Occupational Diseases (2017.1)	
		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 (2013.12)	
		Measures for the Implementation of the Regulations on Labor Protection of Female Workers of Hunan Province (2020.3.8)	
		Work Safety Law of the People's Republic of China (2014.12)	
		Law on the Prevention and Treatment of Infectious Diseases (2020)	
		Emergency Response Law of the People's Republic of China (2007.11)	
		Regulations on the Prevention and Control of Geologic Disasters (2004.3)	
		Regulations on the Defense against Meteorological Disasters (2010.4)	
		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)	
Land acquisition, restriction on land use and resettlement	<b>Principle #4:</b> land acquisition, livelihood restoration and public participation	Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2008.11)	<p><b>Land acquisition</b></p> <p><b>State:</b> Ministry of Natural Resources</p> <p><b>Jiangxi and Hunan</b></p> <p><b>Provinces:</b> provincial, municipal and county governments, and natural</p>
		Land Administration Law (2020)	
		Regulations for the Implementation of the Land Administration Law (2021.7)	
		Regulations on the Expropriation of Houses on	

		<p>State-owned Land and Compensation (Decree [2011] No.590 of the State Council) (2011.1.2)</p> <p>Notice on Issuing the Measures for the Expropriation and Evaluation of Houses on State-owned Land (JF [2011] No.77) (2011-6-3)</p> <p>Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238)</p> <p>Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29)</p> <p>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)</p> <p>Notice of the Jiangxi Provincial Government on Releasing Block Comprehensive Land Prices of Jiangxi Province (2020.2.28)</p> <p>Measures for the Implementation of Urban Housing Demolition Management of Jiangxi Province (2018.7)</p> <p>Compensation Rates for Land Acquisition of Hunan Province (HPG [2018] No.5)</p> <p>Regulations for Urban Housing Demolition Management of Hunan Province (Decree No.157 of the Hunan Provincial Government) (2002.6)</p>	<p>resources authorities</p> <p><b><u>Urban house demolition</u></b> Municipal and county governments, housing and construction bureaus, house demolition agencies</p> <p><b><u>Rural house demolition</u></b> agriculture and rural affairs authorities, Natural resources authorities, township governments, village committees</p> <p><b><u>Livelihood restoration</u></b> <b>State:</b> Ministry of Human Resources and Social Security <b>Jiangxi and Hunan Provinces:</b> provincial, municipal and county human resources and social security authorities, county and township governments, community committees, village committees</p>
Ethnic minorities and vulnerable groups	<b>Principle #5:</b> ethnic minorities and vulnerable groups	<p>Constitution (2018 Amendment)</p> <p>Law of the People's Republic of China on Regional National Autonomy (2001 Amendment)</p> <p>Some Provisions of the State Council on the Implementation of the Regional National Autonomy Law (2005.5)</p> <p>Some Provisions of Hunan Province on the Implementation of the Regional National Autonomy Law (2011)</p> <p>Notice of the State Council on Issuing the 13<sup>th</sup> Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79)</p> <p>13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Hunan Province (2017)</p> <p>Notice of the General Office of the Jiangxi Provincial Government on the 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province (2017)</p> <p>Law of the People's Republic of China on the Protection of Women's Rights and Interests (2018 Amendment)</p> <p>Measures of Hunan Province on the Implementation of the Law on the Protection of Women's Rights and Interests (2006.10.1)</p> <p>Guidelines of the CPC Central Committee and the State Council on the Three-year Poverty Alleviation Action</p> <p>Guidelines of the General Office of the Jiangxi Provincial Government on Care and Support for Registered Severely Disabled Persons (2019.2)</p> <p>Regulations for Countryside Revitalization of</p>	<p><b><u>Ethnic minorities</u></b> <b>State:</b> National Ethnic Affairs Commission <b>Jiangxi and Hunan Provinces:</b> provincial, municipal and county ethnic affairs commissions (or ethnic and religious affairs bureaus)</p> <p><b><u>Women</u></b> <b>State:</b> All-China Women's Federation <b>Jiangxi and Hunan Provinces:</b> women's federations at different levels</p> <p><b><u>Children</u></b> Functional authorities of governments at or above the county level, township governments, sub-district offices, community committees, village committees</p>

		Jiangxi Province (2021)	
		Notice of the Hunan Provincial Government on Issuing the 13 <sup>th</sup> Five-year Poverty Alleviation Plan of Hunan Province (HPG [2017] No.12)	
		Strategic Plan for Countryside Revitalization of Hunan Province (2018-2022) (2018.9)	

## 4.2 Assessment of Social Regulations and Policies

129. 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 LAR, ethnic minority development, labor rights, public participation and consultation, grievance redress, etc. have been promulgated and implemented at the state, provincial, municipal and county levels to systematically manage potential social risks and impacts in the Program lifecycle.

130. **Appendix 2** 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.

**Core 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.<sup>16</sup>**

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

**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.

132. **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.

- The 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.
- The Jiangxi and Hunan Provincial Governments have promulgated the Notice on the Opinions on the Establishment of the Social Stability Risk Assessment Mechanism for Major Matters of Jiangxi Province, and the Measures for the Implementation of the Social Stability Risk Assessment of Major Decisions (Matters) of the Judicial Administrative System of Hunan Province (Interim) respectively, defining the requirements for SSRA.

<sup>16</sup> 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.

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

133. **Assessment:** SSRA is an important procedural requirement in project application and feasibility study. The Chinese, and Jiangxi and Hunan Provincial Governments have formulated and implemented relevant policies, mechanisms, standards and management procedures to regulate SSRA. It is learned through investigation and assessment that the related municipal and county authorities take the SSRA seriously, and the conclusions and risk ratings are the key reference for the governments in their decision-making. However, there is no effective monitoring mechanism to track and support the implementation of risk mitigation measures.

134. **Recommendation:** The borrower should establish and implement a social monitoring and reporting mechanism at both of the provincial and county level to monitor and evaluate the implementation of related social measures and outcomes.

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

135. According to the social risk screening results (Appendixes), the activities in Jiangxi 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.

- i) **Early screening:** During site selection and feasibility study of related projects, the relevant authorities (e.g., natural resources bureau, 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-examination on the Use of Land for Construction Projects (2008), 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 safety risks.
- ii) **Alternatives:** Options should be compared 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 Examination 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) (NDRCOI[2013] No.428) also stipulates, the project implementation units (PIUs) and assessment agencies shall obtain the support of the local governments and related departments, grass-root 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.
- 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) (NDRCOI[2013] No.428) requires that plans and 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

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an moderate 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.

- 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.
- v) **Public participation, information disclosure and grievance redress mechanism:** The SSRA policies of Jiangxi and Hunan Provinces 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) (NDRCOI[2013] No.428) 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 the government at or above the county level shall disclose the key information, once the land acquisition is approved in accordance with related law, 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 Ministry of Natural Resources 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.

136. **Assessment:** The social impacts and risks are basically assessed and managed through regulations in terms of SSRA, land acquisition and house demolition in China and Jiangxi/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 (see Table 4-1) 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. However, there are lack of clear requirements for documentation of the process in terms of impact screening and analysis, public participation, information disclosure, grievance redress, etc.

137. **Recommendation:** Define requirements of documentation in related project management documents (e.g., contracts, agreements) at the PIA of related counties, including (but not limited to) keeping the screening records, recording the public participation as well as information



disclosure process, and the operation of the grievance redress mechanism.

**Core 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.**

138. Elements 3 and 4 under Core Principle #2 define management requirements for natural habitats, which were discussed in Section 3. Here only Element 5 is relevant to social management system. The consistency analysis is discussed below:

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

139. **Cultural relic protection:** The activities in Jiangxi and Hunan involve small civil works, such as the construction of county and township wastewater collection and treatment system, and fecal residue and wastewater recycling facilities. According to the social impact screening (Appendix 1), the 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 will be approved by the cultural relic authority firstly, and then the urban-rural construction planning authority. Within the 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 shall be disposed of within a specific time limit. Before launching a large-scale construction project, the construction unit shall firstly apply to the provincial cultural relic authority for an archeological investigation at places where cultural relics may be buried underground within the project area.

140. **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, and Jiangxi and Hunan Provinces are consistent with Element 5.

**Core 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; and (b) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.**

141. Element 7 under Core Principle #3 defines requirements for toxic and hazardous substances, and pest control related to environmental system analysis. It was discussed in Section 3. Elements 6 and 8 under this core principle are relevant with the social regulations, and analysis of consistency is provided below:

**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.

142. **Worker safety management:** Program activities inevitably involve health and safety risks of workers, including the occupational health management of the WWTP, labors management related to the contractors and facilities of livestock and poultry manure recycling and river cleanup. 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;

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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 Requirements and Guidance for Occupational Health and Safety Management require that enterprises shall identify and control potential occupational health and safety hazards systematically, and eliminate safety accidents at the beginning, thereby protecting worker 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.

143. **Assessment:** A whole set of comprehensive laws and regulations on worker health and safety has been established in China, and Jiangxi and Hunan Provinces to fully protect worker rights. The regulations also require that appropriate safety measures, inspections or remedial works be taken during design, construction and operation to ensure community, personal and worker safety. The regulations on public and labor safety are 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.

144. **Disaster safety management mechanisms:** The Program is located in Jiangxi and Hunan Provinces, 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 Health Commission, 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.

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

**Core 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.**

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

- 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 (2008), 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 used for the project, and the feasibility study will compare different options for LAR impacts. The government authorities of the provincial level such as the PDRC and other departments like provincial natural resources departments, which are responsible for appraisal of the project feasibility study, land preliminary approval and other related project documents, will check if the land use plan is rational during land use review and feasibility study.
- ii) **Identifying and addressing economic and social impacts arising from land acquisition or loss of access to natural resources:** 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 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 Jiangxi and Hunan Provinces 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 land owners and users before project approval. 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 Complaint Letters and Visits (2005), governments at or above the county level shall perform such duties as acceptance, handling, coordination and supervision. If a grievant is dissatisfied with the disposition, he/she may settle the dispute through litigation to protect its lawful rights and interests.
- 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 shall be fixed by provinces, autonomous regions and municipalities by fixing and disclosing block comprehensive land prices, which shall be adjusted or reissued at least every three years; compensation rates for acquired land other than

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agricultural land, ground attachments, young crops, etc. shall be fixed 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. 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 of Jiangxi Province were last adjusted in February 2020, and the Notice of the Jiangxi Provincial Government on Releasing Block Comprehensive Land Prices of Jiangxi Province was promulgated; the compensation rates for land acquisition of Hunan Province were last adjusted in May 2018, the Compensation Rates for Land Acquisition of Hunan Province (HPG [2018] No.5) (2018.5.8) were promulgated, and all municipal (prefecture) governments should fix local compensation rates for attachments and young crops on acquired land based on local economic development and market conditions within three months after promulgation. In addition, the new Land Administration Law requires that land occupied or used for projects shall be compensated for before occupation or use. 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), 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, housing land, and compensation for production / business suspension losses based on local conditions. For example, the Measures for the Implementation of Urban Housing Demolition Management of Jiangxi Province (2018) stipulate that the demolition plan submitted by the demolisher shall include the following: 1) mode of demolition; 2) demolition period and transition period; and 3) proposed compensation standards, etc. 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.

**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 each localities 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 further strengthened, and public employment services improved to promote their employment and startup.

**v) Policy arrangements for infrastructure restoration:** For potential infrastructure impacts

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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 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, ...”*

**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 Ministry of Natural Resources 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.

147. **Assessment:** China has established a complete legal framework and policy system on land acquisition, house demolition, resettlement and compensation. 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 Jiangxi and Hunan Provinces, 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 in August 2019 and came into effect on January 1, 2020 has substantively strengthened the practices of land acquisition and house demolition. The new Land Administration Law defines the scope of land acquisition for public interests, strengthens preparatory risk management for land acquisition, and information disclosure and public participation (including public hearings) in land acquisition and house demolition, and requires that an agreement shall be signed with the land owner and user before land approval, and compensation and resettlement funds be arranged in advance. The new law requires that land acquisition compensation rates shall be fixed 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.

<p><b>Core Principle #5: Program E&amp;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 Peoples and vulnerable groups.</b></p>
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148. The three elements under Core Principle #5 are related to the social regulations system of the Program. Consistency is analyzed below.

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**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.

149. **Policy requirements for ethnic minority consultation:** The Program area includes minority areas in Jiangxi and Hunan Provinces, such as She people in the Ganjiang River watershed in Jiangxi Province, and Tujia and Miao people in Xiangxi Tujia-Miao Autonomous Prefecture (Yuanjiang and Zishui River watersheds) in Hunan Province. 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 is 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. On the other hand, according to the regulations on SSRA, 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; if a government at or above the county level applies for land acquisition, a current status survey and an SSRA should be conducted. Each municipal or county government has formulated local policies according to the applicable regulations, such as the Measures for the Implementation of the Social Stability Risk Assessment of Major Decisions (Matters) of the Judicial Administrative System of Hunan Province (Interim) promulgated in September 2012, and the Notice on the Opinions on the Establishment of the Social Stability Risk Assessment Mechanism for Major Matters of Jiangxi Province (JPGO [2010] No.21) promulgated in 2010.

150. **Assessment:** Comprehensive ethnic minority development policies have been established in China, and Jiangxi and Hunan Provinces 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.

151. **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. According to the above regulations, five-year development plans for ethnic minority programs have been prepared in both provinces. For example, the 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Hunan Province (2017.3.30) plans to build a moderately prosperous society in minority areas in step with the whole province by 2020, and proposes 12 major tasks of minority area development during the 13<sup>th</sup> Five-year Plan period, including infrastructure construction, local economy, social programs, new-type urbanization, targeted poverty reduction, opening up, minority official training, etc., and differentiated supporting policies in terms of public finance, investment, finance, land, industries, ecological compensation, and assistance. The Notice of the General Office of the Jiangxi Provincial Government on the 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province (2017) stipulates that per capita disposable income of farmers in minority areas

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shall be grow faster than and attain or exceed the provincial rural average by 2020, traffic, power, communication, water resources and other infrastructure shall be further improved, and village poverty shall be eliminated in 50 key minority villages. In addition, the 14<sup>th</sup> Five-year development plans for ethnic minority programs of both provinces will be released in 2021.

152. **Assessment:** The central government, and Jiangxi and Hunan Provincial Governments make top-down systematic planning and arrangements in ethnic minority development to create job opportunities for minority residents and improve their living standard, and shall 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.

153. **Poverty and poverty reduction systems:** There are complex causes of poverty, such as illness, disability and education. 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 poverty line. The MLS standard was 550 yuan per capita per month in urban areas and 6,600 yuan per capita per annum in rural areas in Hunan Province in 2020, and the MLS standard was 705 yuan per capita per month in urban areas and 5,640 yuan per capita per annum in rural areas in Jiangxi Province in 2020; 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, who receive full national security in food, clothing, medical care, housing, children education, and basic income which will be ensured no less than the local MLS standard. All localities establish files for the poor, and offer living and housing subsidies, free education, interest-free loans, special occupational training, priority in job placement, etc.

154. **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, where the state shall ensure that women enjoy the same labor and social security rights as men. For example, this law stipulates that women enjoy the same rights as men in rural land contracting, income allocation, LA and compensation, and housing plot land. no any 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 2010, the State Council promulgated the Development Outline for Chinese Women (2010-2020), which aims to include gender awareness in the legal system and public policies, promote women's all-round development, and the balanced development of both genders, protect women's access to basic health and education services, economic development opportunities, and social security, and participation in social affairs management, and environmental decision-making management, and improve the legal system for women's rights and interests. The State Council is preparing the Program for Women's Development of China (2021-2030), which will be promulgated in the second half of 2021.

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

<p><b>Core Principle #6: Program E&amp;S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</b></p>
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156. **Element 13** requires that conflict risks be considered, including distributional equity and cultural sensitiveness, and is not related to the Program 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 Program will not exacerbate local social conflict.

### 4.3 Assessment of Social Management Mechanism and Capacity

157. 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 PIAs, 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**).

158. As shown in

159. **Table 4-1**, the provincial, municipal and county authorities in Jiangxi and Hunan have established clear management agencies for different social risks, which have been provided with qualified staff. This section analyzes the organizational setup of the social management system, and assesses if the organizational settings are rational and needs 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 recommendation 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, decided through official documents and procedures to allocate/maintain human and other resources for meeting the dynamic demand. In addition, **Appendix 4-1** 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.

#### 4.3.1. Assessment of organizational responsibilities and capacity

##### 1) Social risk assessment management agencies<sup>17</sup>

- **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)
- **Provincial political and legislative affairs committee:** coordinating and directing SSRA, convening different political and legislative affairs committees, and authorities for cross-regional / departmental projects to discuss SSRA requirements, and stressing typical risks when necessary
- **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 political and legislative affairs committees:** reviewing and registering the SSRA report, and supervising the work of the assessor and implementing agency
- **Assessor:** conducting or appointing an independent appraisal agency to conduct SSRA,

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<sup>17</sup>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.



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and implementing SSRA measures

- **Independent appraisal agency:** attending SSRA training and examinations organized by the NDRC, and getting registered at the provincial political and legislative affairs committee in advance

160. For example, in Miluo City, Hunan, the Implementation Plan for the Social Stability Risk Assessment of Major Matters of Miluo City (MMGO [2011] No.8), Rules for the Implementation of for the Social Stability Risk Assessment of Major Matters of Miluo City (MWF [2016] No.4) have been promulgated since 2011, defining the assessment procedure and scope, and agencies responsible, and establishing a sound SSRA system at the municipal, township and village levels. It is stipulated that CPC and government chiefs at different levels and authorities are persons chiefly responsible for the SSRA of their respective organizations, and the SSRA of major matters shall be included in the city's overall performance assessment.

161. **Assessment:** The state and local regulations clearly stipulate responsibilities for the agencies concerned, and the related authorities of both provinces (provincial political and legislative affairs committees) require that staff concerned should attend relevant training. In addition, sufficient budgets should be available during SSRA to ensure that relevant measures are implemented. The SSRA mechanisms of both provinces are effective, and consistent with the Bank policy. On the other hand, project risk control measures are implemented by the assessor under the supervision of the municipal and county authorities. For example, the natural resources authority supervises land acquisition and house demolition compensation and resettlement only, while other social risks, such as social security measures, are supervised by another agency, such as the bureau of people and human resources and social security bureau. Therefore, no project-specific third-party monitoring mechanism has been established by the assessor its self.

162. **Recommendation:** Social monitoring arrangements should be established for the Program to monitor social risks (including LAR) regularly, evaluate the social performance of the Program, and improve social risk control measures pertinently and dynamically based on monitoring results.

## 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

163. **Assessment:** For potential adverse impacts on material cultural heritage, there are state and local regulations to avoid or minimize such impacts. According to the survey and interview with the provincial and county level authorizes, the existing cultural relics risks were managed effectively, consistent with Core Principle #2.

## 3) Land acquisition and house demolition agencies

- **Land use approval agencies**

- **Ministry of Natural Resources:** approving project-specific basic farmland acquisition;
- **Provincial natural resources department:** approving project-specific permanent acquisition of collective land (except basic farmland);
- **County natural resources bureau:** accepting land use applications for construction projects, directing the PIUs to prepare necessary land approval documents, and submitting such documents to the competent government

#### ■ **Land acquisition**

- **County or above natural resources authority 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; establishing a leading group for land acquisition and house demolition compensation and resettlement; disclosing relevant reports; drafting a compensation and resettlement plan; organizing public hearings on land acquisition and house demolition; signing land acquisition agreements with affected persons or entities, and conducting compensation and resettlement
- **Township government and village committee:** participating in and supporting land acquisition and house demolition, especially DMS, door-to-door visit, publicity communication, resettlement measure discussion, grievance redress, etc.
- **Municipal / county human resources and social security bureau:** Population with a per capita cultivated area below the specified level after LA will be subject to social security. Land-expropriated farmers may cover basic endowment insurance that is equivalent to that of a worker, or respective basic endowment insurance for a resident voluntarily through application by themselves, and the application will be discussed in the village collective economic organization, reviewed and 7-day disclosed by the township government or sub-district office, approved by the local government, and registration by the human resources and social security bureau. The finance bureau will disburse subsidies.
- **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

164. **Assessment:** China has established a sophisticated organizational structure for land acquisition management, 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, the competent authorities will implement or participate in land acquisition or occupation, compensation and resettlement for different types of projects, and 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, which may decide to 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** is implemented by the

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county social security authority with the support of the township government and village / community committee.

165. **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. In addition, different livelihood restoration measures have different funding sources. Livelihood restoration measures can be well implemented in practice due to rich experience and sound regulations, consistent with Element 9 under Core Principle #4.

#### 4) Public safety, worker health and safety, and emergency engagement agencies

##### ■ a) 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:** registering province-wide occupational health examination agencies
- **Municipal / county health authority:** supervising local occupational health examination, strengthen the supervision and management of occupational diseases and work-related injuries, and ensuring that workers receive occupational health and safety rights according to law
- **Medical insurance authority:** managing work-related injury insurance and settling claims
- **Municipal / county labor authority:** establishing a tripartite mechanism in labor relations with trade unions and enterprises to solve relevant major issues
- **Jiangxi Provincial Occupational Disease Prevention and Treatment Institute:** supervising the quality control of province-wide occupational health examination agencies
- **Hunan Provincial Occupational Disease Prevention and Treatment Institute:** drafting and implementing the provincial plan for occupational disease prevention and control, and being responsible for technical guidance, training and quality control
- **Occupational health examination agency:** obtaining a practicing license, where the lead physician shall have a practicing certificate, a middle-rank or above qualification, an occupational disease diagnosis qualification, and at least three years of experience in occupational health examination
- **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:** coordinating competent authorities to protect women's rights and interests

##### ■ b) Community 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 material production / operation / storage agency:** setting up a work safety management agency, or appointing full-time work safety staff
- **Safety supervision authority:** carrying out administrative law enforcement related to work safety
- In both provinces, a work safety mechanism is in place, saying safety is the responsibility of the production and operation entities, participated by workers, supervised by the government, self-discipline by the industry, and supervised by the public. Safety education aims to cover all people, and work safety training shall be covered by each level of government official.

##### ■ c) Natural disaster emergency engagement

- **Provincial disaster reduction commission:** It is the natural disaster rescue and

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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 agriculture and rural affairs department, water resources department, natural resources department, housing and urban-rural development department, ecology and environment department, statistics bureau, weather bureau, earthquake bureau, health commission, broadcast and television bureau, red cross, communication bureau, and fire brigade. The provincial disaster early warning and response system is started based on assessment, and after it is started, the provincial disaster reduction commission starts its working mechanism immediately, such as post-disaster relief and reconstruction.

- **Municipal / county (district) government:** When a natural disaster occurs, the local disaster early warning and response system is started based on assessment.

166. **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) Ethnic minority management agencies

- **Provincial ethnic and religious affairs bureau:** 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
- **Municipal / prefecture ethnic and religious affairs bureau:** 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 ensuring their implementation; directing 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 relevant policy advice
- **County ethnic and religious affairs bureau:** identifying municipal / county minority population, applying for ethnic minority development projects, and training minority officials

167. **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.

#### 6) Vulnerable group protection agencies

168. Poverty reduction offices (renamed as “countryside revitalization bureaus” since 2021), women’s federations, and civil affairs bureaus have been established, and poverty reduction policies and plans developed at the state, provincial and county levels to plan poverty reduction, women’s development, the disabled, left-behind old people and children, etc. in a unified manner. All authorities have appropriate staff and budgets, and evaluate their performance.

- **Civil affairs bureau:** managing affairs related to old people and left-behind (distressed) children needing assistance, including conducting survey, statistics, filing and recording, establishing a local management mechanism for left-behind (distressed) children 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.
- **DPF(Disabled Persons Federation):** 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, and promoting their rehabilitation, education, employment, rights protection, culture, and social security.
- **Township government and village / community committee:** A supervisor of left-behind (distressed) children is appointed, and a regional old age care service center

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and a women's federation office established at the township level, and a children's director appointed and an old age care service station established in each village / community.

169. For example, in Shimen County, Hunan, a joint meeting for caring for and protecting left-behind (distressed) children, and the Shimen County Child Care and Protection Association have been established at the county level, minor protection workstations, and an assessment mechanism established at the township level, and funding sources secured. By the end of 2020, there were 42 orphans (41 scattered and one raised centrally) and 170 actually unsupported children in the county. The security standard for scattered orphans was 950 yuan per capita per month, and that for centrally raised orphans 1,350 yuan per capita per month. In 2020, job allowances totaling 49,200 yuan were granted to 41 excellent village-level children's directors. From the beginning of 2021 to date, consolation materials worth about 400,000 yuan in total have been given to left-behind (distressed) children throughout the county.

170. For old age care, old age service agencies and platforms have been established at three levels, and three old age service teams established in Shimen County. Each township old people's home has an annual working budget of 30,000 yuan, and each staff member is paid 24,000 yuan per annum (3 staff members per old people's home). Urban and rural destitute residents receive a subsidy of 9,048 yuan and 6,240 yuan per capita per annum respectively, and disabled and semi-disabled people receive a nursing subsidy of 6,000 yuan and 3,000 yuan per capita per annum respectively. In addition, subsidies for private old age care agencies, including one-time bed, operation, nursing and job subsidies, and universal subsidies, including old age and basic old age service subsidies, are granted. In the first half of 2021, old age subsidies totaling 1.49525 million yuan were granted in the county.

171. In Shimen County, the women's federation appoints a full-time vice chairman to be responsible specifically for rights protection, and engages two marriage and family dispute mediators to handle complaint letters and visits. It offers free legal consulting and litigation services for the rights protection of women and children in coordination with the county justice bureau, procuratorate, court, etc. The 21 township- (sub-district) women's federations, and 313 village (community) women's federations protect rights together with the local comprehensive management offices and justice offices, forming a county-, township- and village-level rights protection network. 76 volunteer lectures on the rights protection of girls have been trained with the support of the provincial and municipal women's federations.

172. **Assessment:** There are competent authorities that manage different vulnerable groups in China, such as poverty reduction offices or countryside revitalization bureaus for poverty issues, DPF for disabled people, civil affairs bureaus for the left-behind old people and children, and women's federations for women. These authorities are flexibly staffed, and may engage extra staff as necessary in addition to their regular staff. 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.

#### 4.4 Assessment of Social Practice Effects

173. The assessment of social practice effects is mainly based on the information obtained from the demonstration and sample counties in the counties of Yongfeng, Dexing and Lushan Xihai of Jiangxi province, Yuanling, Xupu and Shimen of Hunan province, where it distributes in different geographic areas of the provinces and basins, and includes some representative areas of ethnic minority villages like Xupu and Shimen in Hunan provinces or townships like Yongfeng and Dexing in Jiangxi province, so as to represent the major social features of different areas. And, information on the assessment of the implementation process and effectiveness of social risk management of experienced similar activities were also used. Key stakeholders were interviewed in each county of field work to cross-check their attitudes and satisfaction with the implementation of relevant activities. The social risk assessment takes a typical sample case as an entry point, and focuses on 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 will be analyzed and assessed against the six core principles and elements of social

relevance.

#### **4.4.1.1 Core Principle #1: Program E&S management systems are designed to promote E&S sustainability in the Program design**

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

174. Some activities in Jiangxi and Hunan involve civil works and land acquisition/resettlement and require SSRAs. The fieldwork indicates that all counties have carried out SSRAs in accordance with regulatory requirements. For example, in a video interview in Dayu County, Jiangxi Province, the Dayu County Political and Legal Affairs Committee confirmed the requirements for SSRA and showed the workflow of SSRA in Jiangxi Province, including clarifying the main responsibilities, developing a work plan, conducting public consultation, determining the risk level, drawing analysis conclusions, and assessing the implementation. Miluo City, Hunan Province has also accumulated 8 SSRAs of wastewater treatment projects since 2020. Xupu County Housing and Urban Development Bureau plans to build 5 new urban WWTPs and 32 wastewater treatment stations during the 14th Five-year Plan. All WWTPs and treatment stations will prepare SSRAs as required.

175. The SSRA investigates and analyzes the social impacts and risks that may be caused at each site, as well as the opinions of the community residents, such as permanent land acquisition, temporary land occupation, ground young crops or attachments and other impacts, to study and determine the levels of every impact and risk. Based on the actual survey and the opinions of the village residents, risk mitigation and control measures were formulated to ensure that the social risks caused by the project would be identified and controlled.

176. The Dexing County waste incineration plant in Dexing City, Jiangxi was visited, and it was learned that an SSRA was prepared at the preparation stage. The Dexing Haichuang Environmental Technology Co., Ltd. that is responsible for the plant operation also appointed a specialized agency to prepare an occupational hazard pre-assessment report. (It was learned from the interview with the principal that the company had set up a safety and environment office, responsible for the implementation of E&S management measures.

