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Sustainable Fodder Production and Low Methane Livestock

Development Program-for-Results

(P181021)

**Environmental and Social Systems  
Assessment**

(Final Draft)

World Bank May, 2024

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## Abbreviations and Acronyms

AFWB	Agricultural, Forest and Water Resources Bureau
AHVMBs	Animal Husbandry and Veterinary Medicine Bureaus
ARM	Antimicrobial Resistance
ARABs	Agriculture and Rural Affairs Bureaus
BSL	Biosafety Level
CAB	Civil Affairs Bureau
CHAB	Cultural Heritage Administration Bureau
CNY	Chinese Yuan
CPC	Communist Party of China
CPCG	County Program Coordinating Group
CPMO	County Program Management Office
CSA	Climate Smart Agriculture
CSFPTP	Climate Smart Fodder Production Technologies and Practices
CTB	Culture and Tourism Bureau
DARA	Department of Agricultural and Rural Affairs
DCPC	Disease Control and Prevention Center
DEE	Department of Ecology and Environment
DLI	Disbursement-linked Indicator
DMS	Detailed Measurement Survey
DNR	Department of Natural Resources
DOF	Department of Finance
DRCs	Development and Reform Commission(s)
E&S	Environment & Social
EEB(s)	Ecology and Environment Bureau(s)
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EM	ethnic minorities
EMBs	Emergency Management Bureaus
EMS	Environmental Management System
EPL	Environmental Protection Law
ERL	Environmental Conservation Redlines
ESMS	Environmental and Social Management System
ESSA	Environmental and Social Systems Assessment
FALU	Facility Agriculture Land Use
FBs	Financial Bureaus
FGBs	Forest and Grassland Bureaus
FGD	Focus Group Discussion
FMD	Foot-and-Mouth Disease
FSR	Feasibility Study Report
GHG	Green House Gas
GIIP	Good International Industry Practice
GPPC	Gansu Provincial People's Congress
GRM	Grievance Redress Mechanism
HACCP	Hazard Analysis and Critical Control Point
HC	Health Commission
HPAI	Highly Pathogenic Avian Influenza

HRSSB	Human Resources and Social Security Bureau
IFAD	International Fund for Agricultural Development
IPF	Investment Project Financing
IPM	Integrated Pest Management
LAR	Land Acquisition and Resettlement
LURT	Land Use Right Transfer
MARA	Ministry of Agriculture and Rural Affairs
MEE	Ministry of Ecology and Environment
MHRSS	Ministry of Human Resources and Social Security
MLS	Minimum Living Subsidies
MNR	Ministry of Natural Resources
MRV	Measuring, Reporting and Verification
MSAs	Market Supervision and Administrations
NDRC	National Development and Reform Commission
NFGA	National Forest and Grassland Administration
NGOs	Non-Governmental Organizations
NIMBY	Not in My Back Yard
NPC	National People's Congress
NPS	Non-point Sources
NRBs	Natural Resources Bureaus
O&M	Operation and Maintenance
OHS	Occupational Health and Safety
OIE	Office of International Epizootic
PAP	Program Action Plan
PCPB	Public Complaints and Proposals Bureaus
PDO	PforR Development Objectives
PforR	Program-for-Results
PGGP	People's Government of Gansu Provincial
PLG	Program Leading Group
PIP	Program Implementation Plan
PIU	Program Implementation Unit
PLAC	Political and Legal Affairs Committee
PML	Pathogenic Microorganism Laboratory
POM	Program Operational Manual
PPE	Personal Protective Equipment
PPMO	Provincial Program Management Office
PPR	Peste des petits ruminants
PSC	Program Steering Committees
RAs	Result Areas
RRB	Rural Revitalization Bureau
SC	State Council
SEA or SH	Sexual Exploitation and Abuse and Sexual Harassment
SOP	Standard Operation Procedures
SSRA	Social Stability Risk Assessment
TLU	Temporary Land Use
WBG	World Bank Group
WF	Women's Federation
WRBs	Water Resources Bureaus
WSC	Water and Soil Conservation

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# 1. Introduction

## Background

1. China's continued quest for green growth and poverty reduction is increasingly constrained by slowing economic growth and the impact of climate change. With increasingly limited water resources and arable land, China's rural areas face greater challenges, and agriculture and the livelihoods of rural people are more vulnerable to adverse climate events. To promote sustainable agricultural development, sustain economic growth in rural areas, and strengthen climate resilience, the Chinese government issued the *National Plan for Sustainable Agricultural Development (2015-2030)* on 20 May 2015, which provides a strategic framework for all provinces and cities across the country to achieve green growth in rural area. **Gansu Sustainable Agricultural Development Plan** is the Gansu province's contribution to the implementation of the National Sustainable Agricultural Development Plan (NSADP; 2015–2030) which sets out the goal of achieving the sustainable agriculture development outcomes by 2030. It is expected to be accomplished by establishing a new pattern of sustainable agricultural development characterized by “efficient resource utilization, green production environment, stable ecosystem, and beautiful pastoral scenery.”

2. As the Plan (the government program), is aligned with the World Bank's China Country Partnership Framework (CPF, FY 2020–2025), including WBG's Green, Resilient and Inclusive Development Framework, the WBG's Climate Change Action Plan (2021–2025), the Bank intends to implement the Sustainable Low Carbon Livestock Development Program -P181021 (the PforR) in Gansu Province, through a Program-for-Results (PforR). The PforR aims to support the implementation of the National Agricultural Sustainable Development Plan (2015-2030) in Gansu Province to reduce greenhouse gas emissions and environmental footprint and promote resilience in Gansu Province in livestock sector.

## Objective and Tasks of the ESSA

3. This Environmental and Social Systems Assessment (ESSA) is prepared as an instrument to address the environmental and social (E&S) risks and impacts of the PforR Program using national and local E&S legal frameworks and management systems. In the ESSA, the applicable national and local E&S frameworks and systems have been reviewed and assessed, compliance with the Bank's PforR core principles and requirements has been analyzed, and actions and recommendations have been proposed to fill the gaps to improve the implementation performance of the systems. The main objectives of the ESSA are as follow:

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

## Procedures and Methodologies of the ESSA

4. While the ESSA is a responsibility of the World Bank, close coordination is required with the Borrower. The Borrower provides information about the E&S management systems with the PforR and coordination in the E&S due diligence and public consultation, etc. and the organization of formal stakeholders' engagement and public consultation events at the various phases of PforR Program cycle.

