
China: Yellow River Basin Ecological Protection and
Pollution Control Program
(Program for Result)

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

(Draft)

The World Bank

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Abbreviation

Bank	World Bank
DLI	Disbursement-Linked Indicator
DMS	Detailed Measurement Survey
E&S	Environmental and Social
ESF	Environmental and Social Framework
ESMS	Environmental and Social Management System
ESSA	Environmental and Social System Assessment
FGD	Focused Group Discussion
FYP	Five Year Plan
IA	Implementation Agency
IPF	Investment Project Financing
GRM	Grievance Redress Mechanism
LA(R)	Land Acquisition and Resettlement
NDRC	National Development and Reform Commission
NIMBY	Not in My Backyard
OHS	Occupational Health and Safety
PAP	Program Action Plan
PDRC	Provincial Development and Reform Commission
PforR	Program-for-Results
PIA	Project Implementation Agency
PIU	Project Implementation Unit
PMO	Program Management Office
SIA	Social Impacts Assessment
SSRA	Social Stability Risk Assessment
TA	Technical Assistance

1. Introduction

1.1. Objectives and Methodologies

1. This Environmental and Social System Assessment (ESSA) is prepared for the Yellow River Basin Ecological Protection and Pollution Control Program (the Program).

2. The objectives of the Program is to support Chinese government's key actions to promote integrated water use efficiency, water pollution control, and ecosystem management in selected regions of the Yellow River Basin (YRB). The Program will be implemented through the World Bank's Program for Results (PforR) financing, and will support a subset of physical and TA activities from the national and sub-national programs for Ecological Protection and High-Quality Development in the YRB, particularly in the areas of water conservation, water pollution management, ecosystem protection and restoration and promoting the application of integrated landscape approaches to catchment management.

3. The Program will manage environmental and social (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 key elements of the Bank PforR policy and directive, and identified gaps/inadequacies 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 Program 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.

4. This ESSA is prepared based on a comprehensive assessment method, including: (1) review and evaluation of existing national and local laws, regulations, policies, guidelines, and related documents; (2) field visits to sample counties in the Program areas of Henan and Shaanxi provinces, to observe the performance of existing environmental and social management systems at the local level; (3) stakeholder consultation in the whole process of program design, involving governmental authorities at different levels (provincial, municipal, county and town/township), people who may be affected, leaders of rural communities and representatives of local residents, women, poor people and ethnic minority groups. (4) Consultation on draft ESSA report. Consultation methods include face-to-face meetings, online video conferences, on-site interviews, etc. Regarding the participation of stakeholders and the consultation activities of the report, please see Chapter 5 and Annex 6-10 for details.

1.2. Program Contents and Boundary

1.2.1 Government Program

5. This PforR will support the implementation of the national program for Ecological Protection and High-Quality Development in the Yellow River Basin. This was first articulated in September 2019, with the key principles and working areas of the program elaborated in the YRB Master Plan issued on October 8, 2021. The YRB Master Plan provides a framework for all nine provinces in the basin to develop their provincial plans and actions. The YRB Master Plan requires the central government to establish a Central Leadership Group with an office under the National Development and Reform Commission (NDRC) in charge of guiding implementation, reviewing planning, policies, and coordinating major inter-jurisdictional issues. Provincial governments are responsible for organizing and promoting implementation of the program, while municipal and county governments are responsible for implementation. In addition, the YRB Master Plan designates the Yellow River Conservancy Commission (YRCC) as the agency in charge of basin-wide monitoring, regulation, supervision, and flood management. YRCC is further tasked with providing technical support to the Central Leadership Group.

6. Following the YRB Master Plan, the two PforR-supported provinces, Henan and Shaanxi, have respectively developed their own Yellow River protection plans as follows:

Henan

7. The provincial program in Henan Province is outlined in the 'Henan YRB Ecological Protection and High-Quality Development Strategy' (dated September 2021). To improve basin management and promote high quality development, the focus of the Henan YRB strategy program includes ten key working areas, including:

- **Strengthen agricultural water saving and efficiency:** agricultural irrigation system rehabilitation and renovation, water price reform, promotion of water efficiency agricultural technology, promotion of water-saving agriculture products.
- **Reduce water loss due to system leakages in urban and rural water supply:** renovation of water supply pipeline network, urban and rural toilet renovation, pilot of water reuse/recycling etc.
- **Optimize water resources allocation system:** optimization of water resource allocation, construction of reservoirs, renovation of irrigation infrastructures; urban and rural water supply projects, interconnection between river systems, integrated basin management mechanisms.
- **Enhance flood prevention and disaster response system:** establishment of Smart Yellow River monitoring system, reservoir dredging, capacity building for flood/drought response.
- **Strengthen ecological restoration according to local conditions:** afforestation/reforestation, water and soil conservation infrastructures, river channel rehabilitation.
- **Construction of ecological corridors along Yellow River mainstream** through green corridor plantation, river bank ecological restoration, wetland rehabilitation,

sustainable farmland and urban parks management, etc.

- **Restore key tributaries as ecological corridors, including Hongnong river among others, through** river rehabilitation, afforestation for water and soil conservation, riparian greening, etc.
- **Wetland protection and restoration**
- **Improve urban and rural wastewater management:** wastewater treatment facilities, sewage pipelines, engineered wetland for wastewater effluent treatment from WWTPs, etc.
- **Improve the collection and treatment of agriculture non-point source pollution.**

Shaanxi

8. The provincial program in Shaanxi Province is outlined in the ‘Shaanxi Province Wei River Basin Water Ecological Restoration 14th Five-Year Plan (2021-2025)’. The Wei River is the largest tributary of the Yellow River with a catchment area of 0.135 million km², 18% of the total area of YRB, and flowing through Gansu, Ningxia and Shaanxi provinces carrying 19 percent of the basin runoff and 30 percent of sediment of the YRB. Its catchment area within Shaanxi amounts to about 0.067 million km², making up 50 percent of the total basin area. Wei River Basin in Shaanxi occupies one third of the provincial land area but provides 56 percent of the arable land and 72 percent of the irrigated area as well as housing two thirds of the provincial population and GDP. The ‘Shaanxi Province Wei River Basin Water Ecological Restoration 14th Five-Year Plan’ issued in 2021 outlines tasks in six areas, including:

- **Water saving and efficiency:** Irrigation infrastructure renovation, reservoir and water transfer.
- **Water ecological restoration:** river rehabilitation, river bank strengthening and ecological restoration, wetland restoration, afforestation and reforestation, water and soil conservation, etc.
- **Improvement of water ecological carrying capacity:** reservoir dredging and dam strengthening, river/lake connection.
- **Enhancement of water security:** drinking water source protection, pollution control (including urban and rural wastewater collection and treatment, and agricultural non-point source pollution management).
- **Water culture heritage protection:** Eco-tourism park and facility construction, water heritage protection, education facilities.
- **Modernized and Innovative water management:** water monitoring system and smart platform, information technology equipment upgrading, institutional capacity building

1.2.2 PforR Activities and Boundary

PforR Activities

9. To address the main challenges facing the YRB, the PforR Program will support the

government’s programs in the areas of water conservation, water pollution management, and ecosystem protection and restoration, and promote innovation through integrated landscape approaches to catchment management. The activities fall into the following four result areas: (1) Improving water resources use; (2) Improving water quality; (3) Restoring key ecosystems; and (4) Promoting integrated and strategic planning. The Program will involve interventions on three levels: (a) Basin-level coordination, technical guidance, and capacity building. (b) Provincial-level development of integrated landscape approaches for catchment management. and (c) Sub-basin-level ecological protection and integrated water management.

10. The Program will focus on selected demonstration sub-basins and further scale up the integrated approach across sub-basins in the two Program provinces (Henan and Shaanxi). The planned activities in relevant provincial government programs were screened for consistency with the identified PforR result areas and acceptable environmental and social risk levels (excluding potential “high-risk” activities, see the specific screening process in Annex 3). Based on the screening results, the Program will address the key challenges of water scarcity, water pollution and ecosystem degradation, and their integration at the YRB, provincial and sub-basin levels by supporting the following activities:

Table 1-1 PforR Program Activities

Result Areas	Activities
1. Improve water conservation	<ul style="list-style-type: none"> i) Improving and rehabilitating irrigation systems: irrigation channel renovation, pumping stations and storage tanks etc. ii) Applying on-farm modern irrigation technologies iii) Adjusting cropping patterns with consumption-based design for higher value crops iv) Building or rehabilitating rural water supply system and pipelines v) Improving community capacity on agricultural water management by providing training to Water User Associations (WUAs) vi) Replacement of water saving utilities in 150 public washrooms in Sanmenxia city
2. Improve water quality	<ul style="list-style-type: none"> i) Upgrading treatment facilities of the existing municipal Wastewater Treatment Plants (WWTPs, medium-sized 10,000-50,000m³/d) to meet the upgraded effluent standards ii) Installing rural wastewater treatment systems (typical capacity of about 500m³/d, with max. 5,000m³/d) with household connections iii) Renovation of existing rural Water-saving toilet iv) Rehabilitating rural wastewater treatment pipelines v) Improving livestock and poultry manure management, i.e., increasing manure collection and treatment rate vi) Promoting organic fertilizer and precise chemical fertilizer application

Result Areas	Activities
3. Restore key ecosystems	i) Integrated landscape management planning ii) Watershed management and ecosystem restoration at the watershed level, with focus on: <ul style="list-style-type: none"> - Reforestation/afforestation with diversified local/indigenous species, - Soil and water conservation (e.g., gully control measures, terrace field improvement) - Wetland protection and restoration - Vegetation restoration with promoted natural regeneration - Natural river channel and bank rehabilitation (e.g., dredging, bank protection) - Green corridor plantation along rivers
4. Promote integrated, strategic planning	i) Preparing the integrated ecosystem and water resources management plans for the seven demonstration sub-basins in Program provinces ii) Preparing Provincial-level guidelines for the preparation of integrated ecosystem and water resources plans prepared in Program provinces iii) Developing consumption based water balance analysis approach with the applications in the demonstration regions and sub-basins iv) Developing an integrated hydro-economic model v) Piloting the “Smart Yellow River” system in selected areas of the basin vi) Training and capacity building implemented at provincial and basin levels

11. Among others, the activities under Result Areas 1-3 will be implemented in the demonstration sub-basins in Shaanxi and Henan Provinces, while Results Area 4 activities will be implemented at the sub-basin, provincial and the YRB level, promoting the application of integrated water and ecosystem management approaches in the government’s programs. The basin-level TA activities (Activities iii-v under the Result Area 4 and the associated training and capacity building activities at the basin level) will be carried out by the YRCC in alignment with the Government’s national program, which will adopt consumption-based water balance analysis to better understand the basin water balance and to inform regional water consumption monitoring and regulation. The specific TA activities proposed by the YRCC (the basin component) are as follows:

Table 1-2 Basin-level TA Activities Proposed by the YRCC

1 Improved water governance and baseline assessment
1.1 Study on improved water baseline assessment methodology
1.2 Study on ET based water management of Irrigation Districts
1.3 Water resources economic modelling (Phase II)
1.4 Study on water use monitoring and management innovation
1.5 Piloting area for Improved water governance and baseline assessment
2 Capacity Strengthening for Ecological Protection Monitoring and Evaluation
2.1 Study on upstream water variation trend and climate change adaptation
2.2 Study on Loess Plateau ecological rehabilitation assessment methodology and key technology

2.3 Study on middle-stream dam safety monitoring innovation
2.4 Downstream and Delta ecosystem & biodiversity survey and assessment
3 Project Collaboration and Capacity building
3.1 Study on YRB water and environment management standards framework
3.2 Ecological protection database of YRB
3.3 Capacity building and knowledge dissemination

Geographical Boundary

12. The geographic coverage of the proposed PforR Program has three levels, i.e., the YRB basin level, provincial level and demonstration sub-basins level.

(a) **At the YRB basin level**, the Program will support TA activities which will cover the whole Yellow River Basin under the development of the “Smart Yellow River” platform (a GIS-based basin management system). The Program will further develop the water balance analysis approach suitable for the YRB, using remote sensing-based water consumption measurements.

(b) **At the provincial level**, the integrated water resources and ecosystem management planning approaches will be piloted in seven demonstration sub-basin (as listed below in (c)) and scaled up in Shaanxi Province (focus on the Wei River Basin) and Henan Province (Yellow River). The incentives introduced by the PforR Program will allow for innovative approaches, particularly the innovations in water resources assessment and strategic planning, will be scaled up to drive the provincial programs towards success.

(c) **At the sub-basins level:**

- The Program activities in **Henan Province** cover three sub-basins, i.e., Hongnongjian River Basin, Qinglongjian-Canglongjian River Basin and Jianhe River Basin. (see Figure 1-1), which involve four counties (Lingbao, Yima, Shanzhou and Mianchi) of Sanmenxia Municipality with a total area of 9376km².
- The Program activities in **Shaanxi Province** cover four major tributaries of the Weihe River (the biggest tributary of Yellow River), i.e., Shichuan River, Beiluo River, Jinghe River, and Qishui River, with a total area of 911.14km² (see Figure 1-2). These four demonstration sub-basins spread across nine counties of the two municipalities, including Xingping, Xunyi, Liquan, Qianxian and Yongshou counties under the jurisdiction of Xianyang, and Yaozhou District, Wangyi District, Yintai District and Yijun under the jurisdiction of Tongchuan Municipality.



Figure 1-1 Sanmenxia Sub-basin of Yellow River in Henan

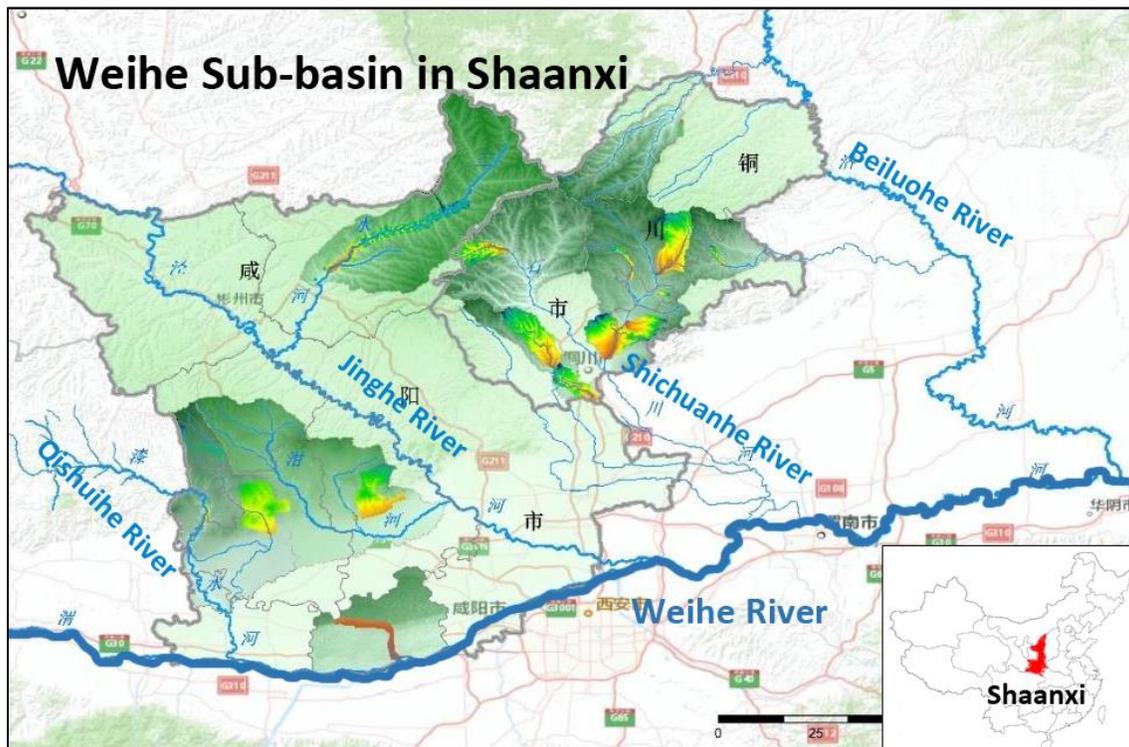


Figure 1-2 Weihe Sub-basin in Shaanxi

Timeline

13. The timeline for the PforR Program is 2022 to 2027, which aligns well with the timelines of the two provincial programs. The Program preparation and implementation period coincides with the government's working schedule to prepare and implement provincial plans, and with the period of implementation of the 14th Five-Year Plan (2021-2025). The timeline for the Program allows the task team to be engaged at an early stage, to introduce World Bank knowledge and experience to support the Government with innovative technologies and best international practices.

1.3. Implementation Arrangement

14. A Project Leading Group (PLG) will be established at the Regional Development Department of the National Development and Reform Commission (NDRC), consisting of leaders from other departments in NDRC, e.g. Department of Rural Economy Development, the Ministry of Water Resources, Ministry of Ecology and Environment, Ministry of Agricultural and Rural Affairs, Ministry of Natural Resources; the PLG will be responsible for providing guidance and supervision of project preparation and implementation.

15. A Basin Project Management Office (BPMO) for the basin component will be hosted at the Yellow River Conservation Center (YRCC). The CPMO is responsible for implementing the basin component activities and providing guidance for provincial project design and activities.

16. The implementation arrangement at provincial level are:

Henan Province: A Provincial Program Leading Groups (PPLG) will be established, consisting of the leaders from the finance bureau, provincial development and reform commission, water resources, ecological environment, forest, agriculture, and other related departments. Under the PPLG, a project management office (PMO) will be established, which is located in the Sanmenxia Water Resources Bureau, responsible for the implementation and management of the project. In addition, the PMO will also set up an expert group to provide technical advice and suggestions for project implementation. The members of the expert group will include experts in the fields of water resources, forestry, water pollution prevention, and agriculture etc.

Shaanxi Province: The implementation arrangement in Shaanxi Province is similar to that in Henan Province. A project leadership group will also be established at the provincial level. Its members include the provincial water resource department, ecological environment, forestry, agriculture and rural departments. A PMO will be established under the leading group. The office is located in the Provincial Water and Soil Conservation and Resettlement Center under the jurisdiction of the Provincial Water Resources Department, which is responsible for the preparation and implementation of the Program. Similarly, the project office will also set up a similar expert group to provide technical consultation and suggestions for project implementation.

2. Screening of Program's E&S Impacts

2.1. E&S Exclusion List

17. During the Program design and E&S assessment, the principles and requirements of E&S impacts screening in the Bank policy were fully considered, and the activities included in government programs were 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.

18. When defining the boundary of the Program, the exclusion principles of the Bank Guidance¹ were first applied, where all activities with the following potential major E&S impacts were 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.
- 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.

19. Second, by reviewing the planning activities under the government programs with field visits to targeted Program areas, further environmental and social impact analysis was also

¹ Para. 14 of Bank Guidance for Program-for-Results Financing Environmental and Social Systems Assessment (September 18, 2020).

carried out. Based on the field observation and review findings, the following types of activities with potential “high risks” were also excluded from this PforR financing:

- 1) Remediation of old mines;
- 2) Wetland construction that may involve large-scale land acquisition.
- 3) Water transfer projects.
- 4) Reservoir dredging, dam reinforcement and rehabilitation of dangerous reservoirs.
- 5) Construction and expansion of urban sewage treatment plants with a total capacity of more than 50,000 m³/day or any facilities involving industrial wastewater treatment; and
- 6) Other activities that are classified as Class A (requiring full EIA Report) according to the latest national Catalogue for the Classified Management of the Environmental Impact Assessment of Construction Projects², for example, river rehabilitation (including dredging) in environmentally sensitive areas³, river dredging activities involving contaminated dredged material, etc.

2.2. E&S Risks Classification

2.2.1 Program Activities and Potentially Associated Activities

2.2.1.1 Program Activities

20. According to the relevant plans of the Sanmenxia sub-basin in Henan Province and the Weihe River sub-basin in Shaanxi Province, as well as the World Bank’s PforR environmental and social screening principles, the Program activities are defined and listed in Table 1-1. More specifically, the activities in Henan and Shaanxi are as follows:

- **Henan:** irrigation channel renovation, pump stations and storage tanks, water-saving toilet renovation, construction/renovation of rural drinking water supply facilities and pipeline network, adjusting cropping patterns with consumption-based design for higher value crops, afforestation/reforestation, water and soil conservation works, gully control measures, ecological terrace field improvement, green corridor plantation along rivers, river bank ecological rehabilitation, river channel rehabilitation, township and rural wastewater treatment plants, and collection pipelines, improving community capacity on agricultural water management by providing training to Water User Associations (WUAs), upgrading treatment facilities of the existing municipal Wastewater Treatment Plants (WWTPs) to meet the upgraded effluent standards, improving livestock and poultry manure management, i.e. increasing manure collection and treatment rate, wetland protection and restoration, and promoting organic fertilizer and precise chemical fertilizer application, etc.

² Currently Version 2021, which was issued on Nov. 30th, 2020.

³ Environmentally sensitive areas refer to the areas subject to the control requirements of ecological redlines, including national parks, natural reserves, world culture and nature heritage, famous scenic spots, Particularly Sensitive Sea Areas, drinking water protection zones, permanent basic farmland, basic grassland, natural parks (forest parks, geological parks, ocean parks), critical wetland, natural forests, critical natural habitats, nature-based aquaculture sites, key areas identified for soil erosion prevention and control, desertified areas, enclosed and semi-enclosed sea areas.

- **Shaanxi:** adjusting cropping patterns with consumption-based design for higher value crops, irrigation area planning and infrastructure improvement, river rehabilitation (including ecological bank protection and river dredging), water source area protection, soil and water conservation, water conservation afforestation/reforestation, improving community capacity on agricultural water management by providing training to Water User Associations (WUAs), upgrading treatment facilities of the existing municipal Wastewater Treatment Plants (WWTPs) to meet the upgraded effluent standards, improving livestock and poultry manure management, i.e. increasing manure collection and treatment rate, promoting organic fertilizer and precise chemical fertilizer application, and institutional reforms, etc.

21. Based on the scale and nature of these types of typical activities, supplemented by a number of field visits results of sample counties, townships, and rural communities in Henan and Shaanxi Provinces, these types of activities required to achieve the Program results are very unlikely to fall under the circumstances defined in the exclusion list. Institutional strengthening and capacity building activities in the two provinces are all technical assistance activities. These activities is to improve environmental management and promote ecological protection, and they do not fall within the scope of the exclusion list. In addition, the Basin Component activities are all technical assistance activities (research and capacity building activities), and do not involve physical or civil works. Therefore, these types of projects can be included in the scope of Program for further environmental and social impact and management system analysis.

2.2.1.2 Potentially Associated Activities

22. Through the identification and analysis of the above-mentioned typical activities, the task team analyzed the situations that may involve associated activities that would be required to meet Program objectives but are not explicitly defined as Program activities or included in the expenditure framework projects. The ESF definition of “Associated Facilities”⁴ was referred to in the analysis, and the followings were identified as Associated Activities related to current proposal of Program activities.

23. It is noted that **rural water supply** activities may have potentially associated activities, that is, the conversion of rural water supply sources, the improvement of water supply facilities and the renovation of irrigation infrastructures in Henan Province may require reservoirs as water sources. To understand this potential and any associated risks, the World Bank team conducted a special survey. Through on-site investigation in several counties in the Program area of Sanmenxia City, Henan Province, the ES team found that all proposed rural water supply and irrigation renovation subprojects will rely on **existing reservoirs/dams**, and there is no need to build new reservoirs/dams for the water supply activities under the Program. The operation and maintenance practice of these reservoirs and dams could pose potential risks on the success of relevant Program activities.

⁴ The term “Associated Facilities” under the World Bank’s Environmental and Social Framework policy means facilities or activities that are not funded as part of the project and, in the judgment of the Bank, are: (a) directly and significantly related to the project; and (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist.

Accordingly, a due diligence review of the systems regulating these reservoirs has been carried out with key findings included in the following E&S contextual risk assessment section and Annex 4.

24. For other activities under the Program, some township and rural sewage treatment plants will include sludge treatment, from which the dry sludge will be sent to the existing approved/licensed solid waste treatment facilities for final disposal, such as incineration plants or landfills. This issue has also been considered in the following assessment.

25. In summary, the ES screening and assessment for the Program has been conducted covering all the potential Associated Facilities, though only some existing facilities (reservoirs/dams for rural water supply activities and solid waste treatment facilities for final disposal of sludge from township and rural sewage treatment plants) were identified relevant. The following assessment has been conducted covering these associated activities.

2.2.2 E&S Risks Screening and Classification

26. Following the above exclusion procedure, the task team has performed a further E&S impact analysis on the activities within the PforR boundary, with consideration of: 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.

27. 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, ranging from low, to moderate and substantial level, which could be mitigated through the E&S management systems. Certain activities with potentially high risks due to scale or potentially sensitive locations will be excluded.

28. The results of E&S risks and impacts screening are shown below. Detailed analysis is presented in Annex 3:

(1) Likely E&S impacts

29. As per the project development goals, the Program activities are ecological restoration and pollution control activities that will bring important positive benefits to the environment and society in the region, including the restoration and improvement of the ecological environment in the basin, the control of soil erosion, improvement of the water quality of rivers and lakes, reduction of sewage discharge in towns and villages. All these efforts will greatly improve the ecological environment and the life quality in the Program area, and make a positive contribution to the ecological restoration of the Yellow River Basin.

Most of the Program activities are environmental protection activities which aim to protect and restore the ecological environment, prevent soil erosion, and reduce pollution, such as tree planting, ecological river bank rehabilitation, water-saving toilet renovation of public washrooms, etc. There is minimal or no adverse environmental risks and impacts associated with these activities. While, some other activities may have a certain degree of environmental and social risks and impacts during the implementation process, including the construction and operation of sewage collection and treatment facilities in towns and villages, livestock manure treatment and recycling facilities, construction of civil works such as river improvement, irrigation canal reconstruction, and tree planting, forest pest control after afforestation, pesticide safety after farmland improvement, wetland infrastructure

construction, and ecological plantation sightseeing park operation. Based on the field visits, these activities' potential negative environmental impacts mainly include:

Potential Environmental Impacts:

- **Environmental impacts of construction activities:** including dust, noise, damage of surface vegetation, soil erosion, construction waste water, solid waste, water body disturbance and wildlife habitat disturbance, traffic impacts, worker safety and health, etc. These impacts are basically short-term and temporary in nature, small in scale, limited to the vicinity of the construction site, and can be properly dealt with through good construction management. After the completion of the construction, these effects will most likely disappear, and the ecological environment of the disturbed riparian zone will gradually restore and be improved. The river rehabilitation may involve dredging activities which will have water quality disturbance and water life habitat disturbance impacts. However, the river rehabilitation activities in this Program are mostly for small rivers in rural counties, and the objectives to restore natural river hydrology and ecology which has been significantly undermined, particularly considering the huge sediment load in the Yellow River basin. The temporarily disturbed aquatic habitats will gradually restore and ultimately be enhanced with the implementation of river rehabilitation. Meanwhile, the exclusion criteria established for the Program have explicitly excluded any dredging activities in environmentally sensitive areas or involving the disposal of contaminated dredged materials, which fall into Full EIA category (Cat. A) under the Chinese EIA system⁵. With the application of such exclusion criteria, dredging impact will be limited and would be outweighed by the improved ecological environment after rehabilitation. . The
- **Environmental impacts during the operation period of the subproject facilities:** including noise, odor, sewage discharge, sludge disposal, potential operational accident risks, and worker safety and health during the daily operation of wastewater treatment facilities. On wastewater management, the Program mainly includes construction/upgrading of township/village WWTPs (with typical capacity of less than 500m³/d, max. 5000m³/d), while it could also involve the upgrading of county-level WWTPs (medium-sized, 10,000-50,000t/d) to meet the more stringent discharge standard in the YRB⁶. Based on the field visit findings, the construction and management of municipal WWTPs in the Program areas are subject to the existing national regulations (including, but not limited to Chinese EIA system), which incorporate the considerations on location, technology selection, staffing arrangements for sustainable operation. The urban and rural sewage treatment facilities under this Program are of medium or small scale, and the corresponding risks and impacts are well known, and can be clearly foreseen and

⁵ River dredging as part of river rehabilitation is subject to EIA classified management requirement as listed in Table 3-2.

⁶ For example, the Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi province (DB61/224-2018) and the Water Pollutant Discharge Standard of Yellow River Basin in Henan Province (DB41/2087-2021).

dealt with by adopting well-known technologies and measures under existing regulatory requirements. No major environmental risks is envisaged.

- **Safety risks of pesticide use:** Old terrace field improvement may involve changes in agricultural crops and farming, which will lead to changes in the use of pesticides. In addition, afforestation/tree plantation may involve the prevention and control of forest diseases and insect pests, which may also involve the use of pesticides. China has established a special pesticide management system, with complete laws and regulations, safety regulations, supervision mechanisms, and clear lists of forbidden and restricted use pesticides⁷, which can ensure that the safety risks of pesticide use in the production of agricultural products are adequately managed.
- **Forest fire risk:** The daily management of forests such as soil and water conservation forests and water conservation forests under the Program involves the prevention and control of fire risks. Forest fire is a risk of forest management and protection, and is listed as a key task for governments and communities at all levels. China has established a comprehensive forest fire prevention and emergency response mechanism, which has been performing its functions for decades. Therefore, this type of risk is very low.

30. In summary, the activities under this Program are basically activities of ecological environment restoration and improvement, and environmental pollution reduction. It is foreseen that these activities will have low or moderate environmental risks. The potential environmental risks/impacts can be clearly identified, and can be effectively dealt with through mature and well-known technologies and management measures. Therefore, the potential environmental impact of this project activity is generally at a moderate level.

Potential Social Impacts:

- **Cultural heritage impacts:** Construction activities included in the Program are small-scale and unlikely to have adverse impacts on tangible or intangible cultural heritage.
- **Labor impacts:** Activities required to achieve the Program results will not require major works. Important considerations such as the 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. are considered to have low or moderate incremental social risks. It is important that strong systems are in place to manage forced labor and/or child labor in sectors such as agriculture and small and medium sized enterprises which are global social challenges. The small scale of physical activities under the Program and the strong legal and regulatory systems at National and Provincial levels will allow these risks to be effectively managed.
- **Community impacts:** The site selection of wastewater treatment facilities may lead to risks such as impacts on the living environment and property value of community

⁷ The national list is in line with international conventions and practices. i.e., high toxic pesticides (type I of WHO RECOMMENDED CLASSIFICATION OF PESTICIDES BY HAZARD) is forbidden, and a series of safety and health regulations and procedures are in place to manage the restricted and other types of pesticides.

residents, disease brought by labor influx, and potential environmental, traffic and safety problems during construction and operation.

- **Involuntary resettlement:** The plans for Shaanxi and Henan provinces involve the use of land for some construction activities, which may be affected by involuntary resettlement. Among them, the amount of land acquisition for new wetlands, new roads (such as riverside roads, rural roads) and other activities is not easy to control, and the problem of land use indicators is relatively sensitive. Such activities would be high risk and therefore excluded. Other activities, such as those which may involve land use are small in scale, and some are only temporary land use. These activities would be informed by effective community engagement and consultation to ensure impacts are minimized and include:
 - ✓ upgrading treatment facilities of the existing municipal Wastewater Treatment Plants (WWTPs)); largely carried out on the existing WWTPs, or requiring small scale land use, e.g., around 10mu of additional land use for the upgrading activities;
 - ✓ construction of rural sewage treatment systems to meet local community needs, including rural sewage treatment plants with about 100 to 400m² for each as well as some underground connection pipeline with temporary land occupation;
 - ✓ construction of utility facilities of poultry and livestock manure with around 20mu on the existing poultry and livestock farms;
 - ✓ construction/renovation of rural water supply facilities, e.g., water supply stations with land use around 20mu for each, pump stations with 5m² of land use for each that are mostly selected to be the unused/disused land, and some underground pipeline network with some temporary land use. Storage tanks or stormwater ponds will be utilizing the existing rural water ponds mostly or building some new ponds with about 200 to 700m² of lands that are normally selected to be the collective unused lands;
 - ✓ construction for some water and soil protection works, including i) gully control works that are basically conducted on the edges of cliff bodies or embankments of existing creeks/rivers, and will barely occupy farmers' land, ii) water source area protection that will be conducted on existing water source protection lands, and few cases of land occupation outside the boundary; and iii) ecological terrace field improvement on existing farmers' land to help improve the land productivity, which are generally carried out between November to February next year to avoid affecting the agriculture production work; and
 - ✓ ecosystem restoration of watersheds like wetland protection and/or restoration, and reforestation/afforestation which will be restricted within the existing river courses, while for vegetation restoration are carried out on existing mountains or land rent from the farmers or collective economic groups.
- For involuntary resettlement, the existing social management system includes management mechanisms for the relevant impacts, including ways to restore or even improve the livelihoods of affected farmers, therefore, impacts and risks of small-scale resettlement will be limited.
- **Livelihood impact:** The substitution of organic fertilizers for chemical fertilizers may bring problems such as cost increasing and needs of corresponding guidance. In addition, adjusting cropping patterns with consumption-based design for higher

value crops may bring potential risks of farmers' livelihood if it is lack of management. Therefore, the adjustment shall be carried out based on appropriate design and management and ensure the livelihood of farmers will be better, or at least not lower than before. Effective community engagement and consultation processes will be important in achieving these outcomes.

- **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 to 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.

31. The Basin Component and capacity building activities of the two provinces also include some technical assistance activities. The Basin Component mainly include TA activities for water resources assessment, monitoring, standard system and database construction, and management capacity building. The TA at provincial level mainly includes the preparation of agricultural irrigation water-saving plans, ecological restoration and water and soil conservation plans, and capacity training activities. Among them, the results of plans development and standards development, if implemented, will have potential downstream indirect environmental and social impacts, which need to be identified and analyzed in the specific research process. While it is foreseeable that because these TA research are targeted at improving the ecological environment and protecting public health, their conclusions and recommendations will unlikely propose actions that will have significant negative impact on the ecological environment and the public. Therefore, the downstream environment and social risk is of these TA activities are low. Given the nature of these pro-environmental TAs, the environmental impacts (direct, indirect and cumulative) are inherently built into the research process, and the conclusions and countermeasures will be reflected in the TA deliveries. During the Program implementation, the Bank task team will provide technical supports in preparing and implementing these TA activities to ensure that the downstream E&S considerations are adequately incorporated, including the review of TORs and TA deliveries.