177. **Assessment:** Field investigation and consultation on sample counties and wastewater treatment facilities in Jiangxi and Hunan Provinces show that the projects concerned have carried out the "social stability assessment" in accordance with the statutory procedures to identify and grade the social risks that may arise from the project. Corresponding risk mitigation and control measures were developed, and the *SSRA Report* of every project has passed the expert assessment and been put on records at authorized governmental departments. The departmental consultation and typical case survey also show that the necessary public consultation has been carried out during the preparation process of SSRA, and the public opinions and suggestions have been taken into account in the design process of relevant measures. In conclusion, at the project level, the current legal framework and regulatory bodies can adequately guide social assessment.

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

178. **i) Early screening:** The information provided by the natural resources departments of the two provinces and the surveyed counties and the field investigation confirms that joint visits by various departments are required at the early stage of projects to determine the impact. All construction projects involving land acquisition are required to complete the land pre-examination process. The feasibility study report of the project generally needs to be reviewed under the organization of the local development and reform department with all relevant departments and industry experts to confirm that the project site selection is in line with the relevant land use planning.

179. The Shimen County Natural Resources Bureau in Hunan Province introduces, for WWTPs and other construction projects that require land acquisition and demolition, the implementing agency is required to provide the natural resources department with the approval of the project

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feasibility study from the Development and Reform Commission (including the approval of land pre-examination and the approval of site selection), red line map of land acquisition, land classification table and SSRA report, before the natural resources department receives the entrustment from the implementing agency. Only when the social risk level is below medium, or the risk is reduced to medium level or below after mitigation measures are taken, can the SSRA report be accepted by the experts of the appraisal panel. It is thus clear that the screening and risk assessment of social risks have been effectively implemented and managed through the operation of relevant mechanisms in the implementation process.

180. **ii) Alternatives:** The feasibility study process for construction projects requires the comparison of different proposals. For example, during the construction preparation phase of the waste incineration plant in Dexing City, Jiangxi Province, the feasibility study included site selection analysis, based on which the final program of the project was determined. The site selection principles include: 1) The project site is located in the Dexing Industrial Park, and the surrounding area does not contain town and village residential land and schools, hospitals and other public facilities land, etc. 2) The site of this project is not in the built-up area of the city, the technology and equipment selected are advanced and reliable, and the pollution prevention and control measures taken are feasible, which can ensure the emission of pollutants up to the standard. 3) A 300m environmental protection distance was set for this project, and there are no sensitive protection targets such as residents within this protection distance.

181. **iii) Developing measures to avoid, minimize or mitigate social impacts:** According to interviews with the Jiangxi Provincial Development and Reform Commission Examination and Review Center, the Hunan Provincial Political and Legislative Affairs Committee, and the competent authorities responsible for SSRA in each county government sampled, topics related to the social impact identification, analysis and management measures of the project are required to be analyzed in feasibility study reports or similar assessment documents of the project preparation phase. For projects that are required by law to carry out SSRAs, such as those involving permanent acquisition of houses or land, there are special management plans for risk identification, analysis, prevention and mitigation in the specific SSRA. For example, when carrying out SSRA of construction projects such as the WWTP in Baishui Town of Miluo county in Hunan, it was required to correspondingly develop preventive and remedial measures, and provide opinions if construction and operation of the saying WWTP is feasible from the social risk management perspective. The official registration form of project SSRA requires the concurrence of relevant government departments. For example, risks like design rationality, land use impacts, construction impacts, and personnel safety management risks during operation and maintenance were identified in the SSRA report of the waste incineration plant in Dexing City, Jiangxi Province, and avoidance and mitigation measures were correspondingly developed.

182. **iv) Defining the organizational responsibilities and budget sources for the implementation of mitigation measures:** Jiangxi Province and Hunan Province have a similar division of government responsibilities in the project involving wastewater, solid waste and non-point pollution control. In particular, housing and construction departments are responsible for the collection and treatment county and township domestic wastewater and domestic solid waste; agricultural and rural departments are responsible for agricultural mulching film collection and resource utilization of livestock and poultry manure. The provincial departments operate their work under the unified coordination of the provincial government, with the Provincial Development and Reform Commission representing the provincial government in inter-departmental coordination. The arrangements for county-level management are broadly in line with provincial arrangements.

183. In terms of implementing land acquisition and resettlement for a specific construction project, it is observed that the implementation approaches are also largely similar during the visits to counties in the two provinces. In Xupu County, Hunan Province, for example, the county government set up a countywide land and house acquisition and resettlement leading group to lead the countywide land acquisition and resettlement (LAR) related works. The leader of the leadership group is the governor of Xupu County, the deputy leader includes three deputy governors, and the members include the directors or deputy directors of relevant functional departments and township government leaders. From the configuration of the positions in the leading group, basically all of them are the principals of the county government and various

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functional departments, in order to ensure the orderly implementation of the acquisition work in accordance with the law. At the implementation level, the County Natural Resources Bureau is responsible for implementing a specific project of land acquisition compensation and resettlement, and relevant functional departments involved act as the PIA of the project, such as the wastewater treatment facilities project under the responsibility of the Housing and Construction Bureau. Some counties have also set up special land or housing acquisition service centers at the implementation level to be specifically responsible for compensation and resettlement of land and housing acquisition, such as the State-owned Land and Housing Acquisition Service Center in Yuanling County, Hunan Province, and Shimen County Natural Resources Affairs Center.

184. According to interviews with integrated county departments, project preparation, construction and operational management of each unit are subject to daily guidance and supervision by ecological and environmental protection, natural resources, labor and employment, health and hygiene, finance and auditing departments to ensure that environmental and social management measures are implemented.

**185. v) Public participation, information disclosure and grievance redress mechanism**

**(GRM):** It is confirmed by the Dexing Political and Legal Affairs Committee as well as Dexing Haichuang Company that a relevant project in Dexing has carried out public consultation as required in the process of SSRA. The SSRA passed an expert review and was filed with the government. It is learned from the natural resources department of Dexing City that the process of land acquisition was subject to public presentation and physical survey in strict accordance with the policy requirements.

186. A survey of counties in Jiangxi and Hunan confirms that government departments in each region have implemented in full set of regulations and mechanisms on grievance complaining and/or petition through the government letter and visit office. Taking Yongfeng County in Jiangxi Province and Xupu County in Hunan Province as examples, the communal grievance mechanism consists of three levels: firstly, go directly to the implementing unit; secondly, go to the village or community committee for addressing; thirdly, go to the county government's letter and visit office or contact the county governor's hotline/mailbox, etc., through which the process includes a mechanism of collection, initiation within 7 days, and completion of processing and feedback within 2 months. In addition, residents can resolve disputes through civil actions in the courts. In general, the grievance redress mechanism is a standardized and effective mechanism. During the site surveys and interviews, some minor problems were also found. For example, public complaint hotlines of landfill and incineration plants at the operation stage were not made public, which was inconvenient for the public residents to reflect their problems directly to the implementing units.

187. **Assessment:** Field investigations in Jiangxi and Hunan Provinces, and the Program counties concerned show that relevant facilities, such as WWTPs in the pre-project, have carried out relevant assessments and approvals as required, the early preparatory stage of the implementation of the project concerned includes a comprehensive environmental social screening process, and single assessment has been carried out for those involving occupational health hazards, land use, etc., such as "SSRA", "occupational health risk assessment", etc. According to regulatory requirements, public consultation and information disclosure were carried out during the proceeding of relevant assessment. Therefore, the final selected solution is usually the best one considering a combination of benefits including environmental, social, and economic. During the design stage, the project design took full consideration of the examination comments from relevant departments and the reasonable suggestions from public participation. The site survey with stakeholders, including the community representatives, indicated that the parties are satisfied with the management system and operation of social risks in general. It is also found that record and documentation in terms of the environmental social risk screening process, public consultation and information disclosure and GRM is relatively weak: including: 1) screening form of subprojects, 2) public consultation process during SSRA, especially the sample questionnaire filled out and the official registration form of SSRA reports, 3) the records and photos of public hearings carried out in the project implementation process, complaint records, etc., 4) other materials reflecting the project social risk screening process and public participation.

188. **Recommendation:** It is recommended to strengthen the recording and documentation of the



project environmental social risk screening process, the public consultation and information disclosure process and GRM operation. The PIAs at the county level should assign dedicated departments and persons to manage the recording and documentation, and send the copies of recording and documentation to the county DRC/PMOs. And, the institutional setting and performance of documentation should be available for supervision and monitoring by the provincial PMO and the World Bank.

**4.4.1.2 Core 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.**

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

189. As confirmed by the government officials of Hunan and Jiangxi provinces as well as those of sampled counties, opinions of the cultural relic management authorities were consulted and followed by the planning departments during development of local land use planning, including the information of relics distribution in the region and the results of the cultural relic census. At the land pre-examination and site selection stages, the project site selection should comply with the overall local land use planning, which ensures that no other construction works or blasting, drilling, excavation and other operations are allowed within the protection area of the cultural relics protection units as required by the *Law on the Protection of Cultural Relics*. At the project appraisal stage, the local development and reform commission will invite experts from the cultural relics protection department to participate the project appraisal. If cultural relics are discovered during the construction of the project, the construction unit will report to the provincial government administrative department of cultural relics according to the provisions of the *Law on the Protection of Cultural Relics* and organize archaeological excavation units to conduct archaeological investigation and exploration of the buried cultural relics within the scope of the project.

190. **Assessment:** In each aspect of the project, the parties involved were able to avoid, minimize, and mitigate impacts on heritage resources in accordance with the requirements of the *Law on the Protection of Cultural Relics*. For unavoidable impacts, strict protection schemes were developed and implemented.

**4.4.1.3 Core Principle #3: Program E&S management systems are designed to protect public and worker safety.**

**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.

191. It was found in the interviews at the county level that all projects were reviewed or approved by provincial or municipal/ county authorities in terms of site selection and design to ensure compliance with all relevant requirements of the regulations. In the implementation and/or operation phase, the human resources and social security departments, labor departments and health departments of every county carry annual supervision check to the key enterprises annually and inspect the implementation of related measures, where findings identified, corrective measures would be required. The health department also regularly checked whether relevant occupational health and safety measures were in place and whether the three simultaneous measures were implemented, and conducted annual monitoring of occupational hazards of the enterprises. It was ensured that corporate safety training and occupational health were put into practice. For example, employees of livestock manure utilization facilities in Shimen County, Hunan Province, must receive safety training from provincial professional institutions and obtain job qualifications before they can start work, and at least one occupational health examination should be provided per year. Follow-up visits to enterprises on occupational diseases were carried out by the county health department to check the basic status and awareness of occupational diseases as well as the performance of employee health examination. Where any problems identified, the enterprise

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involved would be required to submit a corrective action letter.

192. A three-tier labor dispute resolution mechanism has been set up from the internal grievance redressing mechanism to the county government level, namely, the enterprise labor disputes and redressing mechanism, the township government labor dispute mediation center and the county government labor mediation center, and. Employees can also go to the court for mediation through legal channels as well. For example, in Yongfeng County, Jiangxi Province, there are 46 labor dispute mediation centers in the county, and about 80% of the disputes can be handled through mediation, while 20% required to go through arbitration or legal channels. According to Yongfeng labor affair bureau, the union system is also an effective mechanism for ensuring the safety of workers at work, and the unions can help employees obtain rights and interests in safety training, health inspections, work environment and living needs. In addition, the detailed mediation and arbitration processes of labor disputes in the county government level was introduced by the labor affair bureau of Xupu County in Hunan: when a labor and personnel dispute encountered, the employees can seek help from the labor inspection brigade of the labor department, or they can directly submit to labor arbitration. The labor inspection department files a case within 5 days after receiving the complaint, and closes it in 2 months for cases that meet the acceptance principle (e.g., the violation occurred within 2 years, etc.). It can be extended to 30 working days for complicated cases upon approval. If the employees are not satisfied with the result, they can submit to labor arbitration within 6 months. The application for labor arbitration is valid for a period of one year. Labor arbitration consists of two levels, including labor mediation and application for arbitration. Usually, labor mediation is recommended as the priority, and the mediation will be completed within 15 days. If the mediation is successful, the labor and management will sign a mediation agreement, and if not, it will be automatically transferred to labor arbitration. The cases subject to the arbitration of arbitral tribunal end within 45 days after the arbitration committee accepts the application for arbitration. If an extension is required due to the complexity of case, it may be extended and notified in writing to the parties, upon approval of the Director of the Arbitration Committee, but the extension period shall not exceed 15 days. The results include pre-case mediation, case acceptance, and no acceptance. If not accepted, a written explanation should be provided to the applicant. Attached Figure 30 and Attached Figure 31 in Appendix 8 show the labor inspection and enforcement process and the labor arbitration process, provided by Xupu Labor Affair Bureau.

193. During visits to county women's federations and relevant enterprise units in Jiangxi and Hunan Provinces, it was learned that women's federations participated in annual supervision and inspection of enterprises jointly organized by county labor and health departments to check the protection of women's rights and interests. Units inspected include the county WWTPs, animal manure utilization facilities, and domestic solid waste collection and treatment enterprises. On the other hand, companies visited followed the special requirements of laws, regulations and rules for female workers, such as compliance with gender equality, equal pay for equal work, and preferential treatment policies for women. Female workers are entitled to cervical cancer and breast cancer screening and physical examination; work arrangements are made after listening to the opinions of female workers; women workers are not assigned to heavy physical work or work in poor working conditions during pregnancy; protection and welfare policies such as maternity leave benefits are provided in accordance with the law.

194. According to the survey at the construction site of the waste incineration plant in Yongfeng County, Jiangxi, the construction agency conducts strict safety management, such as setting up safety protection facilities and signs, and protective equipment for workers. The landfill in Yongfeng County has 14 workers, including 6 female ones, who receive health checkup one more time than the male workers per annum. It was learned from the visit to the domestic waste collection and transfer enterprise (Qiaoyin) in Yongfeng County, Jiangxi that some temporary workers did not receive health checkup.

195. The prevention and treatment of occupational diseases is assessed by stage:

- **Construction stage:** For the WWTP in Xupu County, Hunan Province, the main hazards at the construction site are mainly falling from height and errors in equipment operation. The construction agency requires that workers are provided with protective equipment

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(e.g., safety helmets), and sets up safety signs at appropriate sites.

- **Operation stage:** In the visits to the WWTPs in Dexing City and Yongfeng County of Jiangxi Province as well as Yuanling County and Xupu County in Hunan Province, and the animal manure utilization enterprises in Miluo County and Shimen County of Hunan Province, it is found that these enterprises have conducted occupational hazard assessment in the phase of operation. For example, the operating enterprise of the waste incineration plant in Dexing City, Jiangxi Province, carried out a pre-assessment of occupational hazards before the trial operation, in which the main occupational hazards such as noise and high temperature were identified. The enterprise developed and implemented corresponding management measures, such as developing an occupational hazard management system, providing training for employees on occupational hazard management, equipping protective equipment, setting up signs in the occupational hazard area, strengthening occupational hazard management inspections and monitoring, etc. As shown in Attached Figure 21 in Appendix 8, the WWTP in Yuanling County of Hunan Province developed operating procedures for the potential hazards in the operational aspects to clarify responsibilities of every position and require that the employees at corresponding position must pass the relevant training and obtain a certificate of qualification. The waste incineration plant in Dexing City carried out the *Safety Pre-assessment* before the trial operation (as shown in Attached Figure 22 in Appendix 8). The WWTP in Yuanling County, Hunan Province has established a perfect safety management system and operating procedures, and publicized the external contact telephone number of the WWTP.

196. **Assessment:** The survey to the counties involved shows that various governmental departments and related implementing agencies have followed regulatory requirements for safety and health during construction or operation. At the same time, there is also room for improvement in individual links, such as the occupational health examination of contract workers or/and temporary workers to be strengthened.

197. **Action:** Employee induction physical and occupational health examinations should cover contract workers or/and temporary workers.

**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.

198. The interviews with relevant county infrastructures show that geological disaster assessment has been carried out at the time of project design. For example, the waste incineration plant in Dexing City carried out a "geological hazard assessment" together with the industrial park (phase I) where the plant is located, and proposed management measures for the design and construction. During the construction phase, the construction contract between the implementing agency and the construction agency includes requirements for severe weather and natural disaster management. The equipment stored at construction site is required to be placed in a standardized and reasonable way, the lightning grounding treatment should be ensured, and special guards should be arranged. In special periods, such as during the massive floods that hit Jiangxi Province in 2020, all equipment and personnel were evacuated from the site.

199. During the visit to the under-construction Xihai WWTP in Lushan of Jiangxi and the WWTP in Yuanling County of Hunan, each unit has developed a *Staff Management Manual*, including special requirements for the management of COVID-19. The requirements and diagrams for employee epidemic management are posted in the public areas.

200. **Assessment:** In the aspect of natural disaster management, systematic analysis has been carried out at the design phase of each project, and avoidance and control plans were proposed. During the construction and operation of the project, the construction contract and operation system contain or implement relevant preventive and control measures. The natural disaster management system is sound, the personnel are in place, and the management is basically in place.

**4.4.1.4 Core 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.**

201. The six aspects under Element 9 are analyzed as follows:

**i) Minimizing negative impacts related to land acquisition:**

202. The facilities visited like the solid waste treatment facilities in Dexing county of Jiangxi and animal manure utilization facilities in Shimen county of Hunan indicated regulation requirements regarding "pre-examination of construction land" and "agricultural land filing form" were strictly followed during the early stage of project preparation, which means that the sensitive elements of related projects have been examined and screened in accordance with the law, so it has ensured that the project avoided occupying basic farmland and affecting other sensitive facilities. Where land certificates required like the solid waste treatment plant and WWTP in Dexing and Xupu counties, the land use certificate was obtained in accordance with the law. Land acquisition agreements were signed between the land affected people and the land use units, and compensation was paid accordingly. This means that the resettlement impacts caused by the implementation of typical projects are implemented the mitigation measures in accordance with the law, such as compensation and resettlement measures to minimize adverse impacts. Attached Figure 25 in Appendix 8 is the registration form of agricultural land for livestock manure resource utilization facilities in Shimen County, Hunan Province, and Attached Figure 26 is the land use certificate for the WWTP in Xupu County, Hunan Province.

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

203. During the site visit and consultation, the local natural resources authorities in Yongfeng County, Dexing City and Lushan Xihai in Jiangxi Province, and Xupu and Shimen Counties in Hunan Province have confirmed that their LA procedures meet the regulatory requirements.

204. During the visit to the small wastewater treatment stations and livestock manure resource utilization facilities in Lushan Xihai of Jiangxi, Miluo of Hunan and Shimen County, it is confirmed that these agriculture-related facilities do not involve the land transition from agricultural land into construction land; usually, based on the form of land renting, meaning the land area and appurtenances were confirmed through negotiation between the village committee and farmers, or land use unit and farmers; after that, a land lease contract would be signed, and the payment of land rental would be made as the statement in the agreement; usually, the rent is paid directly to the farmers. Attached Figure 27 in Appendix 8 Attached Figure 27 is a land use agreement reached between the village committee of Sima Village, Zhelin Town, Lushan Xihai in Jiangxi province and a farmer in regard to a town wastewater treatment station. From the agreement, it can be seen that the village committee and the farmer have referred to the compensation standards for land acquisition in Jiangxi Province and compensated the farmers for the occupation of 0.6 mu land (including land and young crops compensation). The two parties signed the agreement and fulfilled the compensation after reaching a consensus.

205. During the visit to the counties, the survey team learned from the exchange with the villager representatives that they were generally satisfied with the implementation process of land acquisition compensation and resettlement, and the compensation payment. In regard to the problem of whether the issues of the affected people can be reported to the village committee of project implementing agencies during the implementation process, the villagers interviewed reflected that all the issues were solved.

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

206. According to the consultation with relevant county-level natural resources bureaus in Jiangxi and Hunan Provinces, the compensation standards for house demolition within the urban planning area were subject to the market appraisal price at the time of resettlement to ensure that the

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compensation price is consistent with the market replacement cost. In the survey of the sample county, Xupu County, the county invited a real-estate appraisal company to evaluate the value of houses and properties to be expropriated for both urban planning area, and rural area. At the same time, it also included the compensation for housing relocation, compensation for temporary transition of the affected households, and, if individual households and units involved in business, compensation for loss of production and business stoppage were also implemented. Attached Figure 28 and Attached Figure 29 in Appendix 8 are the evaluation reports of the Xupu County Natural Resources Bureau on the demolition of a house on collective land and the demolition of a house on state-owned land, respectively.

#### **iv) Livelihood restoration**

207. Through the implementation of the basic endowment insurance for land-expropriated farmers and the employment training and support policies for land-expropriated farmers, each county government ensures 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 systems according to their actual needs, such as 1) respective basic pension insurance for urban and rural residents, the lowest standard for this type of insurance is 103 per month each person in both Hunan and Jiangxi provinces. For those who have not reached the retirement age, their insurance charges will be paid by local government to their personal account of pension insurance directly, and paid to them through the Human Resources Bureau of local government when they reach the retirement ages.; 2) pension insurance for urban workers. For those who chose this type, subsidy of insurance charge will be given to their as the number of years of charge paid by the person itself. People could apply to improve the charge level so as to receive higher retirement payment as their own wills. Those who have not reached retirement age can obtain employment and receive benefits through government job training and employment support. For example, during a survey in Beili Village, Jingkou Xiang, Lushan Xihai, Jiangxi Province, it was learned that for farmers who had implemented and been affected by land acquisition in the past, the village committee gave priority to recommending these farmers to enter the scenic area within the scenic area of the Xihai Management Committee of Lushan to engage in scenic services. Scenic area provides these villagers with unified training, and arranges them to participate in cleaning, greening, facilities maintenance and other works. They can get a stable wage income each month, the minimum usually being not less than 2,000 yuan/month.

#### **v) Policy arrangements for infrastructure restoration**

208. The consultation to the two provinces and counties sampled indicated that the potential impact on public facilities caused by land acquisition and demolition are identified during the land detail measurement survey (DMS) in the project area, and the value of land loss, including the public infrastructures, are evaluated with professionals as mentioned, and related management plan are developed accordingly. On the other hand, as introduced, the *Social Stability Risk Assessment* in the preparation phase is also identify all relevant social impacts and risks, such as impacts to the public facilities, which may be caused by the project, and listen to public opinions and suggestions. Through these measures, it can ensure that the public facilities and community services affected by the project can be protected, or restored as soon as possible after the impact, or even enhanced with the suggestions of public participation.

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

209. According to the natural resources bureau of Shimen County in Hunan Province, public hearing is mandatory in the process of land and housing acquisition because the hearing materials are one of the necessary materials for the application materials for land use approval. If the affected units are not willing to participate in the hearing, written statements must be issued by the village council or community council, indicating a voluntary waiver of the hearing.

210. **Assessment:** Jiangxi and Hunan Provinces have established the project screening mechanism by strictly following the relevant provisions of the regulations in the aspect of resettlement management. An effective and whole-process management mechanism are in place for redressing the impacts to the project affected people (PAP) in terms of land acquisition, resettlement and livelihood restoration, including the well-organized implementation agencies with clear roles and responsibilities and the required fund, which ensures the effective operation of the management system and ensure that the land acquisition and resettlement impacts are properly

managed. Interests and rights of land/assets for those who are lack of legal title are also regulated in the implementation. The mechanism of replacement cost compensation is established in the policy, and well implemented in the projects, which includes miscellaneous compensation for the PAPs like the transition fee due to relocation. Through the survey with villager representatives, it is found that people are generally satisfied with the implementation process of land acquisition compensation and resettlement, and the compensation payment.

**4.4.1.5 Core 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 Peoples 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.

211. It is learned in the interviews with ethnic affairs management authorities in the counties of the two provinces that ethnic minority issues are effectively managed in the project management: On the one hand, the *Constitution* and relevant ethnic management laws and regulations are observed: when dealing with special issues involving the various ethnic groups in the localities, their representatives must be fully consulted and their opinions respected; the self-governing authorities of the ethnic autonomous localities guarantee the citizens of all ethnic groups in the localities to enjoy their constitutional civil rights. On the other hand, corresponding public consultations were carried out in accordance with the relevant requirements of social risk assessment and management performing in the general construction project. Each county has formulated development plans aiming at the development characteristics of local minority areas and implemented projects for the development and cultural preservation of ethnic areas. For example, in Xupu County, Hunan Province, the town of Beidouxu and four other townships are a town with a relatively high concentration of Tujia nationality. Here, the county has built a special cultural tourism town to protect, inherit and develop Huayao culture, which has ethnic characteristics in the region. When implementing specific projects, local government ethnic management departments have conducted surveys and consultations with ethnic minority people and have reflected their reasonable suggestions into project design, to ensure that the residents of ethnic minorities are respected equally and treated fairly.

212. **Assessment:** The evaluation concluded that the project, when implemented in minority areas, the rights of the ethnic minority are fully respected on both of the legal and implementation levels, including the rights to be informed in the project early stage, and the development rights like the promotion of economic development of minority areas, protection of minority culture and property. Related projects are being implemented every year by following the local development planning. For specific project in the ethnic minority areas, it follows the existing general project management system, which ensured the rights of ethnic minorities being respected. Therefore, it is consistent with the requirement of element 10 of core principle 5.

**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.

213. During the surveys to the She minority towns and villages in Yongfeng County and Dexing City, Jiangxi Province, the ethnic management departments of the two places reflected that there are almost no differences between local minority groups and Han people in terms of language, habits and customs, and no special content was found in tangible culture. There are some traditional customs and songs as intangible culture (e.g. EryueEr, SanyueSan, and Fenglong festival), however, according to the visit to the She Village, Lancun Village in Xiangtun Street, Dexing City, the She villagers interviewed were unaware of the traditional resources and culture unique to their ethnic group, but they held that it should be knowledgeable and passed on to the new generations.

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214. In Xupu County, Shimen County and Yuanling County, Hunan Province, local ethnic and religious departments and community representatives interviewed confirmed the existence of some distinctive local cultures, such as Beidouxu Township in Xupu County where the locals are still retaining their own language, costumes and customs. Therefore, the local government developed their conservation and development plans for the local ethnic minorities to protect the ethnic minority buildings in the area, collect and preserve the ethnic minority elements, and display and introduce these to the local youth and visitors from outside.

215. **Assessment:** The culture, including tangible and intangible culture, varies in different areas, but each region has developed plans for the preservation of minority cultures and are implementing related projects every year. The implementation of the project will not damage or negatively affect minority cultures.

**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.

216. A survey of women's federations in various counties shows that in general there is no discrimination against women, and women are treated equally with men in terms of social status and work benefits. There are even special policies to cater to women's characteristics and needs. For example, in Shimen County, Hunan Province, health examinations are arranged for all women in the county (including ethnic minority women), and genetic screening is arranged for pregnant women. At the same time, there are some structural women's development problems. For example, the number of women employed in non-agricultural industries in rural areas are less than that of men; there are problems of women's rights and interests' protection in a few enterprises. For example, according to the feedback from the Women's Federation of Yongfeng County, Jiangxi Province, it handled 50 complaints related to events of women's rights protection were handled in 2020 in total; in addition, it also handled a number of family conflicts and disputes, mainly marital issues, property disputes and domestic violence mediation and intervention. Local women's federations, in conjunction with other organizations, enterprises and village/community women's homes, etc., are actively helping women to solve the problems and are also able to make the problems better managed in general. For example, in Yuanling County, Hunan Province, the local women's federation continues to widely publicize laws and regulations related to gender equality for women through various media, raise awareness in the general society, and strive to promote a good working situation and atmosphere in which society cares for women and promotes women's development; more employment opportunities are provided for women, including organizing various professional skills training suitable for women as much as possible; relevant units are coordinated to provide female cadres in strict accordance with requirements when allocating cadres to all levels of governmental department, to gradually increase the proportion of female cadres.

217. There are left-behind children and elderly people in all regions of Jiangxi and Hunan Provinces, but the proportion is not high. There are many reasons for the situation of leaving children and elderly people behind, in which the main reason is that young couples in the family go out to work. In Dayu County, Jiangxi Province, for example, the total population of the county was about 340,000 at the end of 2020, with 2,048 left-behind children and 403 left-behind elderly. As the survey, it is found that the management system of left-behind children and the elderly is basically similar in all places, and they are all managed by the civil affairs department of the county government, which is relatively sound on the whole. In Dayu County for example, 1) In the aspect of organization and management, a leading group was set up for the care and protection of children left behind in rural areas, headed by the county government, led by the County Civil Affairs Bureau, with the County Education Bureau, County Public Security Bureau and other relevant units as members, to promptly study and solve major problems in the work; a children's supervisor was allocated to every township government, a children's director is allocated to every village (neighborhood) committee, and at least one full-time (part-time) mental health counseling teacher is allocated to every compulsory education school, who is responsible for information investigation

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and reporting, urging family care, and carrying out care services. 2) In the aspect of budget arrangement, each year, special funds and daily work expenses are arranged to be included in the financial budgets at the county and township levels. By the end of 2020, Dayu County had established 11 work supervisors and 119 work directors in each village of each township.