5. At the **Identification stage**, the ESSA team conducted a risk screening in two steps: applying the exclusionary criteria to eliminate activities that are not eligible for PforR financing; and completing the preliminary risk rating process. At the **Preparation and Appraisal stages**, the ESSA team carried out a comprehensive ESSA in accordance with the agreed scope of work by assessing the E&S benefits, impacts and risks of the PforR activities, assessing the domestic E&S management systems in terms of applicable legal frameworks, institutional arrangements, and implementation performance, and proposing recommendations and actions to fill the gaps between the E&S systems and the Bank's PforR policies. Appropriate consultations with key stakeholders have taken place on the draft ESSA report to agree on the recommended actions which have been incorporated into the PAP, and the final ESSA will be further disclosed on the Bank and governments' websites. .

6. To ensure a robust assessment, the ESSA team conducted information collection and stakeholder engagement by various means. Based on the comprehensive collection of all relevant data of Gansu Province for all the 7 counties or districts supported by the P4R (Lanzhou New District, Minle County & Sunan County of Zhangye Municipality, Jingchuan County & Lingtai County of Pingliang Municipality, Zhengning County of Qingyang Municipality, Guazhou County of Jiuquan Municipality), 4 key counties (Guazhou County, Sunan County, Jingchuan County, Lanzhou New District) were selected as sample counties. In-depth field surveys and interviews were conducted, and relevant data and information were collected by questionnaire surveys in 4 counties. For the remaining counties, video conferences were conducted. The selection of the sample counties (districts) for field survey and more in-depth investigation considered the following main factors:

- (i) geographic coverage and distribution to cover different types of counties in pastoral areas, agricultural areas and mixed pastoral-agricultural areas),
- (ii) counties with diversified activities, and
- (iii) inclusion of representative areas of ethnic minority (EM)-concentrated counties and townships (e.g. Sunan County is a Yugur Autonomous County). The following methodologies were adopted in the ESSA preparation:

- **Secondary information collection and analysis:** Secondary information used for the ESSA included documents provided by provincial and county governments in the 7 counties, online public data, and published literature and books. These documents were analyzed to understand the legal framework, institutional arrangements and implementation procedures of national and provincial E&S management systems related to the PforR. Secondary data from other recent Bank-financed Programs was also consulted.
- **Primary information collection and analysis:** Primary information was obtained in multiple ways, including through questionnaires, virtual consultations and interviews, as well as field visits. During October 2023, the ESSA team conducted a series of field visits to the 4 sample counties (Guazhou County, Sunan County, Jingchuan County and Lanzhou New District). During field visits, meetings were held with representatives of governmental agencies at provincial and county levels, farmers & large family farms, farmers collectives, enterprises engaged in livestock farms and the value chains, and representatives of typical ethnic minority-concentrated villages. Additionally, visits to sites of typical activities were also conducted to assess the actual implementation effectiveness of the E&S systems. 8 ethnic minority-concentrated villages in Guazhou County and Sunan County were visited and discussions were organized with 167 representatives of residents to understand the potential environmental and social impact of typical activities to be supported by the PforR and to solicit their opinions and suggestions on the preparation and implementation of the PforR (see Appendix 9 for details). A sample survey of 43 farms was conducted in seven Program counties to collect targeted information regarding the social risks related to vulnerable groups including ethnic minorities

relevant to the proposed operation which now focuses on livestock. This targeted survey enabled the ESSA to explore how the program will affect and engage with different stakeholder groups especially ethnic minority communities and assess the ability of the government to engage with these communities appropriately. In addition, during preparation the Bank team also conducted questionnaires and consultation activities with relevant provincial departments and 7 counties, which provided a wider range of information sources for the ESSA.

- **Whole process stakeholders engagement:** Throughout the PforR preparation cycle – from identification till ESSA preparation - the ESSA team maintained communication with a variety of stakeholders at each step to ensure that stakeholders can participate in the process in a convenient and receptive manner. Information was provided by provincial authorities and sample counties, including relevant literature, and domestic laws, regulations, policies, standards, guidelines, plans, programs on E&S management. During the preparation of this report, the ESSA team interviewed various relevant government departments at the provincial and county levels and consulted different representatives of potentially affected community or village leaders and residents by means of virtual conferences, etc. Over 380 people were consulted of which about 30% were females.
- **ESSA report consultation:** Soon after the first version of the draft ESSA was drafted in late November 2023, periodic communication with the Provincial Program Management Office (PPMO) was conducted to further clarify and supplement some information. In December 2023, the draft ESSA report was circulated through PPMO to relevant provincial and county government authorities to seek written comments and suggestions. Meanwhile, the draft ESSA report was disclosed at Gansu Provincial Department of Agricultural and Rural Affairs (DARA)'s official website on 14 December 2023 (<https://nync.gansu.gov.cn/nync/or/c107992/or202312/or173813301.shtml>). On 27 December 2023, meaningful consultations on the draft ESSA report were conducted with government authorities, enterprises and community representatives at the provincial level and all the 7 Program counties. Written feedback on the draft ESSA was also made available to the E&S team. The feedback has been incorporated into the ESSA report and the activities about data collection and consultation are listed in **Appendix 6**.

7. In recent years, the Bank has supported several Programs for Result operations China. These include Yellow River Basin Ecological Protection and Pollution Control Program (Henan and Shaanxi), Yellow River Basin Ecological Protection and Pollution Control Program (Gansu and Shandong), Yangtze River Protection and Ecological Restoration Program (Jiangxi, Hunan), Yangtze River Protection and Ecological Restoration Program (Hubei) and Green Agricultural and Rural Revitalization Program (Guangxi, Guizhou), Green Agricultural and Rural Revitalization Program (Hubei, Hunan). Gansu is one of the demonstration provinces in Yellow River Basin Ecological Protection and Pollution Control Program (Gansu and Shandong).

## 2. Program Description

### 2.1 Government Program

8. The PforR Program supports the government's National Sustainable Agricultural Development Plan (2015-2030) and three sector plans for Gansu. The Government program has six priority areas: (i) enhancing the development layout to steadily increase capacity and productivity of agriculture and livestock production; (ii) preserving cultivated land resources to promote sustainable land use in agriculture; (iii) saving water resources and ensuring agricultural water security; (iv) control of environmental pollution to improve the agricultural and rural environment; (v) strengthening agricultural ecological protection and restoration to enhance ecological conservation functions; (vi) establishment of institutional guarantee systems.