Cumulative Environmental and Social Impacts:

32. In addition to the environmental and social impacts of the above-mentioned, the potential cumulative impact of the Program is also considered since the Program involves various investments in multiple counties of the two provinces as part of the government programs, also the potential cumulative impacts from other non-Bank program activities in the Program area of Yellow River Basin. In this regard, it is worth noting that all activities

under the PforR are activities supporting environmental protection and ecological restoration with the exercising of E&S screening. According to the exclusion criteria, this Program will not involve environmentally sensitive areas, and the Program's development objective is to support integrated water use efficiency, water pollution control, and ecosystem management, in selected regions of the Yellow River Basin. Therefore, the Program activities focus on restore and enhance natural environment and ecological function with cumulative positive environmental and social benefits. It does not include large-scale infrastructure that may adversely alter natural environment or river hydrology, or any activity that may lead to regional industrial/urban development. Given the nature and scale of the Program activities, there is low risk for the Program to interact with other activities in the Program provinces to exacerbate/accumulate negative environmental and social impacts at regional scale. Therefore, the cumulative E&S effects of the Program will be mainly reflected as positive benefits with net effect of greatly promoting pollution reduction and environmental improvement in the two provinces. The cumulative positive environmental benefits are mainly reflected in the following aspects:

- **Reduction of pollutant discharge:** The construction of township and rural wastewater treatment facilities and sewage pipeline networks will significantly reduce the amount of pollutants entering surface water bodies in each township. At present, the sewage treatment facilities in the cities of the two provinces are basically complete, while the sewage collection and treatment facilities in the rural towns are far from complete, which has become one of the main factors of water pollution in the river basin. Therefore, the numerous township sewage collection and treatment facilities activities under this project will greatly reduce the discharge of domestic sewage pollutants and have a positive cumulative impact on the entire basin.
- **Improvement of soil erosion:** Henan and Shaanxi are areas with serious soil erosion in the middle and upper reaches of the Yellow River. The Program will vigorously enhance management measures within the forests and facilities for soil conservation and water source protection in the Program areas, which will effectively reduce the total amount of soil erosion, having a positive cumulative impact on improving the water quality of the Yellow River Basin;
- **River ecological environment improvement:** This Program will focus on a large number of river channel improvement, ecological bank protection and other activities, which will effectively improve the overall ecological environment quality of each river, improve water quality, enhance ecological functions, reduce soil erosion, and reduce total amount of waste into the river systems, which when scaled up will generate huge cumulative environmental benefits for the entire basin.
- **Management capacity strengthening:** The capacity building activities under the Program will further enhance the institutional organization, improve the technical standard system, and strengthen the management capabilities at the level of the entire river basin, thereby generating long-term positive benefits.

33. The overarching government program, i.e., "Yellow River Basin Ecological Protection and High-quality Development Plan", is based on a comprehensive assessment of the

environmental protection and development of the entire Yellow River Basin from a strategic level, and thus has provided the guidelines mainstreaming environmental protection and ecological restoration, for example, requiring the maintenance of ecological flow, which are being used to guide the development of the provincial/sub-basin level plans in the Yellow River Basin.

34. Nevertheless, with the implementation of the PforR activities along with the government programs, potential negative E&S cumulative impacts still need to be assessed and addressed in planning interventions at the sub-basin levels, particularly considering the various types of interventions and insufficient coordination of ecological and water management action across jurisdictions and sectors at current stage. In the highly populated Program areas, the tradeoff between economic output and environmental protection should be carefully analyzed to secure the achievement of positive environmental impacts while avoiding and minimize potential negative impacts on various water users in the river basins as the cumulative result of Program implementation. Therefore, the overall likely E&S risk level of the Program is “**Substantial**” considering the assessment and planning of integrated water resource and ecosystem management at the sub-basin level to be piloted and scaled up in two Program provinces (Henan and Shaanxi).

(2) Likely E&S contextual risks

35. The physical activities of this Program are located in the Yellow River sub-basin of Sanmenxia City of Henan Province, and the Weihe River sub-basins under the jurisdiction of Xianyang City and Tongchuan City in Shaanxi Province, largely in small towns and rural areas.

36. Among these activities, the plantation of soil and water conservation forests, the construction of soil and water conservation facilities, ecological bank protection, river rehabilitation, irrigation canal facility renovation and other activities are basically located in the rural background environment, that is, mainly farmland or modified habitats. Deemed China's "Mother River" and "the cradle of Chinese civilization," the Yellow River and its tributaries are highly disturbed by human activities for long, particularly in the middle stream of the Yellow River in the Program areas. The purpose of the activities is to restore and improve the quality of the ecological environment in these places, rather than destroy or change their ecological service functions. Activities such as township and rural water supply, township and rural sewage treatment facilities and pipeline network construction are mainly concentrated in small towns or villages where people live. These activities have important potential impact on water use of and pollution load to the Yellow River basin. The Program areas are not particularly of high biodiversity, but will contribute significantly to the improvements of ecosystem quality in the YRB. Under the background that China has established a national ecological redline protection zoning system⁸, the activities of this project will not involve natural habitats with important ecological values/functions within the ecological protection redline. Activities involve general natural habitats and modified

⁸ China has established an ecological redline protection zoning system since 2015. Ecological redline refers to area that has special and critical ecological functions and must be strictly protected, usually including areas with important eco-services (e.g., water conservation, biodiversity maintenance, water and soil conservation, windbreak and sand fixation, coastal ecological stability) or with high ecological sensitivity/fragility (e.g., water and soil erosion, desertification, salinization). By 2020, this Eco-Redline protection zoning is completed at all levels of governments in China.

habitat are all environmental improvement activities aiming at restoring and improving the original ecological environment quality. Therefore, the environment and social contextual risk of the Program is moderate.

37. In Henan Province, the water supply project activities in villages and towns may involve the conversion of groundwater sources to surface water sources (for the purpose of aquifer and groundwater protection), and therefore need to rely on existing reservoir facilities. The safety of existing reservoirs and dams is a potential E&S contextual risk. To assess such risk, the task team conducted a due diligence review of the existing reservoir/dam safety for Sanmenxia city (Annex 4). Based on the due diligence review, there are total 88 reservoirs, one large, five middles, and 82 smalls, were under jurisdiction of Sanmenxia Water Department⁹. Most of dams were built in 1960s to 1970s. The last round dam safety evaluation during 2000-2010 certified that all the dams are Class A, i.e., safe to operate as designed. Except those very small (Small II class) reservoirs managed by villages, all the reservoirs were managed by special institutes with professionals sufficiently funded. All reservoirs have well-established operational and maintenance manuals. There was no incident or failure reported during the past decades. The municipality is planning to carry out another round of inspection and remediation during the 14th Five Year Plan to ensure the safe operation of the dams under its jurisdiction. It is thus expected that all the dams would be reinforced or upgraded prior to the end of 2022. Therefore, it is concluded that this contextual risk related to dam safety is moderate.

38. In terms of social context, the Program activities are located in towns or rural areas, and agricultural production income is still the main source of income for local households. There are multiple production models in agricultural production such as small farmers, self-employed, production cooperatives, etc., and more and more small farmers are combined through land leases, equity shares, etc., and shift from the past mainly planting corn and wheat crops to fruit plantation. In addition to benefiting from land leases or holding shares, farmers can also earn wage income through planting or working in cooperatives, which can increase their income, especially for the elderly, women, and poor people in rural areas. In addition to planting, agricultural production in various regions also organically combines planting and livestock breeding, which can reduce the use of chemical fertilizers and increase the use of organic fertilizers, and improve the quality of crops.

39. The Program area is located in the northern part of the two provinces of Shaanxi and Henan. In the past, farmers generally used dry toilets, and the sewage collection and treatment facilities were not complete. The sewage from the kitchen and bathroom was traditionally discharged without treatment. Meanwhile, many farmers lack of awareness of environmental protection and financial resources and technology to upgrade household facilities. Therefore, the implementation of this Program is conducive to improving the local living environment and enhancing the awareness and knowledge of environmental protection of rural residents.

40. In summary, as assessed above, the environmental contextual risk is considered to be moderate given the most likely locations/contexts. The social contextual risk is also

⁹ Water reservoirs in China are classified into three categories, i.e., Large (capacity over 100million m³), Middle (10 – 100 million m³), and Small (Small I: 1 -10 million m³; and small II: 0.1-1 million m³).

considered as moderate given the overall social benefits and manageable social contextual risks. Therefore, the overall likely E&S contextual risk is "moderate".

(3) Likely institutional risks

41. The E&S management of this Program will involve many government departments, such as ecological environment, natural resources, water resources, agriculture and rural affairs, forestry, and emergency management etc. Because the Program itself is consistent with government programs and actions which are highly consistent with the responsibilities and objectives of various departments, all relevant departments have extremely high political commitments and support for the implementation of Program activities. Based on the current institutional settings of China's provincial, municipal, and county governments, all relevant departments are managed in accordance with existing laws and regulations, and corresponding institutions and personnel have been set up. As government departments, the personnel arrangement and budgets are guaranteed.

42. As the Program will involve multiple areas of watershed protection, covering a wide geographical range and involving different regions and numerous management agencies, communication and coordination between different departments requires a certain amount of effort. Therefore, the overall institutional risk level is "moderate".

(4) Likely political and reputational risks.

43. The Program will help improve the 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 Yellow River Basin protection and high-quality development, 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.

(5) Overall E&S risks

44. Overall, based on the above assessment from four risk dimensions, the direct E&S impacts associated with proposed Program activities are not expected to be significant since the Program has been designed for clear environmental protection targets in line with the national YRB program, and the exclusion criteria has been established to rule out all the activities with potential high E&S risks. However, potential negative E&S cumulative impacts still need to be assessed and addressed as part of the Program in planning specific interventions at the sub-basin levels, particularly considering the various types of interventions and insufficient coordination of ecological and water management action across jurisdictions and sectors at current stage. In the highly populated Program areas, the tradeoff particularly considering the tradeoff between economic output and environmental protection should be carefully analyzed to secure the achievement of positive environmental impacts while avoiding and minimize potential negative impacts on various water users in the river basins as the cumulative result of Program implementation. Therefore, the overall rating of E&S risks of the Program is rated as "**Substantial**".

3. Environmental Management System Assessment

3.1. Description of Environmental Management Systems

45. 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"> - Environmental impacts during construction, including dust, noise, odor, wastewater, solid waste (including sludge), vegetation damage, natural habitats and biodiversity impacts, soil erosion, traffic disturbance, community safety, etc. - Odor, wastewater, noise, and solid waste (including sludge) discharge during facility operation; 	<ul style="list-style-type: none"> - Ecological environment protection and pollution control systems (including EIA system, pollution control system) - Water and soil conservation management system 	<ul style="list-style-type: none"> - Ecology and Environment authority - Water Resources authority
<ul style="list-style-type: none"> - Worker and community health and safety risks during construction and operation 	<ul style="list-style-type: none"> - Work safety management system - Occupational disease prevention system (this system is assessed in chapter 4) 	<ul style="list-style-type: none"> - Sectoral authorities for their specific sector - Emergency Management authority - Health authority
<ul style="list-style-type: none"> - Environmental and health risks of pesticide and fertilizer application 	<ul style="list-style-type: none"> - Pesticide management system - Fertilizer management system 	<ul style="list-style-type: none"> - Agriculture and Rural Affairs authorities
<ul style="list-style-type: none"> - Forest fire risks and potential environmental risks of pest control 	<ul style="list-style-type: none"> - Forest fire control system and pest management system 	<ul style="list-style-type: none"> - Forestry authority - Emergency Management authority

46. 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) work safety management system, and (3) pesticide

and fertilizer management system, and (4) forest fire control and pest 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, occupational health 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

47. 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 regulation, and over 1,000 technical guidelines and standards at the state level, and constitutes the main regulatory framework for the environmental risks and impacts involved in the Program activities, covering various fields of EIA, pollution prevention and control, ecology and biodiversity protection, etc.

48. ***Environmental Protection Law*** is the fundamental law in China's environmental protection, and pollution prevention and control system. Its 2014 amendment is regarded as the most stringent 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. The law requires that EIA should be conducted for construction projects with environmental impacts as well as for certain type of development plans. In addition, it stipulates that the state practices an environmental protection target responsibility system, an evaluation system, an ecological protection compensation system, "three simultaneities" system, 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 certain types of development plans¹⁰.
- **Pollution prevention and control "three simultaneities"**: Facilities for the prevention and control of pollution must be designed, built and commissioned together with the main project. The three simultaneities system shall be supervised by local environmental protection authorities.
- **Total emission control**: 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 allocated and fulfilled by the governments of the provinces, autonomous regions and municipalities directly under the central government. Enterprises and public institutions shall obey the total pollution amount cap targets assigned to them while complying with the national and local pollutant emission concentration standards.

¹⁰ This means land utilization plans, and construction, development and utilization plans of areas, watersheds and sea areas. The requirement of preparation of Planning EA (similar to Strategic EA) is implemented as part of EIA system, similar to project EIA, along with the plan development and approval procedures.

- Pollutant discharge permit: 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: The State requires all local government to draw a red line for strict ecological protection in the key ecological function areas, ecological sensitive areas, and vulnerable areas.
- EIA information disclosure and public participation: 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

49. Under the general framework of the *Environmental Protection Law*, the main systems related to the environmental risks and impacts management of the Program activities include:

(1) EIA System

50. **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 guidelines.

51. 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:

- Classification 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).¹¹
- 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, 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

¹¹ The EIA classification system in China provides an integrated screening and classification method with consideration of project types, scales and sensitivity of contextual locations. Following the PforR principle, the Program will exclude activities that are classified as class A, and only support class B and C activities. EIA Form (for class B projects) is a simplified EIA report (normally around 100 pages or more) organized by a standard chapter structure. It provides full coverage of all relevant environmental impacts, while certain aspects of the assessment may not require the same in-depth as compared to EIA Report (for class A projects), e.g., air dispersion modelling is not required if air pollution emission is not a major pollution concern following the EIA technical guidelines.

- according to law, the project proponent shall not commence construction.
- **Accountability 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 post-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.

52. To facilitate the implementation of EIA 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 specifies 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 specifies 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 requires three-round disclosure requirements for construction units, 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.

53. In addition, there are a large number of other sectoral laws and regulations that provide direct and indirect requirements for construction projects in the EIA process, mainly including:

- **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. Various classification of protected wild animal and wild plants are defined by these laws, such as national (Class I and Class II), provincial (Class I and Class II) protected species, and list of such species are issued by central and provincial governments respectively. 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

54. 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, 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

55. For a construction project, water and soil conservation impacts and measures are reflected in the EIA system. In parallel, China has established a separate water and soil conservation regulation system under the Water Resource authority for construction projects, consisting of a number of laws, regulations, policies, management measures, technical guidelines, 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 m³ 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 m³, 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

56. Except the EIA, and pollution prevention and control systems, and the 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 requires 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 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 river/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 supervision¹².

- **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.
- **Regulations on Pollution Prevention and Control for Large-scale Livestock Breeding (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.

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

Henan Province has formulated a number of relevant local regulations and measures, including the *Regulations on Environmental Protection for Construction Projects*, *Regulations on Water Pollution Control*, *Regulations on Air Pollution Control*, *Water Pollutant Discharge Standards for the Yellow River Basin in Henan Province*, *Measures for the Management of*

¹² 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.

Yellow River Courses in Henan Province, Three-year Action Plan for the Full Implementation of River/Lake Chief System in Henan Province (2018-2020), Eco-Redline in Henan Province, and so on.

Shaanxi Province has also formulated a series of relevant local regulations and measures, including *Regulations on Environmental Protection of Construction Projects in Shaanxi Province, Regulations on Water Pollution Control in the Weihe River Basin of Shaanxi Province, Regulations on Air Pollution Control in Shaanxi Province, Regulations on the Management of the Weihe River Basin in Shaanxi Province, Procedures on the Ecological Environment Protection of the Weihe River Basin in Shaanxi Province, Shaanxi Weihe River Basin Water Ecological Restoration Plan (2021-2035), Shaanxi Province Ecological Protection Red Line Delineation Plan* and so on.

58. In sum, China has established a comprehensive 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 provides a reasonably sound legal framework to ensure the whole-process management of the Program’s environmental impacts.

3.1.1.2 Implementation Mechanism

(1) EIA System Implementation

EIA document preparation

59. As discussed above, China has established a detailed and comprehensive catalogue for the classification of the environmental impact assessment of construction projects for screening at the preparation stage based on sector, nature, location, scale, and environmental sensitivity.

60. 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.

61. 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:

Table 3-2 PforR Activities and EIA Classification

Activities and Code Number	EIA Report (A)	EIA Form (B)	EIA Registration Form (C)
94. Drinking water production and supply (excluding village supply projects)	/	All	/

95. Sewage treatment and reuse	New construction or expansion of urban and rural wastewater treatment plants with daily treatment capacity of 100,000 tons or more.	New construction or expansion of urban and rural wastewater treatment plants with capacity between 500 – 100,000t/d;	Others (excluding upgrading and renovation projects; excluding septic tanks and reuse treatment after septic tank treatment; excluding construction only of sedimentation tanks for treatment)
125. Irrigation project (non-water source project)	Involving environmentally sensitive areas	Others (excluding high-standard farmland, drip irrigation and other water-saving renovation projects)	/
126. Water diversion project	Trans-basin water diversion; diversion of large and medium-sized rivers; the total annual diversion of small rivers accounts for 1/4 or more of the natural annual runoff of the diversion section; those involving environmentally sensitive areas	Others	/
128. River and lake rehabilitation (excluding rural ponds and weirs and canals)	Involving environmentally sensitive areas	Others	/

62. Other activities that are not listed above (such as soil and water conservation afforestation, forest enclosure, soil and water conservation facilities, terrace transformation, ecological bank protection, green landscape plantation, etc.) have little or no potential environmental impact, or they are environmental restoration and improvement activities by nature. Therefore, in accordance with regulations, there is no need to prepare a separate environmental impact assessment document. The environmental protection measures are inherently built in such activities through project design and relevant technical specifications, e.g., technical guidelines of afforestation, soil and water conservation (as described in Section 1.1.1.1).

63. According to the EIA classification catalogue, the activities of this PforR project in Henan and Shaanxi provinces do not involve EIA Report-type projects. Among them, urban and rural sewage collection and treatment facilities are small-scale treatment facilities (typically 10 – 500t/d) at the township and rural village level. Irrigation canal reconstruction is the improvement of existing irrigation canals, and river and lake rehabilitation (subject to EIA requirement as mentioned in the above table) do not involve environmentally sensitive areas. Dredging in river rehabilitation will be assess in the specific EIA documents following the

EIA guidelines to ensure the risks are assessed, and appropriate mitigation measures are developed. Therefore, in general, the project activities in this PforR belong to the RIA form (B), EIA registration form (C) or projects that do not require an environmental assessment in China's domestic environmental assessment system.

EIA review and approval

64. For the management of EIA, the Ministry of Ecology and Environment has formulated a unified national management system. According to China's regulation, different levels of ecological and environmental departments are responsible for EIA review and approval according to factors such as project approval, investment scale, and environmental sensitivity. The Program activities are generally within the scope of review and approval by the county level Ecological and Environment Bureau (EEB). Municipal-level EEB only review projects that are heavily polluted or that cross districts and counties, while the Provincial Department of Ecology and Environment mainly reviews the approval of large-scale projects that are heavily polluted or cross-city areas. Such projects are not included in the projects supported by this Program.

65. For EIA preparation, China currently adopts a nationally unified qualification system for EIA engineers, that is, technical personnel responsible for preparing EIA documents must pass the national qualification examination and obtain the qualifications of registered EIA engineers.

66. During the preparation of the EIA documents, the owner unit (and EIA consultant) shall carry out public participation in accordance with the requirements of the *Environmental Impact Assessment Law* and the *Public Participation Measures for Environmental Impact Assessment*, typically through interviews, meetings, and questionnaire surveys. For projects that need to prepare an EIA report, the construction unit needs to carry out three rounds of publicity during the preparation of the EIA, that is, the start of the EIA work information publicity (within 7 days); the publicity of the draft report (not less than 10 days); the final report is submitted for approval. The draft (together with public participation instructions) is published. For projects that have many doubts and/or professional issues, it is necessary to hold a symposium/hearing meeting and carry out in-depth public participation. For projects that require the preparation of EIA report forms, the law does not mandatory the reporting of public participation in the EIA forms, however, the undertaking of public participation remains the responsibilities of project proponents according to the national Environmental Protection Law. In actual operation, for those projects that may have an impact on the surrounding sensitive points (such as location of WWTPs), the local EEB do require the owners to carry out and report on public participation activities to avoid environmental and social risks.

67. After the EIA document is received, the EEB will disclose the full documents (both EIA reports and EIA forms) for public comment for not less than 10 days. In addition, the EEB will disclose the approval opinions and decision before and after approval.

68. 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 EEB. EIA review experts are selected randomly from the expert pool set up by the provincial or municipal EEB. A review organized by a municipal or county EEB usually

involves at least three experts.

Acceptance Inspection

69. Based on the approval of the EIA documents, the project proponent will implement the required measures. At the construction stage, the construction unit 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.

70. 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 shall log into the national environmental protection inspection information platform of completed construction projects to submit the basic information of the construction project and the inspection of the environmental protection facility. Local EEB will also disclose such information.

71. Environmental protection authorities at different levels will supervise the implementation of “Three Simultaneousness” requirements and completion inspection through random selection of inspection targets and random assignment of inspectors, and disclose inspection results to the public timely in accordance with the *Measures for the In-process and Post Environmental Protection Supervision and Management of Construction Projects*.

Contractor management

72. The contractor shall implement environmental protection measures at the construction stage. The *Standard Construction Bidding Documents of the People’s Republic of China* requires 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.

73. After the construction contract is signed, the contractor will prepare a construction implementation plan, which is the specific construction plan of the contractor, which must include an environmental protection plan and a work safety management plan. During construction, the supervision consultant will supervise construction quality, safety and environmental protection work of the contractor. The project proponent and supervision units will review the construction implementation plan before construction, and supervise the safety and environmental protection work of the contractor during construction.

74. The above EIA management system for construction projects has been implemented in China for decades, and evolved into a well-established system. During the project preparation period, field visits were conducted to several representative counties including Mianchi County, Shanzhou District and Lingbao City in Sanmenxia City of Henan Province, and Wangyi District in Tongchuan City, Xunyi County and Yongshou County in Shaanxi Province. It is

observed that the types of construction projects that may be involved in this Program, such as sewage treatment plants, sewage pipe networks, engineered wetlands for effluent treatment of WWTPs, etc., have carried out corresponding environmental impact assessment work in accordance with the requirements of the local EEBs in the early stage. For some EIA form-type projects, due to the presence of surrounding villages and other sensitive points, the construction unit also carried out public participation on its own or according to the requirements or recommendations of the local ecological environment bureau, and publicized environmental impact assessment information on the website of the district and county people's government to solicit public opinions. The construction contracts included 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. Upon completion of the project, the environmental protection inspection and acceptance will be organized by the project proponent through engaging third-party consultant in accordance with the relevant requirements, and the acceptance results will be reported to the EEB for record.

(2) Implementation of pollution prevention and control system

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

76. 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 local EEBs in real time.

77. Local EEBs are responsible for the operation regulation of pollutant discharge. Except online monitoring of key pollution emission enterprises, municipal and county/district EEBs also conduct on-site inspection and supervision (through supervision teams). Normally, small enterprises with small amount of pollution emission do not have to install continuous monitoring equipment, and are monitored by local EEBs through random monitoring without prior notice.

78. The Program activities involving daily operation and pollution management is mainly the operation of county and township WWTPs :

- Township and village WWTPs (stations) are under the sectoral management of local EEBs. The pollution discharge is subject to pollution permit requirement, and effluent is subject to periodic monitoring (or real-time online monitoring) and on-site inspection by enforcement units of local EEBs. Through the field visits, it is noted that WWTPs have been constructed at all Program counties Henan Province and Shaanxi Province, with online monitoring equipment (supplemented by daily manual sampling) which transmits the monitoring data to the county EEBs in real

time. The sewage treatment facilities at the township level have not yet reached full coverage, some towns have not yet built sewage collection and treatment facilities. Due to the relatively small scale (generally tens of tons/day to several hundred tons/day), the township and village-level sewage treatment facilities are not required to install online monitoring instruments. Especially for village-level sewage treatment facilities, most of them use pre-fabricated equipment sets with simple and mature techniques which basically do not require daily maintenance. Typical sewage treatment in rural areas include: (1) renovation of household toilets for return to farmland; (2) integrated equipment sets; (3) engineered wetland. The drainage of township and rural sewage treatment plants is monitored by manual sampling, and the general frequency is once every quarter or half a year. The district/county EEBs carry out routine supervision of the compliance operation of the sewage treatment facilities through their enforcement units. Through field visits in Wangyi District of Tongchuan City, Xunyi County of Xianyang City, Yongshou County and other places, the Bank team learned that sewage treatment stations have been basically built in the township level. The scale is generally between 100-300m³/d. Only one of the 18 townships in Xunyi County has not built a sewage treatment station yet. Village-level sewage treatment stations are still under construction. According to the "14th Five-Year Plan" of Shaanxi Province, sewage treatment facilities should be built at the village level with mature conditions, and the coverage rate will reach 60% by 2025. Other villages that cannot be treated centrally will realize sewage treatment through toilet renovation, and regularly clean them for return to farmland. In Mianchi County of Sanmenxia City, only 17 sewage treatment facilities have been built in rural areas (out of 236 villages in the county). The monitoring of effluent is required for facilities with capacity of 20 tons/d or more on a quarterly or six-month basis. There are 256 villages in Shanzhou District, of which 85 villages have built rural domestic sewage treatment facilities or connected to the urban sewage pipeline network. It is noted that for the existing township and village wastewater treatment facilities, it is not uncommon that there is an issue of sustainable operation due to both lack of adequate financial resources and lack of technical capacities.

- This Program supports the improvement of the existing small-scale livestock and poultry farms manure treatment facilities to realize the full utilization of manure organic fertilizer production and achieve zero pollution discharge. Existing farms/households are responsible for the implementation of the upgrading and improvement of manure treatment/recycling facilities, and the county-level agricultural and rural affairs bureaus are responsible for the organization, management, and supervision. Shaanxi Province attaches great importance to the resource utilization of livestock and poultry manure, 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 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 Department of Agriculture and Rural Affairs conducts the assessment and evaluation of the utilization of provincial livestock and poultry manure resources every year, and randomly selects a certain

number of farms (including large-scale farms and farmers below the scale) for assessment. In addition to the supervision and management of the agricultural authorities, the supervision and law enforcement team of the county EEB will also supervise the environmental management of the farms from time to time following the approach of "two random and one open"¹³.

(3) Implementation of Water and Soil Conservation Management System

79. 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.

80. 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.

81. Water and soil conservation measures will be implemented by the contractor under the supervision of the project 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.

82. 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 is publicly disclosed. An annual on-site sampling rate shall be not less than 10%.

3.1.1.3 Institutional Structure and Capacity

83. Due to China's unified organizational setup system, the setup of government authorities at all levels is basically the same in Henan and Shaanxi Provinces in terms of names and mandates assignment. 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), water resources authorities (river channel rehabilitation, water, and soil conservation management).

(1) Ecology and environment authorities

84. In the above environmental management systems, main regulator is the ecology and environment authority, including the provincial Ecology and Environment Department (EED), municipal and county EEBs. At township government, normally one or two full-time environmental officials are assigned as focal points for environmental management tasks.

85. Henan Provincial EED is responsible for province-wide ecological protection, and urban and rural pollutant discharge regulation and law enforcement. It has 18 divisions and 8 directly affiliated units under its jurisdiction. Among them, divisions involving in EIA management and compliance enforcement of the projects mainly include the Environmental Impact Assessment and Emission Management Division (environmental impact assessment,

¹³ Means random site selection and random inspector assigned, and results is publicly disclosed after inspection.

organizing and implementing the supervision of the "three simultaneous" system of construction projects), and the Provincial Ecology and Environment Law Enforcement and Supervision Bureau (mainly responsible for polluting units and operations Environmental protection law enforcement supervision). The Shaanxi Provincial EED has 19 divisions and 13 directly affiliated units. The divisions involved in project environmental management include the Environmental Impact Assessment Division, the Provincial Environmental Engineering Assessment Center, and the Provincial Ecology and Environment Law Enforcement and Supervision Bureau.

86. The EEB in Sanmenxia city has similar institutional structure as provincial EED, including 14 internal divisions and 5 affiliated units, of which EIA and Emission Management Division and Enforcement Team. Under the municipal EEB, each county has its own EEB. The activities under this Program are basically under the jurisdiction of the county-level EEB according to the type and scale of the projects. The county EEB has an internal unit in charge of EIA approval (usually with 1-6 staff), and EIA review is normally based on technical experts from the municipal/provincial expert pool. In addition, there is also a comprehensive environmental law enforcement team (generally have dozens of staff), responsible for the supervision and law enforcement of the implementation of environmental protection measures. Both Tongchuan City and Xianyang City in Shaanxi Province have set up municipal-level EEB, whose structure and functions are basically the same as those in Sanmenxia City in Henan Province. For example, the EEB in Mianchi County in Sanmenxia City has an internal government service unit (with six staff) responsible for EIA review and approval, pollutant discharge permit approval. The county EEB has an environmental law enforcement team with 80 personnel, responsible for construction management, environmental protection inspection, environmental protection acceptance, and three simultaneousness supervision. The EEB of Shaanzhou District has an environmental assessment unit with 3 personnel; the comprehensive environmental law enforcement team is equipped with 30 personnel. The internal comprehensive unit of the Yongshou County EEB is responsible for environmental review and approval (3 staff), and an environmental law enforcement team with 20 staff. The budgets of the county EEBs are all supported by government fiscal appropriations with sufficient funds.

87. For the activities that have environmental impact assessment requirements under this Program (mainly including township and rural sewage treatment facilities, township, and rural water supply plants), the specific supervision of the construction and operation stage is at the level of the district and county EEBs. Generally, supervision and law enforcement teams under the district and county EEBs conduct supervision through online monitoring data and on-site inspections in accordance with the principle of "two random and one open"¹⁴.

88. In terms of environmental compliant management, China has set up a national unified 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 EEB has a division handling public environmental

¹⁴ Means random site selection and random inspector assignment, and results is publicly disclosed after inspection.

complaints in accordance with the Measures for Environmental Complaint Letters and Visits. According to the information from the Sanmenxia EEB, the time limits for the above three channels are: (1) "12369" emergency pollution reports are processed in 3 days, important pollution reports are processed in 15 days, and general pollution reports are processed in 30 days; (2) The "12345" government hotline handles important pollution in 3 days, and general pollution compliant in 5 days; (3) The complaint letters and visits from the public is handled in 10 days. According to the field visits to the comprehensive law enforcement team of Tongchuan City EEB in Shaanxi Province, Tongchuan City received 713 complaints from the public and handled 713 cases from 2019 to the first half of 2021, with a 98% satisfaction rate.

89. Based on the observation of the sample districts and counties, the district and county EEBs have assigned corresponding staff to carry out corresponding tasks in accordance with their duties, and the results are satisfactory. Government agencies have sufficient budgets to ensure the normal implementation of environmental management work.

(2) Water Resources Bureau

90. The activities of this Program mainly involve district/county Water Resources Bureaus (WRB). The main responsibilities of the district and county-level WRBs include county water resources planning and supervision and management, guidance of water conservancy projects, water resources protection, river and lake protection, water and soil conservation, rural drinking water and irrigation, flood and drought prevention and so on. Based on field visits in Mianchi (Henan), Shanzhou, Lingbao, Xunyi and Yongshou counties (Shaanxi), it is observed that county EEB normally has an internal business management unit responsible for review and approval of water and soil conservation plans, and an affiliated water and soil conservation station (enforcement unit) responsible for implementation supervision. For example, the WRB of Yongshou County in Shaanxi Province has a business management division with 3 staff, and a subordinate soil and water conservation station with 15 staff; WRB in Xunyi County is equipped with 20 staff. The soil and water conservation supervision station under Mianchi EEB is staffed with 30 staff. In the actual project, the project owner is responsible for the implementation of soil and water conservation measures, and the contractor is responsible for the implementation. During the implementation process, the monitoring work is carried out in accordance with the soil and water conservation plan. The county soil and water conservation station is responsible for the supervision and inspection.

91. Since 2016, China has established a system of river chiefs/lake chiefs at all levels of governments. Leaders of local governments act as river chiefs and are directly responsible for the ecological protection and pollution prevention of the rivers within their jurisdiction. The river chief office is set up in the head of administrative directors at all levels (generally the water conservancy bureau) and is responsible for daily management. Public notice boards are set up on the banks of the river and lake, indicating the responsibilities of the river chief, the general situation of the river and lake, the management and protection objectives, and the supervision telephone number.

92. Based on the on-site inspection, each county has set up a river chief's office (located in the WRB) with full-time personnel, and set up public signs in all rivers to accept public supervision.

3) Other sectoral authorities

93. Authorities related to the Program also include authorities for county and township wastewater, livestock and poultry manure utilization and recycling. At the provincial level, the authority for county and township wastewater and domestic waste treatment is the provincial housing and urban-rural development department, however, specific construction and management functions for county and township wastewater treatment, and waste collection and treatment are at the county level. The provincial authority for livestock and poultry manure recycling is the agriculture and rural affairs department, and specific management functions are performed by county agriculture and rural affairs bureaus. The detailed arrangements are:

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. Based on field visits in both provinces, it is noted that all county housing and urban-rural development bureaus are well staffed and budgeted, have clearly defined responsibilities, and supervise WWTP operation effectively.