218. The survey results show that all counties in Jiangxi and Hunan have established a very complete database of poor people and families. Although many places were lifted out of poverty one after another in 2020, local governments still have complete records of the population out of poverty, including their family names and family conditions; at the same time, the government will strengthen poverty alleviation achievements in a transition period of five years, and take targeted measures in terms of frequency, strength and timing of measures provision while keep assistance measures stable. On the other hand, the age, education level, skills, work status, family size, and health status of the population out of poverty have been included in the database. Each village is required to have a commissioner to track and record the implementation of poverty alleviation projects for each household that has been lifted out of poverty. There are also analysis reports and improvement measures for farmers with poor project implementation results. Since in 2021, poverty alleviation has entered the phase of poverty eradication, and counties have formulated rural revitalization policies and measures that, in general, aim to ensure that farmers who have been lifted out of poverty continue to enjoy poverty alleviation policies and measures within the next five years, and to provide a transition period for farmers who have been lifted out of poverty to move toward self-reliance and self-improvement.

219. In order to avoid losses of farmers in agriculture, Jiangxi has taken some compensatory measures in the process of replacing chemical fertilizers with organic fertilizers, such as sending seeds by the county for free and helping farmers to sow seeds with *Astragalus sinicus* L. 12 million mu (~8 million hectares) were sowed in Jiangxi for 2020. Hunan Province recommends farmers to use organic fertilizers or a mixture to improve the quality of crops and increase the income of farmers' agricultural products, and recommends already configured fertilizer mixes to farmers. For farmers with family difficulties, many local governments or fertilizer companies do not charge or undercharge them for fertilizer.

220. Hunan Province has issued a policy on agricultural mulching film collection, clearly to establish a sound recycling system for used agricultural mulching film. Visits in various regions further confirmed that farmers can collect used agricultural mulching film and exchange it for a certain percentage of new film at designated sales points, or for a certain amount of money. The method of exchange varies from place to place. According to the amount of money exchanged, a pound of used agricultural mulching film can be exchanged for 0.4 to 0.6 yuan, which both promotes film collection and environmental improvement and can also increase costs for farmers. During surveys and visits, it is also found that the collection rate of agricultural mulching film was not high in some places, mainly because the labor cost of collecting agricultural mulching film up from the fields was large and farmers were not willing to recycle it. And some places have done useful explorations, such as Shimen County in Hunan Province, where the village assigns the task of agricultural mulching film collection to its own cleaning staff, who collect it during working hours and the exchange of money goes to the cleaning staff. The cleaning positions in the villages are usually assigned to vulnerable families or persons with the relevant working capability, for example the MLS households. Through this arrangement, it not only improves the recycling rate of agricultural mulching film, but also increases the household income of the cleaning workers, especially for vulnerable groups.

221. **Assessment:** With regard to the protection of women, children, the elderly, the poor and other groups, the specialized agencies at all levels have performed their duties conscientiously, implemented policies strictly, listened carefully to their needs, and taken proactive measures, not only to guarantee their rights under the law, but also to continuously respond to their needs and promote their development, healthy growth, or the well-being of the elderly. In terms of women's development and rights protection, through government women's federations, enterprise female workers' working agencies, and grassroots women's organizations, the women's development rights and interests can be fully guaranteed. For left-behind children and the elderly, the government has established a relevant database mainly through civil affairs, and combined with each township and village/community to carry out timely assistance. National and local support



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system for poor families has been established with complete institutional mechanism from policies to budgets to institutional arrangements, which not only protects the legitimate rights and interests of poor families in various projects, but also enables effective management of support and development issues for poor families.

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## **5 Public Participation and GRMs**

### **5.1 Public Participation**

222. Stakeholder engagement is an important aspect of this ESSA report, and also a requirement of the Bank's policy. During the ESSA, stakeholders have been identified subject to categories of those affected by activities, those interested in the activities and those could influence the activities, mainly including government authorities at different levels, villages and communities, activity implementation agencies, social organizations such as women's federations, affected persons, etc. (see Appendix 3). During the ESSA preparation, extensive participation and consultation activities were conducted in the relevant counties and districts in both provinces, including consultation meetings on the draft ESSA with provincial and county authorities held in Hunan and Jiangxi Provinces from August 2 to 4, 2021.

#### **5.1.1 Participation Activities Implemented**

223. At the preparation stage, the Bank team briefed and trained the relevant authorities of the Jiangxi and Hunan Provincial Governments several times, covering the Bank's PforR provisions, E&S policies, implementation management practices, operating processes, assessment document preparation, etc.

224. From November 2020, many province-level consultation meetings were held in Jiangxi and Hunan Provinces respectively, involving provincial development and reform commissions, finance departments, water resources departments, housing and urban-rural development departments, natural resources departments, ecology and environment departments, agriculture and rural affairs departments, emergency management departments, health commissions, women's federations, ethnic and religious affairs bureaus, etc. County-level field visits covered Chongyi, Dayu, Yongfeng, Lushan Xihai and Dexing in Jiangxi, and Wangcheng District, Miluo, Yuanling, Xupu and Shimen Counties in Hunan, where focus group discussions (FGDs) were held with government authorities, representatives of wastewater treatment / livestock breeding / agricultural mulching film recycling enterprises, village officials, villager representatives, and site visits were made to WWTPs, breeding farms, manure recycling and agricultural mulching film recycling enterprises. In addition, remote videoconferences were held with and documents collected from government authorities concerned in the sample villages in the two provinces, and some ongoing Bank-financed projects visited. See Appendix 5 for details. Content of public participation mainly includes:

- 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, water and soil conservation, 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, SIA, geological disasters, management, etc.;
- Community domestic waste collection, transfer, separation and disposal (including recycling);
- Villager employment, especially participation in solid waste, wastewater, river management, and water and soil conservation projects;
- Wastewater collection and treatment, house connection, charging, issues, and suggestions;
- Local use of chemical and organic fertilizers, and effects;
- Forms and implementation of public participation in river and lake environment management

#### **5.1.2 Public Consultation of the ESSA Report**

225. The draft ESSA report was provided for public consultation in Hunan and Jiangxi on August 2-4. The provincial PMOs organized provincial and county authorities concerned, representatives of village committees and enterprises to discuss this report with the Bank's team. Due to COVID-

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19, consultation was mostly conducted online. Relevant opinions have been incorporated into the revised report. See Appendix 7 for the key feedbacks from the consultation and the responses made accordingly by the Bank team.

226. The participants of the consultation meetings included the provincial authorities/parties concerned, and county authorities/parties concerned in Yongfeng, Dayu, Yudu, Fuliang, Yugan and Chongyi Counties in Jiangxi, and Wangcheng District and Shimen County in Hunan. At the meetings, the PforR Program and the report were introduced, including the purpose, scope, methods, conclusions and recommendations of the ESSA. The main concerns of the meetings are:

- 1) Whether the laws and regulations quoted in the report are accurate and complete;
- 2) Whether the analysis and assessment of these laws and regulations is pertinent;
- 3) Whether the description of the organizational setup in the report is accurate;
- 4) Whether the assessment of institutional capacity is appropriate; and
- 5) 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.

227. At the meetings, all participants gave positive comments on the ESSA report, accepted the recommendations proposed, and gave some valuable revision opinions, such as the validity of some policies, latest organizational settings, and organizational responsibilities. The Bank has listened to, recorded and studied these opinions carefully, and revised this report accordingly. See the Appendix 7 for details.

## 5.2 Grievance Redress Mechanisms

228. Existing GRMs usually include community and enterprise GRMs. A community GRM consists of three levels: First, grievances are reported directly to the PIUs to seek a solution; second, grievances are reported to the village or community committee, and usually solved within two weeks; third, grievances are handled by the office of letters or visits of the county government, or the hotline / mailbox of the county mayor, including collection and starting within 7 days, and solving within two months. In addition, residents can settle disputes through civil litigation at the court. The enterprise GRM has two aspects: First, workers' grievance. Workers' grievance is handled through a three-tier labor dispute resolution mechanism, namely, the enterprise labor disputes and redressing mechanism, the township government labor dispute mediation center and the county government labor mediation center. On the enterprise level, worker can seek a solution through the enterprise / factory manager mailbox, or the trade union. If the disputes cannot be addressed satisfactory, the workers can go through the government mediation mechanism. Or, the workers can seek solution by labor arbitration to the courts as its own judgments (See the detail analysis in Section 4.4, under element 8, principle 3) Second, the enterprise sets up an external relations department, and fixes a contact and a telephone number to collect complaints and suggestions from the public.

229. **Assessment:** Based on interviews with village committees and villager representatives, village-level GRMs are sophisticated in general, and most (as reportedly over 95%) 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 of both in construction and operation stages to establish the sound GRM.

230. **Recommendation:** Further improve grievance recording and feedback; enterprises should improve GRMs, and disclose grievance contacts and telephone numbers to the public for those at both the construction and operation stages.

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## 6 Conclusions, Recommendations and Action Plan

### 6.1 Conclusions

231. The Program aims to improve institutional coordination, enhance ecological protection and reduce water pollution in selected regions of the Yangtze River Basin. Based on the ESSA, comprehensive and effective ESMSs have been established in relevant sectors in China, Jiangxi and Hunan Provinces to identify, assess, mitigate, manage and monitor E&S impacts and risks related to the Program activities, including: 1) a comprehensive 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 risks management, and necessary professionals and financial resources; and 3) good performance of the ESMSs: The field investigation of ongoing or completed typical projects in the sample counties show that E&S impacts and risks management measures have been implemented effectively. Based on the assessment, the ESMSs related to the Program are generally consistent with the requirements of the Bank's PforR policy and directive.

232. Through E&S screening, "high E&S risk" activities have been excluded. Provided that the existing ESMSs are implemented effectively, the Program will not have any major negative E&S impact, and the Program's overall E&S risk rating is "substantial".

233. The areas for improvement identified in the assessment include:

- 1) Farmers are not proactive in chemical fertilizer reduction and organic fertilizer replacement, because their environmental protection awareness is low, and this may add to their production costs when changing to the new agricultural practices from the traditional ways.
- 2) In some areas, agricultural mulching film collection rate is low, responsible collectors are unclear, and an effective and sustainable collection system has not been established.
- 3) The implementation of OHS management systems at some enterprises (e.g., WWTPs, cleaning companies) is yet to be improved. The labor rights and OHS protection of contracted and temporary workers should be strengthened.
- 4) The social impacts and risks monitoring mechanism has not been established and implemented. In addition, some enterprises have not established an external communication mechanism to disclose information and handle complaints timely.

### 6.2 Recommendations

234. As mentioned above, four E&S issues have been identified, mainly relating to institutional and performance perspectives. Recommendations and actions to address these issues therefore have been designed from the perspectives of: providing government-oriented training measures to promote participation willingness and individual capacity; improving accountability of enterprises and local authority to protect safety and health of employees; and strengthening management capacity and stakeholder engagement measures to enhance implementation monitoring, as well as information disclosure, consultation and participation, etc. The following recommendations are proposed for improvement:

- 1) **Recommendation 1:** Provide training on chemical fertilizer use and agricultural waste management to farmers. The provincial (and county) agriculture and rural affairs bureau should develop relevant training programs, prepare training materials, and conduct trainings during Program implementation. Meanwhile, subsidy and incentive mechanisms are suggested where appropriate.
- 2) **Recommendation 2:** Hunan provincial (and county) agriculture and rural affairs bureau should establish a sustainable incentive mechanism to increase collection rate of agricultural plastics, in which the existing jobholders should be appropriately considered, for example the village cleaners.

- 3) **Recommendation 3:** Enhance the OHS management of the enterprises involved in the Program activities: for jobs with potential occupational hazards, take such measures as occupational hazard identification, and pre-job, on-the-job and post-job health checkup. Strengthen OHS training for contracted and temporary workers (including emergency response and proper use of personal protective equipment).
- 4) **Recommendation 4:** Establish a social impacts and risks screening, public participation, monitoring, and reporting mechanism. The project implementation agencies (PIAs) shall monitor and record the implementation of social impacts and risks (including land acquisition and resettlement impacts, support for vulnerable groups, etc.) screening, mitigation measures implementation, information disclosure, public participation, and grievance redress mechanism (GRM). Disclose to the public with the hotlines and contacts of GRM, and establish an effective external communication mechanism.

### 6.3 Action Plan

235. In order to implement the above recommendations, the following actions should be included in the Program Action Plan (PAP):

No.	Action Description	Responsibility	Timing	Completion Measurement
1	Provide trainings on chemical fertilizer use and agricultural waste management to farmers.	Provincial agriculture and rural affairs departments, county agriculture and rural affairs bureaus	Throughout Program implementation stage	The Hunan and Jiangxi PMOs should submit semiannual progress reports to the Bank, including a training program for chemical fertilizer use and agricultural waste management, and relevant records.
2	Strengthen occupational health and safety (OHS) training and regular health checkup for all in-service workers, including temporary workers.	Project Implementation Agencies	Throughout Program implementation stage	The Hunan and Jiangxi PMOs should submit semiannual progress reports to the Bank, including OHS training and health checkup records.
3	Establish a social impacts and risks screening, public participation, monitoring, and reporting mechanism, and strengthen information and record management in social risk management.	Project Implementation Agencies	Throughout Program implementation stage	The Hunan and Jiangxi PMOs should submit semiannual progress reports to the Bank, including records of social impacts and risks screening and mitigation, information disclosure, public participation, grievance redress and supports to vulnerable groups.

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## **7 Implementation Management and Monitoring**

236. According to the Bank Policy<sup>18</sup>, and the agreement between the Bank and Borrower, the two parties have different roles and responsibilities in terms of managing and monitoring Program implementation.

### **7.1 Project Implementation Agencies**

237. The Borrower is responsible for implementing the Program, monitoring the implementation progress, evaluating the indicators, and performing relevant commitments and responsibilities in the Program's legal documents, including the PAP. Such responsibilities include that the Borrower should maintain an ESMS, implement a monitoring plan, identify issues, and solve them timely and effectively. The Borrower should focus on the following:

- Implementing any agreed-on E&S actions in the PAP, and maintaining the ESMS and its capacity at a level equivalent to the ESSA conclusions.
- Submitting a progress report on PAP implementation semiannually to prove continued compliance with the applicable E&S management mechanism.
- Monitoring and evaluating the performance of the environmental and social system regularly as necessary.
- Reviewing performance of the GRM, its procedures and results regularly, and ensure specific grievance cases are appropriately addressed and included in progress reports.
- Ensuring that the Bank is consulted before any substantive change to an applicable ESMS is implemented to the Program during implementation.

238. The provincial Program Management Office is the overall management authority in each province. Meanwhile, the county Development and Reform Committees (CDRCs) and its dedicated office (county PMO) manage the overall implementation of the county's activities. The main implementation agencies (IA) for activities in the counties include housing and urban-rural development departments, water resources departments, and agriculture and rural affairs departments, which will be responsible for implementation of agreed E&S actions. The IAs at the county level should assign dedicated divisions and persons to manage the implementation of E&S actions, and report to the county DRC/PMOs. And, the institutional setting and deliverables should be available for supervision and monitoring by the provincial PMO and the World Bank.

### **7.2 World Bank**

239. Provide implementation support and pay attention to the consistency between the E&S performance of the Program and the requirements stipulated in the ESSA report, especially with 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 assess the whole Program based on the risk assessment at the preparation stage, and use such assessment to help the Borrower handle expected and unexpected risks, and give recommendations for improvement related to the risk assessment. The Bank will also conduct field visits, and provide appropriate support to the PIUs together with stakeholders, and review the Program's audit and progress reports. The Bank team will report the performance of Program implementation to the management in the form of memorandum regularly, including document review, consultation with the PIUs and stakeholders, field visits, etc. The main activities are as follows:

- Verify the implementation of any agreed-action, including any agreed capacity building activity and any designated E&S mitigation measure;

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<sup>18</sup> Bank Policy for PforR, Para. 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.

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- Conduct regular monitoring to ensure that the Borrower's ESMS performance at the implementation stage is acceptable to the Bank;
  - Ensure that mechanisms related to realization of the E&S DLIs are established;
  - Identify any extra management measure that may be taken to underperformance or any unexpected challenges during implementation;
  - Review the operation the grievance redressing mechanisms mainly through the semiannual progress reports to ensure it is functioning;
  - The Bank will conduct field visits regularly as a supplement to the self-supervisions of the PIAs, and provide other support agreed on between both parties.

## Appendix 1 E&S Screening Summary

Results Areas	Activities	Likely E&S effects	Contextual risk factors	Institutional capacity and complexity risks	Political and reputational risks	Overall risk rating
1. Water Pollution Control	<ul style="list-style-type: none"> <li>Construction and upgrading of county-level and township WWTPs and sewer networks</li> </ul>	<ul style="list-style-type: none"> <li>Improve the WW collection and the water environment</li> <li>Small temporary land use, compensation and land restoration</li> <li>Willingness and cost of pipeline collection to households</li> <li>Supporting to voluntary groups</li> <li>Temporary, short-term, limited adverse environmental impacts during the construction phase (e.g. dust, noise, wastewater, soil erosion, surface vegetation damage, solid waste, traffic disturbance, worker and community safety, etc.), which could be avoided or reduced by mitigation measures.</li> <li>Middle and minor labor use, community health and safety risks</li> <li>Small scale of labor use.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>In counties and towns, no sensitive E&amp;S issues;</li> <li>There are ethnic minority villages involved in the project areas for both Jiangxi and Hunan provinces</li> <li>There are no E&amp;S legacy issues. In case E&amp;S legacy issues identified, the proposed project will be ineligible for the PforR project.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>E&amp;S management of the project may involve government departments of ecology and environment, natural resources, labors, water resources, rural and agricultural affairs etc.</li> <li>There are established regulations and plans for such activities</li> <li>Coordination among these departments will be needed during implementation.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>In line with national and local laws and regulations. No political risks.</li> <li>The experienced projects had improved local water and ecological environment, and the local people benefited from the project.</li> </ul> <p>Risk is low.</p>	<b>Moderate</b>



	<p>Diffuse agricultural pollution control and prevention:</p> <ul style="list-style-type: none"> <li>• Close down or relocate livestock and poultry farms, aquaculture farms</li> <li>• Promote fertilizers with low-carbon and low-emission</li> <li>• Animal manure utilization of existing breeding farms</li> </ul>	<ul style="list-style-type: none"> <li>• High risk activities in terms of closing or relocating livestock and poultry farming, aquaculture farming should be ineligible for the PforR;</li> <li>• Activities affecting farmers' livelihood, such as fertility cost increasing, income decreasing of farmers, should take mitigation measures to minimize the loss of farmers' income, especially for vulnerable peoples. In this regard, the risk is moderate.</li> <li>• Promote fertilizers with low-carbon and low-emission, and improve the soil environment as well as reduce NPS pollution.</li> <li>• Small scale of land use for the animal manure utilization facilities, within the current land lease.</li> <li>• Middle scale of labor and community health and safety issues</li> <li>• Small scale of labor hiring</li> <li>• Health and safety risks related to application of fertilizers and pesticides</li> <li>• Potential environmental risks of fertilizer and pesticide residues into the environment</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>• Rural and agricultural area where overuse of fertilizer is popular;</li> <li>• There are either improper use of pesticide, or inadequate training;</li> <li>• There is lack of agricultural scale, and difficult of supervision on use of pesticides and fertilizers;</li> <li>• There are ethnic minority villages involved in the project areas for both Jiangxi and Hunan provinces;</li> <li>• There are no E&amp;S legacy issues. In case E&amp;S legacy issues identified, the proposed project will be ineligible for the PforR program.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>• E&amp;S management of the project may involve government departments of ecology and environment, natural resources, labors, water resources, rural and agricultural affairs etc.</li> <li>• There are established regulations, plans, organization settings and budget for such activities</li> <li>• Coordination among these departments will be needed during implementation.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>• In line with national and local laws and regulations. No political risks.</li> <li>• The experienced projects had reduced water and soil losing, improved local peoples' living environment and biodiversity, and the local people benefited from the project.</li> </ul> <p>Risk is low.</p>	<b>Moderate</b>
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Results Areas	Activities	Likely E&S effects	Contextual risk factors	Institutional capacity and complexity risks	Political and reputational risks	Overall risk rating
2. Water Environment Improvement	Agricultural plastic mulch collection and recycling	<ul style="list-style-type: none"> <li>• Minimum or no direct E&amp;S risk.</li> <li>• Moderate risks on labor health and safety</li> <li>• Increase income for the people hired for mulching film collection.</li> </ul> <p>Risk is low.</p>	<ul style="list-style-type: none"> <li>• The harm of mulching film is not popularly recognized in the rural area;</li> <li>• Awareness on solid waste sorting is low in rural people and government departments.</li> <li>• The project will substantially enhance the rural living environment and improve the health of rural population.</li> <li>• A few types of labors are involved.</li> <li>• There are ethnic minority villages involved in the project areas for both Jiangxi and Hunan provinces</li> <li>• There are no E&amp;S legacy issues. In case E&amp;S legacy issues identified, the proposed project will be ineligible for the PforR program.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>• Government departments involved may include ecology and environment bureau, urban construction management bureau, agricultural and rural affairs bureau etc.</li> <li>• There are established regulations and institutional arrangement for pollution management activities under their mandates, meanwhile, roles and responsibilities on county and township level may be changed in different government departments and need to be further specified, including organization settings, human resources and budget arrangement.</li> <li>• Due to complexity of organization arrangements, coordination among these departments will be needed during implementation.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>• In line with national and local laws and regulations. No political risks.</li> <li>• The project will reduce plastic pollution, improve resource efficiency and recycling, and improve natural and human living environment.</li> </ul> <p>Risk is low.</p>	<b>Moderate</b>

Results Areas	Activities	Likely E&S effects	Contextual risk factors	Institutional capacity and complexity risks	Political and reputational risks	Overall risk rating
	River solid waste interceptors	<ul style="list-style-type: none"> <li>May have substantial impacts on river hydrology and ecology, e.g. flood risks.</li> <li>Worker's safety risk during trash cleaning and collection.</li> <li>Small scale of labor use</li> </ul> <p>Risk is high.</p>	<ul style="list-style-type: none"> <li>Involvement of natural or modified habitats of rivers and canals.</li> <li>Unlikely involvement of important natural habitats.</li> <li>Lack of systematic regulation and institutional arrangement</li> <li>There are no E&amp;S legacy issues. In case E&amp;S legacy issues identified, the proposed project will be ineligible for the PforR program.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>E&amp;S management may involve government departments of ecology and environment, natural resources, water resources, etc.</li> <li>There are established regulations and specifications for such activities</li> <li>Coordination among these departments will be needed during implementation.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>In line with national and local laws and regulations. No political risks.</li> <li>Improve natural and human living environment and benefit local people.</li> </ul> <p>Risk is low.</p>	<b>High</b> (not eligible for the Program, should be excluded)
<b>3. Institutional Strengthening &amp; Innovation</b>	<ul style="list-style-type: none"> <li>Study and develop an online operation or monitoring system</li> <li>Consult and study for regulation and policy making</li> <li>Training to the agencies and operators for use and monitoring of the system</li> </ul>	<ul style="list-style-type: none"> <li>TA activities with minimal or no direct adverse environmental and social risks.</li> <li>Downstream implication of improved environmental management practice and institutional capacity.</li> <li>Limited labor use;</li> <li>Stakeholder engagement will be needed in different government disciplines.</li> </ul> <p>Risk is low.</p>	<ul style="list-style-type: none"> <li>TA activities with no specific site locations, but have the implication on the whole project area.</li> </ul> <p>Risk is low.</p>	<ul style="list-style-type: none"> <li>Involvement of all relevant government departments.</li> <li>The TA objective is to strengthen capacities of these institutions.</li> <li>Coordination among these departments will be needed during implementation.</li> </ul> <p>Risk is low.</p>	<ul style="list-style-type: none"> <li>In line with national and local laws and regulations. No political risks.</li> <li>Improve institutional capacity.</li> </ul> <p>Risk is low.</p>	<b>Low</b>

Results Areas	Activities	Likely E&S effects	Contextual risk factors	Institutional capacity and complexity risks	Political and reputational risks	Overall risk rating
	Water allocation for the mainstream and tributaries	<ul style="list-style-type: none"> <li>TA activities with minimal or no direct adverse environmental and social risks.</li> <li>While, the recommendations of the TA, if implemented, would likely to have substantial downstream indirect and cumulative impacts in terms of water demand from industrial/agricultural use, domestic drinking water and environmental demands. Since the water allocation study will be based on an integrated consideration of environment, urban and rural, industrial and agricultural demands, and its objective is to develop a scientific, rational water resource balance solution, it is unlikely that the TA recommendations would cause significant adverse E&amp;S impacts on the current water users.</li> <li>The potential downstream water resource infrastructures as a result of the TA activities is not within the boundary the PforR activities.</li> </ul> <p>Risk is substantial.</p>	<ul style="list-style-type: none"> <li>Relevant upstream and downstream regions of project river basin.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>Involvement of inter-jurisdiction governments and river basin management authorities.</li> <li>Coordination among these departments will be needed during implementation.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>In line with national and local laws and regulations. No political risks.</li> <li>Improve institutional capacity.</li> </ul> <p>Risk is low.</p>	<b>Substantial</b>

Results Areas	Activities	Likely E&S effects	Contextual risk factors	Institutional capacity and complexity risks	Political and reputational risks	Overall risk rating
	<p>River and lake environmental protection public participation and training:</p> <ul style="list-style-type: none"> <li>• Training to the public on river/lake protection</li> <li>• Public participation activities on river/lake protection.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal or no direct adverse environmental and social risks.</li> <li>• Small scale of labor management</li> </ul> <p>Risk is moderate</p>	<ul style="list-style-type: none"> <li>• Awareness of river/lake protection is improving in the public people.</li> <li>• The project will substantially enhance the rural living environment and improve the health of rural population.</li> <li>• Small scale of labors is involved.</li> <li>• There are ethnic minority villages involved in the project areas for both Jiangxi and Hunan provinces</li> <li>• There are no E&amp;S legacy issues. In case E&amp;S legacy issues identified, the proposed project will be ineligible for the PforR program.</li> </ul> <p>Risk is low.</p>	<ul style="list-style-type: none"> <li>• Government departments involved may include ecology and environment bureau and water resources bureau;</li> <li>• There are established regulations and institutional arrangement for pollution management activities under their mandates. The river chief office in each level of government is responsible for the public participation activities on river/lake protection.</li> </ul> <p>Risk is moderate.</p>	<ul style="list-style-type: none"> <li>• In line with national and local laws and regulations. No political risks.</li> <li>• The project will reduce plastic pollution, improve resource efficiency and recycling, and improve natural and human living environment.</li> </ul> <p>Risk is low.</p>	<b>Moderate</b>

## Appendix 2 Comparison between the Domestic ESMS and the Bank's PforR Policy and Directive

PforR principle / element	China's ESMS requirements and practices	Consistency analysis and recommendation
<b>Principle #1: Program E&amp;S management systems are designed to promote E&amp;S sustainability in the Program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to a Program's E&amp;S effects.</b>		
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.	<p>China has established a complete legal framework on ESIA, consisting of laws, regulations, technical guidelines, standards, mechanisms and management procedures, especially in the field of EIA, in which a complete management system has been formed on the basis of the Environmental Protection Law, and Environmental Impact Assessment Law. For SIA: 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 fixed asset investment project in China, the owner should perform an SSRA at the preparation stage to identify risks and degree of impact, and propose measures to prevent and mitigate risks; ii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions (Interim)(CPCCCO [2012] No.2): An SSRA shall be conducted for any 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.</p> <p><b><i>The ESIA system applicable to the Program is adequate. Specific laws and regulations are sorted out by the following principles and elements.</i></b></p>	Consistent
Element 2: Incorporate recognized elements of good practice in E&S assessment and management, including: i) early screening of potential impacts; ii) consideration of strategic, technical, and site alternatives (including the "no action" alternative); iii) explicit assessment of potential induced, cumulative, and trans-boundary impacts.; iv) identification of measures to mitigate adverse E&S risks and impacts that cannot be otherwise avoided or minimized; v) clear articulation of institutional responsibilities and resources to support implementation of plans; vi) responsiveness and accountability through stakeholder consultation, timely dissemination	<p><b>The Environmental Impact Assessment Law</b> establishes an early screening system to classify EIA, and take appropriate management measures. <b>The Catalogue for the Classified Management of the Environmental Impact Assessment of Construction Projects</b> (updated in 2021) provides an EIA classification guide for 55 industries (173 types of projects), and proposes criteria for major, moderate and minor impacts based on project type, scale and environmental sensitivity.</p> <p><b>The Technical Guidelines for Environmental Impact Assessment—General Program</b> propose overall requirements for EIA documents, including early intervention in early-stage site (route) selection, option selection, extensive public participation, rational utilization of resources, an analysis of positive vs. negative, long-term vs. short-term, direct vs. indirect, cumulative impacts, etc., an environmental economic benefit and loss analysis, development of environmental management measures, monitoring indicators, and an investment budget, preparation of management and monitoring plans, etc.</p> <p>The Program for Environmental Impact Assessment Information Disclosure Mechanism for Construction Projects requires that the construction agency shall disclose project EIA information throughout the process and with full coverage, including information disclosure before the preparation of EIA documents, full disclosure of the completed report (and report form), and information disclosure before, during and after construction. The environmental protection authority shall also fully disclose the EIA report and report form, and disclose the approval information afterwards.</p> <p><b>The Measures for Public Participation in Environmental Impact Assessment</b> (2018 Amendment) propose three-round disclosure requirements for construction agencies, namely information disclosure at the beginning of the EIA, disclosure of the draft report, and disclosure of the final report (along with a description of public participation). In addition, these measures also specify requirements for in-depth public participation for projects with many doubts and/or professional problems, including two-round disclosure, discussion meeting / public hearing preparation, etc., as well as disclosure requirements for the review and approval of the EIA documents by government authorities.</p>	<p>Largely consistent, but lacking records in impact screening, public participation, information disclosure, and GRM</p> <p><b>Action requirements:</b></p> <ol style="list-style-type: none"> <li>1. Keep screening records;</li> <li>2. Record public participation and information disclosure processes and results;</li> <li>3. Record GRM operation.</li> </ol> <p>Some PIUs rely completely on government authorities to supervise social impact and risk management measures in practice. It is advised that an independent monitoring mechanism be established</p>