9. Gansu Province, situated in the northwest region of the PRC, is bordered by the provinces of Shaanxi to the east, Sichuan, Chongqing and Qinghai to the south, Xinjiang to the west, Inner Mongolia and Ningxia to the north. The province, known for its historical significance and as the starting point of the ancient Silk Road, encompasses an area of about 425,900 square kilometers. The province's capital, Lanzhou, is an important industrial base and key transportation hub in Northwest China. Gansu Province includes 14 cities (prefectures), including 2 ethnic autonomous prefectures a total of 1,229 townships (1197 townships, 32 ethnic townships, 127 subdistrict. As the end of 2022, the total population of Gansu Province was 24.9 million, among which, 45.81% of the total population living in rural areas.

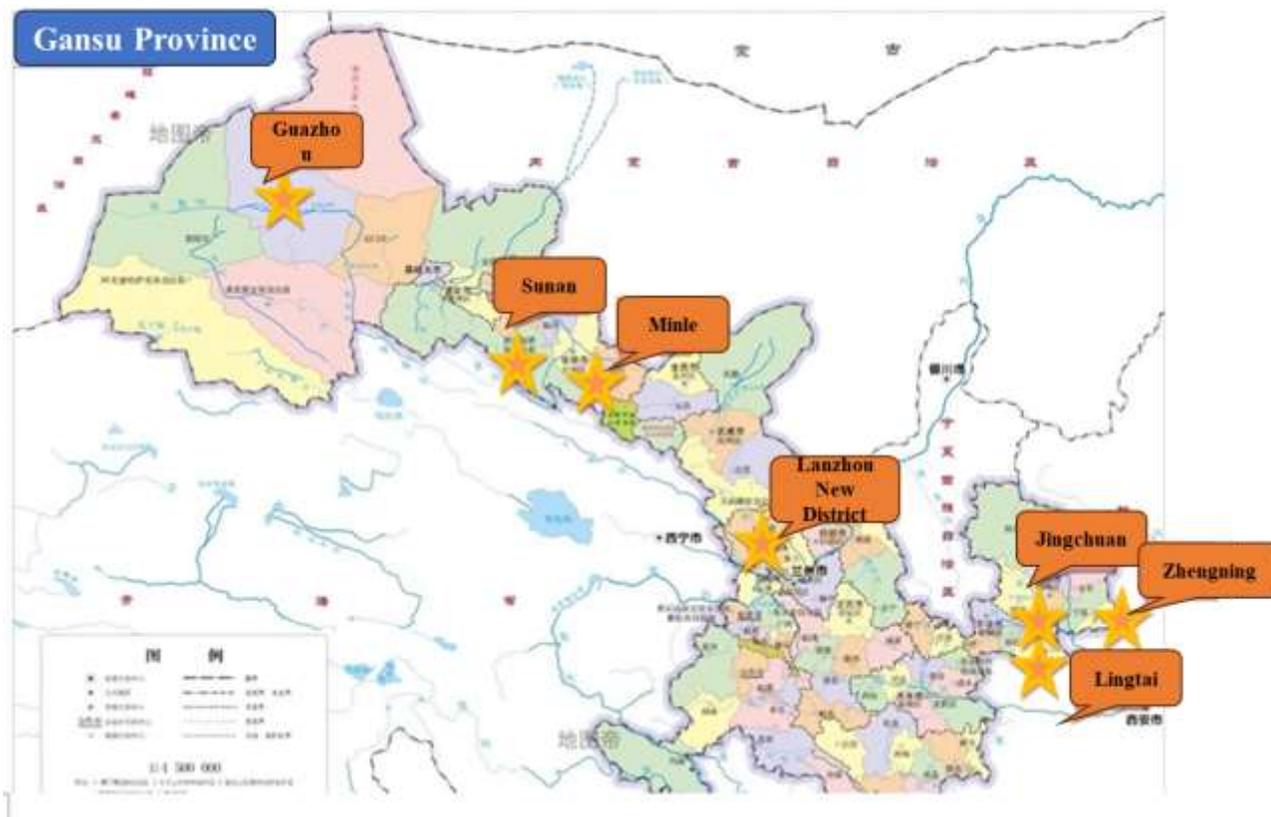
10. Gansu Province is considered a relatively underdeveloped province in the PRC with a per capita disposable income of CNY 23,273, which was only 63.1% of the national average level income of CNY 36,883 in 2022 and ranked at the bottom among 31 provinces and municipalities in China. The annual per capita disposable income of urban residents was CNY 37,572, accounting for 76.2% of the national average (CNY 49,283). The average annual per capita disposable income of rural residents was CNY 12,165, which is only about 32.4% of the average income level of urban residents. The Government of the PRC declared the elimination of absolute poverty by the end of 2020, shifting social policy towards support for those with low income or those identified as facing special difficulties. In 2022, approximately 1.82 million individuals, including 1.5 million rural inhabitants and 0.32 million urban residents, were considered vulnerable and eligible to receive the minimum living subsidy, representing about 7.3% of the total population in Gansu Province.

11. In the process of livestock development, Gansu Province faces several challenges. Firstly, the province faces the challenge of greenhouse gas (GHG) emission to the atmosphere. Ruminants account for 78% of GHG emissions from meat production in Gansu, with beef accounting for 56% and sheep for 22%. If no measures are taken to reduce GHG emission intensity, the total GHG emission will increase significantly with increasing number of livestock. Secondly, low output efficiency, fragmented and low-premium value chains and insufficient adoption of green and low emission technologies characterize the value chains in Gansu. Thirdly, there is a growing public concern to address issues related to food safety, and control zoonotic and animal diseases.

### 2.2 The PforR Program Boundary

12. **Program Financing:** The total Program financing is estimated at US\$ 824.8 million, of which US\$ 200.0 million will be financed by the IBRD loan, to support Gansu in implementing activities in the provincial plan in the sub-areas of green and low emission livestock production a management and regulatory and governance system improvement, in the future. The implementation period of the PforR is from 2024 to 2030, with 2022 serving as the baseline year against which outcomes will be measured.

13. **Geographic Coverage:** The PforR Program is conceived as a provincial program in Gansu Province. 7 counties (or districts) distributed in 5 municipalities or districts have been selected. These include Lanzhou New District, Minle County & Sunan County of Zhangye Municipality, Jingchuan County & Lingtai County of Pingliang Municipality, Zhengning County of Qingyang Municipality, Guazhou County of Jiuquan Municipality. The PforR covers 700 demonstration farms and 130,000 ha of fodder production area. Locations covered by the PforR are shown in Figure 2-1 below.