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. According to the investigation in Shaanxi Province, each city and county has set up a leading group to formulate implementation plans. The county agriculture and rural bureaus and relevant township governments are responsible for daily supervision and management. Except agriculture and rural affairs authorities, law enforcement brigades under county EEBs also supervise the routine environmental management of breeding farms by means of random sampling and assignment, and result disclosure.

94. Based on the results of the field visits, the institutional settings and staffing of various authorities related to the project activities are complete, the budget is sufficient, and have appropriate knowledge and ability to manage the environmental impacts related to the project activities.

3.1.2 Health and Work Safety Management System

3.1.2.1 Legal Framework

95. In China, there is a separate set of management system for work safety, which includes a series of laws and regulations, as well as corresponding implementation methods, technical specifications and standards. The country has formulated more than 80 laws and regulations, hundreds of safety production standards and regulations, and formed a comprehensive and complete safety management system. The main legal framework of this system includes:

- **Labor Law (2018 Amendment):** This law requires that labor contracts guarantee worker's health and safety, and that employers must establish sound labor health and safety regulations, comply strictly with the state labor health and safety regulations and standards, and provide labor health and safety education, healthy

and safe working conditions, and necessary labor protection equipment 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 leader 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 simultaneities”¹⁵, 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 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

¹⁵This 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.

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.

96. 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.

97. On this basis, a number of local regulations and implementation rules on safety management have been promulgated in all the provinces. For instance, Henan issued the *Regulations on Work Safety Management of Henan (2019)*,

Work Safety Risk and Hidden Hazards Management Measures of Henan (2019), *Construction Safety Standardization Guidelines*, *Construction Safety and Site Management Measures (Trial)*, *Regulations on Strengthening Implementation of Work Safety Responsibilities (2021)* and so on. Similarly, Shaanxi Province has also issued a series of related policies and regulations, including: *Shaanxi Provincial Work Safety Regulations (2017)*, *Shaanxi Provincial Construction Project Quality and Work Safety Management Regulations (2020)*, and *Three-year Action for Work Safety (2020)*, *Work Safety Law Enforcement System (2020)*, etc.

98. The above-mentioned work safety system covers the overall safety and health management of construction and daily operations of enterprises. The relevant sectoral authorities are responsible for work safety management in respective sectors, and the emergency management authority is responsible for the overall supervision. Under this general framework, specifically related to the management of workers' occupational disease prevention and control, China also has a special management system based on the *Occupational Disease Prevention and Control Law*, which is mainly supervised by the health authority. The key laws and regulations in this regards include:

- **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.

99. This occupational disease management system is further described and assessed in the Chapter 4 Social Management System.

3.1.1.2 Implementation mechanism

100. 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:

- 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.

101. Project owners, and production and operation entities are responsible subjects of work safety management, sectoral authorities (e.g., water resources, forestry, agriculture and rural affairs authorities etc.) have regulatory responsibilities for respective sectors, and overall supervision is the responsibility of emergency management authorities.

102. Through many years of project experience in China and the actual field visits to the Program counties, It is noted that the above-mentioned work safety management procedures and measures are generally well-implemented in the actual project construction and operation process. During the construction process, work safe is the top priority of project management. Contractors must set up special units, arrange full-time personnel, formulate safety plans, and implement safety measures. Supervision units are equipped with full-time

safety supervision engineers to supervise the implementation of the contractor's safety measures.

103. The main activities involving daily operation and management under this Program are mainly township and rural sewage treatment plants (stations), and township and rural water supply facilities, etc. Through field inspections in Mianchi County, Shanzhou District and Lingbao City in Sanmenxia City of Henan Province, and Wangyi District and Xunyi County in Shaanxi Province, the task team observed that work safety is the primary task of these units. Necessary safety measures can be implemented in accordance with the above-mentioned measures in the operation phase. The visited enterprises established safety management organization and assigned dedicated personnel, formulated safety management, and formulated special safety operating procedures for specific positions and operations. At the scene, relevant safety operation regulations and safety signs are posted on obvious positions beside each relevant equipment. At the same time, these companies has also formulated detailed emergency plans, equipped with emergency equipment and materials, and carried out drills periodically (typically once a year).

104. In terms of occupational disease prevention, mainly the operation of WWTPs under the Program involve occupational disease hazards and risks (hazards factors are 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 is under the responsibility of sectoral management authority, and supervised and inspected by county health commissions annually. For example, in Henan Mianchi County, county health commission conducts monitors once every three years to the WWTPs as general enterprises.

105. 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.

3.1.2.3 Institutional Structure and Capacity

106. The Program activities are implemented by county (and township) governments mainly. Safety management mainly includes construction safety at the construction stage, and safety management during the subsequent operation of township and rural wastewater treatment facilities and water supply facilities.

107. 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.

108. It is noted through field visits that a work safety committee has been established in each county, headed by a chief county leader, and composed of leaders of different government departments. 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 sectoral work safety subcommittees, covering different fields, including industrial manufacturing, mines, hazardous goods, construction, road safety, agriculture, stockbreeding, forestry, fishing, etc. All safety supervision of the Program activities are managed by respective sectoral authorities, and overall supervised by county emergency management bureaus.

109. 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.

110. In addition to the 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 (normally on an annually basis).

111. For instance, the Xunyi County Work Safety Committee has the county head as the director and the deputy head of the county as the deputy director in charge of daily management. The office is located in the Emergency Management Bureau, and the directors of 34 county government departments. The committee is responsible for guiding and supervising the work safety of the county. It holds a plenary meeting every quarter and conducts a comprehensive inspection at least every quarter. There are 14 specialized sectoral work safety committee members under the county safety committee. The competent department in charge of the industrial enterprises is the Bureau of Industry and Information Technology, which has established a work safety leading group within it, with the chief leader of the department as the team leader, responsible for the work safety supervision of project construction and facility operation under the supervision of the department. The competent sectoral department generally inspects work safety during the monthly routine inspections. The routine inspections of construction projects and operating facilities include the inspection of the performance of work safety measures. The County Emergency Management Bureau is responsible for comprehensive supervision functions, and urges various sectoral departments to perform work safety supervision and management functions. The county Emergency Management Bureau has set up a work safety supervision team. At township level, there are emergency management stations in each township, with 3-5 people in each station. At the village level, there is a safety liaison officer for each village, who is usually the village chief.

112. Through on-site inspections, the task team learned that governments at all levels attach great importance to safety issues, and all have established relevant safety management units, established relevant systems, and are equipped with dedicated staff to ensure adequate funding budgets. For the project activities under this PforR, this institutional system can provide a proper framework for safety management.

3.1.3 Pesticide Management System

113. The Program involves irrigation system renovation and terraced fields rehabilitation and renovation activities which may involve changes in crop farming, and thus changes in pesticide use. In general, one of the Program objective is to reduce the pesticide use in the program counties. In China, pesticide safety management has formed a comprehensive management system covering the entire process of production, sales and use. The legal

framework and the management institutions and capabilities involved at the level of the implementation management mechanism are as follows:

3.1.3.1 Legal Framework

114. The main laws related to pesticide management include:

115. **Pesticide Management Regulation** (revised in 2017): The regulation requires the establishment of an overall framework for pesticide management covering agriculture and forestry for pest control. It sets up the overall health and safety requirements for pesticide production, transportation, storage, sale and application. It stipulates that the agricultural authority is responsible for management and supervision the use of pesticides, that is, the agricultural authorities at the county level (and above) are responsible for the supervision of pesticides within their jurisdiction.

116. The regulation stipulates that the country implement a pesticide registration system to ensure that all pesticides are approved before entering the market. At the same time, it is stipulated that the country implements a pesticide production license system and a business license system. Pesticide sale dealers must obtain business licenses from the county-level (and above) agricultural authorities, stating: (i) Have professional knowledge of pesticides and pest control, and be familiar with pesticide management Regulations that can guide operators who use pesticides safely and rationally; (ii) Have business premises and storage locations that are effectively isolated from other commodities, drinking water sources, living areas, etc.; (iii) Have quality management, ledger records, safety protection, emergency response, warehouse management rules that are compatible with the pesticides applied for.

117. Pesticide sale dealers who purchase pesticides shall check the product packaging, labels, product quality inspection certificates and relevant license certification documents, and must not purchase pesticides from pesticide production enterprises that have not obtained a pesticide production license or other pesticide operators that have not obtained a pesticide business license. The regulation also do not allow pesticide dealers to process or repackage pesticides.

118. The regulation clearly stipulates that the county-level agricultural authorities should organize plant protection, agricultural technology extension and other institutions to provide pesticide users with free technical training, and require the forestry authorities to provide technical guidance on the use of forest pesticides.

119. It also clearly emphasizes that the state will gradually reduce the use of pesticides through measures such as the promotion of biological control, physical measures, and advanced pesticide application equipment. It is required that the county-level government should formulate a pesticide reduction plan for its administrative area, and the township governments shall assist in the development of pesticide use guidance and services.

120. The regulation requires that pesticide users should protect the environment and wild animals and plants, and must not discard pesticides, pesticide packaging or cleaning pesticide application equipment in drinking water source protection areas and rivers, and it is strictly forbidden to use pesticides in drinking water source protection areas.

121. The State encourages pesticide users to properly collect pesticide packaging and other wastes, and requires pesticide manufacturers and pesticide dealers to recycle pesticide

wastes.

122. In addition, some other laws and regulations also contain provisions concerning the production, use, and waste recycling of pesticides, such as the *Soil Pollution Control Law*, *Water Pollution Control Law*, *Hazardous Chemicals Management Regulation*, and the *Agricultural Products Quality and Safety Law*, *Agricultural Technology Extension Law*, *Food Safety Law*, etc. These laws and regulations directly or indirectly put forward corresponding requirements for the safety management of pesticides, and constitute the legal framework of the pesticide management system.

123. Under the above-mentioned legal framework, China has formulated a series of specific implementation measures, guidelines, norms and standards for the implementation of specific pesticide safety management, including: *Pesticide Registration Measures*, *Pesticide Production License Management Measures*, *Management Measures for Pesticide Business License*, *Management Measures for Recycling and Disposal of Pesticide Packaging Waste*, *Pesticide Safety Use Specification (NYT 1276-2007)*, *Pesticide Use Environmental Safety Technical Guidelines*, and a large number of technical regulations. In addition, the Ministry of Agriculture and Rural Affairs regularly updates the *List of Restricted Use Pesticides* and dynamically updates the list of prohibited and restricted pesticides.

124. In recent years, the Chinese government has vigorously promoted the zero-growth action for pesticide use. In 2015, it formulated the “Action Plan for Zero-growth Pesticide Use by 2020” and proposed that “by 2020, a resource-saving and environment-friendly sustainable management of pests and diseases will be initially established to achieve the goal of zero growth in total pesticide use”. In the same year, Henan Province and Shaanxi Province respectively issued their respective Implementation Plans for the Zero Growth of Pesticide Use by 2020. As of 2020, the two provinces have achieved remarkable results in the zero increase in pesticide use. For example, Henan Province has achieved negative growth in pesticide use for four consecutive years.

3.1.3.2 Implementation Mechanism

125. According to the Pesticide Management Regulation and related management measures, pesticide sale dealers need to obtain a pesticide business license, and must have the corresponding professional knowledge of pesticides and pest control in accordance with the regulations, and their staff must at least have agriculture, plants, pesticides and other related disciplines background university diploma, or at least a 56-hour training certificate issued by a specialized pesticide use training institution. Dealers must have suitable business premises and storage facilities, establish accounting records, and formulate systems for purchasing, warehousing, sales, safety protection, emergency response, and pesticide waste recycling. Dealers that sell restricted pesticides must have technical personnel with relevant professional knowledge of pesticide use and more than two years of work experience in agriculture, plant protection and pesticide use. According to the requirements, all business dealers must establish accounting records for the source and end-use purchasers of pesticide products, and at the same time provide detailed instructions and guidance to the purchasers.

126. The specific supervision and management are the responsibility of the agricultural and rural bureau. For the activities under this Program, the specific responsible department involved in pesticide safety management is the county-level Agriculture and Rural Affairs Bureau (ARAB). The county ARAB (through its agricultural law enforcement team) supervises and inspects the quality and safety management of pesticide dealers.

127. For example, the Tongchuan ARAB recommended a list of low-toxic and low-residue pesticide varieties. Its Agricultural Comprehensive Law Enforcement Team of Wangyi District is responsible for related administrative inspections and penalties. The 8 pesticide stores are supervised. Pesticide dealers need to obtain a pesticide distribution business license, training and examinations every year, the agricultural technology center and law enforcement team will supervise the safety management of pesticides in the market stores. The Department of Agriculture of Henan Province has also formulated a list of low-toxic and low-residue pesticides, and the county ARABs are responsible for supervision and implementation. A law enforcement team is set up under the county ARAB to be responsible for administrative inspection and punishment. For example, the ARAB of Mianchi County has two agricultural law enforcement teams, which are respectively responsible for the administrative inspection and punishment of planting and livestock breeding sectors. There are 25 pesticide stores in the county, which are issued and inspected annually by the county ARAB, and the law enforcement teams conduct supervision on them.

128. As part of the overall pesticide management system, all county ARABs in China have its affiliated county-level agricultural technology extension stations (or plant protection stations, agricultural training stations), which are responsible for providing technical services and training to farmers, including training on the safe use of pesticides. For example, since 2020, the ARABs of Wangyi District of Tongchuan City in Shaanxi Province has carried out 13 trainings on various agricultural techniques, involving 520 people. Xunyi County ARAB provided training based on farmers' needs, and there are six or seven trainings per month, with dozens to hundreds of people, and the training methods are flexible. In the first nine months of 2021, the ARAB of Mianchi County in Henan has carried out 26 trainings on various agricultural techniques and distributed 50,000 materials.

3.1.3.3 Institutional Structure and Capacity

129. The pesticide management agency involved in the activities of this project is the agricultural and rural affairs authority. At the provincial level, it is the Department of Agriculture and Rural Affairs (the divisions involved include the Pesticide Management Office, the Pesticide Inspection Station, the Provincial Agricultural Law Enforcement Bureau, and the Plant Protection and Plant Inspection Station). While the Provincial Department of Agriculture and Rural Affairs is mainly responsible for policy guidance and supervision at the provincial level. The management activities are all at the county-level ARABs.

130. Each county-level ARAB typically has about 10 staff, and has several internal units to manage planting, livestock breeding, quality and safety of agricultural products, and farmland construction management. The county ARABs have subordinate agencies, including the comprehensive administrative law enforcement team, agricultural technology extension center, animal husbandry technology extension station, and agricultural machinery station.

131. The comprehensive administrative law enforcement team of the county ARAB is responsible for the daily quality and safety supervision and inspection of pesticides and fertilizers. The agricultural technology extension center is mainly responsible for providing training on agricultural production technology and the safe use of fertilizers and pesticides to farmers and rural enterprises. Based on the inspection of Xunyi County, Yongshou County

and Wangyi District in Shaanxi Province, the task team learned that the ARABs in these counties have complete institution setup, equipped with sufficient personnel, and have sufficient government budget guarantees. For example, the Agriculture Unit of Yongshou ARAB has 4 staff members who are responsible for the management of the planting industry, and the enforcement team has 20 personnel responsible for daily supervision and inspection. At the township level, each township also has its own animal husbandry station and agricultural office, cooperating with the county ARAB to manage related work.

132. Based on the results of the on-site inspection, it can be concluded that, in terms of pesticide safety management, the ARABs and related units of each county in Henan and Shaanxi provinces in the project areas have appropriate institutional settings, qualified personnel arrangements and sufficient funding guarantees, which can manage the pesticide safety use of the Program activities.

3.1.4 Forest Pest Management and Fire Control

133. The Program activities in Henan and Shaanxi provinces all involve the plantation of water and soil conservation forests. The purpose is to expand forest coverage and improve the quality of forest ecological environment, not for commercial timber production. These activities will follow the relevant technical specifications and codes to promote healthy forest with mixed and indigenous species to enhance the ecological function of the forest. This type of activity is essentially an activity to protect and improve the environment, and will not cause significant adverse environmental effects and risks. Therefore, these activities are exempt from the requirements for the preparation of environmental impact assessment documents. In regards the temporary impacts during planting such as surface vegetation disturbance, soil erosion, and disturbance of wildlife habitat caused by the afforestation process, relevant mitigation measures have been integrated into the existing afforestation/reforestation technical regulations and operational specifications.

134. Therefore, the main environmental risks involved in the afforestation activities of this project are the pest management practice and forest fire risks in the daily forest management process. The legal framework, implementation mechanism and institutional arrangements involved are as follows:

3.1.4.1 Legal Framework

135. **Forest Law** (revised in 2019): This law stipulates the principles of "ecology first, protection first, combination of protection and conservation, and sustainable development". The state implements a forest resource protection and development goal responsibility system and an assessment and evaluation system, that is, the government at a higher level assesses the completion of the forest resources protection and development goals, forest fire prevention, and the prevention and control of major forest pests by the lower people's governments. The law requires the establishment of forest protection organizations, supervise and urge relevant organizations to conclude forest protection conventions, organize mass forest protection, delimit forest protection responsibility areas, and allocate full-time or part-time forest rangers. At the same time, this law stipulates that the forestry authority of the people's government at or above the county level shall be responsible for the monitoring, quarantine and prevention of forestry pests in the administrative area; the people's government at or above the county level shall organize and lead emergency

management, forestry, public security and other departments in close cooperation in accordance with the division of responsibilities for scientific prevention and fire control.

136. **Regulation on the Prevention and Control of Forest Diseases and Pests** (1989): The regulation puts forward the policy of “prevention first, comprehensive management”, requiring the adoption of an integrated pest management model, and the implementation of a comprehensive forest management approach that combines biological, chemical and physical control. At the same time, the forestry authorities at the county level (and above) shall be responsible for the prevention and control of forest diseases and pests within their jurisdictions, and their subordinate institutions for the prevention and control of forest diseases and pests shall implement the specific measures. The forestry station of the township government is responsible for organizing and implementing the prevention and control of forest diseases and pests in the township. The regulation requires that forest pests and diseases prevention measures must be taken in the process of afforestation, tending and harvesting. Anyone who finds pests and diseases should promptly report to the local government or forestry authorities, who will organize pest control actions in a timely manner and report to the municipal/provincial forestry authorities. The regulation also requires forestry authorities at the county level (and above) to formulate forest pest control plans and conduct regular monitoring. The regulation requires that the application of pesticides must comply with relevant laws and regulations, prevent environmental pollution, and ensure the safety of humans and ecosystems.

137. **Forest Fire Prevention Regulation** (2008): The regulation stipulates that the leaders of local governments at all levels shall be responsible for forest fire prevention work. Local governments at or above the county level are required to establish forest fire prevention teams to prepare fire prevention plans and emergency plans. The forest management unit shall establish a forest fire prevention responsibility system, designate dedicated staff to be responsible for monitoring, and be equipped with necessary fire prevention facilities and equipment. Governments at all levels, forestry enterprises, and villages/communities should set up firefighting teams in forest areas and conduct regular training and drills. Governments at all levels should establish fire warning systems, reporting and response systems. The regulation provides for the establishment of an armed police forest unit to be responsible for carrying out firefighting tasks in accordance with the command of the county (and above) government. In addition, the People's Liberation Army shall carry out forest fire fighting and rescue tasks in accordance with the relevant provisions of the Regulations on Army Participation in Rescue and Disaster Relief.

138. In addition, there are also a series of forestry-related technical regulations and guidelines, including the Guidelines for the *Safe Use of Forest Chemicals (LY/T2648-2016)*, *Technical Specifications for the Treatment of Forestry Quarantine Pests (GB/T26420-2010)*, and *Forestry Quarantine Specifications for Plants and Their Products Distribution (GB/T23473-2009)*, *Guidelines for the Rational Use of Commonly Used Forestry Chemicals (LY/T 2842-2017)*, *Technical Specifications for Forest Fire Prevention (DB21/T 2732-2017)*, etc.

139. In addition to national-level laws and regulations, Henan and Shaanxi provinces have also formulated a series of relevant local regulations, e.g., *Regulations on Forest Fire Prevention in Henan Province*, *Regulations on Prevention and Control of Forest Pests in Henan Province*, and *Responsibility for Forest Fire Prevention in Henan Province*, *Measures of Shaanxi Province on the Implementation of Forest Fire Prevention*, *Shaanxi Province Forestry Pest Control and Quarantine Regulations* and so on.

140. Generally speaking, forest pest control and forest fire prevention are the focus of daily forest management. For this reason, China has formulated systematic laws, regulations, policies, guidelines, and related technical specifications to provide a relatively complete legal framework for forest pest control and forest fire prevention.

3.1.4.2 Implementation Mechanism

Forest Pest Management

141. The Regulation on the Prevention and Control of Forest Diseases and Pests establishes a pest management system with the principle of IPM approach. The system is implemented through three levels of efforts: pest prevention at source; pest monitoring; and pest control.

(a) Pest prevention at source: As part of national plant quarantine system, there is a strict forest pest inspection and quarantine system in place for tree seeds and seedlings at nursery. All seeds and seedlings from tree nursery are subject to pest inspection to prevent spread of forest pest during tree plantation. Plantation of trees with dangerous forest pest is strictly prohibited by law.

(b) Pest monitoring and forecast: Routine pest monitoring is an important part of daily forest management practice. All forest bureaus at various levels have pest control plans and are implementing routine pest monitoring within their jurisdictions. At local level, county forestry bureau (FB) is the authority to be responsible for overall pest monitoring and pest control. Routine pest monitoring is implemented through county-level Forest Pest Control Station (PCS), township level forest workstation (FWS), and forest patrol rangers at each village. Based on the monitoring results, FBs bureaus at various levels issue pest situation forecasts for their jurisdictions. Anyone finds pest and diseases should timely report to county government or county FB, which shall organize timely pest control actions and report to municipal and provincial FB.

(c) Pest control operation: Once pest or disease is found during the routine monitoring by county FB or township FWS staff or village forest rangers, it must be reported to county FB/county PCS. If pest or disease is found in relatively large scale, then the county PCS will take in charge to implement pest control operations by engaging third party professional service providers. In case the pest is occasionally found in small scale, normally no further action will be taken but keeping monitoring. In case of serious infectious disease such as *Bursaphelenchus xylophilus* for pine trees, county PCS staff will cut the individual infected trees and burn it safely. Farmers do not participate in the pest control operations for the public welfare forest.

142. As guided by *Regulations on Prevention and Control of Forest Pests and Diseases*, pest control practice is implemented through an IPM approach, with the application of following measures in following priority order:

- Forest management measures: forest tendering, selective cutting, removal of individual sick/dead trees etc.
- Physical measures: removal of pests by hand picks, installation of traps, use of stick board and pest trap lights etc.
- Biological measures: use natural enemy species for pest control.

- Biological agents: Such biological agents are made of biological living organisms known as natural pesticides.
- Chemical pesticides: Chemical pesticide is used as a last resort, for severe and large-scale pest outbreaks.

143. This IPM approach is implemented nationwide and regulated by the National Forestry and Grassland Administration. To promote the use of non-hazard pest control practice, China also issued a *List of Recommended Pesticide Products and Safe Equipment for Forest Pest Control*. This document emphasizes the IPM approach, with a comprehensive list of natural biological and low-toxic synthetic pesticides, as well as a series of equipment with good safety performance.

144. Based on field visits and discussions with provincial/county pest control stations and township forestry stations, the task team learned that Henan and Shaanxi provinces have carried out effective forest pest control, with very few pests and diseases occurring. The daily monitoring is mainly for pine nematodes, white moths, etc. The forest farm is basically sprayed with biological and low-toxic pesticides for prevention and control every year. For example, Wangyi District, Shaanxi Province, has a total of about 4,000 mu of forest land. There are few pests and diseases, and no common pine nematodes. The daily monitoring of *Hyphantria cunea*, etc. uses traps, and few pesticides (non-toxic) are used. Lingbao City of Henan Province relies on more than 400 full-time and part-time pest forecasters in the city to carry out monitoring work, uphold the principle of "green prevention, environmental protection, low-carbon prevention, and pollution-free prevention", no chemical prevention and control methods, and no pollution prevention for many years.

Forest Fire Prevention and Control

145. Fire prevention and control is an extremely important part of forestry management. The forest fire prevention and control system are established under the umbrella legal framework of *Regulation of Forest Fire Prevention*. Heads of the local governments at various levels are held accountable for forest fire prevention and control within their jurisdictions. Forest fire prevention and control organizations are established at county (and above) level governments, with heads of the governments as leaders and various government departments as members. FBs at county and above level are responsible for daily management and supervision of routine forest fire prevention works. Emergency response command is led by county emergency management bureau. Forest owners/farmers are responsible for fire prevention and control of their forest land.

146. All county (and above) governments have developed their forest fire emergency response plans. County governments also organize township governments to develop township level forest fire emergency plans, with detailed arrangements at township and village levels.

147. Forest fire prevention networks have been established at the city, county, township, and village levels. Specialized forest fire prevention organizations have been set up at the city and county levels. Fire prevention personnel have been assigned in towns and villages to allocate fire prevention work to villages, groups, and villagers. For example, in Xunyi County, the county FB has a forestry monitoring and fire prevention team, which is mainly responsible for publicity, fire prevention and monitoring. There are forestry workstations in towns and villages, and forest rangers in each village.

148. Under the direction of emergency management authority, a special forest

firefighting force (Formerly Armed Police Forest Force) is also established in China, with dedicated task for forest fire control, and can be called by county governments for major fire accidents. In addition, People's Liberation Army is also standing-by to respond to major forest accidents.

Township forestry work stations and village-level rangers carry out daily forest patrol and fire monitoring. At the same time, the provincial level has a thermal image monitoring system covering the whole province to monitor key areas prone to forest fires. In addition, the State Forestry and Grassland Administration has a real-time satellite forest fire monitoring system covering the whole country. In the event of a fire, it can provide high-resolution images and timely warning reports.

149. Through field visits to Program counties in Henan and Shaanxi provinces, the task team learned that Henan and Shaanxi provinces have established a complete forest fire prevention system, with four levels of city, county, township, and village fire prevention agencies and personnel arrangements, and conducted regular emergency drills. This system can effectively respond to the needs of forest fire prevention.

3.1.4.3 Institutional Structure and Capacity

150. The main institutions of forest management are the provincial, municipal, and county forestry department/bureaus. The provincial and municipal forestry departments are mainly responsible for the guidance and supervision of the sector and the lower-level forestry bureaus. The specific forest management work under this Program is mainly related to the county-level FB, county forest pest control stations, county fire protection teams, and forestry workstations at the township level.

151. The county FB is specifically responsible for organizing and implementing the county's afforestation, tending and enclosure activities, supervising and guiding seedling epidemic prevention and pest control, compiling and implementing forest pest control plans, and directing the county's forest fire prevention and other activities. The specific units involved are as follows:

Forest Pest Management

152. The county forest pest control station (PCS) is responsible for implementing the pest control and plant quarantine activities at this level, formulating pest control plans and control measures, providing technical guidance and services for pest control, and organizing the verification of pest control results. Generally, the county-level PCS is equipped with an average of 3-5 staff. These employees regularly receive technical training provided by provincial and municipal forestry departments.

153. At the township level, there is also a layer of forestry institutions, namely the township forestry station, to help carry out pest control work, including daily pest inspection and monitoring. Each village is equipped with at least one full-time forest ranger who is responsible for daily patrolling to monitor pest situation, fire situation, illegal logging, poaching and other activities.

154. It was learned through field visits that all the Program county in Henan and Shaanxi have set up a county-level PCS with dedicated staff to carry out forest pest control work. For example, Sanmenxia City, Henan Province has a municipal forest PCS, each county below has a county-level PCS (some districts and counties work together with forestry workstations),

and the staff of each county PCS has about 2-7 staff. The situation in Shaanxi Province is also similar to that in Henan. For example, the FB of Xunyi County in Shaanxi Province has set up a forest PCS with a total of about 30 staff members. Village have forest rangers (the whole county has more than 200 forest rangers) who are responsible for daily forest monitoring, including fire prevention and pest monitoring. Forest PCS provides irregular training for forest farmers and forest rangers

Forest Fire Control

155. Fire prevention is an important part of forestry management and is built in the institutional structure of FBs. The county FB is responsible for specific forest fire prevention and early warning work. The provincial, municipal and county governments all have set up fire prevention command offices, housed within the local emergency management bureaus to organize and guide the forest fire emergency response coordination work.

156. The county FB generally has a staff of about 10 people, and generally has a fire protection team (about 10-20 people). For example, Shaanxi Xunyi County FB has a forestry inspection and fire prevention team with about 20 personnel. In addition, there are 17 semi-professional forest fire prevention teams with more than 300 personnel, mainly composed of forestry staff and forestry system officials. There are forestry workstations in towns and villages, each with 1-3 people. In addition, there are 3-5 forest rangers in each village, with a total of more than 200 forest rangers. There are 4 fire prevention offices in the FB of Mianchi County in Henan, responsible for prevention, publicity, education and training (about ten trainings and drills are carried out every year). There is a 15-person forest fire brigade; the state-owned forest farm has a 15-person forest fire brigade; key towns (Duancun Township, Potou Township, and Rencun Township) each have a 30-person semi-professional fire brigade; other townships each have a team of 20 persons Semi-professional fire brigade. Each village has a voluntary firefighting team composed of cadres of village committees and villagers. Forest fire prevention adopts four-level grid management in cities, counties, towns and villages. There are forestry work stations in cities, counties, and towns. There are more than 600 forest guards (2-3 persons in each village) in the county and villages. The leaders of the local government are responsible for implementation.

157. The emergency management department manages the major fire incidents, and the FBs manages the initial fire but must first report it to the emergency management department. The county emergency management bureau is generally staffed with 8-10 people. According to the mandate responsibilities, it coordinates with various departments to carry out various emergency management tasks, including cooperation with forestry departments to carry out forest fire prevention and control work.

158. In addition to these arrangement, local firefighting departments at county (and above) level are always available and can be mobilized by local governments. Furthermore, there are special armed forest police force troops which can be called by county government for severe forest fire events. People's Liberation Army is also standing-by for significant fire incidents.

159. The county Emergency Management Bureau and the FB organize forest fire drills at least once a year. State-owned forest farms organize drills 3-5 times a year on their own. The

county-level (and above) government has a built-in fire warning system, which can be contacted by dialing a dedicated hotline.

160. In summary, it can be considered that Henan Province and Shaanxi Province have complete institutional settings and personnel arrangements in forest pest management and forest fire prevention, have formed a complete implementation mechanism, and have also achieved effective results. This system can basically effectively manage the forest pest control and forest fire prevention work involved in this PforR.

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

161. 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.

162. The table below gives a summary of such comparative analysis. See **Annex 3** for details.

Table 3-3 Consistency Analysis between Environmental Management Systems and the World Bank Policy

Principles and Key Elements	National and local environmental management systems	Consistency
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.		
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 in line with international practice. 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	As discussed in Section 3.1.1, 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, alternative 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	Consistent

Principles and Key Elements	National and local environmental management systems	Consistency
<p>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</p>	<p>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.</p> <p>In practice, for all projects requiring EIA (e.g., WWTP, water supply facilities etc.), relevant work has been conducted as required in the EIA system, and its whole implementation process is effectively regulated.</p>	
<p>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.</p>		
<p>3. Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.</p>	<p>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.</p> <p>In the preparation of practical EIA documents, identifying important natural habitats and cultural resources is essential content of EIA documents. For natural habitats or cultural resources involved, measures are designed in order of 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.</p>	<p>Consistent</p>
<p>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>	<p>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.</p> <p>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.</p>	<p>Consistent</p>
<p>5. Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.</p>	<p>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</p>	<p>Consistent</p>

Principles and Key Elements	National and local environmental management systems	Consistency
	<p>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, i.e., stop construction, protect the site, and immediately report to the local cultural relics administration.</p>	
<p>Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.</p>		
<p>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> <p>Promote measures to address child and forced labor.</p>	<p>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.</p> <p>In addition to the requirements that project construction and operation units must set up a safety management arrangement and have appropriate staff and measures in place, all sectoral authorities shall also establish a work safety management mechanism, and supervise work safety performance in the sector. Emergency management bureaus (work safety authorities) supervise all industries and key areas. This system ensures the safety regulation of the Program activities.</p> <p>See Chapter 5 for child labor and forced labor.</p>	<p>Consistent</p>
<p>7. Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the PforR.</p>	<p>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,</p>	<p>Consistent</p>

Principles and Key Elements	National and local environmental management systems	Consistency
	<p>where relevant staff (drivers, handlers, etc.) must be qualified.</p> <p>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.</p>	
<p>8. Promote the use of integrated pest management practices to manage or reduce the adverse impacts of pests or disease vectors.</p>	<p>The agricultural and forestry pest control measures in this PforR follow the IPM method, and rely on successful implementation experience to reduce the amount of chemical pesticides as much as possible. If chemical pesticides are used, non-toxic and low-toxic pesticides are used in accordance with national regulations. China has a comprehensive management system for the production, transportation, storage, sales and use of pesticides.</p>	<p>Consistent</p>
<p>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.</p>	<p>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.</p>	<p>Consistent</p>
<p>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.</p>	<p>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.</p>	<p>Consistent</p>

163. 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.

164. During field visits at the preparation stage, the Bank team also found inadequacies in terms of the operation of rural wastewater treatment facilities. It is not uncommon that some of the township and rural wastewater treatment facilities are facing difficulties of sustainable operation, mainly due to lack of financial sources to support operation cost. There is also a need for technical capacity building on the part of facility operation and maintenance.

165. It is also noted that various county-level activities are separately developed with inadequate subbasin-wide ecological and environmental protection planning.