<p>of the PforR information, and responsive GRMs.</p>	<p>In summary, China's environmental impact assessment system includes early impact screening requirements, and classification is determined according to the level of impact. The "Technical Guidelines for Environmental Impact Assessment" specifies in detail impact screening, alternative comparison and selection, impact analysis (including positive and negative, long-term and short-term, direct and indirect, cumulative impacts, etc.), formulating measures, clarifying management responsibilities, giving budgets, and carrying out extensive public participation, information disclosure, and listening to public opinions. The "Measures for Public Participation in Environmental Impact Assessment" specifies the specific methods, channels and feedback requirements of public participation in detail.</p> <p>In actual implementation, projects that need to carry out EIA (such as sewage treatment plants, garbage transfer facilities, river improvement, etc.) have carried out corresponding work in accordance with the requirements of the EIA system, and the entire implementation process is effectively supervised by the supervisory authority. According to field visits in several counties in Jiangxi Province, projects that need to carry out EIA (such as sewage treatment plants, garbage transfer facilities, river improvement, etc.) have carried out related environmental impacts in strict accordance with national regulations and technical specifications in the early stage. For projects such as EIA reports and report forms, local environmental protection bureaus require public participation activities and information disclosure in accordance with regulations, and incorporate public opinions into the environmental assessment and project design. The local environmental protection bureau has also set up a website for the publicity of environmental impact assessment documents to publicize environmental impact assessment related information in accordance with the law. The construction activities of the project are included in the chapter of environmental protection in accordance with the requirements of the standard construction project contract, and are supervised and implemented by an independent supervision unit. The completion of the project has also been checked and accepted in accordance with the requirements, and the acceptance report has been publicized and submitted to the Ecological Environment Bureau for the record.</p> <p>The state laws and regulations on project screening in social terms include <b>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).</b></p> <p><b>i) Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects:</b> 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, nature reserves, etc.</p> <p><b>ii) Cultural Relics Protection Law: Article 20:</b> Unmovable cultural relics shall be avoided in the choosing of construction sites by whatever possible means; if a protected historical and cultural site 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 unit shall first request in a report the administrative department for cultural relics under the peoples government of the relevant province, autonomous region, or municipality directly under the Central Government to make arrangements for institutions engaged in archaeological excavations to conduct archaeological investigation and prospecting at places where cultural relics may be buried underground within the area designated for the project.</p> <p><b>iii) Regulations on the Prevention and Control of Geologic Disasters: Article 13:</b> To work out and carry out an overall planning on land utilization, a planning on mineral resources or a planning on any other major construction project in respect of water conservancy,</p>	<p>for each subproject to ensure that such measures are implemented.</p>
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	<p>railways, traffic, energy sources, etc., the requirements on prevention and control of geologic disasters shall be taken into full consideration, so as to avoid and mitigate the losses caused from geologic disasters. To work out an overall urban planning, or a village or town planning, the planning on prevention and control of geologic disasters shall be deemed as a component part.</p> <p><b>iv) Land Administration Law: Article 47:</b> For acquisition of land by the state, the local people's governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a people's government at or above the county level is to apply for land acquisition, it shall conduct a current status survey and a social stability risk assessment, and disclose the range and purpose of 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.</p> <p><b>v) Regulations on the Implementation of the Land Administration Law of the PRC: Article 25:</b> 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 village(township), hamlet whose land has been acquired 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 personnel and duration for processing LA compensation. Payment of various expenses for LA should be effected in full within 3 months starting from the date of approval of the LA and resettlement plan.</p> <p><b>vi) 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:</b> At the feasibility study stage, the implementing agency (or an appointed specialized agency) shall conduct an SIA, impact assessment and public consultation, propose mitigation measures, and prepare an SSRA report.</p> <p><b>vii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions (Interim):</b> An SSRA shall be conducted for any 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. The decision to be assessed shall be fixed by the competent authority based on the above provisions and practical situation. If an SSRA is to be conducted for a major project, the SSRA shall be regarded as an important part of the feasibility study. During the SSRA, the assessor may organize an assessment group composed of officials from the political and legislative affairs, integrated control, stability maintenance, and complaint handling authorities, NGOs, specialized agencies, experts, and resident representatives. The assessment report shall include the assessment process, opinions, decisions, potential social stability risks, conclusions, mitigation measures, contingency plan, etc. If the assessment report thinks that the matter has risk risks, a non-implementation decision shall be made, or the decision-making plan adjusted to reduce risks; if there are moderate risks, effective prevention and mitigation measures shall be taken before decision-making; if there are low risks, an implementation decision may be made, but explanation shall be made to handle reasonable requests of stakeholders, the assessment report shall be submitted to the decision-making authority for approval, with copies sent to competent authorities.</p>	
<b>Principle #2: Program E&amp;S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program.</b>		
Element 3: Take into account potential adverse effects on physical cultural property and provide adequate measures to	<p>Regulations on Nature Reserves: A nature reserve shall be set up for an important habitat. Nature reserves shall establish specialized management institution with professional staff responsible for protection works. Activities like timber felling, herding, fishing, picking, reclamation, burning, mining, quarrying and sand digging shall be not conducted in nature reserves. No one shall enter core zones of nature reserves (except approved scientific research activities). No production is allowed within core zone and buffer zone, and no construction or production activities with pollution emission or affecting landscapes is allowed in the experimental zone.</p>	



avoid, minimize, or mitigate such effects.	<p>The EIA Guidelines-Ecological Impacts specifically stipulates the technical details of identifying and screening important ecological factors (including wild animals and plants, important habitats, and biodiversity) in the early environmental assessment stage of the project, and clearly requires that the environmental impact assessment documents pay attention to ecological impacts (positive and negative), direct, indirect and cumulative impacts, mitigation measures are formulated in the order of avoidance, mitigation, compensation and reconstruction.</p> <p>Cultural Relics Protection Law establishes protection areas for valuable cultural resources. Construction projects unrelated to the protection of cultural relics are not allowed in the protected areas. Necessary construction activities must be approved by the local government and higher-level cultural relics departments.</p> <p>Ecological elements and cultural resources are the environmental protection goals defined in the "Technical Guidelines for Environmental Impact Assessment", and are important targets for screening, evaluating, and formulating avoidance and mitigation measures for environmental impact assessment work.</p> <p>In the process of preparing actual environmental impact assessment documents, it is necessary to identify important natural habitats and cultural resources. For the natural habitats or cultural resources involved, measures are formulated in the order of avoidance, reduction, mitigation, and compensation, and they are included in the environmental management plan. In addition, all projects involving nature reserves or cultural relics protection units must be approved by the relevant authorities.</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 Program activities.	<p>The "Regulations on Nature Reserves" stipulate that the establishment of nature reserves for important habitats, the core purpose of which is to protect natural habitats and avoid the degradation and conversion of natural habitats.</p> <p>The Wildlife Protection Law and the Wild Plant Protection Regulations (revised in 2017) stipulate the protection requirements for wild animals and their natural habitats, wild plants and their growing environment. The impact of construction projects on wild animals, plants and habitats and mitigation measures are the focus of environmental impact assessment documents.</p> <p>China's "Environmental Assessment Guidelines-Ecological Impacts" clearly requires that environmental impact assessment documents pay attention to adverse ecological impacts and beneficial impacts, direct, indirect and cumulative impacts, and mitigation measures are formulated in the order of avoidance, mitigation, compensation and reconstruction.</p> <p>In addition, starting from 2015, China has implemented the delineation of ecological protection red lines on a large scale. By the end of 2020, all provinces and cities across the country have completed the delineation of ecological protection red lines within their jurisdictions to protect important habitats. The Jiangxi Provincial Government officially released the Jiangxi Provincial Ecological Protection Red Line in 2020. The ecological protection red line delineates an area of 46,876 square kilometers, accounting for 28.06% of the province's land area. These red lines are divided into 16 areas in 3 categories by ecological function, namely water resource conservation, biodiversity maintenance, and water and soil conservation.</p> <p>In actual implementation, identifying important natural habitats, important wildlife protection targets, and statutory ecological protection red lines are one of the key tasks of each EIA. All projects involving statutory protected areas have taken avoidance measures. For other unavoidable ecological and environmental impacts, it is necessary to formulate reduction, mitigation or compensation measures.</p>	
Element 5: Take into account potential adverse effects on physical cultural property and provide adequate measures to	<p><b>Applicable regulations: Cultural Relics Protection Law (2017 Amendment), Regulations on the Implementation of the Cultural Relics Protection Law (2017 Amendment)</b></p> <p><b>i)Cultural Relics Protection Law: Article 17:</b> No construction of additional projects or such operations as blasting, drilling and digging may be conducted within the area of protection for a historical and cultural site. However, where under special circumstances it</p>	

avoid, minimize, or mitigate such effects.	<p>is necessary to conduct construction of additional projects or such operations as blasting, drilling and digging within the area of protection for such a site, its safety shall be guaranteed, and the matter shall be subject to approval by the peoples' government which originally verified and announced the site. <b>Article 20:</b> While choosing a place for a construction project, the construction unit shall try its best to get around the site of immovable cultural relics; where it is impossible to do so under special circumstances, it shall do everything it can to protect the original site protected for its historical and cultural value. <b>Article 29:</b> Before launching a large-scale capital construction project, the construction unit shall first request in a report the administrative department for cultural relics under the peoples government of the relevant province, autonomous region, or municipality directly under the Central Government to make arrangements for institutions engaged in archaeological excavations to conduct archaeological investigation and prospecting at places where cultural relics may be buried underground within the area designated for the project. <b>Article 31:</b> The expenses needed for 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 unit for the construction project.</p> <p><b>ii) Regulations on the Implementation of the Cultural Relics Protection Law: Article 25:</b> The scope and rates of funds for archeological investigation, exploration and unearthing shall be based on the applicable state provisions.</p>	
<b>Principle #3: Program E&amp;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.</b>		
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.	<p><b>Applicable laws and regulations: Labor Law (2018 Amendment), Work Safety Law (2020.11.25 Amendment), Law on the Prevention and Control of Occupational Diseases (2018 Amendment) (2018.12.29), Occupational Health and Safety Management Systems—Requirements with Guidance for Use (2020.3.6)</b></p> <p><b>i) Labor Law: Article 53:</b> 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 projects. <b>Article 54:</b> The employer must provide labor health and safety conditions, and necessary labor protection articles complying with the state provisions to laborers, and laborers dealing with operations with occupational hazards shall receive health checkup regularly. <b>Article 57:</b> The state shall establish a statistical reporting and handling system of accidents and occupational diseases. <b>Article 61:</b> Female workers shall not be arranged to deal with physical labor of intensity level III stipulated by the state, and prohibited labor during pregnancy; female workers pregnant for seven months or more shall not work overtime or at night.</p> <p><b>ii) Work Safety Law: Article 21:</b> The primary person in charge of a business entity shall have the following duties: establishing and improving the work safety responsibility system of the business entity, organizing the development of policies, rules, and operating procedures for work safety of the business entity, organizing the development and implementation of the work safety education and training plans of the business entity, ensuring the effective utilization of the work safety input of the business entity, supervising and inspecting the work safety of the business entity to eliminate hidden risks of work safety accidents in a timely manner, organizing the preparation and implementation of the business entity's emergency rescue plans for work safety accidents, and reporting work safety accidents in a timely and honest manner. <b>Article 73:</b> Authorities for work safety supervision and management shall establish a reporting system, and disclose a reporting hotline, mailbox or e-mail address to receive reports on work safety. <b>Article 74:</b> Any organization or individual shall have the right to report any concealed accident or work safety violation to authorities for work safety supervision and management. <b>Article 72:</b> When any community or village committee discovers any concealed accident or work safety violation by any production or operation agency within its jurisdiction to the local government or competent authority.</p> <p><b>iii) Law on the Prevention and Control of Occupational Diseases (2018 Amendment): Article 4:</b> Employees shall be entitled to occupational health protection according to law. Employers shall create work environment and conditions meeting the national</p>	Consistent

	<p>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. <b>Article 5:</b> 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 disease hazards. <b>Article 6:</b> The primary person in charge of an employer shall assume the overall responsibility for the employer's prevention and control of occupational diseases. <b>Article 7:</b> Employers must participate in work-related injury insurance according to law. <b>Article 9:</b> The state shall apply an occupational health supervision system. <b>Article 10:</b> The State Council and the local people's 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. It can be seen that China has established a comprehensive safety production management system, and mature safety production measures and management systems have been formed for the design, construction and operation stages of the project. In the actual project implementation process, safety management is the top priority. The implementation of its measures is subject to the comprehensive supervision of the sectoral supervision and emergency management (safe production department) of various sectoral authorities.</p> <p>In addition to the establishment of safety management units, staffing, and implementation of measures in project construction units and construction operation units, all sectoral authorities have established safety production management mechanisms to supervise the safety production performance of projects in this sector. The Emergency Management Bureau (the department in charge of production safety) supervises all sectors and key areas. This system can ensure the safety supervision of project activities under this PforR.</p>	
<p>Element 7: i) Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the PforR.</p>	<p><b>Applicable laws and regulations: Work Safety Law</b></p> <p><b>i) Work Safety Law: Article 21:</b> 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. <b>Article 22:</b> The work safety management body and work safety management personnel of a business entity shall perform the following duties: (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 of the business entity. (2) Organizing or participating in and honestly recording the work safety education and training of the business entity. (3) Supervising the implementation of safety control measures for the major hazard installations of the business entity. (4) Organizing or participating in the emergency rescue rehearsals of the business entity. (5) Inspecting the work safety condition of the business entity, conducting screening for any hidden risks of work safety accidents 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. (7) Supervising the work safety corrective actions taken by the business entity.</p> <p><b>ii) Regulations on the Safety Management of Hazardous Chemicals: Article 4:</b> A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to employees. Employees shall accept education and training, and may not hold office until they have passed the relevant examination</p> <p><b>iii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use:</b> This is a regional standard on OHS management systems, designed to identify and control safety problems 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</p>	<p>Largely consistent, but there are areas for improvement during implementation</p> <p>The implementation of OHS management systems at some enterprises (e.g., WWTPs, cleaning companies) is yet to be improved. The labor rights and OHS protection of contractual and temporary workers should be strengthened.</p> <p>Recommendation: Enhance the OHS management of all enterprises involved in the Program activities; for jobs with potential occupational</p>

	<p>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><b>iv) Guidelines for Occupational Disease Prevention and Control for Employers:</b> The general requirements for occupational disease prevention and treatment, classified management, occupational health file management, and OHS assessment, etc. are stipulated, including: A corporate occupational health policy shall be developed, an occupational disease prevention and treatment agency, and an occupational health management agency established, relevant functions defined, and full/part-time occupational health officers appointed; occupational disease prevention and treatment shall be included on management by objective responsibility system; an occupational disease prevention and treatment 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; a sound workplace occupational disease hazard monitoring and evaluation system shall be established, necessary financial support for occupational disease prevention and treatment secured, a sound emergency rescue plan for occupational diseases developed, and work-related injury insurance covered.</p> <p><b>v) Action Plan for Occupational Health Protection of Jiangxi Province (2020-2030) (JKJXBF [2020] No.15):</b> By 2030, Jiangxi Province will improve its technical support system for occupational health, including realizing the full coverage of work-related injury insurance, creating a clean, tidy, green, comfortable and friendly working environment, strengthening occupational hazard monitoring and evaluation, setting up signs for jobs with occupational hazard, establishing an occupational disease prevention and treatment responsibility system, establishing or appointing an occupational health management agency, appointing full/part-time occupational health management staff, and conducting occupational disease prevention and treatment, and occupational health guidance and management.</p>	<p>hazards, take such measures as occupational hazard identification, and pre-job, in-the-job and post-job health checkup. Strengthen OHS training for contractual and temporary workers (including emergency response and proper use of personal protective equipment).</p>
<p>ii) Promote the use of integrated pest management practices to manage or reduce the adverse impacts of pests or disease vectors.</p>	<p>The activities under this project involve vector control of schistosomiasis. Schistosomiasis control has been carried out in China for more than 70 years, and a mature management, prevention and control system has been formed. Jiangxi Province issued the "Regulations on the Prevention and Control of Schistosomiasis in Jiangxi Province", which adopts a comprehensive prevention and control method for disease vector management. Through physical prevention measures carried out by various sectors and departments, the breeding environment of the vector snails is changed and the growth of the vector snails is inhibited. For example, the agricultural department is responsible for adjusting the structure of planting industry, changing paddy fields to dry fields, and constructing biogas digesters (to reduce manure discharge), the water conservancy department is responsible for lake and river improvement, irrigation canal improvement, the forestry department is responsible for afforestation, and the natural resources department is responsible for land improvement and so on.</p> <p>In endemic areas, the health department conducts population and snail surveys every year, and once or twice a year snails elimination is implemented in the environment where snails are found. As of 2019, among the original 39 counties in Jiangxi Province belonged to schistosomiasis endemic counties, 24 counties have reached the standard for schistosomiasis elimination. In counties that have not yet been eliminated, precautions are taken during construction for water related projects. The main preventive measures include: wearing protective equipment (including clothing coated with protective drugs), rubbing protective drugs, oral preventive medicines, etc. For the treatment of schistosomiasis, there are also mature and safe drugs and treatment methods. Therefore, schistosomiasis can be effectively prevented during the implementation of this project.</p>	

<p>iii) Provide training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with the relevant international guidelines and conventions.</p>	<p><b>Regulations on the Safety Management of Hazardous Chemicals (2013Amendment), Occupational Health and Safety Management Systems—Requirements with Guidance for Use (2020.3.6), and Guidelines for Occupational Disease Prevention and Control for Employers (2010.8.1)</b></p> <p><b>i) Regulations on the Safety Management of Hazardous Chemicals: Article 4:</b> A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to employees. Employees shall accept education and training, and may not hold office until they have passed the relevant examination.</p> <p><b>ii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use:</b> This is a regional standard on OHS management systems, designed to identify and control safety problems 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><b>iii) Guidelines for Occupational Disease Prevention and Control for Employers:</b> The general requirements for occupational disease prevention and treatment, classified management, occupational health file management, and OHS assessment, etc. are stipulated, including: A corporate occupational health policy shall be developed, an occupational disease prevention and treatment agency, and an occupational health management agency established, relevant functions defined, and full/part-time occupational health officers appointed; occupational disease prevention and treatment shall be included on management by objective responsibility system; an occupational disease prevention and treatment 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; a sound workplace occupational disease hazard monitoring and evaluation system shall be established, necessary financial support for occupational disease prevention and treatment secured, a sound emergency rescue plan for occupational diseases developed, and work-related injury insurance covered.</p>	<p>Consistent, but OHS management system certification is not compulsory</p> <p>The implementation of OHS management systems at some enterprises (e.g., WWTPs, cleaning companies) is yet to be improved. The labor rights and OHS protection of contractual and temporary workers should be strengthened.</p> <p>Recommendation: Enhance the OHS management of all enterprises involved in the Program activities; for jobs with potential occupational hazards, take such measures as occupational hazard identification, and pre-job, in-the-job and post-job health checkup. Strengthen OHS training for contractual and temporary workers (including emergency response and proper use of personal protective equipment).</p>
<p>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</p>	<p><b>Applicable laws and regulations: Regulations on the Defense against Meteorological Disasters (2010.4.1), Flood Control Regulations of the People's Republic of China (2005.7.15), Regulations on the Prevention and Control of Geologic Disasters (2004.3.1), Law on Protecting Against and Mitigating Earthquake Disasters (2009.5.1), and Notice on Realizing Precise Health Management and Orderly Flow of People (JPCMZF [2020] No.203)</b></p> <p><b>i) Regulations on the Defense against Meteorological Disasters: Article 27:</b> 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 climate feasibility, and risks of meteorological disasters to avoid or mitigate such impacts. <b>Article 23:</b> Lightning protection devices of buildings, places and facilities shall comply with the national lightning protection standards.</p>	<p>Consistent</p>

<p>weather or affected by climate events.</p>	<p>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 projects.</p> <p><b>ii) Flood Control Regulations of the People's Republic of China (2005.7.15):</b> consisting of 8 chapters and 49 articles, making systematic arrangements for flood control in terms of organization, preparation, implementation, emergency rescue, recovery, funding, reward and punishment, etc.</p> <p><b>iii) Regulations on the Prevention and Control of Geologic Disasters: Article 10:</b> A geologic disaster investigation system is practiced at the state, provincial and county levels. According to the result from investigation of geologic disasters within its own jurisdiction as well as the planning of the next higher level on prevention and control of geologic disasters, an administrative organ of land resources shall work out the planning for its own jurisdiction on prevention and control of geologic disasters, which shall be submitted to the people's government at the same level for approval and promulgation after demonstration by experts.</p> <p><b>iv) Regulations on the Prevention and Control of Geologic Disasters:</b> making systematic arrangements for the investigation, prevention and control of geological disasters, such as Chapter 3 "Prevention of Geologic Disasters", Chapter 4 "Emergency Response to Geologic Disasters", Chapter 5 "Control of Geologic Disasters", and Chapter 6 "Legal Liabilities".</p> <p><b>iv) Law on Protecting Against and Mitigating Earthquake Disasters: Article 35:</b> 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 in accordance with the provisions of relevant administrative regulations of the State Council, 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 locale, and effective measures shall be taken to increase the capability of seismic fortification.</p> <p><b>v) Notice on Realizing Precise Health Management and Orderly Flow of People (JPCMZF [2020] No.203):</b> 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 taken timely. For medium and high-risk areas, avoid entry into project areas and people gathering where possible, and allow people entering project areas to flow freely and orderly on the premise of properly temperature measurement and personal protection. Avoid going to medium and high-risk areas if not necessary.</p>	
<p><b>Principle #4: Program E&amp;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.</b></p>		
<p>Element 9: In six aspects: i) Avoid or minimize land acquisition and related adverse impacts.</p>	<p><b>Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2008), Land Administration Law (2020.1.1 Amendment), Regulations on the Implementation of the Land Administration Law of the PRC (2014 Amendment)</b></p> <p><b>i) Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects:</b> 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, nature reserves, etc.</p> <p><b>ii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions (Interim) (CPCCCO [2012] No.2):</b> An SSRA shall be conducted for any project involving LA and HD, farmers' burden or social security.</p>	<p>Consistent</p>

	<p><b>iii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions (Interim):</b> If the assessment report thinks that the matter has risk risks, a non-implementation decision shall be made, or the decision-making plan adjusted to reduce risks; if there are moderate risks, effective prevention and mitigation measures shall be taken before decision-making; if there are low risks, an implementation decision may be made, but explanation shall be made to handle reasonable requests of stakeholders. For impact and risk management, the legitimacy, rationality, feasibility and controllability of measures shall be assessed.</p>	
<p>ii) Identify and address economic or social impacts caused by land acquisition or loss of access to natural resources.</p>	<p><b>ii) Land Administration Law: Article 26:</b> 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. For acquisition of land by the state, the local people's governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures.</p> <p><b>iii) Regulations on the Implementation of the Land Administration Law of the PRC: Article 25:</b> 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 village(township), hamlet whose land has been acquired 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 personnel and duration for processing LA compensation. <b>Article 26:</b> Land compensation fee goes to the rural collective economic organization; compensation for ground attachments and young crops shall be for the owner(s) of ground attachments and young crops.</p>	Consistent
<p>iii) Provide compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid before taking land or restricting access.</p>	<p><b>Applicable laws and regulations:</b> Real Right Law (2007.3), Land Administration Law, Regulations on the Expropriation of Buildings on State-owned Land and Compensation (Decree[2011] No.590 of the State Council) (2011.1.21), Measures for the Expropriation and Appraisal of Housing on State-owned Land (JF [2011] No.77) (2011-6-3), Notice of the Jiangxi Provincial Government on Releasing Block Comprehensive Land Prices of Jiangxi Province (2020.2.28), Measures for the Administration of Urban Housing Expropriation of Jiangxi Province (2018.7.3), Agricultural Product Quality Safety Law of the PRC (2018.10.26), Regulations on Pesticide Administration (2017.2.8), Measures for the Administration of the Soil Environment of Agricultural Land (Interim) (2017.9.25), Guidelines of the General Office of the Ministry of Agriculture and Rural Affairs on Fertilizer Package Waste Recovery and Disposal (2020.1.16), and Measures for the Administration of Agricultural Mulching Films (2020.4.24)</p> <p><b>i) Real Right Law: Article 42:</b> For collective land acquired, land compensation, resettlement subsidy, compensation for ground attachments and young crops, etc. shall be fully paid according to law, and social security funds for land-expropriated farmers appropriated to secure their livelihoods, and protect their lawful rights and interests. Where any house or other immovable property of any organization or individual are expropriated, compensation shall be granted according to law to protect the lawful rights and interests of the affected organization or individual; where any personal residence is expropriated, the affected person's housing conditions shall be secured.</p> <p><b>ii) Land Administration Law: Article 48:</b> Fair and reasonable compensation shall be granted for land acquisition. 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 law, and social security costs for the affected farmers disbursed.</p> <p><b>iii) Regulations on the Expropriation of Buildings on State-owned Land and Compensation (Decree[2011] No.590 of the State Council) (2011.1.21): Article 19:</b> The compensation for the value of houses to be expropriated shall not be less than the market price of the real estate comparable to the houses to be expropriated 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</p>	<p>Consistent, but there are areas for improvement in management</p> <p>1) Farmers are inactive in chemical fertilizer reduction and organic fertilizer replacement, because their environmental awareness is low, and this may add to their production costs.</p> <p>2) In some areas, agricultural mulching film collection rate is low, collectors are unclear, and no effective and sustainable collection system has been established, because their environmental awareness is low, and labor costs of collection are high.</p> <p><b>Recommendation 1:</b></p>

	<p>qualifications in accordance with the procedures for evaluating houses to be expropriated. Anyone who has objection to the value of the houses to be expropriated that has been assessed and determined may apply to the real estate appraisal agency for reassessment. Anyone who disagrees with the results of the review may apply to the real estate appraisal expert committee for appraisal.</p> <p><b>iv) Measures for the Expropriation and Appraisal of Housing on State-owned Land (JF [2011] No.77) (2011-6-3): Article 16:</b> The real estate appraisal agency shall provide preliminaryhousehold-by-house appraisal results according to the entrustment contract, and the house expropriation authority shall disclose such results to the affected persons. During disclosure, the real estate appraisal agency shall appoint a registered appraiser to explain such results on site, and correct any error.</p> <p><b>v) Notice of the Jiangxi Provincial Government on Releasing Block Comprehensive Land Prices of Jiangxi Province (2020.2.28):</b> A block comprehensive land price consists of land compensation and a resettlement subsidy at 1:1, excluding any subsidy for endowment insurance for land-expropriated farmers, or compensation for ground attachments and young crops.</p> <p><b>Compensation Rates for Land Acquisition of Hunan Province (HPG [2018] No.5, 2018.1.1):</b> A LA compensation rate shall consist of land compensation and a resettlement subsidy only, accounting for 40% and 60% respectively. In addition, detailed provisions are made for compensation rates for ground attachments and young crops, state-owned land to be withdrawn for nonagricultural construction, and acquired irrigated land, grassland and unused land.</p> <p><b>vi) Measures for the Administration of Urban Housing Expropriation of Jiangxi Province (2018.7.3): Article 7:</b> The demolition program submitted by the demolishershall include the following: 1) the mode of demolition; 2) the periods of demolition and transition; 3) the compensation rates offered by the demolisher; and 4) the estimated compensation. <b>Measures of Hunan Province on the Expropriation of Buildings on State-owned Land and Compensation (2015):</b> A municipal or county government making a house expropriation decision shall grant the following compensation to each affected person as the case may be: 1) the compensation for the value of the expropriated house; 2) the compensation for relocation and transition arising from house expropriation; and3) the compensation for production or business suspension arising from house expropriation. In the compensation for the value of the expropriated house, the compensation for the value of the interior decoration shall be agreed on between the demolisher and the affected person, or appraised by a real estate appraisal agency selected hereunder.</p> <p><b>vii) The Agricultural Product Quality Safety Law of the PRC</b> raises requirements for the whole production process of farm products, including the selection of the cultivation place, and the control over the use of pesticides and chemical fertilizer during cultivation. <b>The Regulations on Pesticide Administration</b> raises specific requirements for the production, registration, marketing and use of pesticides. <b>The Measures for the Administration of the Soil Environment of Agricultural Land (Interim)</b> are promulgated by the Ministry of Ecology and Environment, and Ministry of Agriculture and Rural Affairs jointly in accordance with the applicable laws and regulations, and the Action Plan for Soil Pollution Prevention and Control to strengthen the supervision of farmland soil environment protection. The Measures stipulate that local agriculture authorities at or above the county level shall strengthen publicity on farmland soil pollution control, improve the farmland soil environment protection awareness of agricultural producers, and guide them to use fertilizers, pesticides, films and other agricultural inputs rationally. <b>The Guidelines of the General Office of the Ministry of Agriculture and Rural Affairs on Fertilizer Package Waste Recovery and Disposal</b> stipulate that fertilizer package waste shall be recovered by producers, dealers and users. <b>Measures for the Administration of Agricultural Mulching Films: Article 14:</b> Agricultural mulching film recovery shall be conducted with government support and multi-party participation. All localities shall take measures to support and encourage organizations and individuals to recover agricultural mulching films.</p>	<p>Provide training on chemical fertilizer use and agricultural waste management to farmers. The provincial agriculture departments (and the agriculture and rural affairs bureaus of the Program counties) should develop relevant training programs, prepare training materials, and conduct education and publicity during implementation.</p> <p><b>Recommendation 2:</b> The Hunan Provincial Agriculture and Rural Affairs Department (and county agriculture and rural affairs bureaus) should establish a sustainable incentive mechanism to increase collection rate.</p>
iv)Provide supplemental livelihood improvement or restoration	<p><b>Applicable laws and regulations: Land Administration Law, Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238), Notice on Doing a Good Job in Employment Training and Social Security</b></p>	<p>Consistent, but there are areas for improvement in</p>