**Figure 2-1 Indicative location of the PforR**

14. **Brief Overview of the PforR areas:** According to the statistic yearbook of 7 Program counties, at the end of 2022, the total resident population was 1.33 million, accounting for 5% of the total population of Gansu Province. Some 0.6 million live in urban areas, accounting for 46% of the population of 7 counties. The urbanization rate of selected Program counties is lower than the national level of 65.22% and 6 of them rank lower than the provincial urbanization level of 54.19%, except Lanzhou New District. About 0.72 million people are resident in rural areas, accounting for 54% of the total population of Program counties. The population includes 0.23 million of low-income people (17%) and 77,079 people belonging to ethnic minorities (6%).

15. In 2022, the per capita disposable income of urban residents in 7 Program counties or districts ranged from CNY 28,802 to 45,277, among which, Lanzhou New District and Guazhou County reached the provincial level of CNY 37,572. The rest of the counties have a per capita disposable income lower than the provincial level at 23%-5%. As regards the per capita disposable income of rural residents in 7 Program counties or districts, only Lingtai county's was about 5% lower than the provincial level. All other 6 counties or districts had a per capita disposable income level higher than the provincial level ranging between 9%-91%. The disposable income of rural residents of Guazhou County and Sunan Yugur Autonomous County ranked at the top 2, far above other counties.

16. **The PforR Development Objectives (PDO) and Result Areas (RAs):** The PDO aims to improve productivity and reduce the GHG emissions in the selected (beef and dairy cattle, and sheep or goats) value chains and improve the governance system for scale-up for low emissions technology and practice uptake in the livestock sector in Gansu. The expected results are grouped under two Results Areas (RAs) which contribute to the Program objectives:

**Result Area 1 (RA1):** Increased Sustainability & Productivity and Reduced Emissions from Livestock Sector

**Result Area 2 (RA2):** Improved Governance System for Sustainable and Low Emission Livestock Sector Management.

17. **Typical PforR activities and expected outcomes:** The planned activities under the three government programs were screened, and those that meet the PDO requirements and are not within the E&S exclusion list are included in the PforR scope as presented in Table 2-1.

**Table 2-1 The PforR Activities, Outputs or outcomes and Disbursement-linked Indicators (DLIs)**

Typical Activities	Main Outputs or Outcomes	DLI s
<b><i>RA1 - Increased Sustainability &amp; Productivity and Reduced Emissions from Livestock Sector</i></b>		
1) Implement climate smart fodder production technologies and practices (CSFPTP) in the existing fodder production area for the livestock production system.	1) Hectares of fodder production area where (CSFPTP) are consistently being applied	<b>DLI#1:</b> Area under sustainable fodder production where at least three climate smart and sustainable agriculture technologies and practice are being consistently applied <b>DLI#2:</b> Number of livestock production entities that have adopted at least 4 additional low emission technologies and practices from the agreed eligible technologies and practices list <b>DLI#3:</b> Share of treated and recycled livestock manure that meets effluent standards in the Program counties <b>DLI#4:</b> Farms adopting improved animal health practices, specifically: (a) vaccination rate against PPR, FMD and Brucellosis of at least 90 percent across all farms (large, medium and small); and (b) anti-microbial resistance (AMR) plans developed by selected farms in the Program counties
2) Extend fodder production area and consistently apply CSFPTP)	2) Increased quantity of fodder production for the livestock production system	
3) Promote Production Improving, emission reducing technologies and practices for the livestock value chains	3) Increased quality of fodder production for the livestock production system	
4) Uptake livestock manure treatment	4) Manual of production improving, emission reducing technologies and practices developed and awareness raised	
5) Support adoption of better animal health practices (vaccinations) and development of antimicrobial resistance (AMR) plans at livestock farm level	5) Share of livestock farms adopting better animal health practices	
	6) Developing (AMR) plans and implementing them	
	7) Livestock farms in the Program counties that have adopted Production Improving, emission reducing technologies and practices	
	8) Reduced pollution and improved animal welfare	
	9) Reduced livestock disease and mortality	
<b><i>RA2 – Improved Governance System for Sustainable and Low Emission Livestock Sector Management</i></b>		
1) Strengthen technical capacity & regulatory framework for low emission livestock value chain	1) Number of technical guidelines and technologies & regulatory framework developed for low emission livestock value chain	<b>DLI#5:</b> MRV for measuring emission reduction in the livestock value chains developed and in use. <b>DLI#6:</b> Establish incentive system for promoting sustainable low emission technologies demonstrated,
2) Establish an incentive system for promoting	2) Incentive system for promoting sustainable fodder production and	

Typical Activities	Main Outputs or Outcomes	DLI s
sustainable fodder production and low emission technologies	low emission technologies demonstrated, evaluated & realigned	demonstration results evaluated, and the re-aligned incentive system elaborated.
3) Develop Measuring, Reporting and Verification (MRV) system for livestock sector	3) Number of livestock product certified with green or organic or low emission indicators 4) Increased capacity to market high-value green livestock product 5) MRV for livestock sector developed and in use 6) Increased readiness to trade on carbon market	<b>DLI#7:</b> Increase in the number of livestock product certificates in compliance with green, organic or low emission standards

18. In general, the PforR covers 700 target livestock production entities (TLPEs) and 130,000 ha of fodder production area in 7 counties. The 7TLPEs consist of the following farms:

- Medium and large farms owned by 52 enterprises (with an average of 747 heads of cattle and 690 sheep),
- 141 farmer cooperatives (average 206 heads of cattle and 283 sheep),
- 82 family farms (average 57 heads of cattle and 24 sheep), and
- 425 household farms (average 37 heads of cattle and 244 sheep).

19. Of the 100,000 ha of feed production area, around 31,000 ha will be with the TLPEs and the remaining area will be clearly identified feed production areas suitable for the PforR purpose.