4. Social Management System Assessment

166. Table 4-1 shows that the social impacts and risks involved in the Program activities in Henan and Shaanxi fall into the following types: comprehensive social impacts (e.g., fairness, transparency etc.), tangible culture heritage, public and worker safety, land acquisition and resettlement, impacts of ethnic minorities and vulnerable groups.

167. Social risk 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. The social management system assessment consists of the three parts: review of laws and regulations, appraise 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).

168. 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 assesses 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

169. 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	Principle #1: social impacts and risks assessment and management system Principle #6: social conflict	Notice of the National Development and Reform Commission on Issuing the Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2021 Amendment)	State: NDRC. Henan and Shaanxi Provinces: <ul style="list-style-type: none"> Leading authorities: provincial development and reform commissions, provincial, municipal and county political and legislative affairs committees, offices for letters and visits. Assessors: municipal and county competent authorities (e.g., WWTP authorities, county housing and construction bureaus) and appointed third
		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)	
		Notice on Opinions of Implementing Social Stability Risk Assessment Mechanism for Major Matters of Henan Provincial Water Resources	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		Department (Interim) (2013.2) Notice of Shaanxi Provincial DRC Stability Maintenance Leading Group Office of Shaanxi Provincial CPC on Printing and Distributing Opinions on Strengthening the Social Stability Risk Assessment for Major Fixed Asset Investment Projects (Shaanxi DRC Project [2012] No. 1749) Interim Regulations on Major Administrative Decision-Making Procedures (2019.9) Regulations on Complaint Letters and Visits (2005.5)	parties <ul style="list-style-type: none"> • Registration authorities: provincial (cross-regional / cross-departmental projects), or municipal and county political and legislative affairs committees • Decision-making authorities: municipal and county executive meetings of CPC and government leaders • Implementing agencies: assessors and entrusted operating agencies • Supervising agencies: municipal and county governments and their grass-root agencies (e.g.,
Tangible culture heritage	Principle #2: cultural heritage conservation	Cultural Relics Protection Law (2017 Amendment) Regulations for the Implementation of the Cultural Relics Protection Law (2017)	State: National Cultural Heritage Administration Henan and Shaanxi Provinces: provincial, municipal and county cultural relic protection authorities
Public and worker safety	Principle #3: labor and occupational health	Civil Code of the People's Republic of China (2021.1) 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 (2021) The Special Rules on the Labor Protection of Female Employees of Henan Province (2018.11) Work Safety Law of the People's Republic of China (2021) Law on the Prevention and Treatment	Public security State: Ministry of Emergency Management Henan and Shaanxi Provinces: county governments, emergency management bureaus and other related departments, production and operation entities, associations, agencies providing technical management services for work safety Labor safety State: National Health Commission Henan and Shaanxi Provinces: provincial, municipal and county health commissions, provincial occupational disease

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		<p>of Infectious Diseases (2020)</p> <p>Emergency Response Law of the People's Republic of China (2007.11)</p> <p>Regulations on the Prevention and Control of Geologic Disasters (2004.3)</p> <p>Regulations on the Defense against Meteorological Disasters (2010.4)</p> <p>Regulations of the People's Republic of China on Flood Control (2005.7.15)</p> <p>Law of the People's Republic of China on Protecting against and Mitigating Earthquake Disasters (2009.5)</p>	<p>prevention and treatment institutes, occupational health examination agencies</p> <p>Labor management</p> <p>State: Ministry of Human Resources and Social Security, All-China Federation of Trade Unions</p> <p>Henan and Shaanxi Provinces: provincial, municipal and county federations of trade unions, and industrial unions; trade unions of enterprises and public institutions</p>
Land acquisition and resettlement	Principle #4: land acquisition, livelihood restoration and public participation	<p>Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2008.11)</p> <p>Land Administration Law (2020.1)</p> <p>Regulations for the Implementation of the Land Administration Law (2021)</p> <p>Regulations on the Expropriation of Houses on State-owned Land and Compensation (Decree [2011] No.590 of the State Council) (2011.1.21)</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 People's Government of Henan Province on Adjusting the Block Comprehensive Land Price Standard of Land Acquisition in Henan Province (YZ [2016] No. 48)</p>	<p>Land acquisition</p> <p>State: Ministry of Natural Resources</p> <p>Henan and Shaanxi Provinces: provincial, municipal and county governments, and natural resources authorities</p> <p>Urban house demolition</p> <p>Municipal and county governments, housing and construction bureaus, house demolition agencies</p> <p>Rural house demolition</p> <p>agriculture and rural affairs authorities, Natural resources authorities, township governments, village committees</p> <p>Livelihood restoration</p> <p>State: Ministry of Human Resources and Social Security</p> <p>Henan and Shaanxi Provinces: provincial, municipal and county human resources and social security authorities, county and township governments, community committees, village committees</p>

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		<p>Notice of The People's Government of Henan Province on Printing and Distributing Implementing Several Provisions of Regulations on Expropriation and Compensation of Houses on State-owned Land of Henan Province (YZ [2012] No. 39)</p> <p>Notice of the Shaanxi Provincial Government on Releasing Block Comprehensive Land Prices of Shaanxi Province ([2020] No.12)</p> <p>Notice on Printing and Distributing Measures for Selection of Real Estate Price Appraisal Agencies for Expropriation of Houses on State-owned Land in Shaanxi Province (SJF [2018] No. 121)</p> <p>Notice of Henan Provincial Natural Resources Department on Promoting the Reform of "Integrating Multiple Examination and Certificate" in Planning Land Use (Henan Natural Resources Office Issued [2019] No. 2)</p> <p>Notice on Further Optimizing the Pre-Examination of Land Use and Reconnaissance Demonstration of Planning Site Selection for Construction Projects (Henan Natural Resources Office [2021] No.23)</p> <p>Notice of The People's Government of Henan Province on Issues related to the Block Comprehensive Land Price for Acquisition of Agricultural Land (YZ [2020] No.16)</p>	
Ethnic minorities and vulnerable groups	Principle #5: 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>Notice of the State Council on Issuing the 13th Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79)</p> <p>The 13th Five-Year Development Plan</p>	<p><u>Ethnic minorities</u> State: National Ethnic Affairs Commission Henan and Shaanxi Provinces: provincial, municipal and county ethnic affairs commissions (or ethnic and religious affairs bureaus)</p> <p><u>Women</u> State: All-China Women's Federation Henan and Shaanxi Provinces: women's</p>

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		for Ethnic Minorities in Henan Province	federations at different levels
		Notice of The General Office of Shaanxi Provincial People's Government on Printing and Distributing the 13th Five-Year Development Plan for Ethnic Minorities (SZBF [2016] No.62)	Children Functional authorities of governments at or above the county level, township governments, sub-district offices, community committees, village committees
		Law of the People's Republic of China on the Protection of Women's Rights and Interests (2018.10.26 Amendment)	
		Measures of Henan Province for the Implementation of Law of the People's Republic of China on the Protection of Women's Rights and Interests (2008.11.1)	
		Guidelines of the CPC Central Committee and the State Council on the Three-year Poverty Alleviation Action	
		Implementation Opinions of Shaanxi Provincial People's Government on Further Improving the System of Living Subsidies for the Disabled with Difficulties and Nursing Subsidies for the Severely Disabled (SZF [2016] No. 2)	
		Notice on issuing the Strategic Plan for Countryside Revitalization of Henan Province (2018-2022) (2018.10)	
		Notice of the Shaanxi Provincial Government on Issuing the 13 th Five-year Poverty Alleviation Plan of Shaanxi Province (2016-2020) (SFBF [2016] No.33)	
		Strategic Plan for Countryside Revitalization of Shaanxi Province (2018-2022) (2018.10)	

4.2. Assessment of Social Regulations and Policies

170. China's legal framework consists of the following three levels of regulation: 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, Henan and Shaanxi provincial, municipal and county levels to systematically manage potential social risks and impacts in the Program lifecycle.

171. **Annex 5** 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.

4.2.1 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.¹⁶

172. 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.

173. 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 Henan and Shaanxi Provincial Governments have promulgated the Notice on Opinions of Implementing Social Stability Risk Assessment Mechanism for Major Matters of Henan Provincial Water Resources Department (Interim), and the Notice of the Opinions on Strengthening the Social Stability Risk Assessment for Major Fixed Asset Investment Projects (Shaanxi DRC Project [2012] No. 1749) respectively, defining the requirements for SSRA.

¹⁶Chapter 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.

174. **Assessment:** SSRA is an important procedural requirement in project application and feasibility study. The Chinese, and Henan and Shaanxi 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.

175. **Recommendation:** The borrower should establish and implement a social monitoring and reporting mechanism 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.

176. According to the social risk screening results (Annex 3), the activities in Henan and Shaanxi 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 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 Henan and Shaanxi 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) (2013) stipulates, the PIUs and assessment agencies shall obtain supports of the local governments and related departments, grass-root organizations, NGOs, etc. for the proposed project, and the completeness of public participation shall be assessed as well, including if the procedural requirements of public participation, expert consultation and information disclosure are all well implemented. For any project involving land acquisition and house demolition, the Land Administration Law (effective from January 1, 2020) requires that 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.

177. **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 Shaanxi/Henan Provinces. There are clear mechanisms for impact early-stage screening, option comparison, and arrangements for measure defining on social risks (e.g., LAR, social stability risks) management. The regulations also defined the responsible agencies to manage specific impacts. Comprehensive system arrangements have been established in the regulations on social stability risk management, land acquisition and house demolition for information disclosure, public participation and grievance redress. Therefore, the social regulations and policies are generally consistent with Element 2. However, there are lack of clear requirements for documentation of the process of public participation, information disclosure, grievance redress, etc.

178. **Recommendation:** Define requirements of documentation in related project management documents (e.g., contracts, agreements) at the PIUs of related counties, including (but not limited to) keeping the recording the public participation as well as information disclosure process, and the operation of the grievance redress mechanism.

4.2.2. 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.

179. 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.

180. **Cultural relic protection:** The activities in Henan and Shaanxi involve small civil works, such as the construction of rural wastewater collection and treatment system. According to the social impact screening (**Annex 3**), 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.

181. **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 Shaanxi and Henan Provinces are consistent with Element 5.

4.2.3. 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.

182. 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 on labor safety, 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.

183. **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 of industrial base ancillary facilities and river and wetland upgrading and renovation. China has established and implemented a system to manage labor safety:

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

- The Civil Code requires that work safety and health facilities of construction, reconstruction and expansion works shall be designed, constructed and put into operation along with these works (or it is called the “Three Simultaneities Safety Facilities/Features”).
- 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 workers’ health and safety. Enterprises may apply for “occupational health and safety management system” certification, and establish a normative management system, realizing the source identification and whole-process control of hazards, and continual improvement. However, the “occupational health and safety management system” is not a mandatory requirement.

184. **Assessment:** A whole set of comprehensive laws and regulations on worker health and safety has been established in China, and Shaanxi and Henan 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 labor safety are basically consistent with Element 6.

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

185. **Disaster safety management mechanisms:** The Program is located in Henan and Shaanxi 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.

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

4.2.4. 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.

187. 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:** As analyzed on “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, which are responsible for appraisal of the project land use and feasibility study, 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 Henan and Shaanxi 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 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.

188. 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 standard for land acquisition in Henan Province was further confirmed through the Notice of The People's Government of Henan Province on Adjusting the Block Comprehensive Land Price Standard of Land Acquisition in Henan Province (YZ [2016] No. 48) promulgated in 2016 and Notice of The People's Government of Henan Province on Issues related to the Block Comprehensive Land Price for Acquisition of Agricultural Land (YZ [2020] No.16) promulgated in June 2020; while the land acquisition compensation standard in Shaanxi Province was updated in December 2020 as well, promulgated Notice of the Shaanxi Provincial Government on Releasing Block Comprehensive Land Prices of Shaanxi Province ([2020] No.12) and further confirmed that the municipal (district) people's governments shall, according to the local economic

development level and actual situation, formulate compensation standards for attachments and young crops on the expropriated land and report to the provincial Natural Resources Department for the record. In addition, the new Land Administration Law requires that land occupied or used for projects shall be compensated for before occupation or use.

189. 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 selection of real estate appraisal agency and compensation for operation/business suspension losses was clarified through the Notice of The People's Government of Henan Province on Printing and Distributing Implementing Several Provisions of Regulations on Expropriation and Compensation of Houses on State-owned Land of Henan Province (2012) and Notice on Printing and Distributing Measures for Selection of Real Estate Price Appraisal Agencies for Expropriation of Houses on State-owned Land in Shaanxi Province (SJF [2018] No. 121).

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 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.

190. **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 Henan and Shaanxi 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.

4.2.5. 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.

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

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

192. **Policy requirements for ethnic minority consultation:** There are many ethnic minorities live scattered in both Henan province and Shaanxi Province. Among them, the ethnic minorities living in Henan Province are mainly the Hui, Mongolian, Manchu and Uyghur, etc., and the ethnic minorities live in Shaanxi Province are mainly the Hui, Manchu, Mongolian, Miao, Tujia, Shui, Qiang, etc. China's Constitution stipulates that all ethnic groups of China are equal. The Law of the People's Republic of China on Regional National Autonomy stipulates, in dealing with special issues concerning the various nationalities within its area, the organ of self-government of a national autonomous area must conduct full consultation with their representatives and respect their opinions; the organ of self-government of a national autonomous area shall guarantee that citizens of the various nationalities in the area enjoy the rights of citizens prescribed in the Constitution and shall educate them in the need to perform their duties as citizens. On this legal basis, when minority residents are affected similarly by land acquisition and house demolition, they will not only enjoy the same rights as citizens, but also be subject to free, prior and informed consultation in a culturally appropriate manner organized by local governments when necessary. 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 Notice on Opinions of Implementing Social Stability Risk Assessment Mechanism for Major Matters of Henan Provincial Water Resources Department (Interim) promulgated in 2013, and the Notice of the Opinions on Strengthening the Social Stability Risk Assessment for Major Fixed Asset Investment Projects (Shaanxi DRC Project [2012] No. 1749) promulgated in 2012.

193. **Assessment:** Comprehensive ethnic minority development policies have been established in China, and Henan and Shaanxi 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.

194. **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, 14 key tasks were proposed for Henan ethnic minorities management authorities in the 13th Five-Year Development Plan for Ethnic Minorities in Henan Province, including infrastructure development, upgrading the industrial structure, coordinated development between urban and rural areas, poverty alleviation, education, culture and sports, scientific and technological innovation, medical and health care, employment, entrepreneurship and social security systems, talent development, and laws and regulations development. Shaanxi Province also promulgated the Notice of The General Office of Shaanxi Provincial People's Government on Printing and Distributing the 13th Five-Year Development Plan for Ethnic Minorities (2016), which aims to make full use of existing policies and the ethnic minorities development funds to vigorously improve the public infrastructure, working and living conditions of ethnic minorities and ethnic minorities living areas, accelerate the development of competitive industries and economies with distinctive characteristics, strengthen the support for the development of ethnic minority enterprises and build brand enterprises, promote the rapid development of education, science and technology, culture, public health, and sports with innovative ways and methods, and strengthen the construction of legal system to protect the legitimate rights and interests of ethnic minorities. In addition, the 14th Five-year development plans for ethnic minority programs of both provinces will be released in 2021.

195. **Assessment:** The central government, and Henan and Shaanxi 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.

196. **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 580 yuan per capita per month in urban areas and 4,260 yuan per capita per annum in rural areas in Henan Province in 2020, and the MLS standard was various in Shaanxi Province based on the local conditions, e.g., 630 yuan per capita per month in urban areas and 4,830 yuan per capita per annum in rural areas in Tongchuan City 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.

197. **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. Not 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 2021, the State Council promulgated the Development Outline for Chinese Women (2021-2030), which aims to integrate the goals and tasks of women's comprehensive development into national and local overall green and social development planning, special planning and livelihood improving projects to be arrangement and implemented in parallel. The main goals and tasks include improving the institutions and mechanisms to promote gender equality and women's all-round development; women have equal access to the full range of life-cycle health services, so that women's health can be continuously improved; women enjoy equal rights to education, so their quality and ability can be continuously improved; women enjoy equal economic rights and interests, and their economic status has steadily improved; women enjoy equal political rights and their participation in the management of state and economic, cultural and social affairs has gradually improved; women enjoy equal multi-level and sustainable social security, and their treatment level has steadily improved; improving the legal system for supporting family development and widely promoting the new fashion of socialist family literature; the concept of gender equality has gained greater popularity, and the development environment for women becomes better; and improving the legal system, and women's legitimate rights and interests can be effectively protect.

198. **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 Shaanxi and Henan 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.

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

199. **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 and Management Mechanism and Capacity

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

201. As shown in **Table 4-1**, the provincial, municipal and county authorities in Shaanxi and Henan 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 for improvement. It is discussed through two levels: First, the organizational settings of each social management system; second, the rationality and capacity of each social management system against the requirements at Elements 1 and 2 under Core Principle #1. Where gaps identified, actions and recommendation will be proposed. This social assessment team will assess the roles and responsibilities of each administrative agency, working regulations / procedures, staffing and capacity, cross-departmental coordination, etc. through adequate consultation (see Annex 8 to 10 for detail of the consultation process).

202. This section will assess the corresponding agencies and function team in terms of each of the social risks. Annex 6 sets out detailed stakeholder mapping.

4.3.1. Social Risk Assessment Management Agencies¹⁷

- **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.

¹⁷ 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.

- **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, 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

203. Take Lingbao city of Sanmenxia Henan Province for example, the Social Stability Risk Assessment Implementation Plan of Lingbao City (LXL[2012] No.14) have been promulgated since 2012, defining the assessment procedure and scope, and agencies responsible, establishing the "Lingbao Social Stability Risk Assessment Work Leading Group" which is led by the secretary of Standing Committee of the CPC Municipal Committee and the Political and Legal Committee and consisted of the deputy director of the Municipal People's Congress, the deputy mayor, the heads of the petition, public security, courts, DRC, natural resources department, EED, agriculture and rural affairs department and other competent departments, and forming a sound SSRA system at the municipal, township and village levels.

204. **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.

205. **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.

4.3.2. Cultural Relic Protection Agencies

- **Provincial culture and tourism department:** coordinating and directing cultural relic investigation, protection and utilization, archeology, and major project implementation through the cultural relic protection division

- **Municipal / county(district) government:** responsible for the territorial management of cultural relic safety
- **Municipal / county cultural relic authority:** usually it includes one cultural relic protection office and one integrated law enforcement team. among which, the cultural relic protection office has three staff and is responsible for 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; while the integrated law enforcement team has 8-10 staff and is responsible for the inspection and management of cultural relic illegal actions and safety. 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

206. **Assessment:** For potential adverse impacts on material cultural heritage, there are state and local regulations to avoid or minimize such impacts. the existing cultural relics risks were managed effectively through national and local agencies, consistent with Core Principle #2.

4.3.3. 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).
- **Municipal natural resources department:** reviewing and submitting the application of permanent land use conversion.
- **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

207. Take the Natural Resources Department of Wangyi District, Shaanxi Province as an example, the Land Acquisition Service Center of this Department takes charge of the land acquisition work. A project land acquisition task team shall be established jointly by the land acquisition service center, corresponding project implementation authorities, the township government and village committees where the project located regarding the acquisition of land and ancillary facilities for a specific project. e.g., for a rural water supply station project implemented by the Water Resources Bureau, the Water Resources Bureau would be the competent department, and the specific township government and village committee where the water supply station is located would assign personnel as team members. the size the team is determined by the scale of land acquisition and house demolition. Usually, it consists of 5-10 persons, and it would be more for big projects. In terms of the house demolition involved, the task team will select a third-party real estate appraisal agency in line with the legal procedures to conduct property value appraisal and prepare property value appraisal report, in which the market price of the properties at the time of appraisal. The whole process is that the project implementation unit entrusts the natural resources department to implement land acquisition first, then the natural resources department will do the following

activities in sequence, including issuing a land acquisition announcement based on the entrustment, conducting detail measurement survey (DMS) and appraisal, conducting social stability risk assessment, disclosing the DMS results for verification in line with procedure, re-disclosing the DMS results and publishing the land acquisition compensation and resettlement plan in parallel, negotiating and signing the land acquisition pre-agreement, submitting land acquisition application documents to Provincial Natural Resources Department for approval. After getting the land acquisition approval, the project implementation agency will pay the related land compensation fee to county-level financial bureau and endowment insurance fee to human resources and social security bureau according to the land acquisition and compensation agreement. After that, the county-level financial bureau will pay the compensation fee to affected households and the social security bureau will proceed the endowment insurance for affected persons in line with the policies and agreements.

208. **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 county social security authority with the support of the township government and village / community committee. **Section 4.4.4** discussed the livelihood restoration in detail combing with the results of site survey and consultations, including case studies.

209. **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.

4.3.4. 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
- **Occupational health examination agency:** being responsible for the quality control of provincial occupational health inspection agencies, 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

210. The institutional structure of the Health Commissions in different Counties and Cities are similar. Taking Lingbao city of Henan Province as an example, the health work in this city is mainly managed by three institutions of the Health Commission: 1) Health and Family Planning Supervision Institute, 2) Disease Prevention and Control Center (including laboratory), and 3) Chenggang Hospital (occupational health examination).

- Health Supervision Institute, which consists of 5 persons (including 2 full-time and 3 part-time), is responsible for random inspections on the enterprises within the jurisdiction, usually once a year, to check whether the enterprises proactively make declarations in the "National Toxic and Harmful Declaration System" in accordance with the provisions and make punishment and rectification suggestions for those who fails to declare, or declare improperly.
- Disease Prevention and Control Center (8 persons plus 2 persons from laboratory)

is responsible for the classification of hazardous factors of enterprise according to the types of toxicants (divided into five categories, pneumoconiosis, chemical, biological, physical and radioactive). It is required by the upper administration level that the Disease Prevention and Control Center should conduct inspection on a certain number of enterprises according to the hazardous classification to check whether they implemented the related hazard prevention and control measures each year, e.g., it's 35 enterprises in 2021. And the number of enterprises of each type to be inspected shall be adjusted according to the total number of enterprises.

- Chengnan Hospital: One hospital commissioned by the Lingbao Health Commission on occupational health examination. It is required that the employees of enterprises with toxic and harmful factors and taking related positions should carry out occupational health examination before, on and off duty. For the those who has health problem, the enterprise and the employee shall be informed in writing and the enterprise shall not set the post any more, or if the employee is sick while on duty, the enterprise shall transfer his/her post and provide treatment.

■ **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 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.

211. **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.

4.3.5. 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

212. **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.

4.3.6. Vulnerable Group Protection Agencies

213. 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.
- **Rural Revitalization Bureau:** consolidating the achievements of poverty alleviation, formulating plans for people who have been lifted out of poverty to return to poverty, and preventing them from falling back into poverty.
- **Township government and village / community committee:** A supervisor of left-behind (distressed) children is appointed, and a regional old age care service center and a women's federation office established at the township level, and a children's director appointed and an old age care service station established in each village / community.

214. The "Social Welfare Office" or "Child Welfare and Old-age Service Office" of each County/City, equipped with 3-4 staff, is responsible for the work of the left-behind elderly and children left behind. For example, the Civil Affairs Bureau of Xunyi County, Shaanxi Province established a Social Welfare Office to 1) set up the record of left-behind elderly and children. As of the end of 2020, there were 1,938 left-behind elders and 1,259 left-behind children in all 10 townships of the County; 2) formulate and implement the County elderly care service construction planning; 3) construct and manage the elderly services, elderly welfare and mutual aid service centers of the whole County; 4) undertake welfare arrangement for the elderly and relief work for the elderly with special difficulties in the county, coordinate and promote the care and services for the left-behind elderly in rural areas; 5) formulate and implement the County children welfare development planning, manage the safeguard, adoption and assistance for orphaned and abandoned children; 6) manage the children welfare institutions, Juvenile Protection institutions and extremely poor people assistance institutions; 7) improve the care and service system for left-behind children in rural areas and the security system for children in difficulties. In addition, to support the Social Welfare Office of Civil Affairs Bureau, each township government and community/village committee assigns at least one person to do the work related to left-behind elderly and children.

215. Usually, it is the rural revitalization bureau, equipped with about 10 staff, taking charge of the poverty alleviation work. Besides, coordination agencies like "poverty alleviation headquarter" or "poverty alleviation leading group", which consists of the key leaders of the County/City Government and each function department, were set up in the People's Government of each County/City. Irregular meetings among industries and government departments were held according to the poverty alleviation work needs and progress. More social agencies and people will be mobilized for a specific poverty alleviation project. For example, in Shanzhou District, Sanmenxia City, Henan Province, for a certain poverty alleviation work, the responsibility of industrial department, township government, village poverty alleviation work team, the first village secretary, working group in the village, people in charge of the assistance and the fixed-point poverty alleviation unit are clearly specified, forming a responsibility system of heading and supervision at the county-level,

leading and supporting at industrial departments level, implementing at township level and village level. For a special poverty alleviation project, a “5+N” Poverty Alleviation Headquarters at the District Level was established to organize, coordinate, accelerate and supervise the implementation of each task, in which “5” refers to the party secretary of district committee, the chief of the district government, deputy secretary of district Party Committee in charge of poverty alleviation, deputy chief of the district government and the director of the poverty alleviation office, and “N” refers to the members of four leading groups of the district government and other county-level leaders; at the township level, a poverty alleviation team was set up at each of the 13 township government and establish a “2+2+N” township-level poverty alleviation headquarters, in which “2” refers to the party secretary and the head of the township government, “2” refers to the deputy secretary who is in charge of the poverty alleviation and deputy chief of the township government, “N” refers to 5-7 staff who are specifically assigned to do poverty alleviation work; at the industrial department level, a “1+1+2” poverty alleviation group was set up at each of the key industrial department in the District, which was led by the head of the industrial department and equipped with specified personnel to do poverty alleviation work; at the village level, poverty alleviation responsible task team was set up at each of the 256 villages. In the whole District, In the whole, officials of relevant government departments should take the lead in helping the poor households, and organize officials and poor households to establish a partnership of helping and assisting. In principle, each official of government departments should assist 3 poor households, so as to cover all the registered poor people. As the end of 2020, the party secretaries of all 13 township governments visited 15,742 poor households.

216. **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 additional 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

217. The assessment of social practice effects is mainly based on the information obtained from the demonstration and sample counties and information on the assessment of the implementation process and effectiveness of social risk management of experienced similar activities. 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 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.

218. Through the survey in Henan and Shaanxi Provinces, social stability risk assessments were conducted for all projects involving land acquisition and resettlement, such as water supply plant. SSRA of some projects were prepared with other projects together, like soil and water conservation project, wastewater treatment facilities in rural areas (occupying a land area of 300-600m²), etc. The impacts of such projects are limited and no permanent land acquisition involved but use the land temporarily or occupy the unused construction land in the village with the approval from County-level natural resources department. For example, the SSRA of the Yintai District Qishui River (section of urban area) Ecology Protection and Rehabilitation Project in Yintai District, Tongchuan City, Shaanxi Province include the construction and reconstruction of rural wastewater treatment facilities along the Qishui River, river channel improvement, and soil and water conservation, etc. In 2020, there were 9 SSRA reports of major decisions recorded in Wangyi District, Tongchuan City, and 3 SSRA reports recorded in Xunyi County and 2 recorded in Yongshou County of Xianyang City, covering the project of wastewater treatment facilities, domestic solid waste collection and treatment, river channel improvement and so on. The SSRA of Drinking Water Safety Consolidation and Promotion Project in Taowang Village, Caiyuan Town, Shanzhou District, Sanmenxia City, Henan Province assessed the social stability risks related to the construction of drinking water project, like land acquisition. The SSRA of related projects in Sanmenxia City is implemented every year in line with the policies. For example, there were 18 SSRA reports prepared for projects like land acquisition and drinking water programs in Lingbao City from January to September 2021.

219. The SSRA identifies and analyzes the potential social impacts and risks, community residents' opinions and suggestions related to the project, such as permanent land acquisition, temporary land use, affected young crops and attachments, grade the level of impacts and risks, and develop risk mitigation measures and control measures based on the investigation and community residents' opinions and suggestions, to ensure the potential social risks of the project can be managed.

220. **Assessment:** Field investigation and consultation on sample counties in Henan and Shaanxi Provinces show that the projects concerned have carried out the "social stability risk 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. Meanwhile, it's found that SSRA was not conducted at the project preparation stage for some small-scale projects, such as rural wastewater treatment facilities, water supply facilities, livestock and poultry sewage treatment facilities and ditches ecological protection projects.

221. **Recommendation:** social stability risk assessment should be conducted for the single small-scale projects. SSRA for several small-scale projects in the same region can be

prepared in a package according to the actual situation.

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

222. **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.

223. The Wangyi District Natural Resources Bureau in Shaanxi Province and Mianchi County Natural Resources Bureau in Sanmenxia City, Henan Province introduce, for WWTPs with a capacity over 100ton and above that require land acquisition and demolition, the implementing agency is required to provide the natural resources department with the approval of the project 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.

224. **ii) Alternatives:** The feasibility study process for construction projects requires the comparison of different proposals. For example, a Mianchi County Rural Domestic Wastewater Treatment Feasibility Study Report was prepared regarding to the rural wastewater treatment in all 12 townships of Mianchi County, Sanmenxia City, Henan Province, in which the principles of site selection for village-level and township-level wastewater treatment facilities were included. For example, the following factors should be considered when selecting a site for WWTP in the town: 1) terrain. The WWTP should located at a lower terrain, which is convenient for wastewater to flow into the plant; the layout of drainage pipelines should be considered when selecting a site; and the impacts of terrain should also be considered. These principles are helpful for minimizing operation and maintenance costs, maximizing the use of existing resources and avoiding repeated construction. 2) sensitive targets. The site must be located downstream of a central water source, downstream of towns, factories and residential areas, and below the prevailing summer wind direction; There shall be a certain safety protection distance and a health protection belt between the site and the town, the factories; the site shall meet the sound environmental quality standards; and the noise pollution caused by the WWTP facilities to the surrounding area shall be controlled. 3) location and farmland protection. The site should avoid or minimize the occupation of farmland as possible and be in a place with better geological conditions which is easy for construction, to reduce the cost. Make full use of the terrain and select a place with proper slope to meet the requirements of artesian flow during

the treatment process. According to the survey on project implementation agencies and consultation agencies in Henan and Shaanxi Provinces, the feasibility study usually has considered the site selection principles, evaluated the alternatives and selected the best plan.

225. iii) Developing measures to avoid, minimize or mitigate social impacts: According to interviews with the Shaanxi Provincial Political and Legislative Affairs Committee, Henan Sanmenxia Municipal 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 the 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 the social stability risk assessment for the domestic waste landfill site construction project in Yongshou County, Xianyang City, Shaanxi Province, mitigation measures like following the provisions of civilized construction, collecting sewage and washing machines during the construction process, selecting reasonable construction site to achieve dust and noise reduction, etc. were formulated in terms of the potential impacts to surrounding communities during the project construction, such as wastewater, dust, noise and so on. The SSRA of Drinking Water Safety Consolidation and Promotion Project in Taowang Village, Caiyuan Town, Shanzhou District, Sanmenxia City, Henan Province identified that the main social impact of the project is permanent land acquisition, so the mitigation measures developed include occupy construction land and wasteland as much as possible; avoid or minimize the occupation of agricultural land; listen to the opinions of residents; and strictly implement the national and local land management laws and regulations. The SSRA record form shall be submitted to the relevant departments for review and sign the concluding opinion of agree to be implemented or can be implemented. See Figure 4 of Annex 10.

226. iv) Defining the organizational responsibilities and budget sources for the implementation of mitigation measures: Shaanxi Province and Henan Province have a similar division of government responsibilities in the project involving water supply, irrigation, rural wastewater, solid waste and non-point pollution control. In particular, ecology and environment departments are responsible for the collection and treatment rural domestic wastewater; agricultural and rural departments are responsible for 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.

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. For example, the County-level Natural Resources Bureau implement the land acquisition work on behalf of the People's Government of Xunyi County in Shaanxi Province. For a specific project, the land acquisition and resettlement will be implemented by a land acquisition and house demolition team, which is established

with the 2-3 persons from the Natural Resources Bureau, 2-3 persons from the project implementation agency (e.g., the county water resources bureau is the implementation agency for water supply construction project), 2-5 persons from the township government and the members of the village committees where the project located. Through the visits to the project counties in Sanmenxia City, Henan Province, the management procedures for land acquisition and house demolition are similar.

227. 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.

228. **v) Public participation, information disclosure and grievance redress mechanism (GRM):** According to the survey on the political and legal departments in Yintai District and Wangyi District, Tongchuan City, Shaanxi Province and Mianchi County, Shanzhou District, Sanmenxia City, Henan Province and the analysis about the SSRA of the Yintai District Qishui River (section of urban area) Ecology Protection and Rehabilitation Project in Yintai District, Tongchuan City, Shaanxi Province and SSRA of Drinking Water Safety Consolidation and Promotion Project in Taowang Village, Caiyuan Town, Shanzhou District, Sanmenxia City, Henan Province, it's found that public consultations were conducted during the SSAR process. For example, 158 households were consulted during the SSRA of Drinking Water Safety Consolidation and Promotion Project in Taowang Village, Caiyuan Town, Shanzhou District, Sanmenxia City, Henan Province, accounting for 60% of the total village households, and 100% of the people surveyed support the project construction. The SSRA reports of each area were reviewed by experts and recorded in the government departments.

229. In addition, as introduced by the natural resources departments of the project areas that information disclosure and DMS is required during the whole land acquisition and house demolition process according to the Land Administration Law revised in 2020. For example, in Xunyi County, Shaanxi Province, once received land acquisition entrustment from the project implementation unit and confirmed all mandatory procedures have been completed, the natural resources department will publish a land acquisition announcement, conduct land status survey and detail measurement survey (DMS); at the same time, the PIU will conduct social stability risk assessment; after the DMS, the DMS results will be disclosed for verification in line with GRM procedure, and the land acquisition compensation and resettlement plan will be developed and disclosed in the affected communities; then, the natural resources department will negotiate and sign the land acquisition pre-agreement, and submitting land acquisition application documents to Provincial Natural Resources Department for approval. In addition, a formal land acquisition announcement will be published after getting the land acquisition approval and compensation fee will be paid accordingly.