<p>measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment).</p>	<p><b>for Land-expropriated Farmers (SC [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 the Jiangxi Provincial Government on Releasing Block Comprehensive Land Prices of Jiangxi Province (2020.2.28), and Notice of the General Office of the Hunan Provincial Government on Doing a Good Job in Social Security for Land-expropriated Farmers (HPGO [2016] No.80, 2016.11.7)</b></p> <p><b>i) Land Administration Law: Article 48:</b> 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.</p> <p><b>ii) Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238), 1)</b> Agricultural resettlement. When rural collective land out of urban planning areas is acquired, land-expropriated farmers shall be first provided with necessary arable land using 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 a social security system established for them. 3) Dividend distribution resettlement. When any land with long-term stable income 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><b>iii) Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29):</b> Employment training and social security for land-expropriated farmers shall be taken as an important aspect of land acquisition system reform. Local governments 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.</p> <p><b>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):</b> 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 program.</p> <p><b>v) Notice of the Jiangxi Provincial Government on Releasing Block Comprehensive Land Prices of Jiangxi Province (2020.2.28):</b> The subsidy pre-deposit system for endowment insurance for land-expropriated farmers shall be further enforced throughout the province. All localities shall withdraw the subsidy at not less than 6,000 yuan/mu of acquired land to the designated special account. Each municipal or county (district) government shall include land-expropriated farmers in the social security system to ensure that the living standard of land-expropriated farmers is not reduced, and their long-term livelihoods are secured.</p> <p><b>vi) Notice of the General Office of the Hunan Provincial Government on Doing a Good Job in Social Security for Land-expropriated Farmers (HPGO [2016] No.80, 2016.11.7):</b> A government appropriation mechanism shall be established for social security funds for land-expropriated farmers, and municipal and county (district) governments shall use a percentage of land transfer</p>	<p>management</p> <p>No social impacts and risks monitoring mechanism has been established and implemented. In addition, most enterprises have not established an external relations mechanism to disclose information and handle complaints timely.</p> <p><b>Recommendation 4:</b> Establish a social impacts and risks screening, public participation, monitoring, and reporting mechanism. The PIUs will monitor social impacts and risks (including LAR impacts, support for vulnerable groups, etc.) screening, management measure implementation, information disclosure, public participation, grievance redress and supports to vulnerable groups. Disclose public complaint hotlines and contacts to the public, and establish an effective external relations mechanism.</p>
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	income for social security for land-expropriated farmers, and ensure normative use. A collective subsidy withdrawal mechanism shall be established, where 10% of land acquisition compensation shall be withdrawn and appropriated as the collective subsidy. Employment and startup support shall be offered to eligible land-expropriated farmers, occupational training further strengthened, and public employment services optimized to help land-expropriated farmers get employed or start up businesses.	
v) Restore or replace public infrastructure and community services that may be adversely affected by the Program.	<p><b>Applicable laws and regulations: Land Administration Law, and Regulations on the Implementation of the Land Administration Law of the PRC, Real Right Law:</b></p> <p><b>i) Land Administration Law: Article 47:</b> For acquisition of land by the state, the local people's governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a people's government at or above the county level is to apply for land acquisition, it shall conduct a current status survey and a social stability risk assessment, and disclose the range and purpose of 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.</p> <p><b>ii) Regulations on the Implementation of the Land Administration Law of the PRC: Article 25:</b> 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 village(township), hamlet whose land has been acquired 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 personnel and duration for processing LA compensation.</p> <p><b>iii) Real Right Law: Article 36:</b> If any immovable or movable property is damaged, the right holder may request repair, rework, replacement or restoration.</p>	Consistent
vi) Include measures in order for land acquisition and related activities to be planned and implemented with appropriate disclosure of information, consultation, and informed participation of those affected.	<p><b>i) Land Administration Law: Article 26:</b> 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. For acquisition of land by the state, the local people's governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. <b>Article 47:</b> If a people's government at or above the county level is to apply for land acquisition, it shall conduct a current status survey and a social stability risk assessment, and disclose the range and purpose of 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.</p> <p><b>ii) Regulations on Complaint Letters and Visits: Article 6:</b> A working organ of the people's government at or above the county level for the handling of complaint letters and visits shall be the administrative organ in charge of handling complaint letters and visits of its corresponding people's government and shall perform the following duties: (1) Accepting, assigning and transferring the matters as described in the complaint letters and visits; (2) Handling the matters as described in the complaint letters and visits as assigned by the people's governments at and above the same level; (3) Coordinating the handling of the important complaint letters and visits; (4) Supervising and checking the handling of matters as described in complaint letters and visits; (5) Studying and analyzing the matters relating to complaint letters and visits, making investigation and research and timely putting forward suggestions for perfecting relevant policies and improving the work of the people's government at the same level; and (6) Giving instructions to the handling of complaint letters and visits by other working departments of the people's government at the same level and the complaint letter and visit handling organs of the subordinate people's governments.</p> <p><b>iii) Document No.1 of the Central Government (2020):</b> Leaders, especially municipal and county leaders, shall receive complaints and visits at lower levels to solve outstanding cases actively. Diversified legal services like one legal adviser per village shall be</p>	

	<p>offered, and people mediation strengthened to ensure that disputes and conflicts are handled at the village level where possible. Complaint channels for farmers shall be kept smooth to handle their reasonable complaints timely and properly.</p> <p><b>iv) Standard Guide to Grass-root Government Affairs Disclosure on Collective Land Acquisition (June 2019, Ministry of Natural Resources):</b> Matters to be disclosed shall be defined, disclosure procedures normalized, and disclosure modes improved to protect the people's rights of information, participation, expression and supervision practically. Public participation during land acquisition and resettlement mainly includes:</p> <ul style="list-style-type: none"> <li>• During project preparation and option selection, the project owner and design agency shall conduct meaningful consultation with the affected persons and other stakeholders, and improve engineering measures and define the range of land use based on the feedback to avoid sensitive objects and minimize impacts.</li> <li>• Participation during the DMS includes LA announcement, DMS publicity, DMS participation, and result disclosure and confirmation.</li> <li>• During the SSRA, meaningful consultation shall be conducted with stakeholders to assess potential major social risks of LA and HD, including other risks that are not directly related to the project but may affect the project materially.</li> <li>• The compensation program shall be disclosed during drafting, and a public hearing held when necessary.</li> <li>• Public participation during implementation mainly includes production resettlement, livelihood restoration, information disclosure in compensation distribution and information, negotiation, and agreement signing.</li> </ul>	
<b>Principle #5: Program E&amp;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 Peoples and vulnerable groups.</b>		
<p>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.</p>	<p><b>Applicable laws and regulations: Constitution (2018 Amendment), Social Stability Risk Assessment of Major Fixed Asset Investment Projects (2012.8.16), Land Administration Law (2020), and Law of the People's Republic of China on Regional National Autonomy(2001 Amendment)</b></p> <p><b>i) Constitution: Article 4:</b> All ethnic groups in the People's Republic of China are equal.</p> <p><b>ii) Law of the People's Republic of China on Regional National Autonomy: Article 51:</b> 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.</p> <p><b>iii) Social Stability Risk Assessment of Major Fixed Asset Investment Projects: Article 3:</b> At the feasibility study stage, the implementing agency (or an appointed specialized agency) shall conduct an SIA, impact assessment and public consultation, propose mitigation measures, and prepare an SSRA report. On the other hand, if a local government at or above the county level applies for LA, a current status survey and an SSRA shall be conducted. The SSRA report shall be reviewed by experts organized by the designated authority of the county government, and then approved. On this basis, appropriate local implementation opinions / notices have been issued, such as the Working Rules for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects of Hunan Province, and the Notice on Establishing the Social Stability Risk Assessment Mechanism for Major Matters of Jiangxi Province(JPG [2010] No.21).</p> <p><b>iv) Land Administration Law (2020): Article 47:</b> For acquisition of land by the state, the local people's governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a people's government at or above the county level is to apply for land acquisition, it shall conduct a current status survey and a social stability risk assessment, and disclose the range and purpose of 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.</p>	

<p>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.</p>	<p><b>Applicable laws, regulations and plans:</b> <b>Law of the People’s Republic of China on Regional National Autonomy (2001 Amendment), Some Provisions of the State Council on the Implementation of the Regional National Autonomy Law (2005.5), Some Provisions of Hunan Province on the Implementation of the Regional National Autonomy Law (2011), Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1), 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Hunan Province (2017. 3. 30), and 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province (2017.3.27)</b></p> <p><b>i) Law of the People’s Republic of China on Regional National Autonomy: Article 65:</b> While exploiting resources and undertaking construction in national autonomous areas, the State shall give consideration to the interests of these areas, make arrangements favorable to the economic development there and pay proper attention to the productive pursuits and the life of the minority nationalities there. The State shall take measures to give due benefit compensation to the national autonomous areas from which the natural resources are transported out.</p> <p><b>ii) Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1):</b> Prior public consultation shall be conducted for major administrative decision-making matters, including developing important plans for economic and social development and other aspects, developing major public policies and measures to develop, utilize and protect important natural and cultural resources, deciding on major public construction projects to be implemented in the administrative region, and deciding on other major matters that have a significant impact on economic and social development, involve material public interests, or the vital interests of the public. <b>Article 14:</b> 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. <b>Article 15:</b> If public opinions are solicited for a matter for decision-making, the decision-making entity shall disclose the draft decision and its explanation, and the mode and period of solicitation by publicly available means, such as government website, new media and TV. The opinion solicitation period is usually not less than 30 days. For matters of extensive public concern, or highly technical matters, the decision-making entity may make explanation by means of expert interview, etc. <b>Article 16:</b> If any matter for decision-making concerns immediate interests of citizens, legal persons or other organizations, or involves a major dispute, a public hearing may be held. The decision-making entity shall disclose the draft decision and its explanation, and make clear the time and venue of the public hearing. <b>Article 29:</b> If the public participation procedure is performed, the decision-making entity shall submit the draft decision together with adopted public opinions. <b>Article 30:</b> When the draft decision is discussed, the meeting attendees shall give opinions adequately, and chief administrative officer shall give an opinion finally. If such opinion differs from the majority opinion, the reason shall be given at the meeting.</p> <p><b>iii) 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Hunan Province (2017. 3. 30):</b> By 2020, a moderately prosperous society shall be built in minority areas in step with the whole province. 12 major tasks for the development of minority residents and areas in Hunan Province during the 13<sup>th</sup> five-year plan period are defined, and a detailed plan developed, including poverty alleviation, infrastructure construction, economic and social programs, new-type urbanization, opening up, minority official team building, etc., and differential supporting policies are proposed in seven aspects – public finance, investment, finance, land, industry, ecological compensation, and pairing assistance.</p> <p><b>iv) 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province (2017.3.27):</b> The plan covers infrastructure improvement, industry efficiency and structure optimization, public service improvement, new countryside and small town building, talent training, etc. for minority areas.</p>	
<p>Element 12: Give attention to groups vulnerable to hardship or</p>	<p><b>Notice of the State Council on Issuing the 13<sup>th</sup>Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79), 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs ofHunan Province (2017),</b></p>	

<p>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.</p>	<p><b>and Notice of the General Office of the Jiangxi Provincial Government on Issuing the 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province (2017)</b></p> <p><b>i) Notice of the State Council on Issuing the 13<sup>th</sup> Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79):</b> The development of advantaged and characteristic industries of poor minority areas shall be supported, especially stockbreeding and minority handicrafts. “One product per village” industry revitalization and “Internet+” industry poverty alleviation measures shall be taken for poor villages. Poverty alleviation by e-commerce, photovoltaic, rural tourism, etc. shall be implemented to increase local residents’ income; major infrastructure projects shall be constructed in minority areas to improve livelihoods. Basic social service mechanisms in minority areas shall be improved to provide support in old-age services, social assistance, social welfare, special care and resettlement. The disaster assistance system for natural disasters shall be improved in minority areas. Urban and rural minimum living security standards for minority areas shall be fixed rationally. The healthy development of public welfare and charity programs shall be supported.</p> <p><b>ii) 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Hunan Province (2017.3.30):</b> By 2020, a moderately prosperous society shall be built in minority areas in step with the whole province. 12 major tasks for the development of minority residents and areas in Hunan Province during the 13<sup>th</sup> five-year plan period are defined, and a detailed plan developed, including poverty alleviation, infrastructure construction, economic and social programs, new-type urbanization, opening up, minority official team building, etc., and differential supporting policies are proposed in seven aspects – public finance, investment, finance, land, industry, ecological compensation, and pairing assistance.</p> <p><b>iii) Notice of the General Office of the Jiangxi Provincial Government on Issuing the 13<sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province (2017):</b> The per capita disposable income of farmers in minority areas shall grow faster than the rural average of our province, and reach and exceed the provincial average by 2020. The infrastructure service level such as traffic, electricity, communication and water resources shall be further improved. Rural highways of 400km shall be improved and broadened in minority areas, minority natural villages with 25 or more households shall be connected to cement roads, and water resources, flood control and farmland irrigation facilities in minority areas improved. Environmental improvement, domestic wastewater and waste management, and wasteland reclamation, landscaping and conversion shall be completed for 50 minority villages and 100 minority village groups. One or two modern agriculture and ecology demonstration bases shall be built in each minority Xiang. The basic public service level in minority areas shall be improved, with focus on education and medical care. Village-level poverty shall be eliminated in 50 key minority villages.</p> <p><b>iv) Other poverty alleviation policies:</b> 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 poverty line, where the MLS standard was 550 yuan per capita per month in urban areas and 6,600 yuan per capita per annum in rural areas in Hunan Province in 2020, and the MLS standard was 705 yuan per capita per month in urban areas and 5,640 yuan per capita per annum in rural areas in Jiangxi Province in 2020; and b) extremely poor persons, old and disabled persons with no ability to work, no income source, or statutory supporter, or whose statutory supporter is incapable to support, and persons under 16 years, who receive full national security in income, food, clothing, medical care, housing and education.</p> <p><b>v) Law of the People’s Republic of China on the Protection of Women’s Rights and Interests (2018 Amendment): Article 22:</b> Women shall enjoy the same labor and social security rights as men. <b>Article 24:</b> Men and women shall receive equal pay for equal work, and women shall enjoy the same remuneration rights as men. <b>Article 26:</b> 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. <b>Article 27:</b> No employer shall reduce female workers’ salaries, or dismiss female workers on the basis of</p>	
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	<p>marriage, pregnancy lying-in and breastfeeding. <b>Article 28:</b> The state shall ensure that women are entitled to social insurance, social assistance, social welfare and healthcare rights, and encourage public welfare activities for women. <b>Article 29:</b> The state shall offer maternity security.</p> <p><b>vi) Program for Women's Development of China (2011-2020):</b> The overall objective is to include gender awareness in the legal system and public policies to promote women's all-round development, protect their access to basic medical, educational and legal services, economic resources, public affairs management, social security, and environmental management.</p>	
<b>Principle #6: Program E&amp;S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes</b>		
Element 13: Consider conflict risks, including distributional equity and cultural sensitivities.		

## Appendix 3: Provincial and Bank's Program

### A. Jiangxi

Priority areas	Typical activities	Projects from Jiangxi Provincial Program (14 <sup>th</sup> Five-Year Period)	Activities within the PforR Boundary	Reason
1. Water resource conservation	Water supply project construction (Construction of water source structure and water supply projects)	<p><b>Ganjiang River Basin:</b> county and township and rural water supply projects for Ji'an Municipality; 5 county and township and rural water supply projects and treatment plants for Zhangshu City; provincial level rural water supply security project. Construction of 38 medium-scale reservoirs (with a total storage capacity of one billion m<sup>3</sup>). 6 key water control works for Dagangshan, Hanxin, Maodian, Yuhuashan (reservoir), diaozhong (reservoir) and Jifu (reservoir). Gangjiang River water diversion project for Zhangshu City.</p> <p><b>Fuhe River Basin:</b> 14 town and township level water supply plants for Le'an County (with a total capacity of 174,000 m<sup>3</sup>/day).</p> <p><b>Xinjiang River Basin:</b> county, township and rural water supply project for Yingtan Municipality. Key water control structure for Yingtan Municipality.</p> <p><b>Raohe River Basin:</b> county, township and rural water supply project for Jingdezhen Municipality; county, township and rural water supply project for Wuyuan County.</p> <p><b>Xiuhe River Basin:</b> county, township and rural water supply project for Yichun Municipality; Epoling key water control structure.</p> <p><b>Lushui River Basin:</b> county, township and rural water supply project for Pingxiang Municipality; county, township and rural water supply project for Anyuan District; Liuyuan Reservoir for Shangli County, Bihu Reservoir and backup water supply intake scheme for Xiangdong District.</p> <p><b>Poyang Lake Basin:</b> small and medium-scale reservoirs extension project and new pump station for Poyang Lake region.</p> <p><b>West Reach Basin of Yangtze River:</b> emergency water supply pump station and pipeline project for city seat of Jiujiang.</p>	None	Inconsistent with project's objectives
	Water efficiency transformation construction and technical extension for medium and large-scale irrigation district	<p><b>Ganjiang River Basin:</b> water efficiency transformation for 4.8 million mu of irrigation district.</p> <p><b>Fuhe River Basin:</b> water efficiency transformation for 23 medium-scale irrigation districts.</p> <p><b>Xinjiang River Basin:</b> water efficiency transformation projects for Da'ao Irrigation District, Mopiling Irrigation District, Qiyi Irrigation District and Raofeng Irrigation District in Shangrao Municipality.</p> <p><b>Raohe River Basin:</b> water efficiency transformation project for the large-scale irrigation district of the Communism Reservoir.</p> <p><b>Poyang Lake Basin:</b> canal upgrading and transformation for Tuolin Large-Scale Irrigation District.</p>	None	
2. Water pollution	WWTP upgrading and transformation for	18.5 km sewer network construction in Anyuan Industrial Park, industrial wastewater pretreatment plant with the capacity of 6,000 tons/day for	None	Non-priority area

Priority areas	Typical activities	Projects from Jiangxi Provincial Program (14 <sup>th</sup> Five-Year Period)	Activities within the PforR Boundary	Reason
prevention and control	industrial development zone	Jinxi County Industrial Park, county, township and village wastewater treatment capacity increase scheme for Yingtan Municipality, and industrial wastewater treatment plant for Shahe.		
	County and township wastewater collection and treatment	<p><b>Construction and upgrading of WWTPs and sewer networks for province-wide small towns, including the following priority projects:</b></p> <p><b>Ganjiang River Basin:</b> construction and upgrading transformation of 32 WWTPs for Ji'an Municipality, construction of 197 town/township level WWTPs and small-scale wastewater treatment stations together with sewer networks, construction of 120.5 km complementary sewer networks for Guangchang County, construction of 10 km sewer network for Longnan City, construction 190 km sewer network for Anyuan County, construction of 60 km sewer network for Zhanggong District, construction of 36 WWTPs and WWT stations together with 122 km sewer networks for Huichang County, construction of 9 township level WWTPs together with sewer network for Shangyou County, construction and upgrading transformation of WWTPs together with 65 km sewer network for Dayu County, construction of 6 WWTPs with a total capacity of 12,350 tons/day for Quannan County, construction of 304 rural WWT schemes including WWTP upgrading transformation for Xingguo County, capacity expansion of WWTPs together with construction and transformation of sewer networks for Chongyi County, construction of 12 WWTPs for established towns of Ningdu County (18,000 ton/day), construction of 14 WWT stations (10,200 ton/day) for Xinfeng County, and construction of 3.375 km sewer network for Xunwu County.</p> <p><b>Fuhe River Basin:</b> for Fuzhou Municipality, construction of downtown sewer network for Linchuan District, construction of WWTP (25,000 ton/day) for Wenchangli New Zone, construction of 21 township level WWTPs (30,000 ton/day) for Linchuan District, construction and extension of WWTPs for Le'an County and construction of 4 township level WWTPs together with sewer networks for Yihuang County.</p> <p><b>Xiuhe River Basin:</b> construction of 19 town seat WWTPs together with their supporting facilities (200,000 ton/day) for Yuanzhou District, and construction of 22 town seat WWT stations (22,000 ton/day) together with sewer networks for Zhangshu City.</p> <p><b>Lushui River Basin:</b> construction of one WWTP (20,000 ton/day) together with sewer network for Shangli Count, upgrading transformation of Phase III WWTP for Pingxiang Municipality, and construction of town seat WWTPs (5,000 ton/day) together with sewer network for Wugongshan Scenery Spot.</p> <p><b>Raohe River Basin:</b> construction of and upgrading transformation of 17 township level WWTPs together with sewer network and 130 km sewer network for Changjiang Basin, Fuliang County, Jingdezhen Municipality,</p>	<p>Same as the left column, including:</p> <p>Construction of county and township WWTPs;</p> <p>Upgrading and expansion of county and township WWTPs; and</p> <p>Construction and rehabilitation of sewer networks</p>	



Priority areas	Typical activities	Projects from Jiangxi Provincial Program (14 <sup>th</sup> Five-Year Period)	Activities within the PforR Boundary	Reason
		upgrading transformation of WWTP and construction and extension of 7 WWTPs together with sewer network for Tonggu County, Yicheng City, extension of sewage WWTPs together with construction of 127.24 km sewer network and 146.76 km sewer connection to households for Guangfeng District, Shangrao Municipality, and construction of phase II WWTPs together with 148.59 km sewer network for Dexing City. <b>Poyang Lake region:</b> construction and transformation of 41.1 km sewer network for Gongqingcheng City and construction of 2,000 ton/day WWTP together with 25 km sewer network for Xihai City in Lushan, Jiujiang Municipality.		
	Collection and treatment of rural wastewater	<b>Construction and improvement of rural WWTPs together with sewer networks, including the following priorities:</b> <b>Ganjiang River Basin:</b> construction of 304 rural WWTPs and sewage drains for Xingguo County, construction of 299 administrative village level WWTPs for Ningdu County, construction of over-1,000 people natural village level rural WWTPs for Nanchang Municipality, construction of 12 WWTPs for Dongjiang River basin (Nanqiao reach), Xunwu County, Ganzhou Municipality, and construction of 969 rural WWTPs together with 1,546 km sewer networks for Xingan County, Ji'an Municipality. <b>Fuhe River Basin:</b> construction of 26 rural WWTPs along the river for Yihuang County, Fuzhou Municipality. <b>Xiuhe River Basin:</b> construction of 15 rural WWTPs together with 57.96km sewer network for Tonggu County reach on the upstream of Xiuhe River, Yichun Municipality and construction of 41 WWTPs together with 74.160 km sewer network under the rural human habitat improvement project for Tonggu County. <b>Raohe River Basin:</b> construction of rural WWTPs for Yugan County and construction of 300 sets of rural WWT facilities together with 1,000 km sewer network for Qianshan County, Shangrao Municipality. <b>Poyang Lake region:</b> construction of 50 natural village level WWT stations (2,100 ton/day) for Xihai, Lushan, Jiujiang Municipality. <b>Lushui River Basin:</b> construction of 30 rural WWTPs together with 105km sewer network for Luxi County, Pingxiang Municipality.	None	Non-priority area
	Promoting reduced use of chemical fertilizer	<b>Current province-wide subsidies for organic fertilizer substitutes, including the following typical projects:</b> 50,000 mu project for organic fertilizer substitutes for chemical fertilizer in Shanggao County and Longnan City; 30,000 mu demonstration area for winter growing green manure in Longnan Municipality.	None	Non-priority area
	Implementing reduced use of pesticides	Establishing a technical system of substitution for chemical fertilizer and pesticide and growth enhancement	None	Non-priority area
	Remediation and treatment of legacy	<b>Ganjiang River Basin:</b> ecological improvement of abandoned mines for Dongjiangyuan, Zhangjiang and Gongjiang rivers and mine remediation	None	high environmental and social risks

Priority areas	Typical activities	Projects from Jiangxi Provincial Program (14 <sup>th</sup> Five-Year Period)	Activities within the PforR Boundary	Reason
	contaminated sites	for Xinyu Municipality. <b>Poyang Lake Basin:</b> remediation of abandoned mines <b>West reach of Yangtze River:</b> management and control of contaminated farmland <b>Lushui River Basin (Area within Jiangxi):</b> integrated management of coal mining subsidence areas for Pingxiang Municipality, remediation of abandoned mines for Pingxiang Municipality and eco-environmental improvement of abandoned mines for Lianhua County.		
3. Water environment improvement	River/lake water pollution control and water ecological protection	<b>Ganjiang River Basin:</b> integrated water environment management for Yaohu Lake shorelines, river channels (lakes and reservoirs) in Ji'an Municipality and in the central area of Ji'an Municipality, utilization of animal manure from 25 township level animal farms and pollution control for Xingguo County, biogas schemes for Fenyi, Yongxin, Taihe, Nankang, Ruijin, Quannan and Xingan counties, and utilization of animal manure for Dingnan County. <b>Xinjiang River Basin:</b> systematic eco-environmental improvement project for Fengxi River Basin, Shangrao Municipality. <b>Raohe River Basin:</b> integrated ecological improvement for Xianyuanzhuang Reservoir, Jinxi County, and water environment management for Nongcunmentang, Jingdezhen Municipality. <b>West reach basin of Yangtze River:</b> key lake ecological protection and rehabilitation project for city seats in Jiujiang Municipality and central area integrated water environment management Phase II for Jiujiang Municipality. <b>Lushui River Basin (Area within Jiangxi):</b> integrated water environment management for key basins in Pingxiang Municipality, waterway connectivity and integrated rural waterway management for Shangli County and Lianhua County, and animal manure utilization for Luxi County, Lianhua County and Xiangdong District. <b>Fuhe River Basin:</b> reinforcement and improvement of key mountain ponds for Fuzhou Municipality.	None	Non-priority area
	Collection, transportation and pollution-free treatment of solid wastes in county and township, town and rural areas	<b>Ganjiang River Basin:</b> county, township and village solid waste systematic segregation and treatment project for Longnan City and Zhanggong District, county, township and rural sanitation transfer station project for Huichang County, domestic solid waste incineration and power generation project for Xunwu County, Anyuan County, Ganzhou Municipality, Xingguo County, Ningdu County Longnan City and Yudu County and solid waste segregation, collection, transfer and disposal project, one straw collection and storage center and 5 rural transfer stations for Shicheng County, Ganzhou Municipality. <b>Fuhe River Basin:</b> rural domestic solid waste management.	Agricultural plastic mulch recycling	Others are non-priority areas, mostly covered by private investment; High E&S risks for the construction and operation of waste treatment facilities