20. Specific activities supported under the PforR are grouped into three main types: **Firstly, promoting extension technologies and practices**, including eligible low emission technologies and practices adoption by livestock production entities, promoting practices aimed at improving animal health, productivity and welfare through timely vaccination against major animal diseases, and supporting livestock farms to develop anti-microbial resistance plans for improved food safety; **Secondly, soft activities**, such as (a) developing and using a MRV system for emission reduction in the livestock value chains; (b) developing, evaluating and enhancing an incentive system for promoting low emission technologies and practices in the livestock sector; and (c) achievement of certificates for livestock products compliant with green, organic, or low emission standards.; **Thirdly, physical activities**, including: (a) supporting sustainable fodder production; (b) supporting the collection, treatment, and recycling of livestock manure in line with the prevailing effluent standards; (c) infrastructure and non-infrastructure construction or upgrading and or operation which includes the promotion and application of technologies and practices, such as construction of low emission artificial forage plantation base, construction and technical upgrading of small and medium-sized livestock breeding and farming facilities, upgrading of livestock slaughtering and processing, cold chain storage, transportation and market facilities, construction and technical upgrading of forage processing facilities, equipping and improving laboratories for veterinary service, quality and safety testing of livestock products at county level, and construction of facilities for the collection, transfer and sanitary disposal of dead and diseased animals, etc. The program activities screening and PforR scoping are given in **Appendix 1**.

### 2.3 Program implementation agencies

21. This PforR Program will be implemented by Gansu province. At the provincial level, a provincial Program Steering Committee (PSC) has been established to support coordination among the government

agencies at the provincial level and provide policy guidance during the Program implementation. The PSC include members of Gansu Provincial Development and Reform Commissions (Provincial DRC), the Department of Finance (DOF), the Department of Agriculture and Rural Affairs (DARA), the Department of Natural Resources Bureau (DNR), and the Department of Ecology and Environment (DEE).

22. There has been a Foreign Investment Project Management Office (hereinafter referred to as the "PPMO") located in the Provincial DARA. The PPMO was established in 2003 and runs as a public institution, staffed with 20 personnel, and 3 leadership positions. The PPMO is experienced in implementing and managing projects financed by international financial organizations and has implemented 10 projects financed by grants and loans from the United Nations, World Food Program, the World Bank, the International Fund for Agricultural Development (IFAD), the Global Environment Facility (GEF), the Asian Development Bank and others with a total amount of funding of 210 million US dollars, equivalent to CNY 1.296 billion yuan. These projects played positive roles in promoting poverty alleviation in poverty-stricken areas, increasing farmers' income and agricultural efficiency, and promoting rural economic development, and has achieved remarkable results, which have been praised by international organizations. The implementation of IFAD Rural Integrated Development Project in Gansu Province was fully affirmed and praised by IFAD President, NDRC, and Ministry of Finance. Asian Development Bank loan financed Gansu Characteristic Agriculture and Financial Service System Project was listed as the best example case for poverty reduction in the "Third Global Poverty Reduction Case Collection", and the case was disseminated online as China and foreign poverty reduction case database in the South-South cooperation poverty reduction knowledge sharing website. The PPMO has a team with well-trained members with sound project or management skills. They have acquired rich project management experience which provides a solid foundation for the implementation of this Bank financed PforR.

23. At county level, a county Program Leading Group (PLG) headed by a responsible county leader and comprised of senior officials from related sector departments will be established and a county Program Management Office (CPMO) with a technical support team will be set up in each of the Program counties. The district agricultural, forest and water resources bureau (AFWB) in Lanzhou New District and county ARABs in other six project counties will be the lead implementing agencies at the county (district) level while other agencies are expected to contribute to the implementation of some soft activities. Counties with dedicated CPMOs will be responsible for implementing the Program activities. They will also be responsible under the coordination of PLG, for E&S screening which will be further reviewed by the PPMO.

24. The supervision or project support missions of past projects indicate that Gansu Province has extensive experience and a good track record in environmental and social management and monitoring in accordance with World Bank guidelines and policies, and the corresponding environmental and social management performance has been satisfactory to date. In addition, the PPMO has also recruited a group of experts, including experts in the fields of agriculture, animal husbandry, etc., to provide technical advice and suggestions for the PforR implementation. The PPMO has designated at least two full-time employees with experience in environmental and social management of international projects. In addition to the PPMO, the CPMOs also coordinate project management through different government agencies and perform environmental and social management system functions. Each Program County or district has assigned 5-10 people responsible for the preparation and implementation of the PforR. Training on the environment and social management related to the Bank's PforR was provided to stakeholders during the preparation of this ESSA report, and further training will be conducted during the implementation phase. Specific staff are designated in the Program counties to coordinate and manage the environmental and social issues related to the activities under the PforR. These institutions and their capabilities are discussed in depth in both Chapter 4 and Section 5.3 of this ESSA report.

## 3. Potential Environment and Social Effects

### 3.1 Environmental and Social Screening

25. **Purpose:** The Bank's core principles and requirements on E&S screening have been fully considered, and the government program activities have been screened to (1) help define the scope of activities required to achieve the Program development objective and to prepare ESSA and (2) identify and exclude the activities with significant E&S risks or potential impacts; .

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

- 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 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 or natural resources (e.g. ecological resettlement)<sup>1</sup>,
- 6) Adverse E&S impacts covering large geographical areas, e.g. large-scale water (surface and groundwater) resource infrastructure, including large dams, or activities involving the allocation or conveyance of water, including inter-basin water transfers or activities resulting in significant changes to water quality or availability<sup>2</sup>,
- 7) Significant cumulative, induced, or indirect impacts,
- 8) Activities that involve the use of forced or child labor,
- 9) Marginalization of, discrimination against, or conflict within or among, social (including ethnic and racial) groups<sup>3</sup>,
- 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 ethnic minority groups from land and natural resources that are subject to traditional ownership or under customary use or occupation; or (c) have significant impacts on ethnic minority culture.

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

- 1) Activities that are classified as Class A (Environmental Impact Assessment Report category) according to the *National Catalogue for the Classified Management of the Environmental Impact*

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<sup>1</sup> In the context of this Bank Guidance on ESSA for PforR, resettlement includes physical relocation of individuals and communities as well as the acquisition of land for program purposes. It is not necessarily helpful to define fixed numerical thresholds for “large scale” because the significance of impacts depends very much on local contextual factors. The definition of significant resettlement impacts is closely related to the extent to which the borrower’s systems align with the core principles and to the borrower’s capacity to carry out land acquisition and resettlement in accordance with policy principles and requirements. The emphasis should be on the potential for significant impacts on affected people regardless of scale, as significant adverse impacts are not acceptable to the Bank even if they affect only a small number of people.

<sup>2</sup> Para. 16 of Bank Guidance Program-for-Results Financing Environmental and Social Systems Assessment (September 18, 2020)

<sup>3</sup> ‘Social groups’ in this context includes Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, ethnic minorities, and racial groups.