230. A survey of counties in Shaanxi and Henan 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 Yongshou County in Shaanxi Province and Lingbao City in Sanmenxia of Henan 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/municipal or Sanmenxia municipal government's letter and visit office or contact the county/municipal 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.

231. **Assessment:** Field investigations in Shaanxi and Henan Provinces, and the Program counties concerned show that relevant facilities, such as water supply facilities, have carried out relevant assessments and approvals as required during project preparation stage, the early preparatory stage of the implementation of the project concerned includes a comprehensive social risk screening process, such as "SSRA", feasibility study, project alternatives analysis, 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) public consultation process during SSRA, especially the sample questionnaire filled out and the official registration form of SSRA reports,) the records and photos of public hearings carried out in the project implementation process, complaint records, etc., 3) other materials reflecting public participation.

232. **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.

4.4.2 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.

233. As confirmed by the natural resources departments and cultural relic protection departments at County-level, Municipal-level and Provincial level of Shaanxi and Henan Provinces, 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. For example, 64 cultural relics were listed in the national land spatial planning in line with relevant requirement in Wangyi District, Shaanxi Province. 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 any construction project is located within the area of designated cultural relics protection units, it is necessary for the cultural relics protection department to entrust qualified cultural relics exploration institutions to carry out cultural relics protection measures, and the land owner shall carry out land transfer or remising only after archaeological activities completed. For unknown areas, cultural relics should be explored first; If cultural relics were not discovered through exploration but discovered during excavation, the cultural relics protection departments shall entrust qualified cultural relics exploration institutions to take protection measures. 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. According to the survey on cultural relics protection departments in Wangyi District, Xunyi County and Yongshou County, Shaanxi Province, cultural relics exploration is not required for the project without breaking ground. As introduced by the cultural relics protection departments in Shanzhou District, Sanmenxia City, Henan Province, the cultural relics protection work is divided into above-ground part and underground part: the above-ground immovable cultural relics are classified into national, provincial, municipal, county-level and general cultural relics protection units. If there are any national, provincial, municipal, county-level and general cultural relics protection units identified during the site selection, the project site should be changed; for cultural relics under the ground, site selection plan should be submitted to cultural relics protection departments for review and to exploration and archaeological departments for investigation first, then the project can be implemented. It can be seen from the survey in the counties sampled that the cultural relics management system is basically the same, including site selection management in the early stage of the project and cultural relics protection and management in the implementation process of the project. The related cultural relics management system can protect cultural relics resources from being impacted by the project construction.

234. Figure 5 of Annex 10 shows an approval on site selection of a natural gas pipeline and valve construction project issued by Yongshou County Cultural Relics Protection Bureau. Although no natural gas related project involved in this Project, the land use scale of project related rural wastewater treatment facilities and pipelines, water supply facilities and livestock manure treatment facilities are similar with the natural gas pipeline and valve. Therefore, the review process and result are the same, which can show the review procedure of relevant construction projects by the cultural relics departments.

235. **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.

4.4.3 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.

236. There is labor management system established on each administration levels, including related laws and regulations as discussed in Section 4.2, and corresponding labor authorities as mentioned in Section 4.3. The survey of the sampled counties indicates that the labor management system operates effectively. And the result of survey also indicated there were not any child labors (under 16 years) identified in the enterprises or units.

237. It was found in the interviews at the county level that all projects, including Wangyi District and Yintai District of Tongchuan City, Xunyi County and Yongshou County of Xianyang City in Shaanxi Province, Mianchi, Shanzhou District and Lingbao City of Sanmenxia City in Henan Province) 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. For example, the Health Commission of Lingbao City, Henna Province introduced that occupational disease assessment on the project construction and operation is required to be prepared by a third party and reviewed by experts during the project design stage. If any hazard identified, Three Simultaneities safety facilities/measures should be implemented by the operational enterprises during the project design, construction and operations. And it is required for the enterprises to declare the related hazards in the National Toxic and Harmful Substance Declaration System. If any enterprise doesn't make a declaration and found during the township government's grid management and baseline survey, it will be reported to the Health Commission and then the Health Commission will make inspection and punishment. In addition, the Health Commission also conducts random inspection on the enterprises which have made declaration and not make declaration. The number of enterprises to be inspected is determined based on the distribution of each type of enterprise, e.g., 35 enterprises were inspected in Lingbao City from January to August 2021. 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, whether the three simultaneous measures were implemented, whether the enterprise occupational health record was in place and whether annual monitoring of occupational hazards of the enterprises was conducted. In Mianchi County and Lingbao City, Sanmenxia City, Henan Province, as for the enterprises which the occupational hazard is categorized as "general", e.g., sewage treatment, it is required to entrust a certificated occupational health technical service institution to detect the occupational hazard factors at least once every three years; for the enterprises the occupational hazard is categorized as "Substantial", it is required to conduct occupation hazard factors detection annually. During the site survey in Shaanxi and Henan Province, it's found that some facilities like rural water supply facilities, livestock and poultry waste recycling enterprises, which is

small and with limited personnel during the operation, are not included the local occupational health declaration, assessment, inspection and management system.

238. 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 Sanmenxia City, Henan Province, there are 70 labor dispute mediation centers in the county, and about 90% of the disputes can be handled through mediation, while 10% required to go through arbitration or legal channels. From January to August 2021, the human resources and social security department of Sanmenxia city received and handled 340 wage disputes through the labor dispute mediation mechanism, involving 2,076 workers and 4.5388 million yuan in wages. According to county 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. The detailed mediation and arbitration processes of labor disputes was introduced by the labor affair bureau of Sanmenxia city: when a labor and personnel dispute encountered, the employees can seek help from the labor inspection brigade of the labor inspection 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. Figure 6 in Annex 10 show the labor inspection and enforcement process and the labor arbitration process, provided by Mianchi County Labor Affair Bureau.

239. During the visits to Livestock and poultry manure utilization enterprises, all enterprises introduced that trainings were provided to relevant workers and necessary equipment were prepared. For example, the labor contract signed between the employee and the Henan Sanmenxia Chengyu Dairy Cattle Breeding Co. Ltd clearly stipulated the roles and responsibilities of the company and the employee, including the company must provide employees with safety and health working conditions and necessary personal protection equipment in line with national regulations, and provide regular health examination for employees who engaging in the position with occupational hazard factors.

240. **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, it's found that some facilities like rural water supply facilities, livestock and poultry waste recycling enterprises, and agricultural products processing facilities, which is small and with limited personnel during the operation, are not included in the local occupational health declaration, assessment, inspection and management system.

241. **Recommendation:** the operational unit of rural water supply facilities, livestock and poultry manure utilization enterprises should be covered by the daily management of the local occupational health declaration, assessment, inspection and management system, including 1) occupational health assessment and declaration should be conducted and can be queried; 2) the Health Commission at County and City level should bring relevant project facilities into the scope of daily inspection and supervision, and keep inspection records.

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.

242. It is found during the site visit to the already built facilities that the safety of community residents and workers is taken seriously by all units. As shown in Figure 8 of Annex 10, the livestock and poultry manure utilization facility of Wangyi District, Shaanxi Province was built in a relatively independent space within the community with safety fence and specified personnel were arranged for daily safety management. As shown in Figure 9 of Annex 10, the rural domestic sewage treatment facilities in Yongshou County, Shaanxi Province and Lingbao City, Sanmenxia, Henan Province were built on the unused construction land or wasteland of the community with a fence and managed by specified persons assigned by the township government or village committee.

243. In terms of the prevention of Covid-19, both Provinces and project counties took control measures strictly in line the Law on the Prevention and Control of Infectious Diseases (2020) and formulated Covid-19 prevention and control measures based on the local conditions. For example, the Health Commission of Longbai City, Sanmenxia, Henan Province formulated the Covid-19 Prevention, Control and Treatment Plan and divided the responsibilities of each department in details accordingly. See Figure 11 in Annex 10.

244. **Assessment:** During the construction and operation of the project, the construction contract and operation system contain or implement relevant preventive and control measures for ensuring the community and labors safety. The natural disaster management system is sound, the personnel are in place, and the management is basically in place.

4.4.4 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.

245. Through the survey on the related facilities in Shaanxi and Henan Province, it's found that land use may be involved during the construction of rural water supply facilities,

upgrading treatment facilities of the existing municipal Wastewater Treatment Plants (WWTPs), construction of some rural wastewater treatment facilities, livestock and poultry manure utilization facilities embankment, construction/renovation of rural drinking water supply facilities, e.g. water supply stations, pipeline network, pump stations and storage tanks and soil and water conservation activities in terms of stormwater collection pond, gully control works and ecological terrace field improvement. Of which, some facilities, for instance, new construction or expansion of municipal WWTPs and water supply stations, may need permanent land acquisition (LA), while other activities may not involve permanent land acquisition, but i) temporary land occupation, e.g. the pipeline works and laydown areas during civil working; ii) just use the collective construction land or unused land; iii) facility agriculture land use (FALU) for some livestock and poultry manure recycling facilities; and iv) land use right transfer (LURT) for some vegetation works

246. For the above land use, negative impacts are managed through different management systems. LAR effects are analyzed in the six aspects included in Element 9 as follows:

i) Minimizing negative impacts related to land acquisition:

247. For activities involved LA, as introduced by the Natural Resources Bureau in Shaanxi Province and Sanmenxia City, the Construction Land Use Pre-approval and Site Selection Approval were obtained for the projects which may involve permanent land acquisition, which means the land use were reviewed by relevant authorities at the project preparation stage to ensure the project implementation is in line with the local land use planning and avoid occupying basic farmland and impacting other sensitive facilities.

248. For activities involved FALU like the livestock and poultry manure utilization facilities, as confirmed with the NRBs of the sampled counties, FALU process usually requires the consent of relevant villages/community committees (to confirm being informed and consent) and township NRB (to confirm being informed and consent, and in compliance with local land use planning), review by the county water resources bureau (WRB) (if it is close to any critical water source), forestry bureau (proposing technical requirements for woodland use), transport bureau (not to build any breeding farm or any associated facility within 2km), scenic area authority (if the site can be within the scenic area), county NRB (if basic farmland or ecological redline is occupied), and cultural heritage authority (if the site is within the range of any protected cultural relic). According to the survey with the manure utilization facilities in Wangyi district and Yongshou, Shaanxi, the FALU approvals were obtained from the local Natural Resources Bureau after confirmed by the relevant departments, which approves that the land use of the facilities is consistent with the local land use planning and avoid occupying basic farmland or impacting other sensitive facilities. See Figure 12.

249. Rural wastewater collection and treatment facilities usually occupy collective unused land. Or, if villager's land is proposed to occupy, it is normally addressed through land adjustment internal of the collective economic organization, or through land compensation based on negotiation with the villagers. It is subject to voluntary basis. Where the villagers don't accept the result of negotiation, other site option is normally selected.

250. For activities involving LURT, it is a kind of vegetation works that will plant fruit trees or economic vegetation to achieve the objectives of water and soil protection along the river

basins, and income increase of the farmers of the regions. According to the *Management Measures for the Rural Land Use Rights Transfer (2021.3.1)*, LURT can only deal with agricultural activities to ensure that farmland is used for agricultural purposes, against which Shaanxi and Henan local law enforcement brigades under natural resources have routine supervision mechanism to minimize negative impacts of land occupation.

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

251. As confirmed by the natural resources department of each project county that the local land acquisition procedure is in compliance with the laws and regulations. During the survey in Wangyi District, Yintai District, Xunyi County and Yongshou County in Shaanxi Province and Mianchi, Shanzhou and Lingbao in Henan Province, it is found that the construction of soil and water conservation projects usually lasts for a short period and occupies ditches temporarily, sometimes it also occupies farmland temporarily. In terms of the temporary occupation of farmland, usually, it is the construction unit to negotiate with the affected village committee or households and sign a temporary land use agreement, in which land use area, compensation standards, total compensation fee, way of payment, period of occupation, and land restoration requirements are included, so as to minimize the impacts on farmers. Whereas no permanent land acquisition is required such as some small-scale wastewater treatment station, livestock and poultry waste resources utilization facilities, land renting through negotiating with the village committees/land use party and affected households, signing land leasing agreement. Land lease rentals are usually paid to affected households directly in line with the agreed payment method and period. Land area to be rented and affected young crops on the ground are confirmed in the land leasing agreement. As shown in Figure 7 of Annex 10, it is a land lease agreement signed between the village committee (on behalf of villagers) of Dujiazhuang Village in Ganjing Town, Yongshou County, Shaanxi Province and the Xianyang Zhengda Food Co., Ltd. Figure 12 is the “Notice of Facility Agricultural Land Use (FALU) Record” approved by Yongshou County Natural Resources Bureau. The Zhengda Food Co., Ltd use the leased land to plant fruit trees, livestock and poultry feeding and construct and operate livestock and poultry waste resources utilization facilities. According to the agreement, the land rent fee is 500 yuan/mu for the first year and increasing by 10% a year from the second year onwards, the compensation fee for young crops on the ground is paid at once and the rent fee is paid on October 30 of each year.

252. For the projects involved permanent land acquisition of farmland or unused land, all the project counties and cities implement the published national and provincial compensation standards, which is formulated by the local natural resources departments based on the annual output value of the agricultural land and updated every 2-3 years according to the market situation. For example, the Notice of the Shaanxi Provincial Government on Releasing Block Comprehensive Land Prices of Shaanxi Province ([2020] No.12), which was promulgated in 2020, published the latest compensation standard for acquiring agricultural land. Regarding to the livelihood restoration of the land-loss farmers, systematic arrangement was formulated by the natural resources departments and human resources and social security departments in each project County. It will be discussed in detail in point iv) following.

253. During the visit to the counties, the survey team learned from the villager representatives that they were generally satisfied with the implementation process of land acquisition compensation and resettlement, and the compensation payment. When asked whether the concerned issues of the affected people can be reported to the village committee of project implementing agencies during the implementation process, the villagers interviewed gave positive response, and indicated that all the issues were solved.

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

254. According to the consultation of Shaanxi and Henan Provinces and relevant county-level project implementation units and natural resources departments, the compensation for expropriation of housing in the urban planning area of the project counties is determined through appraisal based on the market price at the time of land acquisition, to ensure the compensation standard is basically consistent with the market replacement cost.

iv) Livelihood restoration

255. Mechanisms for livelihood restoration are established in related domestic systems:

256. For impacts related to land acquisition and resettlement, the related land acquisition and resettlement system was implemented with regulated procedure through the lead of NRB of each county. Except for compensation and resettlement in compliance with the laws, it also includes the implementation of the social security systems as well as the employment training and support policies for land-expropriated farmers. As required by the *Land Administration Law 2020 at Article 48*, it is a basic requirement for the related county government and the project implementation agencies to ensure that the livelihood standard of the land-expropriated farmers do not be decreased 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 100 per month each person in both Shaanxi and Henan provinces. For those who have not reached the retirement ages, their insurance charges will be paid in one-off 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 them 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. It is 3,000yuan/month/person on average in Shaanxi and Henan Province in 2021. Those who have not reached retirement ages can get income through training and employment supports provided by local government every year. For example, in Wangyi District and Xunyi County of Shaanxi Province and Shanzhou District of Sanmenxia, Henan Province, besides the land rental fee paid by the agricultural cooperatives or big planters for land use right lease, the agricultural cooperatives also provided employment opportunities to local labor force during fruit trees planting and management. Take the apple cultivation base at Er' Xian Po, Shanzhou District, Henan Province as an example, this project rents about 30,000mu of cultivation land from local communities for apply planting and production. Besides the land rental fee paid to farmers, a large number of local farmers are recruited to work in the base. they are paid by

day or workload and the income is about 90-200 yuan/day. There are about 3,000 farmers employed in this base each year, including both full-time and part-time employees, among which the annual income of full-time employee is about 50,000yuan and the part-time employees can work in the base for 4-5 months. During the site visits in project counties, there are many such kind of projects, which is the main channel to promote farmers employment and increase their income. Other typical projects include peach planting base at Xiantaogou, Mengjiangyuan Village, Wangyi District, Tongchuan city, Shaanxi Province, and ecological management project in Longquan Community, Xianyang City. As shown in Figure 13, farmers are working in the apple cultivation base at Er' Xian Po, Shanzhou District, Henan Province at the time of ESSA Team visit.

257. For others impacts that may not involve any civil works and physical displacement to the farmers, but will improve their environmental awareness, and improve their farming patterns and living habits/behavior gradually, for which farmers should master certain production and living methods and improve their own skills, such as adjusting cropping patterns with consumption-based design for higher value crops and substitution of organic fertilizers for chemical fertilizers. Given the implementation of the PforR program aims to improve the rural environment and push the farmers' livelihood better-off in the long term, there are potential impacts in short-term, e.g., higher cost for fertilizers and related services etc. For such impacts, mechanisms were in place, including:

- **Training.** Free farmer training system has been established from the Ministry of Agriculture and Rural Affairs (MARA) to the provinces and cities, and the local agriculture and rural affairs authorities are exploring some effective policies and measures to accelerate farmers' improvement and transformation. For example, the *Implementation Plan for the Training of High-caliber Farmers in 2019 of Shaanxi (SJ[2019]No.237)*, and the *Implementation Plan for the Training of High-caliber Farmers in 2020 of Sanmenxia, Henan Province (Aug.6, 2020)*. Taking Sanmenxia as an example, a total of 1,800 farmers were trained in 2020 on new agricultural cultivation and specialized breeding. As indicated, the training not only involved courses new cropping patterns, but also included sessions for fertilizer reduction, water saving etc.
- **Consultation and technical supporting.** For adjusting of the existing livelihood patterns like adjusting the cropping patterns with consumption-based design for higher value crops, or collect service fees for water service or wastewater treatment, the implementation of these activities is subject to full consultation and engagement. For adjusting of cropping patterns, as suggested by the agriculture and rural affairs bureau (ARAB) of Wangyi district in Shaanxi, comprehensive assessments would be undertaken with detail proposals or feasibility studies before implementation, and, it normally would be pushed forward through demonstration to popularization on the voluntary basis, meanwhile, except for policy supports, technicians from the district ARAB would provide close supports to the farmers during the land management periods. According to the survey around the counties, services of water supply and wastewater treatment are free of charge in the rural areas. If fees are about to charge, it is a mandatory procedure to carry out full consultation and assessment, so that the price will be set at a feasible and acceptable levels. For example, as stipulated in the *Measures of Public Hearing on Price Determining (Jan. 10, 2019)*, public hearing must be held to solicit the

opinions of the public and stakeholders prior to initiation of fee charging where relevant. And Article 17 required, the public hearing shall include the result of assessments on the rationales of pricing and the potential economic and social impacts. **Policy preferential supports.** Regarding the potential impacts due to the substitution of organic fertilizers for chemical fertilizers, there could bring increase of fertilizer cost. For example, as explained by the sampled counties in Shaanxi and Henan provinces, the cost of chemical fertilizer is around 150 yuan/mu, while the cost of organic fertilizer is 300 yuan/mu, mainly because the application quantity of organic fertilizer is more than chemical fertilizer per mu. In addition, the application procedure of organic fertilizer may be some different. For example, comparing with the chemical fertilizers, how the farmers know they can purchase the right organic fertilizers and what different for application of organic fertilizers bought; and such, guidance is needed for farmers. According to the consultation with the rural and agricultural departments of the sampled counties of both Shaanxi and Henan provinces, mechanisms were established from the national, provincial, and county government. These include soil test of the cultivated land and recommend the mixed fertilizer to farmers free of charge, designed trainings to farmers for free every year with assigned agricultural technicians, and provide organic fertilizers to farmers with free or low costs. As confirmed, the actual costs for farmers are basically remained as before, meanwhile, the soil quality is improved, the quality of products is recognized by the market, and the income of farmers is increased, especially for the vulnerable groups. During the 13th Five-Year Plan period (2016-2020), the coverage rate of soil testing and fertilization recommendation in Shaanxi Province reached over 90%. Pilot projects of replacing chemical fertilizers with organic fertilizer was implemented in 16 counties and districts, and 633,000 mu of demonstration areas were built for replacing chemical fertilizers with organic fertilizer in fruits and vegetables planting. The total amount of chemical fertilizer applied in the demonstration areas reduced by more than 10% and the total amount of organic fertilizer applied increased by 20-50%.

258. Regarding to the renovation of rural household toilets, it is mainly to transform the traditional rural dry toilets into harmless sanitary toilets (such as three-cell septic tanks), collect the sewage from toilets, kitchens and bathrooms to a unified sewage system, and discharge it after natural precipitation and purification. It is promoted through the manner of joint investment of government and rural households, among which, the government provides fund, while the rural households provide labor. Take Wangyi District in Shaanxi Province as an example, the cost for a three-cell septic tank is 3,500 yuan, including 2,000 yuan from the central and provincial governments and 1,500 yuan from the district government, and the farmers themselves are responsible for construction. Therefore, the impact to the local people is limited. And it is implemented subject to voluntary of the farmers.

v) Policy arrangements for infrastructure restoration

259. The consultation to the two provinces and counties sampled indicated that the potential impacts 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 ensured that the public facilities and community services affected by the project are 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

260. According to the natural resources departments of Shaanxi Province and Sanmenxia city in Henan 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.

261. **Assessment:** Shaanxi and Henan 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.

4.4.5 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.

262. The situation of ethnic minorities in Shaanxi and Henan Province is quite similar. As the end of 2020, the population of ethnic minority in Shaanxi Province was 164,574, accounting for 0.47% of the total population, and the Hui, Manchu, Zhuang, Tibetan, Korean, Mongolian, Uygur, etc. were the main ethnic minorities living in the regions. Among them, the population of the Hui people was 134,500, accounting for 84.1% of the total ethnic minority population. In the aspect of geographical distribution of ethnic minority population, most of them live scattered, more in urban areas and less in rural areas. There were ethnic minorities in all 107 counties, cities and districts of the whole province, among which about 70% of the ethnic minorities live in urban areas and 30% of them live in rural areas. in total, there were

3 Hui Townships and 37 ethnic minority villages in Shaanxi Province. There are no ethnic minority townships or villages in Tongchuan City and Xianyang City, while there are three density villages of Hui ethnic in Xianyang: Malan village in Malan town, Xunyi County, Yongjiu Village in Guantou town, Qian County, and Xiguan village in Chengguan town, Liquan county. Henan province is one of the provinces with a large minority population scattered in the administrative region. The population of ethnic minority was 1,441,968, accounting for 1.36% of the total population, including 1,231,858 of hui people, accounting for 85.4% of the total ethnic minority population; 91,079 of Mongolian, accounting for 6.3%, 75,148 of Manchu people, accounting for 5.2%, and the 43,883 of other ethnic minorities, accounting for 3%. There were 3 ethnic minority counties or districts, 13 ethnic minority townships, 8 ethnic minority towns, among which, 3 ethnic minority counties located in Kaifeng, Zhengzhou and Luoyang City. There were no ethnic minority district or county, nor ethnic minority township in Sanmenxia City, but there are 15 ethnic minority villages, including 3 in Mianchi County, 2 in Lingbao City, 2 in Shanzhou District and 8 in Lushi County.

263. According to the ethnic affairs management authorities in the counties of the two provinces that ethnic minority issues are effectively managed by: i) the Constitution and relevant ethnic management laws and regulations: when dealing with special issues involving the various ethnic groups in the localities, their representatives must be fully consulted and their opinions respected; the autonomic authorities of the ethnic autonomous regions guarantee the constitutional civil rights for citizens in their ethnic regions. On the other hand, 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.

264. **Assessment:** The evaluation concluded that the project, when implemented in minority areas, the rights of the ethnic minority are fully respected on both legal and implementation levels, including the rights of pre-notification in the project early stage, and the development rights like 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.

265. The development of ethnic minority in the project area is mainly reflected in two aspects. First, the cultural and religious beliefs of ethnic minorities are respected, such as the "Sesame Day" on each Friday, "Eid Al-Fitr", "Eid al-Adha" and other festivals, build mosques to facilitate religious activities of ethnic minorities. There are 21 mosques in Sanmenxia City, Henan Province, among which, 2 in Mianchi County, 2 in Shanzhou District and 8 in Lingbao City. Second, benefits of economic development for the ethnic minority people are provided, like standardize and promote the development of Muslim catering, considering many Hui

people are running restaurants. For example, in the 13th Five-Year Development Plan for Ethnic Minorities in Shaanxi Province, it is required to implement the Regulations on the Production and Management of Muslim Food in Shaanxi Province and General Rules for Muslim Food Certification, establish and improve the Muslim food certification management system, integrate Muslim food resources, and cultivate and develop the Muslim food market, and so on.

266. **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.

267. A survey of women's federations in various counties shows that women are treated equally with men in terms of social status and work benefits. There are even special policies to cater women's characteristics and needs. For example, there is a Women's Development Plan of Shaanxi Province formulated at the provincial level and updated every ten years and there is a Five-year Development Plan for Women at each of the project city and county level. In Lingbao City, Sanmenxia, Henan Province, the key tasks for women development in the Thirteenth Five Year Plan were the aspects of health, education, economic development, participation in social management, etc. With regard to women's health, screening and management of high-risk pregnant women have been strengthened through random visits, and all social units have been urged to conduct breast and cervical cancer screening for women, with a follow-up rate of over 90%. In terms of women's education and development, various training programs for women were provided with an attendance of 18,000 person times since 2018 and promoted the employment of women. In terms of women's participation in social management, women are encouraged to participate in management. As of April 2020, there were two female leaders in the Municipal Committee of the CPC, and female leaders in 14 of the 27 leading departments of the Municipal Government, accounting for 51.9% of the total. In terms of the Infringement of women's rights, Lingbao city made full use of the "rights protection collegial panel" and "specially invited jurors", with leaders of the Municipal Women's Federation serving as people's jurors. In 2020, they participated in the review and trial of 26 cases, effectively protected women's legitimate rights and interests. And a women's federation workstation was set up in the County Legal Aid Center in Lingbao City to provide legal assistance to women when needed. In addition, volunteers were recruited in all units and township governments to protect women's rights, and the right safeguarding network was extended to grassroots organizations. Women legal aid workstations were set up in all 15 townships of the city, comprehensively covering the three-level network for right safeguarding, to ensure the management system of petition work was in place and the responsibility was assigned to the people. Since 2019, 3 legal aid volunteers have been recruited and 12 legal aid cases have been handled.

268. There are left-behind children and elderly people in all regions of Shaanxi and Henan 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. An information system for left-behind elderly and children was established respectively at the national level and being updated in real time. As the end of 2020, there were 43,000 left-behind elderly people and 1,3000 left-behind children (under 16 years old) in rural areas. The population of left-behind elderly and children are various in project counties, e.g., there were 1,938 left-behind elderly people and 1,259 left-behind children in Xunyi County, Shaanxi Province by the end of 2020; there were 162 left-behind elderly people and 92 left-behind children in Shanzhou District, Sanmenxia City, Henan Province by the end of June 2021. The administration system of left-behind children and the elderly in different places is basically similar. It is managed by the Civil Affairs Bureau of the County government and the whole system is relatively sound. Take Sanmenxia City as an example, 1) in the aspect of planning, the Notice on Further Caring for Left-behind Children, Left-behind Women and Left-behind Elderly in Rural Areas (SCB [2015] No.13) and Notice on Further Strengthening Care and Services for Left-behind Elderly in Rural Areas (SCAB [2015] No.44) was formulated to define the goals and working mechanism for the administration of left-behind children and elderly. 2) in the aspect of institutional building, the Sanmenxia City Joint Conference on Caring for Rural "Three Type of Left-behind" People (left-behind children, women and old people) has been established, and three coordination groups have been set up under this joint conference. Elderly Service Office and Children Supervisors are equipped in each Civil Affairs Bureau of the County People's Governments and the township government, and specified personnel for caring three type of left-behind people is assigned at village/community committees. For example, there are 2 officials equipped in the Children Welfare Office and 3 officials in Old People Welfare Office of Mianchi County Civil Affairs Bureau and 1 person for the elderly and children supervisor at the township level and community level respectively. Taking children's work as an example, Mianchi County supported 50 children through the "Bring Love Home" activity in 2020, with a fund of 30,000 yuan.

269. The survey results show that all counties in Shaanxi and Henan 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. Take Xianyang City in Shaanxi Province as an example, all the four impoverished counties, including Changwu, Xunyi,

Chunhua and Yongshou, have been lifted out of the poverty by the end of 2018. Even though, the situation of people who have been out of poverty was still tracked and managed through the method of poverty registration and documentation. As the end of December 2020, there were 47,347 poor households with 168,629 people registered in these four counties. The registered poor people who have been out of poverty can still enjoy the following policies: 1) education support: children of poor families can enjoy different standards of living subsidies every year, starting from preschool education. At the same time, for ordinary high school students and above, in addition to different standards of grants, they can also enjoy financial aid and student loans offered by the state, of which the interest occurred during the school time is paid by the financial subsidy; 2) financial poverty aid: petty loan of less than 50,000 yuan with no mortgage or guarantee and full interest discount within the first three years is provided to poor households for industrial development; 3) employment or entrepreneurship support: in addition to the above subsidies for poor students, free vocational education and various skills trainings and employment opportunities were also provided to the labor force of poor rural households to increase labor income, and subsidies were provided for poor households who starting their own businesses; 4) health support: provide subsidies to poor households for the treatment of major, chronic and serious diseases, raise the reimbursement rate for inpatient, outpatient and serious diseases, and contribute to poor households' participation in the new rural cooperative medical care system and so on. As introduced by the Rural Revitalization Department of Sanmenxia City, Henan Province, each county has its own poverty alleviation and rural revitalization project database which is established based on their own conditions, and the implementation of these projects must strictly follow the national management process, such as project approval, feasibility study and design, etc. For example, the proposal and feasibility study of a poverty alleviation project in a county need to be reviewed by the poverty alleviation leading group of the county, and the approval of the project can be issued after passing the review. Generally, the project tendering is carried out by township government bidding (tendering for special projects, such as water conservancy, is carried out by the competent authorities, and for trans-regional projects, it's organized and implemented by the County government). For all kinds of fund management, a special account management is set up by the finance department at all levels of government.

270. **Assessment:** Through the systems of government women's federations, enterprise female workers' working agencies, and grassroots women's organizations, the women's development and interests are guaranteed appropriately. For left-behind children and the elderly, management database was established by the local governments through the civil affairs' bureaus, including supports with related townships and villages/communities. National and local support system for poor families has been established with complete institutional mechanism, including policies, budgets, and institutional arrangements, which not only protects the legitimate rights and interests of poor families in various projects, but also enables the effective management for the poor matters of issues.

5. Stakeholder Consultation and GRM

5.1. Stakeholder Consultation

271. Stakeholder engagement is an important aspect of this ESSA, 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 Annex 6). 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 Shaanxi Province from August 30 to September 3, 2021 and in Henan Province from September 13 to 17, 2021.

5.1.1 Consultation Activities Implemented

272. At the preparation stage, the Bank team briefed and trained the relevant authorities of the Henan and Shaanxi Provincial Governments several times from November 2020 to September 2021, covering the Bank's PforR provisions, E&S policies, implementation management practices, operating processes, assessment document preparation, etc.

273. From November 2020, meetings on province-level consultation were held in Henan and Shaanxi 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 Wangyi District, Yongshou County, Xunyi County in Tongchuan city, Shaanxi Province, and Shanzhou District, Mianchi County, Lingbao City in Sanmenxia, Henan Province, where focus group discussions (FGDs) were held with government authorities, representatives of wastewater treatment / livestock breeding, village officials, villager representatives, and site visits were made to the village and township sewage facilities, breeding farms, manure recycling enterprises. See Annex 8 for details. Content of public participation mainly includes:

- Responsibilities and organizational setup of each authority
- Prevailing main sectoral policies and regulations.
- Boundary of PforR activities, policy requirements, implementation progress, effects and main issues related to wastewater collection and treatment, agricultural non-point-source pollution control, river treatment, water and soil conservation, etc. in work of different authorities.
- Enterprises and its scale of land use, 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 Consultation of the ESSA Report

274. The draft ESSA report was provided for public consultation in Henan and Shaanxi on November 15 and December 10, 2021 respectively. The provincial PMOs organized provincial and county authorities concerned to discuss this report with the Bank's team. Due to COVID-19, consultation was conducted virtually. Relevant opinions have been incorporated into the revised report. See Annex 9 for the key feedbacks from the consultation and the responses made accordingly by the Bank team.

275. The participants of the consultation meetings included the provincial authorities/parties concerned, and municipal and county authorities/parties concerned in Tongchuan city, Wangyi District, Yongshou County and Xunyi County in Shaanxi, and Sanmenxia city, Shanzhou District, Mianchi County, Lingbao city in Henan. 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; Whether the assessment of institutional capacity is appropriate; and
- 4) Whether the conclusions of this report are acceptable; in particular, whether the gaps identified between domestic ESMSs and the Bank's PforR policy are correct, and if the recommendations proposed are feasible and acceptable.

276. At the meetings, all participants gave positive comments on the ESSA report, provided feedback on 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 Annex 9 for details.

5.2. Grievance Redress Mechanism (GRM)

277. Existing GRMs usually include two types of GRMs, including the GRM for the communities and one the enterprises. 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.

278. **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 established the GRM during the construction and operation stages, or there were lack of documentation for the operation of GRM.

279. **Recommendation:** Ensure the GRM is established at both the construction and operation stages of the enterprises, and keep/monitor the documentation of the GRM operation.

6. Implementation Management and Monitoring

280. According to the Bank Policy, and the agreement between the Bank and Borrower, the two parties have different roles and responsibilities in terms of managing and monitoring Program implementation.

6.1 Program Implementation Agencies

281. 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, it's 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.