Priority areas	Typical activities	Projects from Jiangxi Provincial Program (14 <sup>th</sup> Five-Year Period)	Activities within the PforR Boundary	Reason
		<p><b>Xinjiang River Basin:</b> solid waste incineration and power generation project (1,000 ton/day) and food waste treatment center project (1,000 ton/day) for Yingtan Municipality.</p> <p><b>Raohe River Basin:</b> food waste treatment center project for Wuyuan County.</p> <p><b>Poyang Lake Basin:</b> domestic solid waste incineration and power generation project (800 ton/day) for Duchang County.</p>		
4. Water Ecological System Restoration	Ecological protection and rehabilitation of forest parks, nature reserves and wetlands	<p><b>Ganjiang River Basin:</b> restoration and integrated management of 22 important wetlands for Ji'an Municipality and construction of provincial and municipal level wetland parks for Nanchang Municipality.</p> <p><b>Fuhe River Basin:</b> Nanyuan national forest park for Yihuang County.</p> <p><b>Xinjiang River Basin:</b> one km<sup>2</sup> retention and storage area for Yingxi Wetland, Yingtan Municipality.</p> <p><b>Lushui River Basin (Area within Jiangxi):</b> 53,000 m<sup>2</sup> ecological wetland for Anyuan District and beautiful Yuanhe River Wetland Park for Luxi County, Pingxiang Municipality.</p>	None	High E&S risks
	Soil and water conservation	<p><b>Ganjiang River Basin:</b> riverbank improvement for Ji'an Municipality, Ganzhou Municipality, Nanchang Municipality and Fengcheng City.</p> <p><b>Fuhe River Basin:</b> riverbank improvement for five river in Fuzhou Municipality and headwaters soil and water conservation for Fuhe River in Guangchang County.</p> <p><b>Xinjiang River Basin:</b> riverbank improvement for city seat reach of Xinjiang River (Shaxi – Lingxi reach) in Shangrao Municipality, riverside ecological protection for the reach (Wenfeng reach) downstream from Huaqiao Key Water Control Structure.</p> <p><b>Raohe River Basin:</b> riverbank improvement for Jiefang River in Shangrao Municipality, Raohe River and Leping reach of Le'an River in Wuyuan Municipality and Jishui River in Dexing Municipality and slope and bank improvement for 18 towns and townships in Leping City; forest profile transformation for 780,000 mu forestland for Wuyuan County.</p> <p><b>Xiuhe River Basin:</b> riverbank improvement for Yuanhe River, Yifeng River, Jinhe River, Changcheng River and Tangpu River.</p> <p><b>Poyang Lake Basin:</b> Poyang Lake dike reinforcement and improvement and small and medium river improvement for Jiujiang Municipality.</p> <p><b>West reach basin of Yangtze River:</b> riverbank improvement for Jiangxi reach of Yangtze River mainstream and 141 km dike reinforcement for Jiujiang reach of the mainstream and tributaries to Yangtze River.</p> <p><b>Lushui River Basin (Area within Jiangxi):</b> 38 km river channel improvement for key flooding areas in Xiangdong District, 77 km riverbank improvement and slope protection for Honghuan Village Pingxiang Municipality, 15 km slope protection for key flooding gullies, 6.8 km river channel improvement for Pingshui River, 111 km rural waterway embankment and dike construction, 44.77 km</p>	None	Non-priority area

Priority areas	Typical activities	Projects from Jiangxi Provincial Program (14 <sup>th</sup> Five-Year Period)	Activities within the PforR Boundary	Reason
		river channel improvement for Caoshui River basin, 25 km embankment and slope protection along Wugongshan River, 20 km embankment and dike construction along Matian River and embankment transformation and riparian vegetation restoration along Zhangli River and Rixing River.		
5. Managerial capacity building	Institutional development and capacity building	<ul style="list-style-type: none"> <li>Establishment or improvement of river chief system information platform</li> <li>Improvement of integrated water environment protection planning, regulation and supervision and data &amp; information management system for Ganjiang River Basin</li> <li>In the fiscal budget system, tagging is attached to funds earmarked for basin eco-compensation projects so as to track and manage the use of the funds and evaluate the results of its use.</li> <li>Adopting provincial policies and guidelines governing water environment management and pollution prevention and control, including: i) provincial rules on water environment management for Ganjiang River Basin; ii) provincial rules on plastic waste management; iii) provincial guidelines on best practices for management of agricultural and rural non-point source pollution.</li> <li>Public participation and training activities for river/lake protection</li> <li>Developing provincial level guidelines for assessment of river health based on sectoral standards</li> </ul> <p>Fulfilling water allocation for the mainstream and tributaries in Ganjiang River Basin</p>	Same as the left column	

## B. Hunan

Dongting Lake Water Environment Comprehensive Management Plan		Major Provincial Projects during the 14 <sup>th</sup> Five-Year Plan	Activities within the PforR Boundary	Reason
Priority Areas	Typical Activities			
1. Water supply safety' guarantee	<p>1. Build 8 piecemeal water supplementation projects, such as the Xiguanwan water supplementation project in Changde City, to effectively solve the water resources problem in the southern key area of Dongting Lake.</p> <p>2. In the Dingcheng District, MiluoCity and other hilly post</p>	<p><b>The whole province:</b></p> <p>1. The reinforcement of sick reservoirs all over the province (78 large reservoirs, 277 medium-sized reservoirs, 500 small (A) reservoirs, and 3460 small (B) reservoirs).</p> <p>2. Rural water supply projects all over the province: new water supply scale of 5,216,100 m<sup>3</sup>/day.</p> <p>3. The province plans to build (renovate) 8,000 kilometers of county and township water supply network.</p> <p>4. 24 medium-sized reservoirs and 51 small reservoirs are built, renovated and expanded all over the province.</p>	None	Inconsistent with the project's objectives

	<p>areas around Dongtign Lake, newly build or expand 5 reservoir water supply projects.</p> <p>3. Build 19 external river diversion projects including Anxiang River diversion project, Nan County Songzi River diversion project, etc.</p> <p>4. Build 30 rural water supply source projects, and a water supply network of about 4,000 kilometers correspondingly, to consolidate and improve the level of drinking water safety in the lake area.</p> <p>5. Complete the cleaning and rectification of the illegal construction projects in the township centralized drinking water source protection zone with the scale of kiloton and ten thousand people.</p> <p>6. Build 26 centralized drinking water source protection projects above the county level, such as Changsha Wangcheng Xiangjiang water source, and set up boundary pillars and warning signs, to strengthen the construction of water source isolation and protection measures.</p> <p>7. Establish a water quality monitoring network for water sources and accelerate the construction of emergency response capacity for water source monitoring and early warning.</p> <p>8. Accelerate the water supply</p>	<p>5. 62,500 small water supply projects were rectified and built all over the province, such as ponds, weirs, pumping stations, pools, and water cellars.</p> <p>6. Centralized water quality security projects of drinking water source were conducted in all cities and villages all over the province.</p> <p>7. Water diversion channels, water pipelines, water diversion and lifting machine pumps were built all over the province. There were 103 small and medium-sized water introduction and division projects.</p> <p>8. The safety guarantee of 125 centralized water quality security projects of drinking water source above the county level met the standard all over the province.</p> <p><b>Dongtinghu District:</b></p> <p>1. The projects of important flood storage area safety construction were conducted in Yueyang City, Changde City, and Yiyang City.</p> <p>2. 11 new irrigation water supply projects and 6 centralized water supply projects were conducted in Yueyang City, Changde City, and Yiyang City, and a connection project was conducted between the southern part of the Datong Lake and the southern water system.</p> <p>3. A water supplementation emergency implementation project was conducted in Junshan District, Huarong County, Yueyang City.</p> <p>4. The projects of "water introduction from the Yellow River to Changde" and water plant relocation were conducted in Changde.</p> <p>5. A project was conducted in Dongtinghu District to connect the water systems of river and lake.</p> <p>6. Changde "Two Test" and water supply projects in some villages and towns of Dingcheng: With Yuanjiang River as the water source, 1 new water plant was built, with a planned daily water supply capacity of 80,000 tons in the near future and 120,000 tons in the long term; 20 new or expanded county, township and village water plants were built in Dingcheng as well as 2 new water booster pumping stations.</p> <p>7. Changde river and lake connection project: The project includes the connection of YuannanwanCanglang River, Chengbei River and Yuanshui, the connection of XihuwanXihuNeijiang River and Lishui River connection, the connection of the main stream of Lishui River, Daoshui tributaries and small and large river systems, the connection of Yuanliwan river and lake, and the connection of Chehuwan, Zhangjiangwan, ZuoxiChubukou river and lake.</p> <p>8. YiyangJintangchong Reservoir: The new hub is 582.5 meters long with a maximum dam height of 32 meters. The reservoir capacity is 214 million m<sup>3</sup>, and the power station is installed with 200,000 kilowatts.</p>		
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	<p>network zoning and metering management, and implement leaking aging pipe network renovation project, to reduce the leakage rate of water supply pipe network.</p>	<p>9. Water supplementation emergency implementation project in Junshan District of Yueyang City, and the southern part of the Dongting Lake area in Huarong County, Yueyang City Yangtze River recharge project phase II.</p> <p>10. Internal and external water system connection project in Dongting Lake District, Yueyang City (key river and lake ecological restoration project): One river and five lakes connection project, Hao River and lake connection project, Baishui River, East Lake, and Xiang River and lake connection project and other connection projects were carried out to improve the water quality of internal rivers and lakes.</p> <p>11. Dongting Lake water environment comprehensive management (Changsha City, Yueyang City, Changde City, Yiyang City): Build the ecological water network in six large areas including Dongting Lake Sikou water system area, Songli area, XiangzhiWeilv area, Yuanli area, Yueyangarea and Yuanjiang area, including connection of water system lines, dredging and improvement of water system ditches, dredging and clearing, new or renovated water diversion culverts and gates, ecological restoration and landscape engineering, restoration of river and lake connecting buildings, etc.</p> <p><b>Xiang River drainage basin:</b></p> <p>1. The trunk line of Xiangjiang River Basin draws water from Dongjiang Reservoir, and the branch lines draw water from Taoshui Reservoir, Jiubujiang Reservoir and other reservoirs, providing a quality drinking water source for about 30 million people in 30 counties in 5 cities along the Xiangjiang River, including Changsha, Zhuzhou, Xiangtan, Hengyang and Chenzhou City, of which the length of the trunk line is about 289 km, the length of the branch lines is 229 km, and the total length of the pipe network is 518 km.</p> <p>2. Project of introducing Zishui to support Lianshui of Loudi City, Lianyuan City, and Shuangfeng County: the total length of the tunnel is 36 kilometers. In Louxing District, Wentang Reservoir has been built in Shuidongdi, and a new 25km water pipeline has been built from the reservoir to the central city of Loudi to supply water to county, township and village areas. Water is diverted into the lateral water from the Shuifumiao Reservoir on the mainstream of Lianshui through a 21 km tunnel.</p> <p>3. Changsha City, Liuyang City, Changsha County (Jiaohua Reservoir Project): the main construction content includes three parts of reservoir hub, Daxi River diversion system, water supply system. The total reservoir capacity is 170 million m<sup>3</sup>. In particular, the flood control capacity is 0.2 billion m<sup>3</sup>, the average multi-year water supply is 86.2 million m<sup>3</sup>, the design irrigation area is 10,100 mu, the power station installed is 2.2 MW, and average annual power generation is 7.07 million kWh.</p>		
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		networks, and 9 water plant quality improvement and capacity expansion, increasing the water supply capacity by 385,000 tons/day; 7 new rainwater storage facilities. 2. 106 new township water plants, 589 expansion and reconstruction projects, 11,614 km of new expansion of water supply network, new pools and ancillary facilities, etc., to increase the water supply scale by 463,000 tons/day, and benefit 1.93 million people.		
2. Water pollution prevention and control	<p>1. County and township wastewater treatment facilities have been built, including upgrading 51 WWTPs, and building and renovating 2434km of new wastewater collection network, increasing the wastewater treatment capacity by 1.32 million tons/day.</p> <p>2. Sludge harmless treatment and disposal capacity of 128 tons/day has been built or renovated to realize the integrated treatment and disposal of sludge in organic towns.</p> <p>3. 6 domestic waste incineration and treatment projects have been built or expanded, and the incineration and treatment rate of domestic waste in cities divided into districts reached more than 50%.</p> <p>4. The quality improvement of 21 domestic waste landfills and the treatment of 9 existing waste landfills have been completed.</p> <p>5. The construction of lake district township wastewater treatment facilities is completed.</p> <p>6. Efforts have been made to eliminate toilet waste in 1.1 million households.</p> <p>7. The reduction of chemical</p>	<p><b>The whole province:</b></p> <p>1. Pig manure organic fertilizer treatment and other environmental protection facilities have been built all over the province.</p> <p>2. A number of pipe network projects have been built and renovated in the whole province, and 5,500 kilometers of pipe networks will be built and renovated by 2025.</p> <p>3. Comprehensive environmental improvement of parks at provincial-level and above: the environmental protection infrastructures of 143 provincial-level and above industrial parks have been upgraded, renovated, and improved in the province, including centralized wastewater treatment facilities, pipe networks, solid waste treatment facilities, etc.</p> <p>4. Rural domestic wastewater treatment: 12,250 administrative village domestic wastewater treatments have been completed all over the province, mainly focusing on the construction of centralized rural domestic wastewater treatment facilities and household-type rural domestic wastewater treatment ponds.</p> <p>5. Rural habitat improvement project: the province's rural living waste, rural wastewater, and rural household sanitary toilets, for the beautiful countryside construction.</p> <p>6. Domestic waste incineration power generation facilities construction projects above the county level (continued): A number of domestic waste incineration power generation facilities have been built all over the province, to increase the province's new domestic waste treatment capacity by 25650 tons/day by 2025.</p> <p>7. Domestic waste classification front-end project (continued): A number of domestic waste classification projects have been built all over the province, to basically built the basic completion of domestic waste classification and treatment system in all prefecture-level cities and Jishou City all over the province by 2025.</p> <p>8. Food waste treatment facilities construction projects above the county level (continued): A number of food waste treatment facilities have been built all over the province to equip 14 cities and prefectures all over the province with food waste treatment facilities by 2025.</p> <p>9. Prevention and control of total phosphorus pollution and ecological restoration in Xiang River, Zishui River, Yuan River, and Lishui River: recycling</p>	<p><b>Among the province-wide related basin county / township wastewater collection and management, agricultural mulching film collection and manure recycling of existing breeding farms, the priority projects include:</b></p> <p><b>The whole province:</b></p> <p>1. Pig manure organic fertilizer treatment and other environmental protection facilities have been built all over the province.</p> <p>2. Prevention and control of total phosphorus pollution and ecological restoration in Xiang River, Zishui River, Yuan River, and Lishui River: recycling of livestock and poultry manure, negative growth of chemical fertilizers and pesticides.</p> <p><b>Dongtinghu District:</b></p> <p>1. Renovation of rainwater and wastewater diversion in county and township areas of Yiyang City, and renovation of Zijang River outfall.</p> <p>2. Yiyang city livestock and poultry manure recycling projects: standardized construction of manure treatment facilities in livestock and poultry farms, construction of large-scale biogas projects in centralized breeding communities, construction</p>	

<p>pesticides has been promoted, the specialized rule service organizations have been greatly supported, to accelerate the promotion of specialized pest control of major crops.</p> <p>8. A total of 15 demonstration projects for the centralized treatment of breeding waste have been built or expanded, and the system for the harmless collection and treatment of diseased and dead livestock and poultry in the Dongting Lake region has been further standardized.</p> <p>9. The standardization and upgrading of 700,000 mu of aquaculture ponds in the Dongting Lake area has been promoted.</p> <p>10. The testing of soil for formulated fertilization has been completed.</p> <p>11. The area of green manure planting has been completed.</p> <p>12. The water and fertilizer integration application area has been completed.</p> <p>13. Small basin agricultural surface pollution integrated management demonstration area has been built.</p> <p>14. The industrial pollution source compliance plan has been promoted in all aspects by year and by industry, and the rectification work of all kinds of industrial pollution sources exceeding the standard has been completed.</p>	<p>pesticides has been promoted, the specialized rule service organizations have been greatly supported, to accelerate the promotion of specialized pest control of major crops.</p> <p>8. A total of 15 demonstration projects for the centralized treatment of breeding waste have been built or expanded, and the system for the harmless collection and treatment of diseased and dead livestock and poultry in the Dongting Lake region has been further standardized.</p> <p>9. The standardization and upgrading of 700,000 mu of aquaculture ponds in the Dongting Lake area has been promoted.</p> <p>10. The testing of soil for formulated fertilization has been completed.</p> <p>11. The area of green manure planting has been completed.</p> <p>12. 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Yiyang city livestock and poultry manure recycling projects: standardized construction of manure treatment facilities in livestock and poultry farms, construction of large-scale biogas projects in centralized breeding communities, construction of manure collection and recycling projects for small scattered farmers, etc.</p> <p>4. Ecological management of three large areas in Changde City: 6 major projects have been implemented for Shanpo Lake, Anle Lake and Chongtian Lake, including agricultural surface source pollution control and rural habitat improvement.</p> <p>5. County and township living wastewater treatment quality and efficiency project in Changde City: WWTP quality and efficiency improvement, wastewater pipe network rain and wastewater diversion transformation, mixed and incorrect connection, old pipe network repair, etc. to achieve full coverage of wastewater treatment facilities in towns and villages with a large regional span after the merger.</p> <p>6. The integration of county, township and rural domestic waste disposal in Changde City: the construction project of domestic waste sorting, collection, transfer and disposal facilities in relevant districts and counties of Changde City.</p> <p>7. Agricultural waste recycling in Changde City: Crop and livestock manure collection and transportation systems, centralized disposal projects, large and medium-sized biogas projects and organic fertilizer processing plants have been built in relevant districts and counties.</p> <p>8. Central city wastewater system comprehensive management PPP project in Yueyang City: including wastewater pipe network improvement, pipe network desilting and repair, rain and wastewater diversion transformation and other wastewater system management projects and comprehensive water environment improvement projects.</p> <p>9. Yueyang Venous Industrial Park: comprehensive harmless and reduction treatment of all kinds of county and township domestic waste, hazardous waste,</p>	<p>of manure collection and recycling projects for small scattered farmers, etc.</p> <p>3. Ecological management of three areas in Changde City: six major projects have been implemented for Shanpo Lake, Anle Lake and Chongtian Lake, including agricultural surface source pollution management.</p> <p>4. County and township living wastewater treatment quality and efficiency project in Changde City: WWTP quality and efficiency improvement, wastewater pipe network rain and wastewater diversion transformation, mixed and incorrect connection, old pipe network repair, etc. to achieve full coverage of wastewater treatment facilities in towns and villages with a large regional span after the merger.</p> <p>5. Agricultural waste recycling in Changde City: Crop and livestock manure collection and transportation systems, centralized disposal projects, large and medium-sized biogas projects and organic fertilizer processing plants have been built in relevant districts and counties.</p> <p>6. Central city wastewater system comprehensive management PPP project in Yueyang City: including wastewater pipe network improvement, pipe network desilting and repair, rain and wastewater diversion transformation and other wastewater system management projects and comprehensive water</p>	
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<p>15. The rate of industrial enterprises entering the park has increased significantly, and all wastewater in industrial clusters (parks) above the provincial level has been collected and treated.</p>	<p>medical waste, kitchen waste, all kinds of county and township sludge, etc., and recycling.</p> <p><b>Xiang River Basin:</b></p> <p>1. Wangcheng District water pollution prevention and control project: Firstly, to carry out the construction of district-wide wastewater interception, Wangcheng wastewater network quality and efficiency "three-year action" to improve the county and township rain and wastewater pipe network, complete the construction of the pipe network in uncovered areas, clean the covered areas, and repair damaged rain and wastewater pipes. Second, to build the Phase 4 expansion project of No.1 WWTP of Wangcheng to improve the wastewater treatment capacity.</p> <p>2. River basin comprehensive management project in Yongzhou City (continued): comprehensive remediation of livestock and poultry breeding enterprises and water industry enterprises in the basin, and strict control of pesticides, fertilizers and other agricultural sources of pollution of fields and soils in the basin.</p> <p>3. Xiangjiang River, Leishui River, and Zhengshui River sewerage network construction and supporting service facilities construction, etc. in Hengyang City (continued).</p> <p>4. Waste treatment and waste recycling project in Xiangtan City: Xiangtan City, Xiangtan County, Xiangxiang City, and Shaoshan City domestic waste classification construction projects, kitchen waste disposal and waste recycling construction projects.</p> <p>5. Chenzhou (State-level) high-tech industrial development zone WWTP containing heavy metals and pipe network connection project: the new construction of industrial WWTP containing heavy metals, while supporting the construction of 55.0km of pipe network outside the industrial wastewater plant containing heavy metals.</p> <p>6. Chenzhou Venous Industrial Park: Including the construction of waste resource treatment and disposal, new waste backup landfill, comprehensive environmental improvement of domestic waste landfill, tailings recycling project, sludge disposal resource, livestock manure treatment and disposal, food waste treatment and disposal, garden waste treatment and disposal, fruit and vegetable waste treatment and disposal, agricultural waste and other recycling projects, end-of-life vehicles, electronic waste, etc.</p> <p>7. Demonstration project of rain and wastewater drainage and flood prevention in the central old city of Hengyang City: the transformation of Tongqiao Port WWTP, 194km of new rain water pipes and 53km of new wastewater pipes.</p> <p>8. Comprehensive county, township and rural living wastewater treatment</p>	<p>environment improvement projects.</p> <p><b>Xiang River Basin:</b></p> <p>1. Wangcheng District water pollution prevention and control project: Firstly, to carry out the construction of district-wide wastewater interception, Wangcheng wastewater network quality and efficiency "three-year action" to improve the county and township rain and wastewater pipe network, complete the construction of the pipe network in uncovered areas, clean the covered areas, and repair damaged rain and wastewater pipes. Second, to build the Phase 4 expansion project of No.1 WWTP of Wangcheng to improve the wastewater treatment capacity.</p> <p>2. River basin comprehensive management project in Yongzhou City (continued): comprehensive remediation of livestock and poultry breeding enterprises and water industry enterprises in the basin, and strict control of pesticides, fertilizers and other agricultural sources of pollution of fields and soils in the basin.</p> <p>3. Xiangjiang River, Leishui River, and Zhengshui River sewerage network construction and supporting service facilities construction, etc. in Hengyang City (continued).</p> <p>4. Demonstration project of rain and wastewater drainage and flood prevention in the central old city of Hengyang City: the transformation of Tongqiao Port WWTP, 194km of new</p>	
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		<p>projects: 810 administrative villages rural wastewater network, interceptor ditches, living wastewater treatment facilities and other living wastewater treatment facilities have been built in every county and district of Yongzhou City; wastewater treatment sites have been set up in townships; 44 artificial wetland wastewater treatment facilities have been built, improving the wastewater network of more than 39km; 12,872 sets of decentralized wastewater treatment systems have been built.</p> <p>9. Comprehensive water pollution prevention and control project in Wangcheng District, Changsha City: The county and township rainwater and wastewater pipe network has been improved, and the Phase 4 expansion project of No.1 WWTP in Wangcheng has been built.</p> <p>10. Pig breeding livestock manure recycling project in Lukou District of Zhuzhou City, Liling City, Youxian County, and Chaling County: pig manure organic fertilizer treatment.</p> <p>11. County and township wastewater treatment and upgrading of rainwater and wastewater diversion transformation project (continued) in Zhuzhou City: the main wastewater network has been built, the Baishigang Water Quality Purification Center, Hexi WWTP and Fengxi WWTP have been expanded, and Jinshan WWTP and Qunfeng WWTP have been built.</p> <p>12. Comprehensive waste treatment base in Hetang District and Lusong District of Zhuzhou City: Waste incineration plant, kitchen waste treatment plant, landscaping waste treatment plant, bulky waste treatment plant, wet waste treatment plant, renovation waste treatment plant, construction waste treatment site, sanitary landfill for domestic waste in the southern suburbs, fly ash and slag landfill area, emergency landfill for domestic waste, etc. have been built.</p> <p>13. Waste treatment and waste recycling project in Xiangtan City: Xiangtan City, Xiangtan County, Xiangxiang City, and Shaoshan City domestic waste classification construction projects, kitchen waste waste disposal and waste recycling construction projects.</p> <p><b>Zijiang River Basin:</b></p> <p>1. The main stream of the Zijiang River in Shaoyang City: the wastewater network renovation and upgrading project of Xuefeng Bridge at the south bank of the Zijiang River to Guihua Bridge in Shaoyang City.</p> <p>2. ShaoyangNansan National Park ecological protection and restoration and infrastructure construction project: ecological and environmental protection toilets, WWTP, waste recycling treatment and landfill construction, etc.</p> <p>3. Construction and renovation of rainwater and wastewater pipe network in Hongjiang City of Huaihua City.</p> <p><b>Yuan River Basin:</b></p>	<p>rain water pipes and 53km of new wastewater pipes.</p> <p>8. Comprehensive county, township and rural living wastewater treatment projects: 810 administrative villages rural wastewater network, interceptor ditches, living wastewater treatment facilities and other living wastewater treatment facilities have been built in every county and district of Yongzhou City; wastewater treatment sites have been set up in townships; the wastewater network of more than 39km has been improved; 12,872 sets of decentralized wastewater treatment systems have been built.</p> <p>9. Comprehensive water pollution prevention and control project in Wangcheng District, Changsha City: The county and township rainwater and wastewater pipe network has been improved, and the Phase 4 expansion project of No.1 WWTP in Wangcheng has been built.</p> <p>10. Pig breeding livestock manure recycling project in Lukou District of Zhuzhou City, Liling City, Youxian County, and Chaling County: pig manure organic fertilizer treatment.</p> <p>11. County and township wastewater treatment and upgrading of rainwater and wastewater diversion transformation project (continued) in Zhuzhou City: the main wastewater network has been built, the Baishigang Water Quality Purification Center, Hexi WWTP and Fengxi WWTP have been expanded, and Jinshan WWTP and Qunfeng WWTP</p>	
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			<p>976.63km has been built (renovated), and the wastewater treatment capacity of 171,600 tons/day was increased. 3. 14 WWTPs have been built in industrial parks and agricultural parks, providing the wastewater treatment capacity of 210,000 tons/day, and 255km of pipe network has been laid.</p> <p>3. Rural habitat environment improvement in Xiangxi Prefecture: the improvement of the recycling of livestock and poultry manure in 1815 villages (neighborhood committees and communities) all over the prefecture, and village appearance improvement.</p>	
3. Water Ecology Protection and Restoration	<p>1. The ditch and pond dredging and storage action in the lake area have been completed.</p> <p>2. The retirement of European and American black poplar in the Dongting Lake Nature Reserve has been promoted in an orderly manner.</p> <p>3. 10 national aquatic germplasm resource reserves have been built.</p> <p>4. The ecological restoration of wetlands in the Dongting Lake area of 650,000 mu has been completed.</p> <p>5. The reforestation and forest landscape transformation of 450,000 mu around Dongting Lake and the upstream of Sishui River have been completed.</p> <p>6. The forest quality improvement</p>	<p><b>The whole province:</b></p> <p>1. The governance of small and medium-sized rivers and major tributaries all over the province (the governance of 27 major tributaries with the river length of about 1,000km; the governance of 357 small and medium-sized rivers with the river length of about 3,217km).</p> <p>2. 28 comprehensive rural water system improvement projects have been implemented all over the province.</p> <p>3. Slope cropland soil erosion management all over the province: With the measures of terraced fields, small water resources and water conservation projects, the sloping arable land area of 600,000 mu has been renovated.</p> <p>4. Comprehensive management of small basins all over the province: With the measures such as water conservation forest, warp forest, grass planting, closed management, small water resources and water protection projects, surface source pollution control projects, and habitat improvement projects, the soil erosion control area of 4,000 square kilometers has been increased.</p> <p>5. Prevention and control of total phosphorus pollution and ecological restoration in Xiang River, Zijiang River, Yuan River and Lishui River: Ecological ditches, artificial wetlands, riverside buffer zone/lakeside buffer zone and other ecological interception and purification projects have been built, recycled water recycling projects have been continuously promoted, the total amount of total phosphorus in the basins of Xiang River, Zijiang River, Yuan River and Lishui</p>	None	Non-priority area