### *Assessment of Construction Projects;*

- 2) Activities requiring significant conversion or degradation of critical natural habitats (for example, activities within the scope of environmentally sensitive area<sup>4</sup>, particularly within the scope of ecological protection redline<sup>5</sup> (ERL) for developing forage cultivation land, and for building large-scale intensive livestock farming,
- 3) Activities that would be conducted in areas with significant legacy environmental and social issues. These may include desertification or other environmental issues which are a legacy of past land management (or other) policies and activities or archaeological sites, ancient landmarks, and cultural relics which date back thousands of years. Activities in such areas – due to the higher environmental and social risks – should be excluded from the operation.
- 4) Activities of artificial forage cultivation with high water consumption (e.g., forage cultivation activities that result in excessive extraction of groundwater, unbalanced total available groundwater, or water consumption quota for crop cultivation sector, or involve water re-allocation that may cause significant changes in water quality, water availability and local aquatic ecosystems);
- 5) Construction projects involving large-scale land acquisition and physical displacement, such as new industrial parks for livestock production and processing,
- 6) Activities involving the acquisition or occupation of permanent basic farmland or basic grassland,
- 7) Activities that have significant livelihood impacts arising from restriction on access to land and natural resources, that may result in large-scale relocation of farmers and herdsmen or significant change of their income source,
- 8) Activities that may have a significant adverse impact on the health or safety of individuals or communities, such as ecological restoration in areas prone to geological hazards, etc.,
- 9) Activities that have significant adverse impact on ethnic minorities, such as relocation, major changes in production and lifestyle.

## **3.2 E&S Assessment Scope**

28. The scope of E&S assessment in this report covers typical activities to be supported by the PforR (as detailed in Appendix 1 of this report), including physical activities, non-physical soft activities, and facilities related to or associated with typical activities of the PforR:

- **Promotion, application and extension of technologies and practices**, including adoption of eligible low emission technologies and practices by livestock farms or farming zones, promoting practices aimed at improving animal health, productivity and welfare through timely vaccination against major animal diseases, and supporting livestock farms to develop anti-microbial resistance plans for improved food safety;
- **Physical activities under the PforR**: After excluding the above-mentioned activities, the main

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<sup>4</sup> Environmentally sensitive areas, as defined in the Construction Project EIA Classification Catalogue, refer to the protection areas established legally at various levels, and areas that are particularly sensitive to certain types of pollution factor(s) or ecological impact factor(s), mainly including 1) national parks, natural reserves, famous scenic spots, world culture and nature heritage sites, special marine protection areas, drinking water source protection zones; 2) other areas subject to control requirements of ecological redlines, including permanent basic farmland, basic grassland natural parks (forest parks, geological parks, ocean parks, etc.) critical wetland, natural forests, important wildlife habitats, natural spawning feeding, wintering, migrating grounds or corridors of important aquatic life, natural fishery ground, key areas identified for soil erosion prevention and control, decertified areas, enclosed and semi-enclosed sea areas; and 3) areas with residence, medical and health care, culture and education, scientific research and administrative offices as the main functions and cultural heritage conservation units

<sup>5</sup> Ecological Protection Redline: refers to the area within the scope of ecological space and has special important ecological function that must be mandatorily and strictly protected. Ecological space is a territorial space with natural attributes and mainly functions to provide ecological service or ecological products. Natural protected areas (e.g. national park, natural reserves, and natural parks) and other areas with relatively important ecological service functions or fragile ecosystems are defined within the scope of Ecological Protection Redlines.

physical activities that the PforR will support include: (a) supporting sustainable fodder production; (b) supporting the collection, treatment, and recycling of livestock manure in line with the prevailing effluent standards; (c) infrastructure and non-infrastructure construction or upgrading or operation or improved animal welfare and health will relay such as technical upgrading of small and medium-sized livestock breeding and farming facilities, upgrading of livestock slaughtering and processing, cold chain storage and transportation and market facilities, construction and technical upgrading of or forage processing facilities, equipping and improving laboratories for veterinary service and quality and safety testing of livestock products at county level, and construction of facilities for the collection, transfer and sanitary disposal of dead and diseased animals, etc.;

- **Non-physical activities under the PforR:** such as (a) developing and using a MRV system for emission reduction in the livestock value chains; (b) developing, evaluating and enhancing an incentive system for promoting low emission technologies and practices in the livestock sector; and (c) achievement of certificates for livestock products compliant with green, organic, or low emission standards;
- **Related and Associated Facilities or Activities:** Associated (or linked) activities refer to activities that would be required to meet the PforR objectives but that are not explicitly defined as PforR activities or included in the expenditure framework. The ESSA team through its field visit and environmental and social due diligence found that there are no associated facilities or activities. Facilities and infrastructure for the LPE including disposal facilities, roads, water supplies, power supplies etc. already exist and will not be newly constructed or expanded due to the implementation activities under the PforR. Section 2.4.3 and Table 3-1 of this report further screen the possible indirect impacts of the Program implementation on these existing related facilities in the Program counties.

### 3.3 E&S Benefits

29. As the objective of the PforR is to support low emission livestock development in Gansu, China through the promotion of livestock emission reduction, animal health, construction of facilities, technological extension and mechanism building to improve livestock productivity and efficiency, it is expected to have significant environmental and social benefits. These benefits include the reduction of livestock emissions and multi-purpose utilization of livestock manure while improving livestock productivity and efficiency, promoting mutual benefit of livestock and agricultural development that tend to be more green, ecological and circular. The PforR will help the recovery and utilization rate of crop straw feed, improvement of fertility and carbon sequestration potential of farmland and forage planting land, and improvement of the agricultural and rural ecological environment; and in health and safety aspects, the PforR will implement the concept of “one health” in the Program areas so as to further improve the livestock productivity and efficiency and protect the health and safety of practitioners, communities and public through the prevention and control of animal diseases and the construction of related facilities, service upgrading and measures improvement. The PforR will also bring significant social benefits to farmers (including ethnic minorities and the low-income), including (i) upgraded livestock farming infrastructures; (ii) improved livestock farming technologies, so livestock production becomes more productive and sustainable; (iii) improved food safety in the livestock value chains, ensuring human health; (iv) resilient livestock systems; (v) more employment and income-generating opportunities. The PforR will significantly enhance the livestock husbandry resilience and sustainability for farmers, including ethnic minorities.