6.2 World Bank

282. 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.
- 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 grievance occurred.
- The Bank will conduct field visits regularly as a supplement to the self-supervisions of the PIUs, and provide other supports agreed on between both parties.

7. Conclusions, Recommendations and Action Plan

7.1. Conclusions

283. The Yellow River Basin Ecological Protection and Pollution Control Program aims to support the Chinese government's key actions in the area of ecological conservation in the Yellow River Basin and promote the economic, environmental, and social resilience of the project's sub-basins. Based on the ESSA, comprehensive and effective ESMSs have been established in relevant sectors in China, Shaanxi and Henan 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.

The range of activities required to achieve the Program results are not expected to include any which would be defined as "High Risk"¹⁸. If the activities are viewed in isolation, the E&S risk would generally fall within a "Moderate" category. Given various types of activities and the geographic scale across the river basin (7 sub-basins and 13 counties in two provinces), the cumulative risks may increase to a "Substantial" category. Based on the activities required to achieve the Program's results, and the strength of the E&S risk management systems, the Program is not expected to generate a wide range of significant adverse risks and impacts on human populations or the environment¹⁹. The areas for improvement identified in the assessment include:

- 1) The ecological protection and high-quality development programs of the Yellow River Basin have been established on both the national and provincial levels, which provides guidance to all provinces within the basin including Shaanxi and Henan provinces for their implementation. Challenges remain with optimizing inter-jurisdictional coordination of water ecosystem and water management, which in turn has implications for E&S risk management. It is anticipated the basin- and provincial-level activities of the operation will result in improvements in this regard.
- 2) Given the fast improvement for rural sewage water treatment facilities along the Yellow River Basin recent years, many sewage treatment facilities have operation and maintenance (O&M) challenges such as lack of timely maintenance, lack of technical support, and poor management. This results in frequent break-downs, unstable operations and therefore poor sewage treatment quality. In addition to direct environmental and social implications created by poor outflows, other O&M activities such as OHS, community awareness etc also exist. Improved technical capacity through targeted and meaningful trainings (as well as additional technical and financial resources) would greatly improve the end results.
- 3) Documentation on public consultation, information disclosure and GRM operation is relatively weak, and some enterprises have not established the GRMs for their construction and operation.

7. 2. **Recommendations**

284. 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

¹⁸ Risk categorization based on Section C of the Bank Directive – Environmental and Social Directive for Investment Project Financing, March 2019.

¹⁹ This is the basic criteria for a "high" risk project.

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:** Coordinate the related municipal/county departments for the development and implementation of integrated sub-basin plans for the seven demonstration sub-basins under the PforR, which has been reflected as part of the Program activities (RA4).
- 2) **Recommendation 2:** Provide regular trainings on E&S issues for the staff who are maintaining the town and village sewage treatment facilities, and raise up their technical capacity and awareness of occupational health and other likely E&S implications of poor O&M.
- 3) **Recommendation 3:** Strengthen the recording and documentation of the public consultation and information disclosure process and GRM management, define the requirements of documentation in project management documents (such as contract, agreement), including (but not limited to) the records of the process and results of public participation, information disclosure, and the implementation of grievance redress mechanism.

7. 3. Action Plan

285. 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 regular trainings on technical capacity building for the staff maintaining the town and village sewage treatment facilities focusing on OHS and other E&S impacts of poor O&M	Project Implementation Agencies	Throughout Program implementation stage	The Henan and Shaanxi PMOs should submit semiannual progress reports to the Bank, including the implementation of related trainings.
2	Establish monitoring and reporting mechanisms for meaningful public participation and GRM, and strengthen information and documentation management during the project social risk	Project Implementation Agencies	Throughout Program implementation stage	The Henan and Shaanxi PMOs should submit semiannual progress reports to the Bank, including the information of land selection/screening or approvals, records of information disclosure and public participation,

management.	GRM establishment and operation, and supporting provided to vulnerable groups.
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Annex1 Overview of Government Program and PforR Activities – Henan Province

Henan Yellow River Ecological Protection and High-Quality Plan	Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing	
<p>1. Strengthen water conservation and efficiency in agriculture</p> <p>Strengthen agricultural water saving and efficiency</p>	<ul style="list-style-type: none"> - Implementation of large and medium-sized irrigation areas to continue construction support and modernization, promote the integration of water fertilizer, efficient water-saving irrigation and water-saving technology, to create high-efficiency water-saving irrigation demonstration areas. 	<ul style="list-style-type: none"> • Narrow mouth (large), red line canal (medium), Zhangjiahe, Yuli, Temple River Hill, Rangoon and other irrigation areas The renewal of supporting and water-saving facilities upgrading and renovation projects, including the first water source project of the canal, the reinforcement of dry and branch linings, and the reinforcement and renovation of the building of the dry and branch canals Construction of management houses, construction of irrigation stations, cisterns, intelligent water management system construction. • The dry branch channels and canal systems of irrigation areas are boundary demarcation of buildings (narrow mouth irrigation areas, ditch slope irrigation areas, Zhangjiahe irrigation areas, and irrigation areas in Yuli). 	<ul style="list-style-type: none"> • Improving and rehabilitating irrigation systems, e.g., renewal of supporting and water-saving facilities upgrading and renovation projects. • Applying on-farm modern irrigation technologies. 	<p>RA 1</p>
	<ul style="list-style-type: none"> - We will further promote the comprehensive reform of agricultural water prices, grade classification and formulation of differentiated water prices within the quota, over-quota progressive price increases, establish and improve mechanisms for water management, project management, water price formation, financial awards and other compensation, and promote the healthy operation of agricultural water conservation and farmland water conservancy projects. 	<p>/</p>		
	<ul style="list-style-type: none"> - Promote drought-fed water-saving agricultural 	<p>/</p>		

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
	technology, breed and promote new varieties of drought-tolerant crops, promote water-saving varieties and drought-tolerant crops in hilly mountainous areas, and guide water-appropriate planting and water production.			
	- Promote water-saving animal husbandry and fishery farming technology to improve the efficiency of water use in the aquaculture industry.	/		
2. Strengthen water conservation and loss reduction in urban and rural areas Strengthen urban and rural water saving and loss reduction	- Implementation of urban water supply network zoning measurement management and "one household, one table" transformation, in order to reduce the leakage rate of the pipe network mainly to implement the old water supply network transformation, promote the popularization of water-saving appliances, government agencies, schools, hospitals and other public institutions water-saving technology transformation, strictly control the high water consumption services water. - Improve the construction of centralized water supply and water-saving facilities in rural areas, gradually implement metering charges, and promote the rural "toilet revolution" to adopt water-saving appliances.	• The main urban area of 151 public toilets to completely update and transform, the use of water-saving appliances	• Construction of rural wastewater treatment systems and household connections, including toilet improvement	RA 2
	- In-depth promotion of water-saving urban standards at or above the county level, and continue to carry out water-saving enterprises, units, community creation, and promote the yellow and yellow water-affected cities all high-level water-saving cities built.	/		Not the priority areas of PforR
	- We will strengthen the utilization of unconventional water resources such as recycled water, mine water, rain and flood, carry out pilot projects on recycling recycled water, and gradually popularize water reuse technology and stormwater storage and utilization facilities in urban buildings. In-depth implementation of water efficiency leader action, further	/		Potential High E&S risks

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
	implementation of water efficiency marking construction, water certification and contract water conservation management			
3. Optimize the water resources allocation system Optimize water resources allocation system	- Co-ordinate local water and external water transfer, rationally distribute water for life and production under the premise of water conservation priority, retain sufficient ecological water, establish and improve the early warning and control mechanism for monitoring the ecological flow of the main stream and major tributaries of the Yellow River.	/		
	- Relying on the Yellow River main tributary and the south-north water transfer central line project, we will advance the construction of large and medium-sized reservoirs and storage projects in the plan in an orderly manner, improve the subsidy mechanism for the construction of yellow water charges and yellow diversion storage projects, and speed up the construction of large and medium-sized yellow irrigation areas, the yellowing canals and the transformation of yellow culverts.	/		Potential High E&S risks
	- We will optimize the structure of urban and rural water sources, implement the integration project of urban and rural water supply, the urban emergency backup water supply and the rural standardized water supply guarantee project, promote the changes of drinking water sources from groundwater to surface water, and form a pattern of water supply security with complementary water sources.	<p>Relying on the existing reservoir to build a new water supply plant, water supply facilities upgrade and transformation, water supply network extension, especially to groundwater pressure recovery center, water source replacement, improve the water supply guarantee rate</p> <ul style="list-style-type: none"> • Lingbao City, the town of Jiaocun, Hanguguan town concentrated water supply projects • Zhang Maoxiang, Xi Zhangcun Township, Zhang Weixiang, Zhangwan Township Centralized Water Supply Project: It is proposed to build a new centralized water supply plant in Zhang Mao, Zhang Wei and Zhangwan, benefiting 75,000 people. • Lakeside District intersection water plant water 	• Construction or rehabilitation of rural water supply systems and pipelines	RA1

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
		<p>supply project: cross-border township, magnetic clock township to solve 18 administrative villages, benefiting the population of 31,000 people, the construction of township water plant 1 and laying pipeline 160 km.</p> <ul style="list-style-type: none"> • The centralized water supply project in Potou Township, Ren Village Township, Rangoon Town and Orchard Township Tianchi Township in Yanchi County: it is proposed to build a new slope head, Ren Village and Yangon centralized water supply project, benefiting 70,000 people. • Water supply project of The Great Ishiguro Reservoir 		
	- We will promote the connection between the yellow channel system and the natural water system and the existing river reservoir lakes, and construct the interconnection pattern between the Yellow River and the Haihe, Huaihe and Yangtze River basins.	<ul style="list-style-type: none"> • Sanmenxia City, Hong Nongyu River ecological water transfer and six river ecological restoration projects: new construction, reconstruction of water diversion lines 25.4km, water distribution lines 50km, Good Yang River, Nanqing River, Ziyang River, Jinshui River, Wuli River, Xishui River construction ecological bank 34.3km, dredging 30.5km. 	No	Potential high E&S risks
	- According to the principle of "water conservation priority, spatial balance, systemic management, two-handed force" water management and "real need, ecological safety, sustainable" construction, water resources as the maximum rigid constraint.	<ul style="list-style-type: none"> • The construction of the whole basin system and mechanism management system: <ul style="list-style-type: none"> ○ To construct a complete legal norm system for river management and river management in the Yellow River basin of Sanmenxia City ○ We will improve the system of long-term lake-length organization for river supervision ○ Strengthen the technical support system of integrated river supervision ○ Establish a talent security system for the supervision of integrated rivers in the Yellow River Basin of Sanmenxia City 	<ul style="list-style-type: none"> • Integrated ecosystem and water resources management plans for the seven demonstration sub-basins • Scaling up of 	RA4

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
			integrated ecosystem and water resources management plans for the Wei River Basin in the Yellow River Basin in Henan <ul style="list-style-type: none"> Scaling up of integrated ecosystem and water resources management plans for the Yellow River Basin in Henan 	
4. Strengthen flood prevention and mitigation capabilities Enhancing flood prevention and disaster mitigation capabilities	- Establish and improve the comprehensive monitoring mechanism of the Yellow River Anlan, and build the "Smart Yellow River".	/	<ul style="list-style-type: none"> Piloting the "Smart Yellow River" system 	RA4
	- We will upgrade and transform public facilities such as flood prevention and mitigation, drainage and flood prevention in large and medium-sized cities, and enhance their resilience to disasters.	<ul style="list-style-type: none"> Pilot project for silting of the Sanmenxia Reservoir : It is planned to desilt 100 million m3 per year for²⁰years with an investment of 5 billion yuan. 	No	Potential high E&S risks, and not prioritized areas under the Program
	- Carry out the investigation of geological disasters and the fineness of ground subsidence, and promote the management of the hidden dangers of major geological disasters.	/		

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
	- Implementation of precision meteorological disaster prevention and mitigation projects.	/		
	- We will improve the command system for flood control and drought relief, improve the emergency rescue mechanism, improve the civil-military joint defense system, strengthen the comprehensive capabilities of emergency planning, early warning and release, emergency rescue, engineering science and technology, material reserves and other comprehensive capabilities and the construction of grass-roots disaster prevention and mitigation teams, and carry out normal and operational coordinated mobilization exercises.	/		
5. Strengthen ecological management according to local conditions Strengthen ecological governance according to local conditions	- We will comprehensively promote the protection of natural forests and the construction of forest and grass vegetation belts in the Three Gate Gorges of the Yellow River, strengthen the restoration of the ecological environment of mines and the prevention and control of geological disasters, carry out comprehensive management of the small basins of the loess hills and ravines in the upper reaches of the Ilo River and the Sanmenxia Reservoir, and implement sloped arable land comprehensive management of erosion ditches and collapses, restoration and upgrading of regional soil and water conservation, water conservation functions, implementation of dry tributary water ecological environment restoration and management, implementation of river and lake water system connectivity, ecological rehydration, river ecological restoration and other measures to enhance the ecological function of water systems, Significantly improve the quality of water ecological environment in the basin. We will strengthen the protection and restoration of ecosystems such as	Integrated remediation of small basins, including forest replanting, economic forest planting, water conservation facilities construction (valley square, trench head protection, etc.), ditch remediation <ul style="list-style-type: none"> Lakeside Area Mountain Forest Field Lake Grass and Sand Project: In the Lakeside District High Temple Township to carry out comprehensive management of mountain and water forest tianhu grass and sand, the construction of ecological terraces 10.7km², field roads 13km, the transformation of water source project 1 place, laying water pipeline 30km, the construction of 8 pools. Comprehensive management of the small basin of the fire-burning Yanggou: dredging, planting economic forest, soil erosion control, construction of valleys, ditch head protection, etc., comprehensive remediation of ditches. Dujia River small basin comprehensive management project: the implementation of engineering measures, plant measures, soil erosion 	<ul style="list-style-type: none"> Integrated landscape management planning Watershed management and ecosystem restoration at watershed level Afforestation/ reforestation Soil and water conservation Wetland protection and 	RA 3

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
	national nature reserves, wetlands, forests and farmlands, and maintain biodiversity.	control <ul style="list-style-type: none"> Yima City Yangou River, Miaoyuan sub-basin water and soil conservation comprehensive management: to carry out forestation and reforestation, planting economic forest, soil erosion control, in the lower reaches of the Yangou River and Zhuanggou, Weigou ditch and other ditches, river rehabilitation 	restoration <ul style="list-style-type: none"> Vegetation restoration with promoted natural regeneration Natural river rehabilitation 	
6. Ecological corridor construction Ecological corridor construction	<ul style="list-style-type: none"> To formulate standards for the construction of water conservation forests, soil and water conservation forests, wind-proof solidified sarin, solidified forests and embankments along the Yellow Ecological Corridor, and to promote the construction of wave-proof forests, conservation forests and wetland conservation belts, and to promote the orderly return of farmland to forests and grasses We will vigorously carry out the return of the beach to the wet, and build a green ecological corridor with the functions of river, embankment, dam, road, field, forest and grass, including flood protection, water conservation, biological habitat, eco-agriculture, cultural tourism and so on. We will promote ecological protection, natural landscape and urban and rural landscape construction, integrate the functions of protection and safety, ecological conservation, soil and water conservation, waterfront landscape, cultural and leisure, sports and fitness, and build a harmonious and unified composite demonstration corridor in The People's River City. We will promote the construction of a complex ecological corridor of the Yellow River, such as Zhengzhou, Kaifeng, Luoyang, Sanmenxia, Jiaozhu, 	<ul style="list-style-type: none"> Shaanxi District, Yanchi County along the Yellow Green Corridor Construction: According to Henan Province along the Yellow Ecological Corridor plan, in the Yellow River embankment to build flood prevention and rescue roads (6-8 m wide) and along the greening projects (including mountain ecological forests, rural greening, farmland protection forests, etc.); Construction of ecological restoration projects in Huangkou, including ecological shore protection, ecological restoration (aquatic plants, afforestation), Restoration of surface wetlands 	<ul style="list-style-type: none"> Integrated landscape management planning Watershed management and ecosystem restoration at watershed level Afforestation/ reforestation Soil and water conservation Wetland protection and restoration Vegetation 	RA 3

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
	Xinxiang, Fuyang and Jiyuan, and connect the whole line through the Yellow River Ecological Avenue.		restoration with promoted natural regeneration	
7. Construction of an important tributary ecological corridor Construction of important tributary ecological corridors	- We will carry out demonstrations of ecological protection and restoration, consolidate and upgrade the ecological environment of tributaries such as the Yihe, Luo, Luhe, Hongnong, Wei and Jindi rivers, strengthen the greening construction of water and soil conservation forests, water conservation forests and river channels, optimize and adjust vegetation structure, and comprehensively promote Joe The combination of wood and shrubs, the combination of deciduous leaves and evergreen, the combination of protection and beautification, to create four seasons evergreen, three seasons with flowers, three-dimensional fall of the corridor ecological landscape, the formation of forest water dependent, water clear shore green tributary green corridor.	River rehabilitation: including ecological shore protection, dredging barriers, landscape, small connections to road bridges, pollution pipes, water rehydration pumping stations and other projects, : <ul style="list-style-type: none"> • Lingbao City Double Bridge River Bohai Railway Bridge to Zhengxi high-speed rail bridge section management project • Lingbao City, Hongnon River Changqiao Village to 38 bridge section of the management project • Lingbao City, Hongnon River five acres bridge to Yuedu section of the management project • The management project from Qinglongyu River in Shaanxi Province to Yangjiahe Village • The management project from Lianchang River Farm Village to Yanghe Village in Shaanxi Province • Ecological management project in Wuzhuang village section of Hongyang Town, Weichi County • Ecological management project from The Town of Weihe City to Yinghao Township in Yuchi County • One river and two ditches comprehensive management project in Yanchi County • Yima City, Weihe and Shihe ecological comprehensive remediation project • Lakeside Area Integrated Management Project along the Yellow Basin: Comprehensive Management of the Lakeside Area along the Yellow 3 Small Basins 	<ul style="list-style-type: none"> • Natural river rehabilitation 	
8. Promote wetland conservation and restoration Promote	- On the premise of stabilizing the downstream river potential, regulating the Yellow River flow path and ensuring that it does not affect the flood capacity of the river channel and the flood area, we should coordinate the ecological construction of the river waters, shore line and beach area, and make	/		Potential High E&S Risks

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
wetland protection and restoration	appropriate adjustments to the land space of the conflicting land areas such as permanent basic farmland, major infrastructure and important ecological space. We will strengthen the control of water ecological space in the beach area, carry out ecological protection and restoration of wetlands in the beach area, and construct the comprehensive ecological space of the beach river forest and grass. Optimize the layout of wetland parks, rely on wetland resources such as the main tributaries of the Yellow River, reservoirs, lakes, marshes and the Yellow River road of Ming and Qing Dynasties, carry out ecological restoration and restoration of wetlands with weakened functions and degradation of habitats, take engineering and biological measures to rebuild wetlands with type change and loss of function, carry out the restoration of farmland to wet, back to the beach, water expansion, humidification, ecological rehydration, stability and expansion of wetland protection area. We will carry out wetland management projects to maintain the integrity and stability of wetland ecosystems. Support Luoyang and other cities to create an international wetland city.			
9. Pollution control in urban and rural areas Urban and rural life pollution control	- Adhere to full coverage, full collection, full treatment, improve urban and rural sewage supporting pipe network, garbage collection and transfer system and sewage waste harmless resource treatment facilities, promote the Yellow River main tributary along the urban sewage treatment bid reform, garbage collection and disposal and plastic pollution control, construction of constructed wetland for effluent treatment of existing urban sewage treatment plants and other environmental protection facilities.	<ul style="list-style-type: none"> • Yima City Yangou River Basin water pollution comprehensive management project: to carry out dredging barrier, ecological protection, sewage interception and other treatment projects. Sewage is sent to the second sewage treatment plant in Yima City, with a daily capacity of 15,000 tons. • Lingbao City, Hongnon River sewage treatment plant tailings wetland purification project: new ecological residual pond, artificial submersible wetland, stable pond, pipeline, etc. , tertiary treatment of effluent from Lingbao City first and 	Yes, with exception <ul style="list-style-type: none"> • Upgrading effluent standards within the existing wastewater treatment plants • Construction of 	RA 2 If a new expansion of a municipal sewage treatment plant involving 20,000 tons / day or industrial wastewater treatment is

Henan Yellow River Ecological Protection and High-Quality Plan		Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
		second sewage treatment plant 60000m ³ /d, to meet the new standard for discharge into Yellow River to meet Class III water quality requirements, with the supporting pipelines of 9.6km and a total area of 440 acres <ul style="list-style-type: none"> Watershed white waste management projects: including village-level recycling stations, township and county-level transshipment stations, advanced recycling and recycling processing plants 	rural wastewater treatment systems and household connections <ul style="list-style-type: none"> Rehabilitation of rural wastewater Improving livestock and poultry manure management Promoting organic fertilizer and precise chemical fertilizer application 	involved, there are high potential environmental and social risks that are not included.
	- Strengthen urban river channels to cut pollution pipe, sewage mouth rectification, silting dredging, ecological restoration and water system connectivity, do a good job of "toilet revolution" and rural sewage treatment, according to local conditions to choose the treatment model, strengthen sewage control standards, promote moderate scale management and professional management and maintenance, and promote the Yellow River basin rural sewage treatment coverage.	<ul style="list-style-type: none"> Construction, expansion and upgrading of township sewage treatment plant, laying of pollution-cutting pipeline: Yinghao Town, Potou Township, Tianchi Town pollution wastewater treatment plant project; Hongnon River, Canglong, Qinglonghe, Weihe Rural Wastewater Treatment Project: Rural Decentralized Sewage Collection and Treatment Facility Improving livestock and poultry manure management Promoting organic fertilizer and precise chemical fertilizer application 		
	- We will promote the construction of quality improvement in the construction of the intravenous industrial park, improve the collaborative disposal functions of kitchen waste, urban sludge and hazardous waste, and build resource treatment facilities for rural household waste such as sunshine composting houses according to local conditions.	/		Potential High E&S Risks
	- We will promote the development and utilization of "urban mines" and the construction of "waste-free cities" and establish and improve the system of recycling and recycling of waste resources.	/		Not falling in the result areas of this PforR
	- Encourage market participants to participate in	/		Potential High

Henan Yellow River Ecological Protection and High-Quality Plan	Activities proposed in under Sanmenxia Yellow River Protection Plan	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing	
	sewage waste treatment, explore the establishment of sewage waste treatment services on a quantity-to-pay mechanism to ensure the stable operation of sewage waste treatment facilities.			E&S Risks

Annex 2 Overview of Government Program and PforR Activities – Shaanxi Province

Wei River Basin Water Ecological Restoration Plan (2021-2035)	Activities proposed in under Shaanxi Wei River Basin Water Ecological Restoration 14 th -five-year Plan (2021-2025)	Activities Included for PforR Financing	Rationale for Inclusion in /Exclusion from PforR financing
1. Water saving and efficiency	<ul style="list-style-type: none"> Deep water saving: strengthen agricultural water conservation efficiency, the Baoji Gorge irrigation area and other 10 large irrigation area organizations to implement the "14th Five-Year Plan" Xu Jian matching and modernization, the basin of ZTE irrigation area planning and transformation of 42 places, of which the key medium-sized irrigation area planning transformation 26 places. 	<ul style="list-style-type: none"> Improving and rehabilitating irrigation systems Applying on-farm modern irrigation technologies Adjusting cropping patterns with consumption-based design for higher value crops Construction or rehabilitation of rural water supply systems and pipelines Improving community capacity on agricultural water management through WUA training 	RA1
	<ul style="list-style-type: none"> Key water resources allocation project construction: planning and construction of Doomen Reservoir, Puhua Reservoir, Bailuyuan (whale ditch) reservoir, Beitougou reservoir, Wangjiaxia reservoir expansion, Yijun County Leiyu reservoir and other 43 key water projects, the implementation of Hanjiu, Fuhongjishi, Bailongjiang drinking water project (Yan'an section) and other 5 major water diversion projects, improve the basin and regional water resources allocation system. We will comprehensively promote the construction of water networks in the Weihe River basin in Shaanxi Province and promote the coordinated and balanced allocation of resources. 	No	Potentially significant E&S impacts with reservoir construction and basin-wide water re-allocation.
2. Water ecological restoration	<ul style="list-style-type: none"> Key projects for integrated management of dry tributary water ecology: According to the needs of water ecological restoration in the basin, the key projects such as comprehensive upgrading and management of dry tributaries such as the Wei River, Beiluo River, Shichuan River and Qishui River, the water diversion project of Yangmaowan Reservoir, and the comprehensive management of clean watersheds will focus on specific engineering measures include river rehabilitation (embankment reinforcement, ecological bank protection, river silting, flood prevention roads, etc.), ecological corridor construction, beach remediation and water ecological restoration, water cultural site protection and publicity and display facilities construction, and sewage treatment system upgrading and transformation River and lake ecological management and upgrading project: to carry out comprehensive management of small and medium-sized rivers, governance measures include the construction of standard embankments, new renovation and drainage facilities, ecological bank protection, river silting, the implementation of afforestation and breeding projects. Comprehensive management project of clean watersheds in northern 	<ul style="list-style-type: none"> Integrated landscape management planning Watershed management and ecosystem restoration at watershed level Afforestation/ reforestation Soil and water conservation Wetland protection and restoration Vegetation restoration with promoted natural regeneration Natural river rehabilitation 	RA3

	<p>Fujian: In the northern bank area of the Weihe River Basin, focus on building clean basins of Qian River, Qishui River, Wei River, Shichuan River and Beiluo River, integrate water conservation, eco-tourism development, clean industry upgrading into the construction of clean small basins, promote water ecological restoration in the North Wei River Basin, combine sewage waste collection and treatment, and improve the living environment to sort out the model of ecological management of the basin.</p> <ul style="list-style-type: none"> • Water conservation and soil and water conservation: <ul style="list-style-type: none"> ○ The water conservation of Qinling Beibei, including the protection of natural forest sealing, the management of ecological clean small basins, the ecological restoration of the man-made disturbance damage area of The Road, and the ecological restoration at the mouth of the river • Water and soil conservation ecological construction, in southern Fujian, Xianyang, Copper River, Baoji, Yulin, Yan'an and other places to build new silt dams, new slope ladders, the implementation of surface protection, forest and grass projects, sealing and breeding and other water conservation measures. 		
3. Improvement of water ecological carrying capacity	<ul style="list-style-type: none"> • Through the implementation of the existing reservoir silting dredging, risk reduction and reinforcement and other engineering measures, improve the ecological rehydration function of the reservoir, the construction of river and lake water system connectivity project, promote water circulation, improve the water level of the river and lake, while improving the self-purification function of the water body. <ul style="list-style-type: none"> - Idle reservoir utilization project - Water connectivity works - Yangmaowan, Laorenzui, Qianling Reservoir water system connectivity project - Water ecological restoration project of Xigou Reservoir - West River Trench Management Project - The flood drainage canal management project in the small tower new village 	No	Potentially significant downstream E&S impacts with basin-wide water re-allocation.
4. Enhance water security	<ul style="list-style-type: none"> • Recently, for the current situation of water quality is not up to standard Lijiahe reservoir, Fufeng County official reservoir, Yangmaowan reservoir and other 10 drinking water sources, the implementation of water source protection areas, water pollution prevention and control, water source isolation protection, regulatory capacity improvement projects to improve water quality, improve water safety and security capacity. • In the long term, the rehabilitation project of 8 drinking water source areas, such as Zhengjia River Reservoir and Wangzhuang River Reservoir in Yan'an City, will be carried out in the long term. • Improving livestock and poultry manure management • Promoting organic fertilizer and precise chemical fertilizer application 	<ul style="list-style-type: none"> • Upgrading effluent standards within the existing wastewater treatment plants • Construction of rural wastewater treatment systems and household connections • Rehabilitation of rural wastewater treatment systems • Improving livestock and poultry manure management • Promoting organic fertilizer and precise chemical fertilizer application 	RA2
5. Water culture heritage protection	<ul style="list-style-type: none"> • In the light of detailed planning for the construction of the Weihe Ecological Zone in various cities and other similar projects in the planning, the projects for the protection of the cultural heritage of the main stream and important tributaries of the Weihe River shall be implemented, including: 	No	Not prioritized areas under the Program

	<ul style="list-style-type: none"> - Build along the tourist belt, planning and construction of cultural and tourist landscape points and service facilities - Implementation of water conservancy scenic area construction, protection of water cultural sites, the construction of cultural stations, educational demonstration bases and supporting services, the production of publicity films and videos 		
6. Modernized and innovative water management	<p>Planning and construction of water ecology, water environment, water supervision business-related Smart Wei River, promote the basin water ecological restoration management information construction and application promotion, make up the water conservancy information short board, including the following:</p> <ul style="list-style-type: none"> • Construction of three-dimensional perception system: new water situation, groundwater, water environment, water ecology and other monitoring and monitoring sites. • Communication network system construction: expand the water conservancy fiber optic communication network system, while strengthening mobile wireless interconnection, and promote satellite communication and emergency communication. • Construction of the Water Resources Capacity Cloud Center in the Weihe River Basin Water Capacity Cloud Center: In accordance with the concept of cloud architecture, the construction of support for water resources, water security, soil and water conservation and other business-related resources platform and data resource pool, application support and intelligent platform, • Application Service Platform Construction: Based on 3D GIS water conservancy platform, build a service platform for business collaborative application systems such as water conservation and water resources monitoring system, soil and water conservation supervision system, water disaster scientific defense system, etc • We will upgrade and upgrade the information-based office equipment, emergency communication facilities and water conservancy supervision facilities of management institutions at all levels to upgrade and build provincial and municipal dispatching intelligence centers. • Build a security system: to build and support water resources, water security, soil and water conservation and other business-related intelligent water conservancy construction and operation of the security system, including standard system, network security system. 	<ul style="list-style-type: none"> • Integrated ecosystem and water resources management plans for the seven demonstration sub-basins • Scaling up of integrated ecosystem and water resources management plans for the Wei River Basin in Shaanxi and the Yellow River Basin in Henan • Assessment of water resources availability in demonstration sub-basin for YRCC • Piloting the “Smart Yellow River” system • Training and capacity building 	RA4

Annex 3 PforR Environmental and Social Risks Analysis

Result Areas	Activities	Likely E&S Risks	Likely E&S contextual risks	Likely institutional risks	Reputational and political risks	Risk level
1. Improve efficiency of water resources use	<ul style="list-style-type: none"> Improving the management and infrastructure of irrigated agriculture: water supply stations (around 20mu for each) , irrigation channel renovation, pumping stations (~5m² for each) and storage ponds (200 to 700m²), tanks etc. 	<ul style="list-style-type: none"> Temporary, short-term and limited negative environmental impacts during the construction process, such as local surface disturbance, water habitat disturbance (dredging), dust, noise, construction waste, and safety risks for construction workers. These negative impacts can be readily addressed through environmental mitigation measures; Safety maintenance during irrigation canal operation period Water supply stations, irrigation pumping stations, storage pond and other facilities will occupy small-scale land. <p>Overall risk is moderate.</p>	<ul style="list-style-type: none"> Irrigation canal activities are located in rural farmland and are unlikely to involve important natural habitats. Drought and soil erosion in the project area are issues that affect the local environment and quality of life for a long time. The construction of irrigation pumping stations can alleviate the impact of drought. The construction of storage ponds is not only a measure to reduce the impact of drought, but also an effective measure to reduce the risk of soil erosion. . <p>The background risk is moderate.</p>	<ul style="list-style-type: none"> Mainly involves government departments such as ecological and environment, natural resources, water resources, agriculture and rural affairs, and these departments have complete institutions and personnel, as well as appropriate business management capabilities. For related project activities, systematic regulations and plans have been established Coordination between departments is required during the implementation process. <p>The risk is moderate.</p>	<ul style="list-style-type: none"> In line with national and local laws, regulations, policies and procedures, so there is no political risk The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is widely supported by the public. <p>The reputation risk is low</p>	Moderate
	<ul style="list-style-type: none"> Improving the efficiency of water supply systems, construction/improvement of township and rural water supply facilities, pipeline network. 	<ul style="list-style-type: none"> Temporary, short-term and limited negative environmental impacts during the construction process, such as local surface disturbance, dust, noise, construction waste, and safety risks for construction workers. These negative impacts can be avoided or mitigated through environmental mitigation measures. The availability of water resources and water balance issues involved in water diversion facilities need to be specifically assessed. 	<ul style="list-style-type: none"> Activity locations are mainly in rural areas, habitats that have been modified or degraded by human activities, and do not involve natural habitats and important natural habitats that have not been disturbed by human activities. Water supply facilities may involve relying on existing reservoirs, thus involving reservoir dam safety risk factors. 	<ul style="list-style-type: none"> Mainly involves government departments such as ecological and environment, natural resources, water resources. Coordination between departments is required during the implementation process. Departments involved in environmental and social risk management 	<ul style="list-style-type: none"> In line with national and local laws, regulations, policies and procedures, so there is no political risk The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is 	Substantial