	<p>of 300,000 mu has been completed.</p>	<p>River into Dongting Lake has been reduced, the problem of excessive total phosphorus pollution in Dongting Lake has been gradually solved, and the Yangtze River water ecological environment has been continuously improved.</p> <p>6. Ecological protection and restoration projects (continued): nature reserves protection and restoration projects, natural forests (public welfare forests) protection and restoration projects, wetland protection and restoration projects, grassland ecological restoration projects, wildlife resources protection, provincial ecological corridor construction, key protective forest construction, returning farmland to grass, forestry and grassland disaster prevention and control, forestry and grass germplasm resources protection and utilization, green heart area forestry ecological protection and restoration all over the province.</p> <p><b>Dongtinghu District:</b></p> <p>1. 163 km of Yangtze River mainstream shore protection was conducted in Yueyang City, Changde City, and Yiyang City, mainly including 20.54 km of new protection crumbling shore. 30.86 km of protected and reinforced section, 24.58 km of ecological restoration of damaged part above the low water level and 6 places of Yangtze River shoreline heritage water shoreline protection.</p> <p>2. Yangtze River riverbank ecological restoration project in Huarong County, Junshan District, Yunxi District, and Linxiang City of Yueyang City.</p> <p>12. Ecological protection and restoration around Dongting Lake (continued): wetland protection project around Dongting Lake, water-containing forest construction and protection project.</p> <p>3. Wetland protection and restoration project in Changde City: Wetland restoration projects such as West Dongting Lake and Xifeng Lake in Hanshou County has been promoted.</p> <p>4. Yangtze River dry dike remediation and river potential control project in Junshan of Yueyang City, Yueyang Prison, Yunxi, Linxiang, and Huarong Counties: 24,580 meters of ecological slope protection above the medium dry water level; 17,430 meters of shore beach grassing.</p> <p><b>Xiang River Basin:</b></p> <p>1. Xiangjiang River east bank ecological management project in Lingshitan District of Yongzhou City: Being 11.35km long, the construction includes riverbank protection, ecological landscape, Xiangjiangdong Road and pipe network construction.</p> <p>2. Comprehensive river and lake management project in Wangcheng District: construction of the water system connection and flood control improvement project of Dazhongwan, comprehensive dike management project of the east bank of Xiangjiang River and the dry dike of Xiangjiang River; dredging and connection of lakes, inland rivers and canal systems in Dazhongwan; dredging</p>		
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		<p>and clearing of river (canal) channels and lakes; ecological restoration and water environmental protection: construction of 166,400 square meters of aquatic wetlands; 163 new construction, reconstruction and reconstruction of water system connection buildings, and water environment and water ecology management and dredging of Tuantou Lake, artificial wetland construction, etc.</p> <p>3. Coal mining subsidence area comprehensive management project in Loudi City (continued): comprehensive management of 39 coal mining subsidence areas all over the city, including the relocation of residents to avoid danger, infrastructure transformation, ecological environment modification, protection and improvement of people's livelihood, succession of alternative industrial development, etc.</p> <p>4. Comprehensive management of coal mining sinkhole in Beixiang area of Zixing City: geological disaster potential management, ecological restoration and environmental remediation, sinkhole residents avoiding danger and resettlement, etc.</p> <p>5. Guiyang County Qitianling coal mining subsidence area comprehensive management project: geological disaster management, risk avoidance and resettlement project, ecological restoration and environmental management.</p> <p>6. Yuhu District of Xiangtan City, Xiangxiang City, Xiangtan County (continued): the implementation of Xiangtan City manganese mining area groundwater risk control and farmland restoration, Xiangxiang City, the former Lake iron contaminated land treatment, the city's western chromium contaminated area soil remediation and treatment engineering projects, chromium contaminated area groundwater remediation and treatment projects, Tanjiashan mining area comprehensive management construction projects.</p> <p>7. Linwu County Jinjiang-Shuidong coal mining subsidence area comprehensive management project: about 2,000 villagers were relocated and evaded, 1,000 houses and buildings were reinforced; about 200,000 square meters of coal mining waste rock piles in the area occupied forest and grass areas for reclamation, re-greening and land remediation; more than 50 landslides, mudslides and other geological disasters in the area were managed.</p> <p>8. Tin mine area heavy metal contaminated soil treatment and restoration project in Lengshuijiang City of Loudi City: After the soil restoration treatment of the tin mine area suffering from heavy metal contamination, the unique use of the area soil function has been restored, with the total area of restoration treatment of about 35,000 mu.</p> <p>9. Sunshui River comprehensive management project in Loudi City (Litouzui to ShuiyangLangtan): 9 kilometers of trunk wastewater interceptors have been laid; 1,600 mu of wetlands have been repaired and 4 Sunshui River Bay parks</p>		
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		<p>have been built.</p> <p>10. The project of producing construction materials by construction waste, tailings (sand), gangue in Shuangfeng County of Loudi City: 15 standardized building materials enterprises have been established, with an annual output of 1 billion building bricks and wall materials, and an annual digestion and processing of 1 million tons of construction waste.</p> <p>11. Key coal mining subsidence area comprehensive management project in Shaoyang County: comprehensive management of Fengjiangxi, Sanbitian, Gujiaodi and other key coal mining subsidence area, including the relocation and resettlement of 2,000 households for danger avoidance in Sanbitian mining area.</p> <p>12. Chenjiang River (Suxian section and Liangtian section) water environment comprehensive management project in Chenzhou City: artificial wetland, 22km of wastewater pipe network, 10km of ecological shore protection and 20km of ecological ditch.</p> <p>13. ChenzhouLutang independent industrial and mining area renovation and upgrading project: 4 relocation projects for residents to avoid danger, 4 ecological restoration and environmental improvement projects.</p> <p>14. Comprehensive management project of coal mining subsidence area in Guiyang County, Chenzhou City: the area of coal mining subsidence area in Guiyang County is over 100 square kilometers, geological disaster management (flash flood disaster prevention and control project, etc.), risk avoidance and resettlement project (construction project of relocation and risk avoidance housing for residents of coal mining subsidence area in Guiyang County), ecological restoration and environmental management (restoration project of vegetation in mining area in Guiyang County, etc.).</p> <p>15. Comprehensive management of coal mining sinkhole in Beixiang area of Zixing City, Chenzhou City: geological disaster potential management, ecological restoration and environmental remediation, sinkhole residents avoiding danger and resettlement, etc.</p> <p>16. Xianghualing independent industrial and mining area renovation and upgrading project in Linwu County of Chenzhou City: the project includes the relocation of people to avoid danger, ecological restoration and environmental management, reservoir de-risking and reinforcement.</p> <p>17. Xiangjiang River Xiaoshui dry tributary management project in Yongzhou City: soil and water conservation management of 78 small rivers in the city.</p> <p>18. Nature reserve ecological restoration and protection projects: Relocation of the residents in every county and district of Yongzhou City, ecological restoration of nature reserves, construction of ecological monitoring stations and</p>		
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		<p>regulatory capacity building in all counties and districts of Yongzhou; ecological restoration of closed quarry and brickyard sites; ecological restoration in the bank zone of the rainwater river, yard city town and Shuikou new town, and completion of the construction of wetland vegetation zones.</p> <p>19. Comprehensive river and lake management project in Wangcheng District of Changsha City: construction of the water system connection and flood control improvement project of Dazhongwan, dredging and connection of lakes, inland rivers and canal systems in Dazhongwan; ecological restoration and water environmental protection: construction of 166,400 square meters of aquatic wetlands.</p> <p>20. Qingshitang old industrial zone environmental remediation treatment project in Shifeng District of Zhuzhou City (continued): soil remediation in the region, disposal of residue waste left by relocated enterprises, treatment and repair of enterprise contaminated sites.</p> <p>21. Main rivers and lakes and regional ecological environment management protection and restoration project in Xiangtan City: soil erosion management area of 331 square kilometers; dredging and masonry of 32 river in the rural water system, with the treatment length of 557.43 kilometers; Juanshui ecological protection and restoration project, comprehensive land improvement project, surrounding abandoned mine restoration, etc.; livestock and poultry withdrawal from the villages along.</p> <p><b>Zijiang River Basin:</b></p> <p>1. Shore protection of 17,528.9 meters in Shaoyang City.</p> <p>2. Xuefeng Mountain ecological restoration project in Shaoyang City: Comprehensive protection of 640,000 hectares of public welfare forests and 520,000 hectares of natural forests, and comprehensive protection and appropriate restoration of 134,700 hectares of grasslands (grass hills).</p> <p>3. Nanshan National Park ecological protection and restoration and infrastructure construction project in Shaoyang City: Nanshan National Park ecological corridor construction; exit from ecological restoration project; ecological restoration along Nansui Highway; ecological restoration after the exit of SANY Wind Power of ShiliPingtan; ecological restoration along ShiwanGutian Highway; restoration of Nanshan grass hill.</p> <p><b>Lishui Basin:</b></p> <p>1. Wuling Mountain Area (Xiangxi Prefecture) mountain, water, forest, field, lake and grass ecological restoration project: With two technical means of governance engineering and monitoring engineering, restoration and management were conducted in the comprehensive management of inner riverway, wetland parks, national nature reserves and land in Xiangxi</p>		
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		<p>Prefecture; the ecological restoration and pollution treatment of 320 open mines and abandoned quarries in 8 counties and cities in the state covers an area of 307.62 hectares.</p> <p>2. Huayuan green mine construction (continued): closure of 88 tailing ponds (manganese slag ponds), as well as the comprehensive improvement of mineral environment.</p> <p>3. Xiangxi Prefecture tailing pond closure and mine ecological restoration project (continued): dam body reinforcement, drainage system, beach cover project, mine re-greening, etc.</p> <p>4. Giant salamander protection zone ecological restoration project in Zhangjiajie City (continued): 86 hydropower stations inside the protection zone were shut down and exited (some were demolished), and ecological revegetation, comprehensive basin management, basic farmland restoration, giant salamander multiplication and release, giant salamander land habitat construction, etc. were performed.</p> <p>5. Xiangxi Prefecture tailing pond closure and mine ecological restoration project.</p> <p>6. Wuling Mountain Area (Xiangxi Prefecture) mountain, water, forest, field, lake and grass ecological restoration project: Governance of wetland parks; the ecological restoration and pollution treatment of 320 open mines and abandoned quarries in 8 counties and cities in the state covers an area of 307.62 hectares.</p>		
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## Appendix 4: Stakeholder Analysis

1. The ESMS of the 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 Program are consistent, including affected entities, interested entities and management agencies. Therefore, stakeholders can be summarized as follows:

### A. Affected entities

- i) **Persons affected by land acquisition (PLA):** farmers or residents affected by land acquisition or occupation;
- ii) **Persons affected by displacement (POD):** residents affected by the demolition of ground structures;
- iii) **Paying residents (HOP):** residents paying for wastewater treatment and operation, or for domestic waste collection and disposal, and facility operation;
- iv) **Persons separating waste (PSW):** rural residents involved in domestic waste separation and recycling

### B. Interested entities

- i) **Operation entities:** operation entities of WWTPs, domestic waste collection, transfer and disposal entities, agricultural mulching film processing enterprises, and manure recycling enterprises
- ii) **Suppliers:** suppliers of services and goods, such as equipment and fertilizers
- iii) **Agencies:** women's federation, poverty alleviation office, etc.
- iv) **NGOs:** NGOs concerned about environmental quality
- v) **Research staff:** staff of research institutions or universities

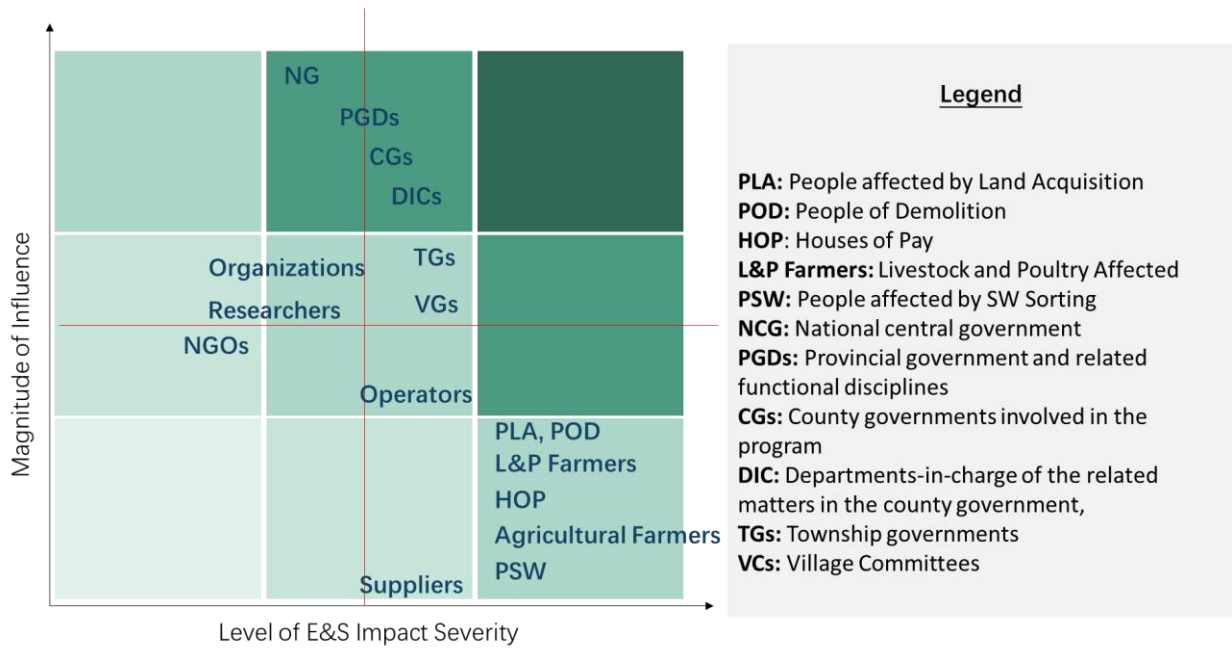
### C. Management agencies

- i) **NCG:** national central government
- ii) **PGDs:** provincial government departments
- iii) **CGs:** county governments
- iv) **DIC:** local county authorities, such as water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, and ecology and environment bureau
- v) **TGs:** local township governments, including land acquisition / occupation, wastewater treatment, domestic waste collection, separation and recycling, etc.
- vi) **VCs:** local village committees

2. Attached **Appendix Table 1** shows detailed stakeholder identification and analysis.

### Stakeholder matrix

3. Affected entities include directly, indirectly, temporarily and permanently affected entities. Interested entities include entities with influence on the Program or its outcomes. The following stakeholder matrix shows different stakeholders with the degree of E&S impact being the horizontal axis and the influence on Program decision-making being the vertical axis.



**Appendix Table 1 Stakeholder Identification**

Result Area	Activities	Parties Affected	Parties with interest	Government Authorities
<b>1. Water pollution prevention and control</b>	<ul style="list-style-type: none"> <li>County and township WW Collection and Treatment: Construction and improvement of WWTPs and sewer networks for province-wide county towns and townships</li> </ul>	<ul style="list-style-type: none"> <li>LA Affected farmers and residents</li> <li>Residents to turn charges for wastewater treatment.</li> </ul>	<ul style="list-style-type: none"> <li>WWTP operators</li> <li>Suppliers of fertilizers</li> <li>People and organizations who are concerning the environmental quality</li> <li>Organizations which are concerning poverty problems and women development.</li> </ul>	<ul style="list-style-type: none"> <li>Water resources Bureaus of governments through levels of county and provincial</li> <li>Local county governments</li> <li>Township governments</li> <li>Village committees involved</li> </ul>
	Non-point agricultural pollution control: <ul style="list-style-type: none"> <li>Prompt fertilizers with low-carbon and low-emission</li> <li>Manure utilization of existing breeding farms</li> </ul>	Farmers undertaking agricultural cultivation Breeding households	<ul style="list-style-type: none"> <li>Suppliers of animal feedstuff</li> <li>Suppliers of fertilizers</li> <li>Customers of meat and vegetables</li> <li>People and organizations who are concerning the environmental quality</li> <li>Organizations which are concerning poverty problems and women development.</li> </ul>	<ul style="list-style-type: none"> <li>Rural and agricultural Bureaus of governments through levels of county, provincial and national</li> <li>Local county governments</li> <li>Township governments</li> <li>Village committees</li> </ul>
<b>2. Water environment improvement</b>	Plastic waste policies, monitoring protocols, etc. <ul style="list-style-type: none"> <li>Study and develop policy and monitoring system</li> <li>Train to the agencies and operators for use and monitoring of the system</li> </ul>	Personnel involved in policy research and development; Rural residents who are involved in solid waste sorting and recycling	<ul style="list-style-type: none"> <li>People and organizations who are concerning the environmental quality</li> <li>Organizations which are concerning poverty problems and women development.</li> </ul>	<ul style="list-style-type: none"> <li>Departments-in-Charge, e.g. Provincial and county level of Urban Construction Bureaus</li> <li>Local County Governments</li> </ul>
	Mulching film recycling and disposal <ul style="list-style-type: none"> <li>Mulching film collection, and take to the recovery / disposal centers</li> </ul>	• n/a	<ul style="list-style-type: none"> <li>Recovery / disposal service providers</li> <li>People and organizations who are concerning the environmental quality</li> <li>Organizations which are concerning poverty problems.</li> </ul>	<ul style="list-style-type: none"> <li>Departments-in-Charge, e.g. Provincial and county level of rural and agricultural bureaus;</li> <li>Local County Governments</li> <li>Township governments</li> <li>Village committees</li> </ul>
	<ul style="list-style-type: none"> <li>Clean of plastic waste in the water</li> </ul>	<ul style="list-style-type: none"> <li>Cleaners who collect plastic waste from the water</li> </ul>	<ul style="list-style-type: none"> <li>Operators of solid waste collection, transportation and treatment plants</li> </ul>	<ul style="list-style-type: none"> <li>Departments-in-Charge, e.g. Provincial and</li> </ul>

Result Area	Activities	Parties Affected	Parties with interest	Government Authorities
			<ul style="list-style-type: none"> <li>Suppliers of services</li> </ul>	county level of Urban Construction Bureaus <ul style="list-style-type: none"> <li>Local County Governments</li> </ul>
	<ul style="list-style-type: none"> <li>Establishment or improvement of river chief system information platform</li> <li>Provincial guidelines governing water environment management and pollution prevention and control</li> <li>Public participation and training activities for river/lake protection</li> </ul>	n/a	<ul style="list-style-type: none"> <li>People and organizations who are concerning the environmental quality</li> <li>Suppliers of services</li> </ul>	Departments and Bureaus of provincial and national government, river/lake chief offices of each level governments.
Institutional Strengthening & Innovation mechanisms strengthened	<ul style="list-style-type: none"> <li>Water allocation for the mainstream and tributaries fulfilled</li> </ul> Public participation in river and lake environment protection <ul style="list-style-type: none"> <li>Public training on river and lake protection</li> <li>River and lake protection activities</li> </ul>			

## Appendix 5: Main Data Collection Activities during ESSA Preparation

Province	Time	Targets	Mode
Jiangxi	Nov. 2020	<ul style="list-style-type: none"> <li><b>Provincial authorities:</b> development and reform commission, finance, water resources, ecology and environment, forestry department</li> <li><b>Sample counties:</b> Chongyi County (Ganjiang River watershed), Dayu County (Ganjiang River watershed)</li> </ul>	Field visit and consultation
	Dec. 2020	<ul style="list-style-type: none"> <li><b>Provincial authorities:</b> development and reform commission, finance, water resources, ecology and environment, natural resources, housing and urban-rural development, agriculture and rural affairs department</li> <li><b>Sample counties:</b> Yongfeng County (Ganjiang River watershed)</li> </ul>	Field visit and consultation
	Mar. 2021	<ul style="list-style-type: none"> <li><b>Provincial authorities:</b> development and reform commission, finance, water resources, housing and urban-rural development, agriculture and rural affairs, natural resources, ecology and environment, emergency management, health, poverty reduction, ethnics and religions, culture and tourism department, women's federation</li> <li><b>Sample counties:</b> Dexing City (Xinjiang River), Lushan Xihai (Poyang Lake)</li> </ul>	Field visit and consultation
		<ul style="list-style-type: none"> <li><b>Sample counties:</b> Yudu County (Ganjiang River watershed), Dayu County (Ganjiang River watershed), Chongyi County (Ganjiang River watershed)</li> </ul>	Online interview
	Apr. 2021	<ul style="list-style-type: none"> <li><b>Sample counties:</b> Fuzhou City (Fuhe River watershed)</li> </ul>	Visits to other Bank-financed projects
	Jun. 2021	<ul style="list-style-type: none"> <li><b>Sample counties:</b> Poyang County (Raohe River watershed), Fengxin County (Xiuhe River watershed), Jinxian County</li> </ul>	
Hunan	Apr. 2021	<ul style="list-style-type: none"> <li><b>Provincial authorities:</b> development and reform commission, finance, housing and urban-rural development, agriculture and rural affairs, forestry, water resources, ecology and environment, natural resources department</li> <li><b>Sample counties:</b> Miluo County, Wangcheng District (Dongting Lake area)</li> <li><b>Enterprises:</b> plastic waste recycling enterprises</li> </ul>	Field visit and consultation
	Jun. 2021	<ul style="list-style-type: none"> <li><b>Provincial authorities:</b> development and reform commission, finance, water resources, housing and urban-rural development, agriculture and rural affairs ecology and environment department</li> <li><b>Sample counties:</b> Yuanlin County (Yuanjiang River watershed)</li> </ul>	Field visit and consultation
	Jul. 2021	<ul style="list-style-type: none"> <li><b>Provincial authorities:</b> provincial political and legal affairs commission</li> <li><b>Sample counties:</b> Xupu County (Zishui River watershed), Shimen County (Lishui River watershed)</li> </ul>	Field visit and consultation
		<ul style="list-style-type: none"> <li><b>Sample counties:</b> Chaling County, Youxian County (Xiangjiang River watershed)</li> </ul>	Visits to other Bank-financed projects



## Appendix 6: Public Participation Activities

Time	Venue	Participants	Topics
Dec. 21, 2020	Yongfeng County, Jiangxi Province	Government authorities, incl. development and reform commission, housing and urban-rural development bureau, urban administration bureau, agriculture and rural affairs bureau, natural resources bureau, ecology and environment bureau, ethnic and religious affairs bureau, women's federation, employment bureau	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to solid waste, rural wastewater, rural non-point source pollution control, river management, and water and soil conservation</li> </ul>
		Representatives of the Yongfeng City landfill authority	<ul style="list-style-type: none"> <li>Enterprise scale, recruitment mode, worker benefits, safety and skills training, occupational health hazards and inspection, availability of protective equipment, facility land approval, EIA, SSRA, SIA, geological disasters, management, etc.</li> </ul>
		Representatives of the contractor of waste incineration plant in Yongfeng County	
		Representatives of the environmental sanitation company (Qiaoyin) in Yongfeng County	
		Representatives of the WWTP in Yongfeng County	<ul style="list-style-type: none"> <li>Community domestic waste collection, transfer, separation and disposal (including recycling);</li> <li>Villager employment, especially participation in solid waste, rural wastewater, river management, and water and soil conservation projects;</li> <li>Rural wastewater collection and treatment, house connection, charging, issues, and suggestions;</li> <li>Local use of chemical and organic fertilizers, and effects</li> </ul>
		Representatives of the village committee and villagers of Zequan Village, Enjiang Town, Yongfeng County	
Mar. 8, 2021	<b>Jiangxi PMO</b>	Provincial development and reform commission, finance department, water resources department/ river chief office, housing and urban-rural development department, ecology and environment department, natural resources department; PMO; water and environment research institutes, Bank team	<ul style="list-style-type: none"> <li>Reviewing 14<sup>th</sup> five-year plans and department plans</li> <li>Discussing with competent authorities</li> </ul>
Mar. 9	<b>Water resources department</b>	Deputy head of the water resources department, water and soil conservation office	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of the provincial water resources department</li> <li>Scope of water and soil conservation</li> <li>Potential E&amp;S impacts</li> </ul>
	<b>Provincial women's federation</b>	Office director and inspector	<ul style="list-style-type: none"> <li>Current situation of protection of women's rights and interests in Jiangxi Province</li> <li>Responsibilities and organizational setup</li> <li>Challenges and plans in the protection of women's rights and interests, and women's development</li> </ul>
Mar. 10	Provincial housing and urban-rural development department	County and township construction, countryside, and real estate administration sections of the housing and urban-rural development	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of the housing and urban-rural development department for domestic waste disposal, and house expropriation on state-owned land</li> <li>Progress and issues of domestic waste disposal</li> </ul>

		department	
	Provincial natural resources department	Regulations section of the natural resources department	<ul style="list-style-type: none"> <li>Prevailing LA compensation and resettlement policies of Jiangxi Province</li> <li>Fixation of LA compensation rates</li> <li>Responsibilities, working pattern and staffing of provincial and county natural resources authorities</li> </ul>
	Online meeting (interview with authorities of the Chongyi County Government)	Water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, forestry bureau	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to solid waste, rural wastewater, rural non-point source pollution control, river management, and water and soil conservation</li> </ul>
	Online meeting (interview with authorities of the Yudu County Government)	Water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, forestry bureau	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to solid waste, rural wastewater, rural non-point source pollution control, river management, and water and soil conservation</li> </ul>
Mar. 11	Provincial agriculture department		
	Online meeting (interview with authorities of the Dayu County Government)		<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to solid waste, rural wastewater, rural non-point source pollution control, river management, and water and soil conservation</li> </ul>
Mar. 12	Dexing City	Representatives of the water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, forestry bureau, social security bureau, employment bureau, etc.	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to solid waste, rural wastewater, rural non-point source pollution control, river management, and water and soil conservation</li> </ul>
		Representatives of the Dexing City landfill authority	Enterprise scale, recruitment mode, worker benefits, safety and skills training, occupational health hazards and inspection, availability of protective equipment, facility land approval, EIA, SSRA, SIA, geological disasters, management, etc.
		Representatives of the operator of the Dexing City waste incineration plant	
		Representatives of the environmental sanitation company in Dexing City	
		Representatives of the Dexing City WWTP	<ul style="list-style-type: none"> <li>Community domestic waste collection, transfer, separation and disposal (including recycling);</li> <li>Villager employment, especially participation in solid waste, rural wastewater, river management, and water and soil conservation projects;</li> <li>Rural wastewater collection and treatment, house connection, charging, issues, and suggestions;</li> </ul>
		Representatives of the village committee and villagers of Daolan (She) Village, Xiangtun Sub-district, Dexing City	

			<ul style="list-style-type: none"> <li>Local use of chemical and organic fertilizers, and effects</li> </ul>
Mar. 13	Lushan Xihai Administrative Committee	Representatives from water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, forestry bureau, etc.	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to solid waste, rural wastewater, rural non-point source pollution control, river management, and water and soil conservation</li> </ul>
		Representatives of the Lushan Xihai WWTP	Enterprise scale, recruitment mode, worker benefits, safety and skills training, occupational health hazards and inspection, availability of protective equipment, facility land approval, EIA, SSRA, SIA, geological disasters, management, etc.
		Representatives of the village committee and villagers of Beili Village, Jinkou Xiang, Lushan Xihai Administrative Committee	<ul style="list-style-type: none"> <li>Community domestic waste collection, transfer, separation and disposal (including recycling);</li> <li>Villager employment, especially participation in solid waste, rural wastewater, river management, and water and soil conservation projects;</li> <li>Rural wastewater collection and treatment, house connection, charging, issues, and suggestions;</li> <li>Local use of chemical and organic fertilizers, and effects</li> </ul>
Apr. 19	Hunan Provincial Development and Reform Commission	Finance department, water resources department, housing and urban-rural development department, forestry bureau, agriculture and rural affairs department, ecology and environment department	<ul style="list-style-type: none"> <li>Introducing the Bank's PforR tool</li> <li>Listening to the 14<sup>th</sup> five-year plans of the departments / bureaus</li> </ul>
Apr. 20	Hunan Provincial Water Resources Department	Water and soil conservation section, river chief office	<ul style="list-style-type: none"> <li>Understanding the 14<sup>th</sup> five-year water and soil conservation plan;</li> <li>Implementation modes of water and soil conservation projects;</li> <li>River solid waste cleanup;</li> <li>Forms and implementation of public participation in river and lake environment management</li> </ul>
	Hunan Provincial Housing and Urban-Rural Development Department	Urban construction, and countryside sections	<ul style="list-style-type: none"> <li>14<sup>th</sup> five-year plans for township and above collection stations, transfer stations, waste incineration plants, and landfills</li> <li>Rural river waste cleanup mechanism;</li> <li>Wastewater recovery and disposal, and planning in incorporated towns</li> </ul>
Apr. 21	Hunan Provincial Agriculture and Rural Affairs Department		<ul style="list-style-type: none"> <li>Rural wastewater and domestic waste management (rural domestic wastewater), and responsibilities of housing and urban-rural development authorities (rural domestic waste)</li> <li>Chemical fertilizer reduction plan and implementation</li> <li>Agricultural livestock and poultry waste disposal and operation, and 14<sup>th</sup> five-year plan</li> <li>Rural toilet improvement, and 14<sup>th</sup> five-year plan</li> </ul>
	Forestry department	Forestation section, and wetland center	<ul style="list-style-type: none"> <li>Responsibilities</li> <li>Work in the 13<sup>th</sup> five-year plan period, and 14<sup>th</sup> five-year plans</li> <li>Eco-benefit compensation mechanism for wetlands</li> <li>Ecological compensation mechanism for forests</li> <li>Main tasks and plans of reserves (4 in the</li> </ul>