### 3.4 Potential E&S Risk and Impacts

30. The PforR activities are all aimed at improving the productivity & efficiency of animal husbandry, reducing pollutants and GHG emissions, and ensuring the health and safety of humans and animals.

However, there are some potential negative environmental and social impacts that could be generated during implementation and operation. These are described in the following sections. The assessment of environmental and social risks of various typical activities is shown in **Appendix 2**. The adverse environmental and social impacts of these activities can be effectively mitigated with appropriate and well-established mitigation measures (as listed in **Appendix 8** of this report, but not limited to), during implementation.

### 3.4.1 Direct Impacts

31. The physical activities (infrastructure construction, and non-infrastructure operations activities) to be supported under the PforR will involve agricultural land use, land transfer, temporary land use, construction wastewater and waste gas emission, noise and vibration interference, etc. during construction. During operation of animal husbandry production activities, artificial forage plantation, etc., certain direct environmental and social adverse impacts will be generated. These adverse impacts are analyzed as follows.

32. **Major environmental risks or impacts:**

- **During construction:** Civil works construction of above-mentioned physical activities will generate dust, noise and spoil material from excavation, material handling and transportation, etc. Exhaust from construction vehicles may also cause air pollution in the vicinity of the construction site. These impacts are short-term, site-specific and can be effectively mitigated with good construction management practices (such as water-spraying at construction sites, covering of bulk material and transportation trucks, use of low noise equipment or methods, no nighttime construction etc.)
- **During operation:** New facilities (such as animal farms and farming zones, slaughtering and meat and dairy processing, feed processing, comprehensive utilization of animal waste, related laboratories, storage and transportation of livestock products and marketing, etc.) or existing facilities on which the technologies & practices will be applied, extended or adopted may pose corresponding environmental problems during operation, including:
  - Solid waste (waste feed, animal waste, and carcasses), sludge from wastewater treatment plants or facilities installed for slaughterhouses, feed processing plants, veterinary labs, animal product quality and safety testing labs.
  - Wastewater: This will constitute, firstly, non-point source effluents due to runoff from feed (including silage) storage, loading, and unloading, livestock housing, feeding, and watering, waste management facilities, and areas of land application of manure. Secondly, wastewater will also be generated during animal slaughter and meat processing. Thirdly, effluent will be produced due to animal disease control and food safety laboratory. Finally, wastewater will be generated during the process of feed processing, livestock and poultry manure treatment and resource utilization.
  - GHG and air emission: The first source of GHG and air emissions will be ammonia (e.g. management of animal waste), methane and nitrous oxide (e.g. animal feeding and waste management), odors (e.g. animal housing and waste management), bioaerosols, and dust (e.g. feed storage, loading, and unloading, feeding, and waste management activities). Secondly, emissions will result from odor and exhaust gas, dust and particulates produced during slaughtering and meat processing. Thirdly, waste gas will be generated from animal disease control and food safety testing laboratories. Fourthly, dust produced during feed processing will also lead to emissions.
  - Hazardous Materials: These are used throughout the livestock production cycles, e.g. (a) disinfecting agents spread on animals and sheds; (b) antibiotic used for control of animal disease, (c) hormonal products used for animal breeding and milk production); (d) occupational

and public health risks from pathogens, hazardous biological waste and chemical waste from veterinary laboratories and livestock quality testing laboratories, etc.

- Pesticides: There is potential for pollution to the environment effects on health and safety due to the use of pesticides (for the control of pests in livestock, sheds, and enclosures, pests and diseases of artificial forage in fodder production area).
- Special risk materials (SRM): These are tissues in cattle that contain the agent that may transmit bovine spongiform encephalopathy (BSE), transmissible spongiform encephalopathy (TSE), or scrapie disease if reprocessed into animal feed. The human disease, Creutzfeldt-Jakob Disease (vCJD), may result from human consumption of products from animals infected with BSE. However, such SRM have never been reported to be found in China in MARA's successive assessment reports. The strengthened monitoring of these sensitive materials in China come back to negative and monitoring and testing of these SRM are only done at labs at national level. The veterinary service labs at county level which the PforR activities will support will not involve the testing of SRM, except aiding the national labs when sampling.
- Forage plantation requires watering, application of pesticides and fertilizers, which will lead to the consumption of water resources, agricultural non-point sources (NPS) pollution, and soil compaction and so on. Non-point source pollution caused by using chemical agents, pesticides for the prevention and control of pests for forage cultivation in fodder production areas will lead to negative impact on environment. Forage production could involve the introduction of imported grass and fodder species that may have wider effects on biodiversity. These adverse impacts during implementation can be significantly reduced by the adoption of climate-smart farming techniques, the adoption of low-emission technologies and measures in the PforR and the local practice and promotion of the green livestock development model of circularity in crop and livestock production.

33. **Major ecological impacts:**

- During Design: Although there are some natural reserves that natural grassland is parts of the Program counties (district), there will be no activities supported by the Program on natural grasslands. Fodder production will be conducted on farmland in agricultural areas, the forage cultivated from them will benefit the conservation of ecology of grassland and the natural reserves.
- During Construction: Through land levelling and soil improvement, some project counties (district) will develop state-owned unused gently sloped hilly areas to relatively flat crop land for artificial forage cultivation and green ecological land use, in line with the principle of ecological priority, in order to improve the natural conditions of soil erosion in local areas. The construction of some small-medium scale facilities may involve topsoil & vegetation stripping and earthwork excavation and backfill, borrow pits, resulting in soil erosion without taking any preventive measures during construction. With the implementation of water and soil conservation schemes to be developed before construction, in line with China's Soil & Water Conservation Law, Measures for the Administration of Water and Soil Conservation Schemes for Production and Construction Projects and adoption of good construction management practices, this risk will be effectively reduced, and conditions will be restored after the end of construction.
- During Operation: The cultivation of artificial forage, improper use of ploughing machinery or technology, or the imbalance of nutrient application can cause potential decline in soil fertility, soil compaction, soil degradation and loss. The use of fertilizer can lead to run off and eutrophication of nearby water bodies. The facilities to be used in crop cultivation will adopt climate-smart agricultural technologies, which will have little adverse impact on the natural ecosystem but will improve the quality of the regional ecosystem due to the various crop protection, water conservation, soil conservation measures and agricultural technology extension proposed under the PforR.