Result Areas	Activities	Likely E&S Risks	Likely E&S contextual risks	Likely institutional risks	Reputational and political risks	Risk level
		<ul style="list-style-type: none"> ✓ The construction of water supply facilities will involve land use, but the scale is not large. ✓ Labor management will be involved in the construction and operation of the project. <p>Overall risk is substantial</p>	<ul style="list-style-type: none"> ✓ As a whole, the project has no environmental and social risks. If the candidate sub-project has environmental and social legacy issues, it will be excluded from the scope of the PforR project. <p>Overall risk is substantial</p>	<p>may include ecological environment, water conservancy and other departments.</p> <ul style="list-style-type: none"> ✓ Inter-departmental coordination is required during the implementation process. <p>Institutional risk is moderate.</p>	<p>widely supported by the public.</p> <p>The reputation risk is low</p>	
	<ul style="list-style-type: none"> • Implementing remote sensing-based technologies to assess and monitor water consumption 	<ul style="list-style-type: none"> ✓ Technical assistance activities do not involve physical engineering construction, and basically have minimum or no environmental and social impacts. <p>Risk level is low</p>	<ul style="list-style-type: none"> ✓ Do not involve physical engineering construction, and does not involve environmental and socially sensitive areas. <p>Risk level is low</p>	<ul style="list-style-type: none"> ✓ Departments involved in environmental and social risk management may include ecological environment, water conservancy and other departments. ✓ Inter-departmental coordination is required during the implementation process. <p>Risk is moderate.</p>	<ul style="list-style-type: none"> ✓ In line with national and local laws, regulations, policies and procedures, so there is no political risk <p>The reputation risk is low</p>	Moderate
	<ul style="list-style-type: none"> • Improving community on-farm water management by strengthening water user associations (WUA) 	<ul style="list-style-type: none"> ✓ Do not involve physical construction activities, and basically have minimum or no environmental impact. <p>Risk level is low</p>	<ul style="list-style-type: none"> ✓ Do not involve physical engineering construction, and does not involve environmental and socially sensitive areas. <p>Risk level is low</p>	<ul style="list-style-type: none"> ✓ Involve different groups of farmers and coordination of the distribution of water resources. <p>Risk level is moderate</p>	<ul style="list-style-type: none"> ✓ In line with national and local laws, regulations, policies and procedures, so there is no political risk ✓ The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is widely supported by the public. 	Moderate

Result Areas	Activities	Likely E&S Risks	Likely E&S contextual risks	Likely institutional risks	Reputational and political risks	Risk level
					The reputation risk is low	
	<ul style="list-style-type: none"> Reforming irrigation water pricing and water rights 	<ul style="list-style-type: none"> Do not involve physical construction activities, and basically have minimum or no environmental impact. Affect farmers' water use behavior and production cost in small scale. <p>Risk level is low</p>	<ul style="list-style-type: none"> Do not involve physical engineering construction, and does not involve environmental and socially sensitive areas. <p>Risk level is low</p>	<ul style="list-style-type: none"> Departments involved in environmental and social risk management may include the Development and Reform Commission, natural resources, water conservancy, price and other departments. Departmental coordination is required during the implementation process. <p>Risk is moderate.</p>	<ul style="list-style-type: none"> In line with national and local laws, regulations, policies and procedures, so there is no political risk The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is widely supported by the public. <p>The reputation risk is low</p>	Moderate
2.Improvewa ter quality	<ul style="list-style-type: none"> Improve rural wastewater management, new construction and upgrading township and rural wastewater treatment plants (typical capacity of 50-500m³/d, with max. 5000m³/d, some requiring no addition land other others taking up to 400m² for each. It may also involve 	<ul style="list-style-type: none"> Temporary, short-term and limited negative environmental impacts during the construction process, such as local surface disturbance, dust, noise, construction waste, and safety risks for construction workers. These negative impacts can be avoided or mitigated through environmental mitigation measures. Environmental risks during the operation of the wastewater treatment plant, including odor, sludge disposal, management of hazardous chemicals, accidental discharge, etc. Workers' safety and health risks during operation. 	<ul style="list-style-type: none"> The project activities are located in urban/village built-up areas near communities, and there are no environmentally sensitive protection areas or natural habitats and other protection areas. The locations of the existing township sewage treatment facilities in the local area are all on open land or idle land. As a whole, the project has no environmental and social risks. If the candidate sub-project has environmental and social legacy issues, it will be excluded from the scope of the PforR project. 	<ul style="list-style-type: none"> Involves ecological environment departments, urban construction departments, rural affairs etc. These departments have corresponding institutions, personnel, budgets, systems and division of responsibilities for managing environmental and social risks of such plans and activities. Inter-department coordination is needed In the process of 	<ul style="list-style-type: none"> In line with national and local laws, regulations, policies and procedures, so there is no political risk The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is widely supported by the public. <p>The reputation risk is low</p>	Moderate

Result Areas	Activities	Likely E&S Risks	Likely E&S contextual risks	Likely institutional risks	Reputational and political risks	Risk level
	improvement of existing county-level WWTP, with capacity of 10,000 - 50,000m ³ /d which are basically carried out on the existing WWTPs, or additional small-scale land use, e.g., around 10mu for the upgrading activities), underground sewage pipeline network with temporary land use.	<ul style="list-style-type: none"> ✓ The construction of sewage facilities will involve land use, but the scale is not large. <p>Overall risk is moderate</p>	The risk is moderate	<p>project implementation.</p> <p>The risk is moderate.</p>		
	<ul style="list-style-type: none"> • Improve rural non-point source pollution management, promotion formular fertilizers, and reduction of fertilizer and pesticide use 	<ul style="list-style-type: none"> ✓ No physical construction involved, and there is basically minimum or negative environmental impact. ✓ Reduce the use of chemical fertilizers and pesticides, reduce pollution emissions and health risks, and generate positive environmental benefits. ✓ Raise farmers environment protection awareness and production behavior. <p>The overall risk is low</p>	<ul style="list-style-type: none"> ✓ Only on the existing farmland irrigation areas, no sensitive environmental areas involved. <p>The overall risk is low</p>	<ul style="list-style-type: none"> ✓ Departments involved may include the ecology and environment, rural affairs etc. ✓ Departmental coordination is required during the implementation process. <p>The risk is moderate</p>	<ul style="list-style-type: none"> ✓ In line with national and local laws, regulations, policies and procedures, so there is no political risk ✓ The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is widely supported by the public. <p>The reputation risk is low</p>	Moderate
3. Restore key ecosystems	<ul style="list-style-type: none"> • Integrated landscape 	<ul style="list-style-type: none"> ✓ TA activity that does not involve physical construction works, 	<ul style="list-style-type: none"> ✓ TA covers the whole sub-basin areas in general term, 	<ul style="list-style-type: none"> ✓ Departments involved may include multiple 	<ul style="list-style-type: none"> ✓ In line with national and local laws, 	Moderate

Result Areas	Activities	Likely E&S Risks	Likely E&S contextual risks	Likely institutional risks	Reputational and political risks	Risk level
	management planning	<p>minimum or no direct environmental impacts.</p> <ul style="list-style-type: none"> ✓ Planning results and recommendations may have indirect downstream E&S implication. Since the planning is targeting environmental protection, it is unlikely that the recommendations will cause significant adverse E&S impacts. <p>The overall risk is low</p>	<p>but does not involve specific locations.</p> <ul style="list-style-type: none"> ✓ Minimum or no E&S contextual risks <p>The overall risk is low.</p>	<p>departments, including DRC, ecology and environment, water resources, rural affairs etc.</p> <ul style="list-style-type: none"> ✓ Departmental coordination is required during the implementation process. <p>The risk is moderate</p>	<p>regulations, policies and procedures, so there is no political risk</p> <p>The reputation risk is low</p>	
	<ul style="list-style-type: none"> • Reforestation/afforestation with diversified local/indigenous species, • Soil and water conservation (e.g., gully control works, water source area protection, and ecological terrace field improvement) • Wetland protection and restoration • Vegetation restoration with promoted natural regeneration • Natural river rehabilitation, river bank ecological restoration 	<ul style="list-style-type: none"> ✓ Improve ecological environment and reduce soil erosion. ✓ Temporary, short-term and limited negative environmental impacts during the construction process, such as local surface disturbance, dust, noise, construction waste, and safety risks for construction workers. These negative impacts can be avoided or mitigated through environmental mitigation measures. ✓ The daily management of forests, including the risks of pest control and fire prevention. ✓ Gully control works are basically conducted on the edges of cliff bodies or embankments of existing creeks/rivers, and will barely occupy farmers' land; water source area protection will be conducted on existing water source protection lands, and few cases of land occupation outside the boundary; and ecological terrace field improvement on existing farmers' land, which are generally carried out between November to February next year to avoid affecting the agriculture production work; 	<ul style="list-style-type: none"> ✓ Activity locations are mainly in rural areas, habitats that have been modified or degraded by human activities, and do not involve natural habitats and important natural habitats that have not been disturbed by human activities. ✓ As a whole, the project has no environmental and social risks. If the candidate sub-project has environmental and social legacy issues, it will be excluded from the scope of the PforR project. ✓ The activities of the project are all located in towns or rural areas, and agricultural production income is still the main source of income for local households. Agricultural activities in the project area have gradually transitioned from planting corn and wheat crops in the past to having grown apples and peaches. <p>The overall risk is moderate.</p>	<ul style="list-style-type: none"> ✓ Departments involved may include multiple departments, including ecology and environment, labor management, water resources, rural affairs etc. These departments have complete institutions and personnel, as well as appropriate business management capabilities. ✓ Departmental coordination is required during the implementation process. <p>The risk is moderate</p>	<ul style="list-style-type: none"> ✓ In line with national and local laws, regulations, policies and procedures, so there is no political risk ✓ The goal of the project is to improve the ecological environment of the project area and benefit local residents. Therefore, it is widely supported by the public. <p>The reputation risk is low</p>	Moderate

Result Areas	Activities	Likely E&S Risks	Likely E&S contextual risks	Likely institutional risks	Reputational and political risks	Risk level
		<ul style="list-style-type: none"> ✓ Wetland protection and reforestation/afforestation will be restricted within the existing river courses. Vegetation restoration to be carried out on existing mountains or land rented from the farmers or collective economic groups. ✓ There will be a certain amount of labor during the construction process. <p>The risk is moderate.</p>				
4. Promote innovation of water resources assessment and strategic, cost-effective planning	<ul style="list-style-type: none"> • Water consumption-based irrigated agricultural water savings plan (for the Wei River Basin in Shaanxi and Yellow River Basin in Henan). • Ecological restoration and soil and water conservation plans based on integrated management are prepared (for the Wei River Basin in Shaanxi and the Yellow River Basin in Henan). 	<ul style="list-style-type: none"> ✓ TA activity that does not involve physical construction works, minimum or no direct environmental impacts. ✓ Planning results and recommendations may have indirect downstream E&S implication. Since the planning is targeting environmental protection, it is unlikely that the recommendations will cause significant adverse E&S impacts. <p>The overall risk is low</p>	<ul style="list-style-type: none"> ✓ TA covers the whole sub-basin areas in general term, but does not involve specific locations. ✓ Minimum or no E&S contextual risks <p>The overall risk is low.</p>	<ul style="list-style-type: none"> ✓ Departments involved may include multiple departments, including DRC, ecology and environment, water resources, rural affairs etc. ✓ Departmental coordination is required during the implementation process. <p>The risk is moderate</p>	<ul style="list-style-type: none"> ✓ In line with national and local laws, regulations, policies and procedures, so there is no political risk <p>The reputation risk is low</p>	Moderate

Annex 4 Due Diligence Review of Reservoir Safety in Sanmenxia in Henan

Back to Office Report – Regulatory Framework Review Sanmenxia City Yellow River By Shunong Hu, Sr. Water Engineer, SEAW1 报告 -- 三门峡市监管框架审查 黄河 作者：胡树农，SEAW1 高级水工程师	
Summary: Total 88 reservoirs, one large, five middles, and 82 smalls, were under jurisdiction of Sanmenxia Water Department. Most of dams were built in 1960s to 1970s and reinforced/updated in 2000s. The last round dam safety evaluation certified that all the dams are Class A, i.e., safe to operate as designed. Except those Small (II) reservoirs managed by villages, the reservoirs were managed by institutes with professionals sufficiently funded. Sanmenxia Water Department planned to provide funds, RMB20,000 to RMB30, 000, to those Small (II) Reservoirs to improve the management thereof. With well-established operational manuals and strict enforcement of relevant laws and regulations, no incident or dam failure was reported in the past decades.	概要： 三门峡水利局辖 88 座水库，其中 1 座大型、5 座中型、82 座小水库。大多数大坝建于 1960 年代至 1970 年代，并在 2000 年代加固/更新。上一轮大坝安全评估证明所有大坝均为 A 级，即安全、并允许按设计运行。除村级管理的小（二）水库外，水库均由专业机构管理，经费充足。三门峡市水务局拟向这些小（二）水库提供资金 2 万元至 3 万元，以改善其管理。凭借完善的操作手册和严格执行相关法律法规，过去几十年没有发生事故或溃坝事件。
Sanmenxia Water Department also planned to seek the ways, such as increasing the domestic and/or industrial water supply, increasing the ecological flow release with compensation mechanism developed, to increase the income of those reservoirs to ensure their sustainable operation. In addition, it was also discussed that Sanmenxia Water Department can develop a computerized operational platform for optimization of water regulation and/or risk-based dam safety operational platform.	三门峡水务局还计划通过增加生活和/或工业供水，增加生态流量释放，建立补偿机制等途径，增加这些水库的收入，确保其可持续运行。此外，还与三门峡水利局讨论了是否有意愿考虑开发一个计算机化水库运行平台，以优化水资源调度和/或基于风险的大坝安全运行平台。
Annex:	
Demography: Sanmenxia City, a prefecture-level city, neighboring Shaanxi on its west and Shanxi on its north, located in the west of Henan Province, has its jurisdiction territory of 9,936 km ² and population of 2.035 million people, according to 2020 census (<i>population of 2.23 million people and 947,588 living in urban built-up areas as of 2021 census</i>). Geographically, the city lies on the south side of the Yellow River at the point where the river cut through the Loess Plateau on its	人口统计： 三门峡市是地级市，西接陕西，北接山西，地处河南省西部，根据 2020 年人口普查（人口 2.23 截至 2021 年人口普查，100 万人和 947,588 人居住在城市建成区）。从地理上看，该市位于黄河以南，黄河在通往华北平原的途中穿过黄土高原。下图显示了河南省

<p>way to the North China Plain. The map below shows the location of Sanmenxia in Henan Province and Henan in China.</p>	<p>三门峡和中国河南省的位置。</p>
	
<p>Dams under the jurisdiction of Water Department of Sanmenxia City:</p> <p>There are 88 registered²⁰ reservoirs formed by dams in Sanmenxia, among which one large, five middle, and 82 small sized reservoirs²¹, with the designed storage of 4.12 billion m³ in total. Most of them were built in 1960s and 1970s, and majority of them are earth dams. These reservoirs played a key role in optimizing the water resource balance (from groundwater to surface water) in Sanmenxia as the purposes of these reservoirs are mainly aiming at irrigation and domestic and industrial water supply as groundwater level kept dropping year by year during the past decades. These reservoirs greatly supplemented the water supply as required and supported the success of transferring from groundwater to surface water. However, there is still challenge in water supply to meet the growing demands due to relatively low regulating capacity as the total storage of these reservoirs is still relatively low. This might be an area</p>	<p>三门峡市水务局管辖的大坝：</p> <p>三门峡市有注册登记水库 88 座，其中大型水库 1 座、中型水库 5 座、小型水库 82 座，设计库容 4.12 亿立方米。其中大部分建于 1960 年代和 1970 年代，大部分是土坝。水库在优化三门峡水资源平衡（从地下水到地表水）方面发挥了关键作用，因为这些水库的用途主要用于灌溉和生活和工业供水，而地下水位在过去几十年中逐年下降。这些水库根据需要极大地补充了供水，并支持了从地下水到地表水的成功转移。然而，由于这些水库的总蓄水量仍然较低，调节能力相对较低，在满足不断增长的需求方面仍然面临挑战。</p>

²⁰ In accordance with the Dam Registration Regulation issued by the Ministry of Water Resources on December 28, 1995 and revised on December 25, 1997, all reservoirs with the total storage above 100,000 m³ shall be registered for the purpose of dam safety management and supervision.

根据水利部 1995 年 12 月 28 日发布并于 1997 年 12 月 25 日修订的《大坝登记管理条例》，所有蓄水量在 10 万立方米以上的水库，均应进行大坝安全管理和监督。

²¹ In accordance with the national standards, the reservoirs are categorized as: i) Large Reservoir (I): the total storage greater than 1.0 billion m³; ii) Large Reservoir (II): the total storage between 100.0 million m³ to 1.0 billion m³; iii) Middle Sized Reservoir: the total storage between 10.0 million m³ to 100.0 million m³; iv) Small Reservoir (I): the total storage between 1.0 million m³ to 10.0 million m³; and v) Small Reservoir (II): the total storage smaller between 100,000 m³ to 1.0 million m³. 按照国家标准，水库分为：

i) 大型水库 (I)：总库容大于 10 亿立方米； ii) 大型水库 (II)：总储量在 1 亿立方米至 10 亿立方米至 1 亿立方米之间； iii) 中型水库：总库容在 1000 万立方米至 1 亿立方米之间； iv) 小型水库 (I)：总库容在 100 万立方米至 1000 万立方米之间； v) 小型水库 (II)：总储量在 100,000 立方米至 100 万立方米之间。

<p>where the Bank's project can contribute to optimize the operation rules of the reservoirs by establishing the computerized operational system based on real time weather forecast and historical data analysis.</p>	<p>这可能是世行项目通过建立基于实时天气预报和历史数据分析的计算机化运行系统来优化水库运行规则的一个领域。</p>
<p>During 2000 to 2010, all the dams had been upgraded through dam reinforcement and/or remedial programs and thus most of them are classified as Class A dams now based on the dam safety evaluation results. The municipality is planning to carry out another round of inspection and remediation during the 14th Five Year Plan to ensure the safe operation of the dams under its jurisdiction. It is thus expected that all the dams would be reinforced or upgraded prior to the end of 2022. In connection with the reservoir operation system that has been discussed above, a GIS based platform might help Sanmenxia Water Department to upgrade its monitoring and operation capacity.</p>	<p>2000 年至 2010 年期间，所有大坝均通过大坝除险加固和/或修复计划进行了升级。根据最新的大坝安全评估结果，大多数大坝现在被列为 A 级大坝。市政府计划在“十四五”期间再次开展检查整治，确保辖区内大坝安全运行。因此，预计所有大坝将在 2022 年底之前完成进一步的除险加固或升级工程。结合上文讨论的水库运行系统，基于 GIS 的平台可能会帮助三门峡水务局提升其监测和运行能力。</p>
<p>The reservoir operation and maintenance or reservoir management units were well established and sufficiently staffed, except for those Small (II) that are operated by villages. The operation and maintenance funds for Large, Middle, and Small (I) reservoirs come from the provincial government (70%) and municipal government (30%), that were guaranteed. In addition, the municipal government planned to allocate special funds, about RMB20,000 ~ RMB30,000, for all Small (II) starting from 2022, which would help the operation and maintenance of those Small (II) reservoirs.</p>	<p>水库运营和维护或水库管理单位已经建立并配备了足够的人员，除了那些村级运营的小（二）型水库。大、中、小（一）水库运行维护资金来源市有保障的，即省级政府（70%）和市政府（30%）。此外，市政府计划从 2022 年起，为所有小（二）水库安排专项资金约 2 万元~3 万元，用于小（二）水库的运行维护。</p>
<p>The reservoir operation manuals, emergency preparedness and responsiveness plans, and instrument plans were well established according to the relevant laws and regulations. The laws and regulations include at least:</p> <ol style="list-style-type: none"> 1. Laws and Regulations issued by Central Government: i) Water Law of PRC; ii) Flood Control Law of PRC; iii) River Course Management Regulations of PRC; iv) Dam Safety Management Regulations of PRC; v) Dam Registration and Management Regulations of PRC; vi) Flood Responding Rules of PRC; and vii) Regulations on Dam Downgrading and Decommission of PRC; and 	<p>水库运行手册、应急响应预案、仪器预案均按照相关法律法规建立。相关法律法规包括：</p> <ol style="list-style-type: none"> 1. 中央政府颁布的法律法规：i) 中华人民共和国水法；ii) 中华人民共和国防洪法；iii) 中华人民共和国河道管理条例；iv) 中华人民共和国水库大坝安全管理条例；v) 中华人民共和国大坝注册登记办法；vi) 中华人民共和国防汛条例；vii) 中华人民共和国大坝降等与报废管理办法；和

<p>2. Regulations issued by Provincial Government: i) Implementation Rules of Dam Safety Management by Henan Province; ii) Implementation Rules of River Course Management by Henan Province; iii) Implementation Rules of Water Law by Henan Province; iv) Detailed Rules of Implementing Flood Responding Rules of PRC; v) Implementation Rules of Flood Control Law of PRC; vi) Management Rules for Small Reservoirs issued by Henan Province; and vii) Management Rules of Hydraulic Structures issued by Henan Province.</p>	<p>2、省政府发布的规定：i) 河南省《水库大坝安全管理条例》实施细则；ii) 河南省《河道管理条例》实施细则；iii) 河南省《水法》实施办法；iv) 《中华人民共和国抗防汛条例》细则；v) 实施《中华人民共和国防洪法》办法；vi) 河南省颁布的《小型水库管理办法》；vii) 河南省颁布的《河南省小型病险水库除险加固工程验收管理办法》。</p>
<p>As a result of well-established operational and maintenance manuals, as well as the strict observation and enforcement thereof, there was no incident or failure reported during the past decades.</p>	<p>由于编制了完善的运行和维护手册，并严格遵守和执行，在过去的几十年里没有发生过任何事故或溃坝。</p>
<p>During the interview, the Bank team explored the possibility on the cooperation with the Bank in dam safety with the leaders of Sanmenxia Water Department and noted that a PAP can be discussed, i.e., i) Development of Risk Based Emergency Preparedness and Responsiveness Plan which would help the dam operators to better respond to the floods based on real time weather forecast; and/or ii) Computerized Dam Cascade Operation Platform to help the operators to better regulating the water resources.</p>	<p>在采访中，世行团队与三门峡水务局领导探讨了与世行在大坝安全方面合作的可能性，并提出了可以供讨论项目活动计划（PAP），即 i) 制定基于风险的应急准备和响应计划，这将有助于大坝运营单位根据实时天气预报更好地应对洪水；和/或 ii) 计算机化大坝梯级操作平台，以帮助运营单位更好地调度水资源。</p>

Annex 5 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
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.		
<p>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>	<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. <i>The ESIA system applicable to the Program is adequate. Specific laws and regulations are sorted out by the following principles and elements.</i></p>	<p>Largely consistent, but lacking records in impact screening, public participation, information disclosure, and GRM</p>
<p>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</p>	<p>The Environmental Impact Assessment Law establishes an early screening system to classify EIA, and take appropriate management measures. The Catalogue for the Classified Management of the Environmental Impact Assessment of Construction Projects (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>The Technical Guidelines for Environmental Impact Assessment—General Program 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>The Measures for Public Participation in Environmental Impact Assessment (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</p>	<p>Largely consistent, but lacking records in public participation, information disclosure, and GRM</p> <p>Action requirements:</p> <ol style="list-style-type: none"> 1. Record public participation and information disclosure processes and results. 2. Record GRM operation. <p>Some PIUs rely completely on government authorities to supervise social impact and risk management measures in practice. It is advised that monitoring mechanism be established for each subproject to ensure that such measures are implemented.</p>

<p>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.</p>	<p>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>The state laws and regulations on project screening in social terms include the Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2008.11.29), Cultural Relics Protection Law (2017 Amendment), Land Administration Law (2020.1.1), Regulations on the Prevention and Control of Geologic Disasters (2004.3.1), and Notice of the National Development and Reform Commission on Issuing the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2012).</p> <p>i) Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects: The area and type of the land used for the project shall be identified before the feasibility study report or project proposal is reviewed to avoid the acquisition of basic farmland, nature reserves, etc.</p> <p>ii) Cultural Relics Protection Law: Article 20: 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>iii) Regulations on the Prevention and Control of Geologic Disasters: Article 13: 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, 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>iv) Land Administration Law: Article 47: 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>v) Regulations on the Implementation of the Land Administration Law of the PRC: Article 25: Municipal, county government of the locality whose land has been acquired shall, upon approval of the LA plan according to law, organize its implementation, and make an announcement in the 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</p>	
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	<p>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>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: 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>vii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions (Interim): 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>	
<p>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.</p>		
<p>Element 3: Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.</p>	<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> <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>Consistent</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>	
<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>	<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. 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.</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>	Consistent
<p>Element 5: Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.</p>	<p>Applicable regulations: Cultural Relics Protection Law (2017 Amendment), Regulations on the Implementation of the Cultural Relics Protection Law (2017 Amendment)</p> <p>i) Cultural Relics Protection Law: Article 17: 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 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. Article 20: 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. 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</p>	Consistent

	<p>the project. Article 31: 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>ii) Regulations on the Implementation of the Cultural Relics Protection Law: Article 25: The scope and rates of funds for archeological investigation, exploration and unearthing shall be based on the applicable state provisions.</p>	
<p>Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.</p>		
<p>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>	<p>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)</p> <p>i) Labor Law: Article 53: Labor health and safety facilities shall comply with the national standards. Newly constructed, reconstructed or expanded labor health and safety facilities must be designed, constructed and put into operation together with main parts of projects. Article 54: 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. Article 57: The state shall establish a statistical reporting and handling system of accidents and occupational diseases. Article 61: 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>ii) Work Safety Law: Article 21: 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. Article 73: 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. Article 74: 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. Article 72: 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>iii) Law on the Prevention and Control of Occupational Diseases (2018 Amendment): Article 4: Employees shall be entitled to occupational health protection according to law. Employers shall create work environment and conditions meeting the national occupational health standards and health requirements and take measures to ensure that employees receive occupational health protection. Trade unions shall oversee the prevention and control of occupational diseases and protect the lawful rights and interests of employees according to law. When formulating or amending rules and regulations on the prevention and control of occupational diseases, employers shall solicit the opinions of trade unions. Article 5: Employers shall establish and improve a responsibility system for the prevention</p>	<p>Consistent</p>

	<p>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. Article 6: The primary person in charge of an employer shall assume the overall responsibility for the employer's prevention and control of occupational diseases. Article 7: Employers must participate in work-related injury insurance according to law. Article 9: The state shall apply an occupational health supervision system. Article 10: 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.</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>Applicable laws and regulations: Work Safety Law i) Work Safety Law: Article 21: An entity engaged in mining, metal smelting, building construction, or road transportation or an entity manufacturing, marketing, or storing hazardous substances shall establish a work safety management body or have full-time work safety management personnel. Article 22: 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. ii) Regulations on the Safety Management of Hazardous Chemicals: Article 4: A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to employees. Employees shall accept education and training, and may not hold office until they have passed the relevant examination iii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use: 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. iv) Guidelines for Occupational Disease Prevention and Control for Employers: 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</p>	<p>Largely consistent, but there are areas for improvement during implementation. The implementation of OHS management systems at some enterprises is yet to be improved.</p> <p>Recommendation: Enhance the OHS management of all enterprises involved in the Program activities.</p>

	<p>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>v) Opinions of Shaanxi Provincial People's Government on the Implementation of Promoting Healthy Shaanxi Action (SGF[2020] No.7): to promote the demonstration construction of healthy enterprises to prevent and control occupational hazards; carry out key occupational diseases monitoring, special investigation and occupational health risk assessment, and advocate healthy working style; strengthen supervision and inspection, and urge employers to fulfill the main responsibility of occupational disease prevention; strengthen training and education to improve workers' occupational health literacy; enhance the "three simultaneous" management of occupational-disease-prevention facilities in construction projects, strengthen the occupational health monitoring of laborers, the declaration of occupational-disease-inductive projects, and the detection, monitoring and evaluation of occupational-disease-inductive factors; standardize employment management and expand coverage of work-related injury insurance; strengthen the treatment and assistance for pneumoconiosis patients among migrant workers, protect their legitimate medical rights and interests through medical insurance and medical assistance in accordance with regulations for those who have not participated in work-related injury insurance. By 2022 and 2030, the proportion of newly reported pneumoconiosis cases among workers with less than five years of dust exposure will be significantly and continuously decreased.</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>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>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)</p> <p>i) Regulations on the Safety Management of Hazardous Chemicals: Article 4: A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to employees. Employees shall accept education and training, and may not hold office until they have passed the relevant examination.</p> <p>ii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use: This is a regional standard on OHS management systems, designed to 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</p>	<p>Consistent, but OHS management system certification is not compulsory</p> <p>Recommendation: Enhance the OHS management of all enterprises involved in the Program activities.</p>

	<p>required); and 6) copy of business license. The following shall be reviewed comprehensively: 1) the organization’s work safety permit; 2) production or service flowchart; 3) organizational chart; 4) list of applicable laws and regulations; 5) location map; 6) factory layout; 7) workshop layout; 8) list of major hazards; 9) OHS targets, indicators and management plan; and 10) certificate of compliance, etc.</p> <p>iii) Guidelines for Occupational Disease Prevention and Control for Employers: The general requirements for occupational disease prevention and treatment, 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>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.</p>	<p>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)</p> <p>i) Regulations on the Defense against Meteorological Disasters: Article 27: When implementing major national construction projects, and major regional economic development projects, and preparing urban and rural development plans, governments at or above the county level shall consider climate feasibility, and risks of meteorological disasters to avoid or mitigate such impacts. Article 23: Lightning protection devices of buildings, places and facilities shall comply with the national lightning protection standards. Lightning protection devices of newly constructed, reconstructed or expanded buildings, places and facilities must be designed, constructed and put into operation together with main parts of projects.</p> <p>ii) Flood Control Regulations of the People’s Republic of China (2005.7.15): 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>iii) Regulations on the Prevention and Control of Geologic Disasters: Article 10: 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>iv) Regulations on the Prevention and Control of Geologic Disasters: 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>iv) Law on Protecting Against and Mitigating Earthquake Disasters: Article 35: The construction projects newly</p>	<p>Consistent</p>

	<p>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>v) Notice on Realizing Precise Health Management and Orderly Flow of People (JPCMZF [2020] No.203): Pandemic control areas shall be defined accurately based on pandemic risk level, and such prevention and control measures as people flow restriction, nucleic acid testing and health monitoring 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>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.</p>		
<p>Element 9: In six aspects: i) Avoid or minimize land acquisition and related adverse impacts.</p>	<p>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)</p> <p>i) Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects: The area and type of the land used for the project shall be identified before the feasibility study report or project proposal is reviewed to avoid the acquisition of basic farmland, nature reserves, etc.</p> <p>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 project involving LA and HD, farmers' burden or social security.</p> <p>iii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions (Interim): 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>Consistent</p>
<p>ii) Identify and address economic or social impacts caused by land acquisition or loss of access to natural resources.</p>	<p>ii) Land Administration Law: Article 26: Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate. 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>iii) Regulations on the Implementation of the Land Administration Law of the PRC: Article 25: Municipal, county government of the locality whose land has been acquired shall, upon approval of the LA plan according to law, organize</p>	<p>Consistent</p>

	<p>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. Article 26: 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>	
<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>Applicable laws and regulations: 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 People's Government of Henan Province on Issues related to the Block Comprehensive Land Price for Acquisition of Agricultural Land (YZ [2020] No.16), Notice of The People's Government of Henan Province on Printing and Distributing Implementing Several Provisions of Regulations on Expropriation and Compensation of Houses on State-owned Land of Henan Province (2012), Housing Security Measures for Expropriation of Housing on State-owned Land in Shaanxi Province (2018), Notice on Printing and Distributing Measures for Selection of Real Estate Price Appraisal Agencies for Expropriation of Houses on State-owned Land in Shaanxi Province (SJF [2018] No. 121), 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 Agricultural 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>i) Real Right Law: Article 42: 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>ii) Land Administration Law: Article 48: 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>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: 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 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>iv) Measures for the Expropriation and Appraisal of Housing on State-owned Land (JF [2011] No.77) (2011-6-3): Article 16: The real estate appraisal agency shall provide preliminary household-by-house appraisal results according to the entrustment contract, and the house expropriation authority shall disclose such results to the affected persons.</p>	<p>Consistent</p>

	<p>During disclosure, the real estate appraisal agency shall appoint a registered appraiser to explain such results on site, and correct any error.</p> <p>v) Notice of The People's Government of Henan Province on Issues related to the Block Comprehensive Land Price for Acquisition of Agricultural Land (YZ [2020] No.16): defined that the land acquisition compensation standard only includes land compensation fee and resettlement subsidy, among which land acquisition fee accounts for 40% and resettlement subsidy accounts for 60%. In addition, compensation standard were formulated for young crops and ground attachments, acquiring state-owned agricultural, forestry, animal husbandry, fishery and other state-owned land for non-agricultural construction purpose, and for acquiring paddy land, grassland, unused land, etc.</p> <p>vi) Notice of The People's Government of Henan Province on Printing and Distributing Implementing Several Provisions of Regulations on Expropriation and Compensation of Houses on State-owned Land of Henan Province (2012): Article 12: the housing expropriation department shall compensation the owner of the acquired house for business suspension or shut-down loss if the expropriated house meets the following conditions; Article 17: If individual houses on state-owned land are expropriated and the affected persons meets the local housing security conditions and choose indemnification housing voluntarily, the municipal or county governments that make the decision on house expropriation shall give priority to them on housing security. Notice on Printing and Distributing Measures for Selection of Real Estate Price Appraisal Agencies for Expropriation of Houses on State-owned Land in Shaanxi Province (SJF [2018] No. 121) defined that the compensation for housing expropriation shall be determined through appraisal by a real estate value appraisal company in line with the Regulations on the Expropriation of Buildings on State-owned Land and Compensation; Where individual houses are expropriated, the expropriated persons shall be included in the scope of housing security if they meet the local housing security conditions; The housing expropriation department shall compensate the expropriated person's for losses caused by business suspension or shut-down due to the expropriation of houses on state-owned land.</p> <p>vii) The Agricultural Product Quality Safety Law of the PRC 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. The Regulations on Pesticide Administration raises specific requirements for the production, registration, marketing and use of pesticides. The Measures for the Administration of the Soil Environment of Agricultural Land (Interim) 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. The Guidelines of the General Office of the Ministry of Agriculture and Rural Affairs on Fertilizer Package Waste Recovery and Disposal stipulate that fertilizer package waste shall be recovered by producers, dealers and users. Measures for the Administration of Agricultural Mulching Films: Article 14: 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>iv) Provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity</p>	<p>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 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 Shaanxi Province on Further Implementing Policies related to Land-loss Farmers' Participation in Basic Endowment Insurance (SHRSS [2016] No.20),</p>	<p>Consistent, but there are areas for improvement in management Social impacts and risks monitoring mechanism established by government</p>