			Dongting Lake watershed)
Jul. 4-6	Wangcheng District, Miluo County, Yuanling County in Hunan	Government authorities concerned, enterprises, communities	<ul style="list-style-type: none"> <li>Willingness to participate, and implementation of activities</li> </ul>
Jul. 8	Xupu County	Representatives from water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, forestry bureau, etc., WWTP	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to urban wastewater, rural non-point source pollution control, and water and soil conservation</li> </ul>
Jul. 9-10	Shimen County	Representatives from water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, etc., WWTP, feces recycling enterprises	<ul style="list-style-type: none"> <li>Responsibilities and organizational setup of each authority</li> <li>Key responsibilities, policy requirements, progress, effectiveness and key issues related to urban wastewater, rural non-point source pollution control, and water and soil conservation</li> </ul>
Dec. 2020–Jul. 2021	Dayu, Yudu and Chongyi Counties in Jiangxi	Representatives from water resources bureau, housing and urban-rural development bureau, agriculture and rural affairs bureau, ecology and environmental bureau, natural resources bureau, ethnic and religious affairs bureau, women's federation, etc., WWTP, and typical communities	<ul style="list-style-type: none"> <li>Videoconference</li> </ul>
Dec. 2020–Jul. 2021	Chaling and Youxian in Hunan, and Fuzhou, Poyang, Fengxin and Jinxian in Jiangxi	Government authorities concerned	<ul style="list-style-type: none"> <li>Collecting other Program information</li> </ul>
Aug. 2, 2021	Hunan Provincial Development and Reform Commission	Hunan Provincial Development and Reform Commission, Agriculture and Rural Affairs Department, Water Resources Department, Ecology and Environment Department, Natural Resources Department, Women's Federation, Civil Affairs Department, Political and Legislative Affairs Committee, Emergency Management Department, Health Commission, Human Resources and Social Security Department, Countryside Revitalization Department	<ul style="list-style-type: none"> <li>Introducing the ESSA report</li> <li>Collecting opinions on the revision of the ESSA report</li> </ul>
Aug. 3, 2021	Online meeting	Development and reform bureau, agriculture and rural affairs bureau, water resources bureau,	<ul style="list-style-type: none"> <li>Introducing the ESSA report</li> <li>Collecting opinions on the revision of the ESSA report</li> </ul>

		ecology and environment bureau, natural resources bureau, women's federation, civil affairs bureau, political and legislative affairs committee, river chief office, housing and urban-rural development bureau, emergency management bureau, health commission, human resources and social security bureau, countryside revitalization bureau, and bureau for letters and visits in sample counties, WWTPs, Qianfeng Community	
Aug. 4, 2021	Online meeting	Jiangxi Provincial Development and Reform Commission, Agriculture and Rural Affairs Department, Water Resources Department, Ecology and Environment Department, Natural Resources Department, Women's Federation, Civil Affairs Department, Political and Legislative Affairs Committee, Emergency Management Department, Health Commission, Human Resources and Social Security Department, Countryside Revitalization Department	<ul style="list-style-type: none"> <li>• Introducing the ESSA report</li> <li>• Collecting opinions on the revision of the ESSA report</li> </ul>
	Online meeting	Development and reform bureau, agriculture and rural affairs bureau, water resources bureau, ecology and environment bureau, natural resources bureau, women's federation, civil affairs bureau, political and legislative affairs committee, river chief office, housing and urban-rural development bureau, emergency management bureau, health commission, human resources and social security bureau, countryside revitalization bureau, and bureau for letters and visits in sample counties, WWTPs, Qianfeng Community	<ul style="list-style-type: none"> <li>• Introducing the ESSA report</li> <li>• Collecting opinions on the revision of the ESSA report</li> </ul>

## Appendix 7: Records of Public Consultation on the Draft ESSA

### 1. Feedback and response

No.	Issue	Opinion	Participants	Report revision
Validity of policies				
1	Some government documents have expired or been updated, such as the 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).	This document has been updated in 2021. It is suggested to consider the up-to-date policies for assessing the SSRA system.	Hunan Provincial Political and Legislative Affairs Committee	Table 4-1 revised
2	About the 13 <sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Hunan Province, 13 <sup>th</sup> Five-year Development Plan for Ethnic Minority Programs of Jiangxi Province, Program for Women's Development of China (2011-2020), 13th Five-Year Plan for Poverty Alleviation in Hunan Province, etc.	These policy documents are for the 13 <sup>th</sup> five-year plan period (2010-2020) only, and the 14 <sup>th</sup> five-year plans are being developed, and should be described in the report.	Hunan Provincial Women's Federation, Shimen County, Hunan, Wangcheng District Women's Federation, Jiangxi Provincial Women's Federation, Yudu and Yongfeng County Women's Federations, Jiangxi Hunan Provincial Ethnic and Religious Affairs Commission, Jiangxi Provincial Ethnic and Religious Affairs Commission	Description on the 14 <sup>th</sup> five-year plan added to Elements 11 and 12 in Section 4.2
3	The Cultural Relics Protection Law (2014 Amendment) in Table 4-1 and Appendix 2 should be the 2017 amendment.	Table 4-1 and Appendix 2 should be updated.	Hunan Provincial Ethnic and Religious Affairs Commission, Jiangxi Provincial Culture and Tourism Department	Table 4-1 and Appendix 2 updated
4	The Work Safety Law in Section 1.2 and Appendix 2 should be the 2017 amendment.	Section 3.1.2 and Appendix 2 should be updated.	Hunan Provincial Emergency Management Department, Jiangxi Provincial Emergency Management Department, Yongfeng County Emergency Management Office, Jiangxi	Section 3.1.2 and Appendix 2 updated
5	The Real Right Law in Table 4-1 has been incorporated into the Civil Code.	The Real Right Law should be deleted.	Jiangxi Provincial Natural Resources Department	Deleted
6	The Measures for the Implementation of the Regulations on Labor Protection of Female Workers of Hunan Province (2020.3.8) and the Measures of Hunan Province on the Implementation of the Law on the Protection of Women's Rights and Interests (2006.10.1) should be added to Table 4-1.	The two sets of measures should be added to Table 4-1.	Hunan Provincial Women's Federation	Added
7	The poverty alleviation data of Jiangxi Province in Appendix 9 is inaccurate.	An adjustment should be made based on the opinion given.	Jiangxi Provincial Countryside Revitalization Department	Appendix 9 updated
8	The poverty alleviation data of Hunan Province in Appendix 9 is inaccurate.	An adjustment should be made based on the opinion given.	Yuanling County Countryside Revitalization Bureau, Hunan	Appendix 9 updated
Policy analysis and understanding				
9	The expression on the legitimacy, rationality, feasibility and controllability of SSRA measures in Paragraph (iii) of Element 2 in Section 4.2 is inaccurate.	This should be consistent with the policy.	Fuliang County Political and Legislative Affairs Committee, Jiangxi	Paragraph (iii) of Element 2 in Section 4.2 adjusted
10	Some terms in Element 12 in Section 4.2 have been updated according to the latest policy.	These terms should be updated.	Hunan Provincial Civil Affairs Department, Hunan Provincial Countryside Revitalization Department, Wangcheng	Element 12 in Section 4.2 updated

			District, Hunan Provincial Civil Affairs Department Jiangxi Provincial Civil Affairs Department, Jiangxi Provincial Countryside Revitalization Department, Yongfeng County	
11	The description of subsequent measures for households lifted out of poverty in Jiangxi Province in Element 12 in Section 4.2 is accurate.	An adjustment should be made based on the opinion given.	Jiangxi Provincial Countryside Revitalization Department	Element 12 in Section 4.2 updated
12	Relevant provisions of the Law of the People's Republic of China on the Protection of Women's Rights and Interests should be added to Element 12 in Section 4.2.	Relevant provisions in Articles 23 and 24 of the Law of the People's Republic of China should be added.	Shimen County Women's Federation, Hunan	Element 12 in Section 4.2 updated
13	The text on the Law on the Protection of Cultural Relics in Element 5 in Section 4.4.3 is incomplete.	Articles 18 and 19 of the Law on the Protection of Cultural Relics should be added.	Wangcheng District Cultural Relic Bureau, Hunan	Element 5 in Section 4.3 updated
14	In addition to the Law of the People's Republic of China on Regional National Autonomy, two sets of measures should be included in Element 11 in Appendix 2.	Some Provisions of the State Council on the Implementation of the Regional National Autonomy Law (2005.5) and Some Provisions of Hunan Province on the Implementation of the Regional National Autonomy Law (2011) should be added.	Hunan Provincial Ethnic and Religious Affairs Commission	Added to Table 4-1 and Appendix 2
<b>Investigation and analysis of system operation</b>				
15	The text on livelihood restoration in paragraph (iv) in Element 9 of Section 4.4 should be more specific.	An adjustment should be made based on the opinion given.	Yuanling County Human Resources and Social Security Bureau, Hunan	Updated
16	The description that "according to the feedback from the Women's Federation of Yongfeng County, Jiangxi Province, the department has handled a cumulative total of about 50 complaints related to incidents of equal pay for equal work for women in 2020" in Element 12 in Section 4.4 is inaccurate.	It should be changed to "50 complaints related to events of women's rights protection were handled in 2020 in total".	Yongfeng County Women's Federation, Jiangxi	Element 12 in Section 4.4 updated
17	In Element 12 in Section 4.4, the reasons for leaving children and elderly people behind are not limited to that young couples in the family go out to work.	An adjustment should be made based on the opinion given.	Jiangxi Provincial Civil Affairs Department	Revised
<b>Analysis of organizational setup and responsibilities</b>				
18	The functions of municipal and county political and legal affairs commissions in Section 4.3 are inaccurate.	"Review" should be deleted.	Ziyang District Political and Legislative Affairs Committee, Hunan	Deleted
19	In Section 4.3, municipal and county cultural relic authorities are not responsible for cultural relic resources investigation.	The description that "municipal and county cultural relic authorities are responsible for cultural relic resources investigation" should be deleted.	Jiangxi Provincial Culture and Tourism Department	Deleted
20	In Section 4.3, the operating process on endowment insurance for land-expropriated farmers is inaccurate.	An adjustment should be made based on the opinion given.	Ziyang District Human Resources and Social Security Bureau, Hunan, Yuanling County Human	Revised

			Resources and Social Security Bureau, Jiangxi	
21	In Section 4.3, municipal and county health authorities are not responsible for the supervision and management of work-related injury insurance.	The description that “municipal and county health authorities are responsible for the supervision and management of work-related injury insurance” should be deleted.	Ziyang District Health Commission, Hunan	Deleted
22	In Section 4.3, women’s federations are responsible for the coordination of women’s rights protection only, and not for organization, guidance and supervision.	“Organization, direction and supervision” should be deleted.	Hunan Provincial Women’s Federation	Deleted
23	In Section 4.3, civil affairs authorities are not in charge of the disabled.	It should be changed to “disabled persons’ federations are in charge of the disabled”.	Hunan Provincial Civil Affairs Department	Revised
24	The description on enterprise women’s federations in Element 12 in Section 4.4 is inaccurate.	It should be changed to “female workers’ working agencies”.	Jiangxi Provincial Women’s Federation	Revised
25	In this report, poverty alleviation offices should be “countryside revitalization bureaus”.	It should be changed to “countryside revitalization bureau”.	Miluo County Countryside Revitalization Bureau, Hunan	Revised
Opinions on governments plans				
26	Xupu County is located in the Lishui River watershed, other than the Zishui River watershed. What is the basis for the division of the watersheds of the one lake and four tributaries?	This should be clarified.	Xupu County Development and Reform Commission, Hunan	Such division is based on the Dongting Lake Water Environment Comprehensive Management Plan
27	In Item 1 of Key Field 2 of the Dongting Lake Water Environment Comprehensive Management Plan, the improvement of 51 WWTPs was completed in the 13 <sup>th</sup> five-year plan period.	It should be deleted.	Hunan Provincial Housing and Urban-Rural Development Department	Deleted
28	In the Xiangjiang River watershed of the 14 <sup>th</sup> Five-year Plan of Hunan Province, “improvement of the county and township sewer network of Wangcheng District” should be changed to “improvement of the county and township sewer network of Changsha City”.	It should be changed to “improvement of the county and township sewer network of Changsha City”.	Wangcheng District Housing and Urban-Rural Development Department, Hunan	Revised
About public consultation				
29	Consultation with the Hunan Provincial Natural Resources Department is omitted in Appendix 6.	It should be added.	Hunan Provincial Natural Resources Department	Added

## 2. Registration forms, photos and opinion records (part)



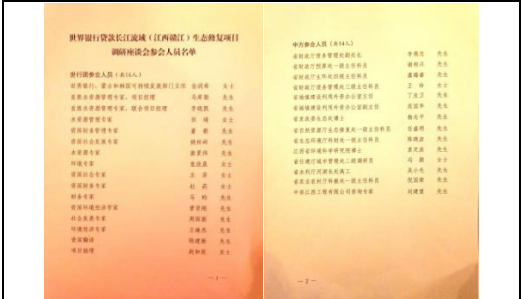
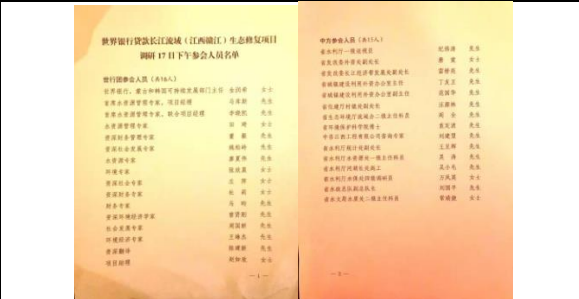


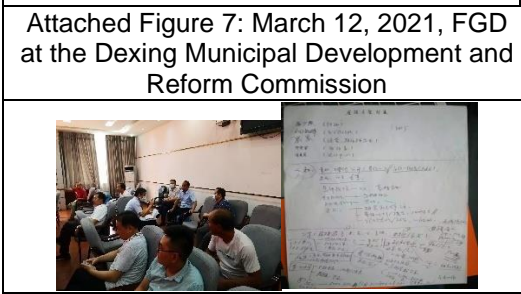
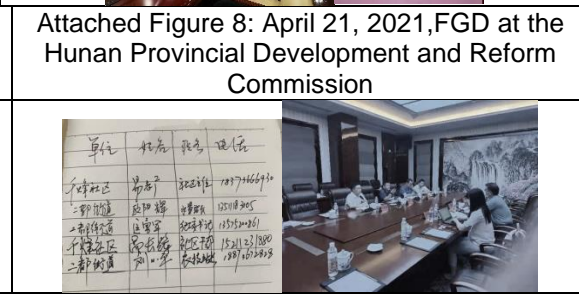
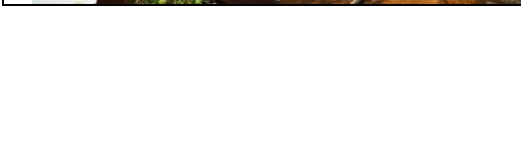
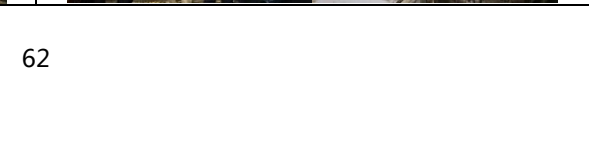






## Appendix 8: Selected Public Participation Records

### 1. FGDs with government authorities

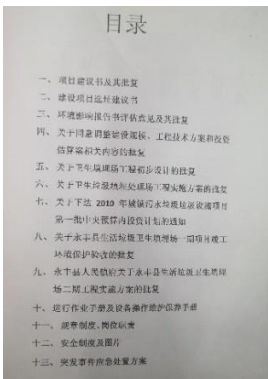
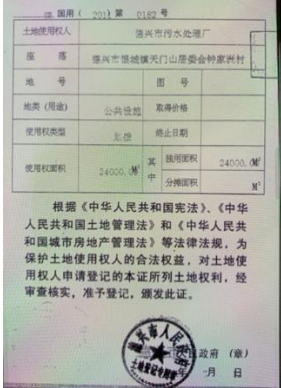
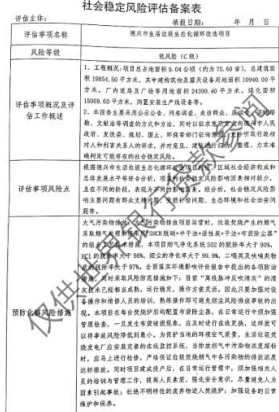
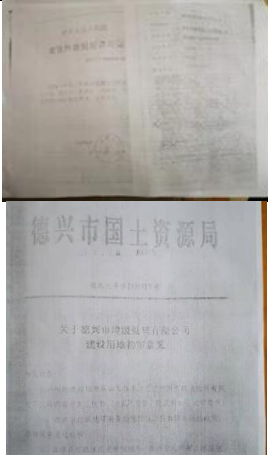
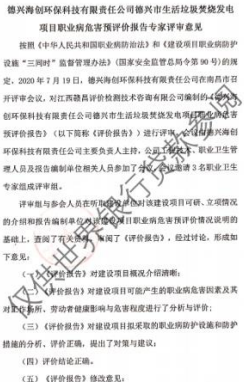
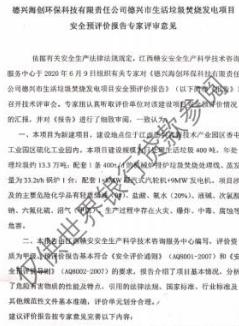
	
<p>Attached Figure 1: morning of December 16, 2020, FGD at the Jiangxi Provincial Development and Reform Commission</p>	<p>Attached Figure 2: afternoon of December 17, 2020, FGD at the Jiangxi Provincial Water Resources Department</p>
	
<p>Attached Figure 3: morning of March 8, 2021, FGD at the Jiangxi Provincial Development and Reform Commission</p>	<p>Attached Figure 4: afternoon of March 9, 2021, FGD at the water resources department</p>
	
<p>Attached Figure 5: March 10, 2021, FGD at the housing and urban-rural development department</p>	<p>Attached Figure 6: March 11, 2021, FGD at the agriculture department</p>
	
<p>Attached Figure 7: March 12, 2021, FGD at the Dexing Municipal Development and Reform Commission</p>	<p>Attached Figure 8: April 21, 2021, FGD at the Hunan Provincial Development and Reform Commission</p>
<p>Attached Figure 9: July 8, 2021, FGD in Xupu County, Hunan</p>	<p>Attached Figure 10: July 9, 2021, FGD in Shimen County, Hunan</p>

### 2. Visits to enterprises, workers and villagers



Attached Figure 11: December 21, 2020, interview with female workers and field visit to the Yongfeng Countylandfill in Jiangxi	Attached Figure 12: December 21, 2020, visit to a waste recovery and disposal enterprise in Wangcheng District, Changsha, Hunan
	
Attached Figure 13: March 12, 2021, visit to Beili Village, Dexing City, Jiangxi	Attached Figure 14: April 22, 2021, visit to the WWTP in Miluo County, Hunan
	
Attached Figure 15: July 10, 2021, visit to Qianfeng Community, Shimen County, Hunan	Attached Figure 16: July 10, 2021, visit to a feces recycling enterprise in Shimen County, Hunan
	

### 3. Regulations and approvals

		
Attached Figure 17: Catalogue of file management of the Yongfeng County landfill in Jiangxi, including site selection, design, EIA, safe operation and maintenance handbook, rules and regulations, contingency plan	Attached Figure 18: Land certificate of the Dexing WWTP	Attached Figure 19: SSRA registration form of the incineration plant in Dexing County, Jiangxi
		
Attached Figure 20: Land pre-examination and site selection	Attached Figure 21: Occupational hazard	Attached Figure 22: Safety pre-assessment report and expert review



opinion of the incineration plant in Dexing County	assessment report and expert review opinion on the waste-to-energy plant in Dexing City	opinion on the waste-to-energy plant in Dexing City
		
Attached Figure 23: SOP for chlorination of the Yuanling County WWTP	Attached Figure 24: Sample special job training certificate and job certificate of the Yuanling County WWTP	Attached Figure 25: Farmland registration form for a livestock and poultry waste recycling facility in Shimen County, Hunan
		
Attached Figure 26: Certificate of land use right of the Xupu County WWTP in Hunan	Attached Figure 27: Land use agreement for a WWTP between the Sima Village Committee, Zhelin Town, Lushan Xihai and a household	
		
Attached Figure 28: A third party appraisal report of a house on state-owned land in Xupu County, Hunan	Attached Figure 29: A third party appraisal report of a house on collective land in Xupu County, Hunan	Attached Figure 30: Labor supervision and law enforcement process
		
Attached Figure 31: Labor arbitration process		

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## Appendix 9 E&S Overview of the Program Provinces

### A. Environmental Overview

#### **Jiangxi Province**

Jiangxi Province is located in southeastern China, on the south bank of the middle and lower reaches of the Yangtze River, with a land area of 166,900 square kilometers. The province is surrounded by mountains on three sides in the southeast and west, and the periphery is gradually inclined to Poyang Lake in the north. The basin area of Poyang Lake accounts for 94% of the total area of the province, which constitutes a relatively independent water and land ecosystem and is not easy to be disturbed from outside. The ecological environment is endowed with a good background.

The climate is subtropical warm and humid monsoon climate with an average annual temperature of about 16.3-19.5°C. The province has warm winters and hot summers, with a frost-free period of 240-307 days. The duration of stable average daily temperature above 10°C is 240-270 days. Jiangxi is one of the rainiest provinces in China. The annual precipitation is 1341-1943mm, of which about 42-53% occurs from April to June.

With an important ecological location, Jiangxi Province is an important ecological security zone in the middle and lower reaches of the Yangtze River and an important ecological barrier in the southern hills and mountains, with 78% of the total area in the hills and mountains, and 22% in the mountains, plains and waters. The forest coverage is 63.1%. Poyang Lake is the largest freshwater lake in China, and its basin carries 15.5% of water resources with an area of 9% of Yangtze River basin. The five rivers of Ganjiang River, Feihe River, Xinjiang River, Raohe River and Xiuhe River, radiate the whole territory, and the water from the five rivers is injected into Yangtze River after being transferred by Poyang Lake. With more than 3,700 tributaries with a basin area of 10 square kilometers or more, the total river length is about 63,000 kilometers and the total water resource is 156.5 billion m<sup>3</sup>, ranking seventh in the country. The water quality is excellent on the whole. In 2019, the proportion of excellent water quality of surface water sections in Jiangxi Province is 92.4%, 1.7 percentage points up from the previous year, and the proportion of poor V water sections is 0.

There are 536 nature reserves of various types in the province, including 190 nature reserves, 45 scenic spots, 182 forest parks, 99 wetland parks, 15 geological parks, and 5 World Natural Heritage sites. There are 160 national cultural relics protection units, 920 provincial cultural relics protection units, and numerous city and county-level cultural relics protection units in the province.

In recent years, under the rapid economic and social development, urbanization level continues to rise, the impact of global climate change and other multiple changes, water and drought disasters, local shortages of water resources, water ecological damage, water environmental pollution and other old and new water problems intertwined, resulting in a more prominent and urgent need for the systematic management of "five rivers, one lake and one river".

#### **Hunan Province**

Hunan Province is located in the south of China, on the south bank of the middle reaches of the Yangtze River, with a land area of 211,800 square kilometers. Dongting Lake is located on the south bank of the Jing River in the middle reaches of the Yangtze River, straddling Hunan and Hubei Provinces, with mountainous highlands to the east, south and west, and plain water network areas to the north. The part of the Dongting Lake basin in Hunan Province covers about 97% of the Hunan Province land area. Dongting Lake mainly consists of East Dongting Lake, South Dongting Lake and West Dongting Lake, forming an inclined water surface from west to east, with a total natural lake area of 2,625 square kilometers, a total storage capacity of 16.7 billion m<sup>3</sup> and a watershed area of 263,300 square kilometers. As the second largest freshwater lake in China, Dongting Lake is the largest river lake in China and an important water source, wetland and agricultural and fishery production base in the middle and lower reaches of the Yangtze River. As it has a pivotal position in ensuring the safety of flood control, water supply, ecological safety and shipping safety in the middle and lower reaches of the Yangtze River, it is known as the "kidney of

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the Yangtze River".

Dongting Lake is located in the north-central subtropical humid climate zone, with four distinct seasons, abundant heat, abundant precipitation and long frost-free period. Dongting Lake is an internationally important wetland and habitat for rare migratory birds, an important site for aquatic organisms to live and breed, and one of the richest areas of biodiversity in China. There are 9 national nature reserves in the Dongting Lake area, including East Dongting Lake, West Dongting Lake and Yangtze River Swan Island Yangtze River Dolphin, 6 provincial nature reserves, including Hengling Lake and South Dongting Lake Wetland Waterfowl, and 4 internationally important wetlands, including East Dongting Lake, West Dongting Lake, South Dongting Lake and Honghu Lake. Rich in biological resources, there are more than 30 kinds of first- and second-level protected wild plants, 13 kinds of national-level protected wild animals such as Chinese sturgeon, white sturgeon and oriental white stork, and 35 kinds of second-level protected wild animals, and it is the habitat of national key protected wild animals such as finless porpoise and elk.

## **B. Social Overview**

### **Jiangxi Province**

Jiangxi Province is located in southeastern China, on the south bank of the lower reaches of the Yangtze River, with a total area of 166,900 square kilometers and 11 municipalities and 100 counties under its jurisdiction. According to the results of the 7th census in 2020, the total resident population of Jiangxi at the end of 2020 is 45,188,600, of which 27,310,600 live in cities and towns, accounting for 60.44% of the total population. In 2019, the gross domestic product of Jiangxi Province is 2,475.75 billion yuan, and the per capita disposable income of the province's residents is 2,6262 yuan, of which 36,546 yuan is the per capita disposable income of county and township residents and 15,796 yuan is the per capita disposable income of rural residents.

Jiangxi Province has a total of 38 ethnic groups, with Han as its the main ethnic, accounting for more than 99% of the total population. The ethnic minorities in Jiangxi Province are mainly She, who are mostly scattered in Yingtan Longhushan, Qianshan, Guixi, Ji'an, Yongfeng, Quannan, Wuning, Zixi, Xingguo and other counties, with the population of about 76,500 people. There is no ethnic city or ethnic county in the province, and there are 8 ethnic townships (7 She townships, and 1 multi-ethnic township), and 82 ethnic villages (77 She villages, 2 Yao villages, 2 Li villages, and 1 Hui village).

By the end of 2020, all 25 poor counties and 3,058 poor counties in Jiangxi Province had been lifted out of poverty. The poor population of 3.46 million in 2013 has been completed lifted out of poverty, and absolute poverty has been eliminated. Poor residents' production level and living standard have improved greatly, and their development drivers have been strengthening. The per capita disposable income of farmers in poor areas rose from 5,419 yuan in 2012 to 12,877 yuan in 2020, growing 11.43% per annum on average, and the per capita income of poor households rose from 2,654 yuan in 2014 to 12,626 yuan in 2020, growing 30% per annum on average.

### **Hunan Province**

Hunan Province is located in the middle reaches of the Yangtze River, with a total area of 218,800 square kilometers. As of May 2021, Hunan Province has 14 prefecture-level administrative regions (1 ethnic autonomous prefecture), 122 county-level divisions (7 ethnic autonomous counties), and 1,933 townships (83 ethnic minority townships). According to the results of the seventh census in 2020, the province's resident population is 66.445 million by the end of 2020, of which 26.793 million are urban residents, accounting for 57.4% of the total population (urbanization rate of resident population). In 2019, the gross domestic product (GDP) of Hunan Province is 2,475.75 billion yuan, the per capita GDP is 53,164 yuan (\$7,707), and the per capita disposable income of the province is 27,680 yuan, of which, the per capita disposable income of urban residents is 39,842 yuan and the per capita disposable income of rural residents is 15,395.

Among the resident population of the province, the Han population is 59,760,000, accounting for 89.94%; the population of various ethnic minorities is 6,685,000, accounting for 10.06%, accounting for 5.76% of the total population of ethnic minorities nationwide, including the Tujia, Miao, Dong, Yao, Hui and other 55 ethnic minorities. The distribution of ethnic minorities in the province is of the pattern of "mostly mixed residence, small compact community". 14 cities and

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states, 122 counties and urban areas are distributed with ethnic minorities. Ethnic regions include 1 autonomous prefecture (Xiangxi Tujia and Miao Autonomous Prefecture, with Longshan County, Yongshun County, Baojing County, Huayuan County, Guzhang County, Phoenix County, Luxi County and Jishou City under its jurisdiction), 7 autonomous counties (Tongdao Dong Autonomous County, Jianghua Yao Autonomous County, Chengbu Miao Autonomous County, Xinfeng Dong Autonomous County, Zhijiang Dong Autonomous County, Jingzhou Miao and Dong Autonomous County and Mayang Miao Autonomous County), 3 counties and districts that enjoy preferential policies in comparison with ethnic autonomous (Sangzhi County, Yongding District, Wulingyuan District), 6 counties with more than half of the minority population (Suining County, Huitong County, Yuanling County, Jiangyong County, Shimen County, Cili County), and 84 ethnic townships. Ethnic autonomous areas and ethnic areas account for 17.8% and 28% of the province's area, respectively. Xiangxi Tujia and Miao Autonomous Prefecture, Huaihua City, and Zhangjiajie City have the minority population of above 1 million; Yongzhou City, Shaoyang City, and Changde City have the minority population of below 1 million and above 100,000. 96.34% of the province's minority population is concentrated in Xiangxi Tujia and Miao Autonomous Prefecture, Huaihua City, Zhangjiajie City, Yongzhou City, Shaoyang City and Changde City.

In terms of poverty alleviation, by the end of 2020, the poor population of 6.82 million, 6,920 poor villages and 51 poor counties had been lifted out of poverty. The per capita income of households lifted out of poverty rose from 1,987 yuan in 2014 to 11,945 yuan in 2020, growing 34.8% per annum on average.