<p>(e.g., loss of crop production or employment).</p>	<p>Opinions of Labor and Social Security Department, Land Resources Department and Finance Department of Henan Province on Implementation of Job Training and Social Security Work for Land-loss Farmers (HLS [2008] No. 19), Opinions of Human Resources and Social Security Department, Finance Department, Natural Resources Department of Henan Province on the Implementation of Subsidies for Land-loss Farmers' Participation in the Basic Endowment Insurance (YHRSS [2019] No.1)</p> <p>i) Land Administration Law: Article 48: 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>ii) Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238), 1) Agricultural resettlement. When rural collective land out of urban planning areas is acquired, land-expropriated farmers shall be first provided with necessary arable land 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>iii) Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29): Employment training and social security for land-expropriated farmers shall be 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>iv) Notice of the Ministry of Labor and Social Security, and the Ministry of Land and Resources on Doing a Substantially Good Job in Social Security for Land-expropriated Farmers (MLSS [2007] No.14): All localities shall establish a social security system for land-expropriated farmers as soon as possible. Funds required for social security for land-expropriated farmers shall be fully transferred to the special account, and credited to the individual or pooling account within 3 months after the approval of the land acquisition compensation and resettlement program.</p> <p>v) Notice of Shaanxi Province on Further Implementing Policies related to Land-loss Farmers' Participation in Basic Endowment Insurance (SHRSS [2016] No.20), defined that the social security fee should be prepared in the principle of "who use the land, who provide safeguard; and jointly funded by the government, collective organizations and individuals". Regardless of land requisition for any project, the land use unit must include the social security fee for land-loss farmers into the land acquisition budget at a standard of not less than 10, 000 yuan per mu and pay according to regulations. The government funded part for land-loss farmer's endowment insurance will be paid from the local collection of the social security insurance; the remaining funding gap shall be settled from the compensation of using</p>	<p>departments, not yet established and implemented by PIUs.</p> <p>Recommendation: Establish a social impacts and risks monitoring and reporting mechanism in PIUs.</p>
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	<p>state-owned land.</p> <p>vi) Opinions of Human Resources and Social Security Department, Finance Department, Natural Resources Department of Henan Province on the Implementation of Subsidies for Land-loss Farmers' Participation in the Basic Endowment Insurance (YHRSS [2019] No.1), stipulated that include the pension for land-loss farmers in basic endowment social insurance system and provide subsidies of basic endowment insurance for farmers who lost their land. The social security insurance should be funded fully by the government who acquire the land and doesn't need to fund by the land-loss farmers or collective organizations any more. Equal subsidies will be provided to the land-loss farmers in the same region regardless of whether they participated in the basic endowment insurance for urban and rural residents or the basic endowment insurance for urban workers. Minimum subsidy standard shall be determined at provincial level, and specific subsidy standard shall be reasonably determined at local levels in light of actual conditions. To meet the needs of mobility, the subsidy funds can be transferred with the endowment insurance relationship together.</p>	
<p>v) Restore or replace public infrastructure and community services that may be adversely affected by the Program.</p>	<p>Applicable laws and regulations: Land Administration Law, and Regulations on the Implementation of the Land Administration Law of the PRC, Real Right Law:</p> <p>i) Land Administration Law: Article 47: 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>ii) Regulations on the Implementation of the Land Administration Law of the PRC: Article 27: People's governments at and above the county level shall, on the basis of the social stability risk assessment and the investigation results of land status, organize relevant departments of natural resources, finance, agricultural and rural affairs, human resources and social security to formulate land acquisition compensation and resettlement plan, in which the information of area to be acquired, the current land status, the purpose of land acquisition, the compensation methods and standards, the objects of resettlement, the resettlement methods and social security, etc should be included. Article 31: After the application for land acquisition is approved according to law, the local people's government at or above the county level shall, within 15 working days from the date of receiving the approval, issue a public announcement of land acquisition within the scope of the township (town), village and villagers' group where the land to be acquired, announce the specific work arrangements, such as the land acquisition scope and timeline.</p> <p>iii) Real Right Law: Article 36: If any immovable or movable property is damaged, the right holder may request repair, rework, replacement or restoration.</p>	<p>Consistent</p>
<p>vi) Include measures in order for land acquisition and related activities to be planned and implemented with appropriate disclosure of information, consultation, and</p>	<p>i) Land Administration Law: Article 26: Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate. 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. Article 47: 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</p>	

<p>informed participation of those affected.</p>	<p>collect comments from the affected rural collective economic organization and its members, village committee and other stakeholders.</p> <p>ii) Regulations on Complaint Letters and Visits: Article 6: 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>iii) Document No.1 of the Central Government (2020): 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 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>iv) Standard Guide to Grass-root Government Affairs Disclosure on Collective Land Acquisition (June 2019, Ministry of Natural Resources): 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"> • 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. • Participation during the DMS includes LA announcement, DMS publicity, DMS participation, and result disclosure and confirmation. • 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. • The compensation program shall be disclosed during drafting, and a public hearing held when necessary. • Public participation during implementation mainly includes production resettlement, livelihood restoration, information disclosure in compensation distribution and information, negotiation, and agreement signing. 	
<p>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.</p>		
<p>Element 10: Undertake meaningful consultations if the ethnic minorities are potentially affected (positively or</p>	<p>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)</p> <p>i) Constitution: Article 4: All ethnic groups in the People's Republic of China are equal.</p> <p>ii) Law of the People's Republic of China on Regional National Autonomy: Article 51: In dealing with special issues</p>	

<p>negatively), to determine whether there is broad community support for the PforR Program activities.</p>	<p>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>iii) Social Stability Risk Assessment of Major Fixed Asset Investment Projects: Article 3: 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 Henan promulgated the Notice on Opinions of Implementing Social Stability Risk Assessment Mechanism for Major Matters of Henan Provincial Water Resources Department (Interim) in 2013, and Shaanxi Provincial Governments promulgated the Notice of the Opinions on Strengthening the Social Stability Risk Assessment for Major Fixed Asset Investment Projects (Shaanxi DRC Project [2012] No. 1749) in 2012 respectively.</p> <p>iv) Land Administration Law (2020): Article 47: 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>Applicable laws, regulations and plans: 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), Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1), 13th Five-year Development Plan for Ethnic Minority Programs of Henan Province (2016), and 13th Five-year Development Plan for Ethnic Minority Programs of Shaanxi Province (2016)</p> <p>i) Law of the People's Republic of China on Regional National Autonomy: Article 65: 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>ii) Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1): 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. Article 14: The decision-making entity shall fully solicit opinions in the form widely available for public participation. Opinions may be solicited in such forms as symposiums, hearings, field visits, written solicitation of opinions from the public, questionnaires, and opinion polls. Article 15: 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</p>	

	<p>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. Article 16: 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. Article 29: If the public participation procedure is performed, the decision-making entity shall submit the draft decision together with adopted public opinions. Article 30: 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>iii) The 13th Five-Year Development Plan for Ethnic Minorities in Henan Province (2016), In which, fourteen key tasks of the ethnic administration department of Henan Province during the 13th Five-Year Plan period were put forward, including: accelerating the construction of infrastructure and upgrading the industrial structure in ethnic concentrated areas; promoting the coordinated development of urban and rural areas inhabited by ethnic minorities; pushing ethnic minorities and ethnic minority communities out of poverty; accelerating the development of education in ethnic areas; promoting the prosperity and development of ethnic culture and sports; strengthening the ability of scientific and technological innovation in ethnic concentrated areas; promoting the development of medical and health services in ethnic minority areas; improving the employment, entrepreneurship and social security systems in ethnic minority areas; cultivating high-quality ethnic minority talents; improving the laws and regulations system of ethnic work; effectively protecting the legitimate rights and interests of ethnic minorities; enhancing the ability of ethnic affairs management and service; and vigorously launching activities to promote ethnic unity and progress.</p> <p>iv) Notice of The General Office of Shaanxi Provincial People's Government on Printing and Distributing the 13th Five-Year Development Plan for Ethnic Minorities (2016) : Plans have also been made in the areas of infrastructure construction and upgrading, optimization of industrial quality and efficiency in ethnic minority areas, improvement of basic public services in ethnic minority areas, promotion of the construction of new villages and small towns in ethnic minority areas, and the development of talents of ethnic minorities.</p>	
<p>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.</p>	<p>Notice of the State Council on Issuing the 13thFive-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79), 13th Five-year Development Plan for Ethnic Minority Programs of Henan Province (2016), and Notice of the General Office of the Shaanxi Provincial Government on Issuing the 13th Five-year Development Plan for Ethnic Minority Programs of Shaanxi Province (2016)</p> <p>i) Notice of the State Council on Issuing the 13thFive-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79): 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>ii) The 13th Five-Year Development Plan for Ethnic Minorities in Henan Province (2016), In which, fourteen key tasks of the ethnic administration department of Henan Province during the 13th Five-Year Plan period were put forward, including: accelerating the construction of infrastructure and upgrading the industrial structure in ethnic concentrated areas; promoting the coordinated development of urban and rural areas inhabited by ethnic minorities; pushing ethnic minorities and ethnic minority communities out of poverty; accelerating the development of education in ethnic areas; promoting the prosperity and development of ethnic culture and sports; strengthening the ability of scientific and technological innovation in ethnic concentrated areas; promoting the development of medical and health services in ethnic minority areas; improving the employment, entrepreneurship and social security systems in ethnic minority areas; cultivating high-quality ethnic minority talents; improving the laws and regulations system of ethnic work; effectively protecting the legitimate rights and interests of ethnic minorities; enhancing the ability of ethnic affairs management and service; and vigorously launching activities to promote ethnic unity and progress.</p> <p>iii) Notice of The General Office of Shaanxi Provincial People's Government on Printing and Distributing the 13th Five-Year Development Plan for Ethnic Minorities (2016), aims to make full use of existing policies and the ethnic minorities development funds to vigorously improve the public infrastructure, working and living conditions of ethnic minorities and ethnic minorities living areas, accelerate the development of competitive industries and economies with distinctive characteristics, strengthen the support for the development of ethnic minority enterprises and build brand enterprises, promote the rapid development of education, science and technology, culture, public health, and sports with innovative ways and methods, and strengthen the construction of legal system to protect the legitimate rights and interests of ethnic minorities, carry out intensive activities to promote ethnic unity and development, strengthen the construction of educational bases and demonstration units for ethnic unity and development, and further consolidate the favorable atmosphere of ethnic unity and social harmony.</p> <p>iv) Other poverty alleviation policies: In China, poor households refer mainly to those below the minimum living security (MLS) standard, and are classified into: a) MLS households, whose per capita annual income is below the poverty line, where the MLS standard was 570 yuan per capita per month in urban areas and 4,260 yuan per capita per annum in rural areas in Henan Province in 2020, and the MLS standard was various in Shaanxi Province due to the local conditions of each area, such as 630 yuan per capita per month in urban areas and 4,830 yuan per capita per annum in rural areas in Tongchuan city 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>v) Law of the People's Republic of China on the Protection of Women's Rights and Interests (2018 Amendment): Article 22: Women shall enjoy the same labor and social security rights as men. Article 24: Men and women shall receive equal pay for equal work, and women shall enjoy the same remuneration rights as men. Article 26: Any employer shall protect women's health and safety at work, and shall not assign women to unsuitable jobs. Women shall receive special protection during menstruation, pregnancy, lying-in and breastfeeding. Article 27: No employer shall reduce female workers' salaries, or dismiss female workers on the basis of marriage, pregnancy lying-in and breastfeeding. Article 28: The state shall ensure that women are entitled to social insurance, social assistance, social welfare and healthcare rights, and encourage public welfare activities for women. Article 29: The state shall offer maternity security.</p> <p>vi) Program for Women's Development of China (2011-2020): 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</p>	
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	management.	
Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.		
Element 13: Consider conflict risks, including distributional equity and cultural sensitivities.		

Annex 6 Stakeholder Analysis

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 automatically. Generally, 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

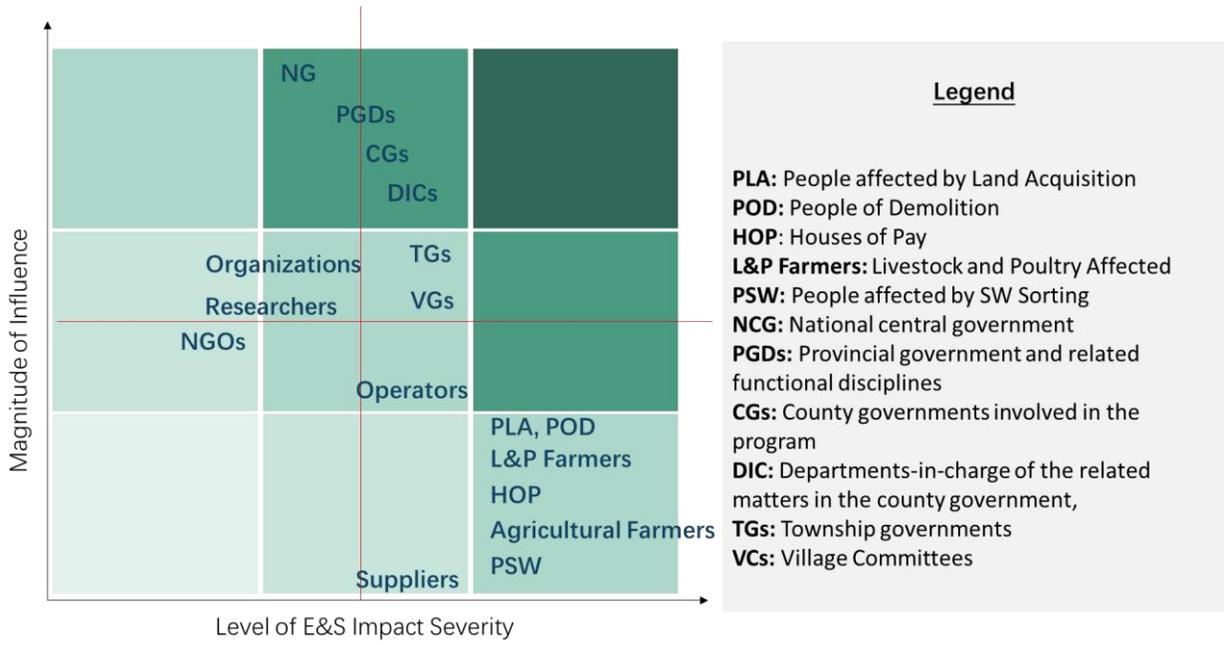
- i) **Operation entities:** operation entities of WWTPs, domestic waste collection, transfer and disposal entities, agricultural mulching film processing enterprises, and manure recycling enterprises
- ii) **Suppliers:** suppliers of services and goods, such as equipment and fertilizers
- iii) **Agencies:** 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
- v) **TGs:** local township governments, including land acquisition / occupation, wastewater treatment, domestic waste collection, separation and recycling, etc.
- vi) **VCs:** local village committees

Stakeholder Matrix

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.



Annex 7 Main Data Collection Activities during ESSA Preparation

Province	Date	Targets	Mode
Shaanxi	March 17-19, 2021	<ul style="list-style-type: none"> Provincial Department: DRC, Water Resources Department 	<p>Introduction about the PforR and ESSA</p> <p>Learn about the provincial planning and key activities</p>
	July 19-23, 2021	<ul style="list-style-type: none"> Provincial Department: DRC, Water Resources Department, Housing and Urban-rural Development Department, Agricultural and Rural Affairs Department, Natural Resources Department, Women's Federation, Ecology and Environment Department, Forest Department, Health Commission, Ethnic and Religions Commission, Civil Affairs Department, Poverty Alleviation Department/Rural Revitalization Department Sample County: Wangyi and Yintai District in Tongchuan City, Xunyi County in Xianyang City 	<p>Introduction about the PforR and ESSA</p> <p>Learn about the provincial planning and key activities</p> <p>Site survey and consultations</p>
	August 29-September 3, 2021	<ul style="list-style-type: none"> Sample County: Wangyi District, Xunyi County and Yongshou County 	<p>Site survey and consultations</p>
Henan	March 14-17, 2021	<ul style="list-style-type: none"> Provincial Department: DRC Sanmenxia City: DRC, Agricultural and Rural Affairs Department, Ecology and Environment Department, Natural Resources Department, Forest Department 	<p>Introduction about the PforR and ESSA</p> <p>Learn about the provincial planning and key activities</p>
	March 13-17, 2021	<ul style="list-style-type: none"> Provincial Department: DRC, Finance Department, Ecology and Environment Department, Agricultural and Rural Affairs Department, Forest Department Sanmenxia City: Municipal Government, DRC, Finance Bureau, Regional Coordination Office, Water Resources Bureau, Agricultural and Rural Affairs Bureau, Rural Revitalization Bureau, Ecology and Environment Department, Natural Resources and Planning Bureau, Forest Bureau, Urban Administration Bureau, Culture, Radio and Television, Tourism Bureau, Health Commission, Emergency Management Bureau, Meteorological Bureau, Civil Affairs Department, Ethnic and Religions Commission, Women's Federation Sample County: Yima City, Binghu District, Mianchi County, Shanzhou 	<p>Introduction about the PforR and ESSA</p> <p>Learn about the provincial planning and key activities</p> <p>Site survey and consultations</p> <p>Site visits and consultations</p>

		District, Lingbao City	
	September 13-17, 2021	<ul style="list-style-type: none"> • Municipal Department: Waster Resources Department, Civil Affairs Department, Rural Revitalization Department, Women's Federation, Agricultural and Rural Affairs Department, Ethnic and Religions Commission, Human Resources and Social Security Department • Sample County: Mianchi County, Shanzhou District, Lingbao City 	Site visits and consultations

Annex 8 Public Participation Implemented

Date	Location	Participants	Topic discussed
March 17-19, 2021	Zhengzhou City, Henan Province	Henan Provincial Development and Reform Commission, Sanmenxia City: Development and Reform Commission, Agriculture and Rural Affairs Bureau, Ecology and Environment Bureau, Natural Resources Bureau, Forestry Bureau	<ul style="list-style-type: none"> • Provincial Planning related to Yellow River Basin Resilience • Introduction about World Bank PforR Program
July 13-17, 2021	Sanmenxia City, Henan Province	Provincial Development and Reform Commission, Finance Department, Ecology and Environment Department, Agricultural and Rural Affairs Department, Forestry Department. Sanmenxia Municipal Government, DRC, Finance Bureau, Reginal Coordination Office, Water Resources Bureau, Housing and Urban-rural Construction Bureau, Agricultural and Rural Affairs Bureau, Rural Revitalization Bureau, Ecology and Environment Bureau, Natural Resources and Planning Bureau, Forestry Bureau, Urban Administration Bureau, Culture, Radio and Television, Tourism Department, Health Commission, Emergency Management Department, Meteorological Department, Civil Affairs Department, Ethnic and Religions Commission, Women's Federation	<ul style="list-style-type: none"> • Learn about the Plan of Water Ecology Protection and High-quality Development in Yellow River Basin of Sanmenxia City, Henan Province (2020-2050) • Discussions with relevant departments to understand regulations and current status in each field
September 13-17, 2021	Sanmenxia City, Henan Province	Municipal departments: Sanmenxia Water Resources Bureau, Civil Affairs Bureau, Rural Development Bureau, Women's Federation, Agriculture and Rural Affairs Bureau, Ethnic and Religions Affairs Bureau, Human Resources and Social Security Bureau, Health Commission; Representatives of Sample Counties (Mianchi County, Shaanxi District, Lingbao City), sample township government and community residents, and relevant sample enterprises	<ul style="list-style-type: none"> • Industries Policies consultation, responsibilities and organizational setup of each authority • Previous project implementation, including collection of relevant data
March 19-23, 2021	Shaanxi Provincial Water Conservation Center	Government administrative departments include: National Development and Reform Commission, Housing and Urban-rural Construction	<ul style="list-style-type: none"> • Provincial Planning related to Yellow River Basin Resilience • Introduction about

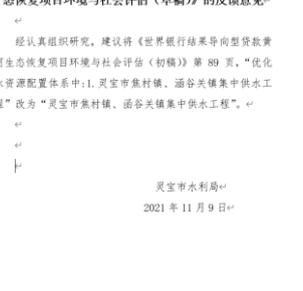
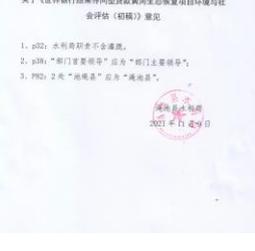
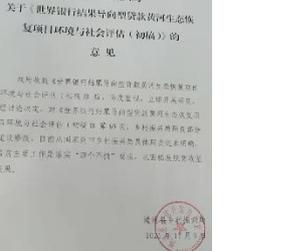
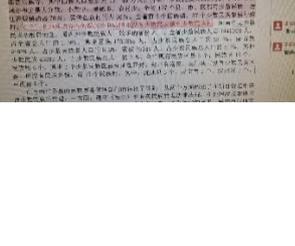
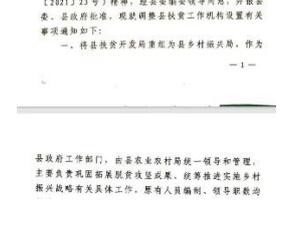
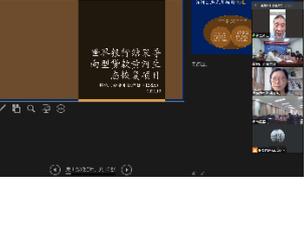
Date	Location	Participants	Topic discussed
		Department Urban Administration Department, Agriculture and Rural Affairs Department, Natural Resources Department, Environmental Resources Bureau, Civil and Rural Affairs Department, Women's Federation, Employment Bureau	World Bank PforR Program
July 19, 2021	Shaanxi Provincial Water Conservation Center	DRC, Finance Department, Provincial Water Resources Department/River Chief Office, Provincial Housing and Urban-rural Construction Department, Provincial Ecology and Environment Department, Provincial Natural Resources Department, Provincial Project Management Office, Institute for Water and Environmental Research	<ul style="list-style-type: none"> • Learn about the Water Ecological Rehabilitation Plan of Weihe River Basin in Shaanxi Province (2021-2035) • Discussions with relevant departments to understand regulations and current status in each field
July 19, 2021	Water Resources Department	Deputy chief of the Water Resources Department, Soil and Water Conservation Office	<ul style="list-style-type: none"> • Responsibilities and organizational setup of Provincial Water Resources Department • Key activities of soil and water conservation • Potential E&S impacts
	Women's Federation	Director and inspectors of the Office	<ul style="list-style-type: none"> • Status of women's rights and interests protection in Shaanxi Province • Responsibilities and organizational structure • Challenges and plans in women's rights protection and development
	Provincial Housing and Urban-Rural Construction Department	Urban Division, Rural and Township Division and Real Estate Division of Housing and Urban-rural Construction Department	<ul style="list-style-type: none"> • Division of responsibilities and institutional setup of the Housing and Urban-rural Construction Department on domestic waste management and house expropriation on state-owned land • Progress and problems of domestic waste management in the province
	Provincial Natural Resources Department	Regulations Division of Natural Resources Department	<ul style="list-style-type: none"> • Current land acquisition and compensation policies. • The procedure of land compensation standards formulation and publishment. • Division of

Date	Location	Participants	Topic discussed
			responsibilities and organizational structure among the provincial and county-level natural resources departments
July 20, 2021	Site visit-Wangyi and Yintai District, Tongchuan City	DRC, Water Resources Bureau, Agricultural and Rural Affairs Bureau	<ul style="list-style-type: none"> • responsibilities and organizational setup of each authority • The main activities, policy requirements, implementation progress, effects and main problems of solid waste, rural wastewater, agricultural non-point source pollution management, river improvement and soil and water conservation
	Site visit-Xunyi County in Xianyang City	DRC, Water Resources Bureau, Agricultural and Rural Affairs Bureau	<ul style="list-style-type: none"> • responsibilities and organizational setup of each authority • The main activities, policy requirements, implementation progress, effects and main problems of solid waste, rural wastewater, agricultural non-point source pollution management, river improvement and soil and water conservation.
August 30-September 3, 2021	Due Diligence-Wangyi and Yintai District in Tongchuan City, Xunyi and Yongshou County in Xianyang City	Water Resources Bureau, Housing and Urban-rural Construction Bureau, Agriculture and Rural Affairs Bureau, Ecology and Environment Bureau, Natural Resources Bureau, Ethnic and Religions Commission, Women's Federation, Civil Affairs Bureau, Human Resources and Social Security Bureau, Health Commission, representatives of sample townships and communities, and relevant sample enterprises	<ul style="list-style-type: none"> • Industries Policies consultation, responsibilities and organizational setup of each authority • Previous project implementation, including collection of relevant data

Annex 9 Records of Public Consultation on the Draft ESSA

1. Main comments received and responded for the Draft ESSA

No.	Issues	Comments	Parties	Follow-up
About Policy				
1	Section 4.1: Some regulations on land acquisition used are out of date	Please update.	Natural Resources Bureau, Sanmenxia	Updated
2	Section 4.1: The regulation on safety of production used is out of date	Please use the one updated in 2021	Emergency bureau, Wangyi, Shaanxi	Updated
4	Section 4.3.4: the statement on land use is not accurate	Revise as: there were no land acquisition issue for most facilities above.	Natural Resources Bureau, Sanmenxia	Updated
5	Section 4.3.4, statement on land-preliminary land approval is not so accurate	Please update as provided written document.	Natural Resources Bureau, Sanmenxia	Updated.
6	Section 4.1.5, The use of data should not be sourced from the 13 th five year Development program any more, it was too old.	Please use the data of 14 th five year Development program any more, it was too old.	Women Federal, Sanmenxia	Updated.
7	Section 4.3.5: the description on ethnic minority is not accurate for Xianyang of Shaanxi, and Sanmenxia	Please update as provided written document.	Bureau of Ethnic affairs, Xianyang, Sanmenxia	Updated.
8	Section 4.3.2: Experience of Shanzhou in Sanmenxia should be added for relics protection.	Please add as the document provided.	Shanzhou relics protection bureau	Added
About the description of the practices in the actual projects				
9	Section 4.3.3: the description of the three-chamber toilet is not accurate.	Please update as provided written document.	Rural and agricultural bureau, Sanmenxia	Updated.
About the institution				
10	Section 4.2.3, the role and responsibility for natural resources should add those of Sanmenxia	Please update as provided written document.	Natural Resources Bureau, Sanmenxia	Updated.
11	Section 4.2.6: The role and responsibility of the rural vitalization bureau is not accurate	Please update as provided written document.	The rural vitalization bureau of Mianchi county of Henan and Wangyi District of Shaanxi	Updated.
12	Section 3.1.2, the statement on water resource part is not accurate	Please update as provided written document.	Water resources bureau of Wangyi district, Shaanxi	Updated
About the program				

<p>Natural Resources of Sanmenxia municipality, Henan</p>	<p>DRC of Sanmenxia, Henan</p>	<p>Women Federal, Sanmenxia, Henan</p>	<p>灵宝市水利局关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会评估（初稿）》的反馈意见</p>
<p>三门峡市民族宗教事务局</p> 	<p>关于世界银行结果导向型贷款黄河生态恢复项目环境与社会系统评估（初稿）的反馈意见</p> 	<p>关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会评估（初稿）》的意见</p> 	<p>灵宝市水利局关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会评估（初稿）》的反馈意见</p> 
<p>Bureau of Ethnic Minority, Sanmenxia, Henan</p>	<p>Water Resources, Sanmenxia, Henan</p>	<p>Political and legislative affairs committee, Sanmenxia, Henan</p>	<p>Water resources bureau, Lingbao, Sanmenxia, Henan</p>
<p>灵宝市水利局</p> <p>关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会评估（初稿）》意见</p> 	<p>关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会系统评估（初稿）》征求意见的回复</p> 	<p>灵宝县政协</p> <p>关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会系统评估（初稿）》的意见</p> 	<p>世界银行结果导向型贷款黄河生态恢复项目环境与社会系统评估修改意见</p> 
<p>Water resources bureau, Mianchi, Sanmenxia, Henan</p>	<p>Relics resources bureau, Mianchi, Sanmenxia, Henan</p>	<p>Rural virilization bureau, Mianchi, Sanmenxia</p>	<p>DRC, Shanzhou, Sanmenxia, Henan</p>
<p>关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会系统评估（初稿）》征求意见的回复</p> 	<p>三门峡市民族宗教事务局</p> 	<p>灵宝县乡村振兴局</p> 	<p>根据《中共灵宝市委办公室、灵宝市人民政府办公室关于调整县级扶贫工作机构设置的通知》（灵办发〔2021〕23号）精神，经市委常委会研究，并报市委、市政府批准，现调整扶贫开发工作机构设置有关事项通知如下：</p> 
<p>Rural and agricultural burau, Shanzhou, Sanmenxia, Henan</p>	<p>Relics resources bureau, Shanzhou, Sanmenxia, Henan</p>	<p>Bureau of Ethnic Minority, Xianyang, Shaanxi</p>	<p>Rural virilization bureau, Xunyi, Shaanxi</p>
<p>三门峡市民族宗教事务局</p> <p>关于《世界银行结果导向型贷款黄河生态恢复项目环境与社会系统评估（初稿）》意见</p> 	<p>三门峡市民族宗教事务局</p> 	<p>三门峡市民族宗教事务局</p> 	<p>三门峡市民族宗教事务局</p> 

Water resources bureau, Wangi, Shaanxi	ESSA consultation with Shaanxi	ESSA consultation with Sanmenxia, Henan	
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Annex 10 Examples of Public Consultation Records

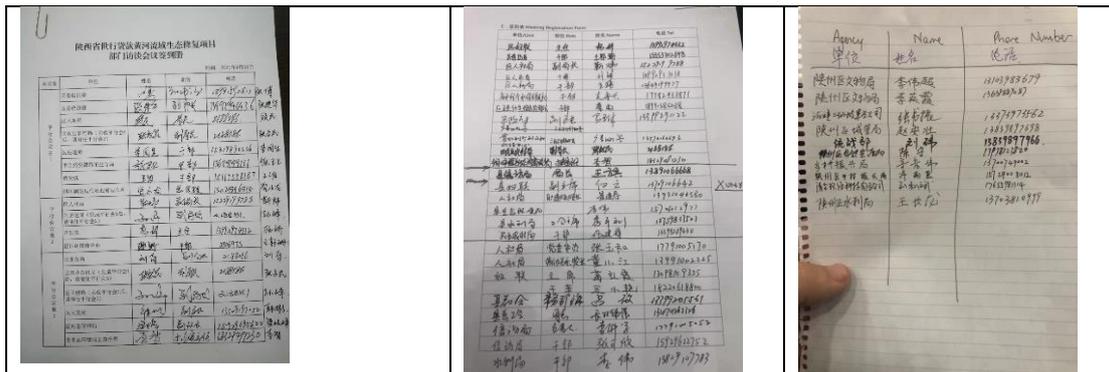


Figure 1: 2021.8.31 Registration form of FGD in Wangyi district, Shaanxi

Figure 2 : 2021.9.1 Registration form of FGD in Xunyi county, Shaanxi

Figure 3: 2021.9.15 Registration form of FGD in Shanzhou district, Sanmenxia, Henan

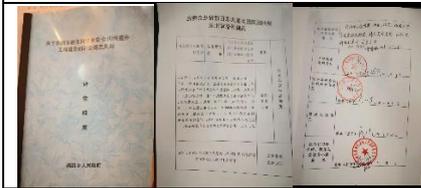


Figure 4: SSAR report and approvals of a rural drinking water project in Shanzhou district of Sanmenxia, Henan



Figure 5: Approval on relics protection for site selection of a gas pipeline project in Yongshou county, Shaanxi.

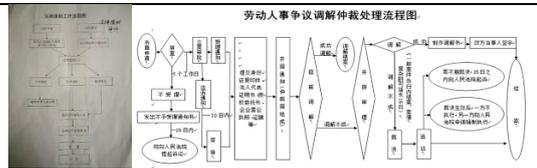


Figure 6: The detailed mediation and arbitration processes of labor disputes, Mianchi County, Sanmenxia, Henan

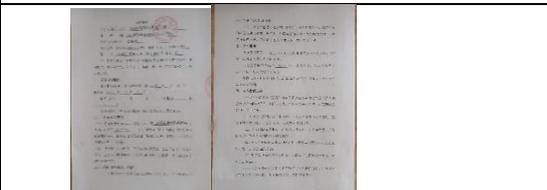


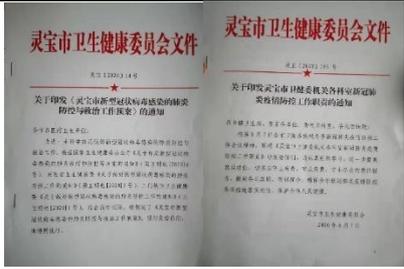
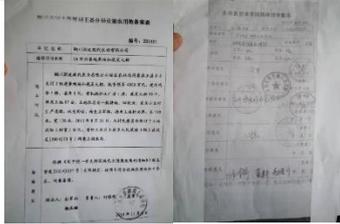
Figure 7: A land lease agreement signed between the village committee (on behalf of villagers) of Dujiazhuang Village in Ganjing Town, Yongshou County, Shaanxi Province and the Xianyang Zhengda Food Co., Ltd.



Figure 8: A manure utilization facility in



Figure 9: A village sewage treatment

<p>Wangyi district, Shaanxi</p>	<p>facility in Yongshou county, Shaanxi</p>
	
<p>Figure 10: A town sewage treatment facility in Lingbao, Henan</p>	<p>Figure 11: Covid-19 control and management plan developed by Lingbao, Sanmenxia, Henan</p>
	
<p>Figure 12: A Land use approvals for a manure utilization facilities in Wangyi district and Yongshou, Shaanxi</p>	<p>Figure 13: farmers hired by an apple planting farm</p>