34. **Major health and safety risks:**

- During Construction: There are potential health and safety risks in excavation, and driving machinery and vehicles, etc.
- During Operation:
  - Occupational health and safety (OHS) hazards in the day-to-day operations of livestock breeding and farming include: Exposure of breeders to physical hazards and potential physical injuries from livestock slaughtering and processing machinery, exposure to chemical hazards (pesticides applied to livestock and sheds, organic dust in sheds, pathogenic substances such as bacteria, molds, mites, viruses, etc., detergents, disinfectants used in slaughtering and processing workshops, related research and laboratory chemicals, etc.), and the dangers of exposure to confined spaces.
  - Use of pesticides (for controlling pests from animals, livestock sheds, and artificial forage) may pose health and safety risks to farmers and communities.
  - Animal disease-causing agents can spread rapidly, especially in intensive livestock operations. Animal diseases can enter a facility with new animals, via equipment, and people, which not only directly affect the health of animals, but also pose risks of affecting the health and safety of operators who have direct contact with animals and the surrounding communities in animal infectious diseases, especially the zoonotic infectious diseases.
  - Quality vulnerabilities in livestock products (such as residual animal antibiotics, residual feed additives, contamination or adulteration during slaughter, processing and marketing) can affect food quality and threaten public health and safety.
  - Animal welfare in animal husbandry: The high density low activity, space of livestock farms or farming zones with harsh environmental conditions in intensive livestock operation, the mistreating of animals and frightening behaviors of livestock stockman during animal feeding, transportation and slaughtering will easily causes animal sickness with low immunity; The use of prohibited antibiotics, "clenbuterol" or other drugs in feed, or the excessive use of trace elements will cause the residue of harmful substances in animal products, which will affect animal health, lead to high incidence of animal disease, reduce breeding efficiency, and affect the quality of agro-food products, which in turn will affect public health and safety of agro-food consumers.

35. There are also risks to the health and safety of practitioners and the public from improper disposal of hazardous biological and chemical waste in veterinary laboratories and animal product quality testing laboratories and improper disposal of sick & dead animals.

36. These health and safety risks will be significantly mitigated and improved through the construction and upgrading of livestock sheds, animal disease prevention and control facilities and the provision of services by government-led and entrusted professional organizations, as well as through the adoption and practice of better animal health practices and the "One health" concept to be adopted by the PforR.

37. **Major social impacts:**

Through screening and analysis of the activities in the Gansu provincial plans which are proposed to be included in the PforR, activities with potential high social risks have been excluded from the PforR boundary. Meanwhile, referring to the experience of local projects that have been implemented or are currently under implementation, it is considered that the remaining activities may involve certain social impacts or risks, but can be managed effectively through the existing social management system. Different types of social impacts are analyzed as follows:

- Labor impacts:** Concerning physical activities such as construction and upgrade of facilities for livestock farming, livestock manure treatment and resource utilization, straw processing, and disease prevention and control, there are potential labor disputes and occupational health and safety risks to workers and to a lesser extent, communities during the project construction process. For example, the construction may involve recruiting temporary labor from surrounding communities, settling daily expenses without signing labor contracts or service contracts, posing a risk of labor disputes. Construction may involve mechanical operation, fire and electrical work and wastewater, waste gas, and noise, etc. are generated during the process. It may pose a threat to the health and safety of construction workers if appropriate protective measures are not taken and or machinery not operated properly. Issues may also arise during the operation and maintenance of the mentioned facilities and equipment including potential risks to workers' occupational health and safety, such as pesticide and fertilizer application in the process of forage cultivation, agricultural machinery operation, biogas and odors generated by livestock manure treatment facilities, zoonotic diseases such as brucellosis and anthrax during the operation & maintenance (O&M) of livestock farming facilities (enterprises, cooperatives, large family farms), animal inspection and quarantine, slaughter, and processing facilities, etc.
- Community impacts:** During the construction of related facilities, the entry of external construction workers into the community may pose a risk of spreading infectious diseases. The wastewater, waste gas, solid waste generated during construction and operation, as well as the movement of machinery and vehicles, may impact the daily life and road safety of surrounding communities. For example, the odor generated by livestock farming facilities and the associated livestock manure treatment facilities may have an impact on the living environment of the surrounding communities. Improper control of animal diseases may also lead to zoonotic diseases such as Brucellosis and Anthrax being transmitted to residents in the surrounding communities.
- Land use and involuntary resettlement:** Activities with potential high social risks are not required to achieve the Program objective for this operation and have been excluded from the PforR scope (including activities involving large-scale land acquisition and house demolition). Based on interviews, consultations, and site visits during ESSA preparation, the project activities will not involve permanent land acquisition and house demolition. Given the focus on existing farms, the risk of any land acquisition is considered to be low. The main land use type of activities supported by the PforR include: i) Facility agricultural land use (FALU), such as livestock farming and affiliated facilities, straw processing facilities, and inspection and quarantine facilities; ii) Land use right transfer (LURT), including taking land as an investment to a certain activity and receiving land equity annually, mainly involved in activities such as forage planting and grain-to-feed conversion. iii) Upgrading and renovation of existing facilities without involving new land use, such works on large-scale livestock farms including slaughter and processing facilities, cold chain logistics, wholesale markets, etc. iv) Temporary land use (TLU), some facilities may require a small amount of temporary land during construction for the storage of equipment, materials and camps, although in most cases adequate land will be available on the existing farms for these purposes.
- Livelihood impacts:** The project land use like FALU and LURT will have limited impacts on farmers and herders' livelihoods, as land leasing fees are negotiated and paid annually to the owner of land contract rights by land users based on market price. Overall, livelihood impacts can be expected to improve for the workers, contractors and owners of the 700 livestock entities in the Program as a result of improved livestock productivity. The distribution of benefits within the entities will likely vary between, and within, the different types of entities. There are 52 enterprises (8%); 141 Cooperatives (20%) and 507 family farms (72%). For example, in large enterprises where formal contractual arrangements define relations between employers and employees, opportunities for workers to improve productivity should flow to improved payment arrangements for the workers. On the other hand, family farms (72% of beneficiaries), the flow of benefits of

improved productivity will be far more direct. A Program Action Plan is proposed to address this issue, especially in the large enterprises to strengthen existing policy support and trainings.

- **Ethnic minorities:** Among the 7 project counties (district), there is one ethnic minority autonomous county, and there are 8 EM-concentrated townships, and 137 EM-concentrated villages and communities, with a total population of 77,079. Majority (60%) of them are located in Guazhou County and Sunan Yugur Autonomous County. Guazhou County has 4 EM-concentrated townships and 11 EM-concentrated villages and communities, with a total EM population of 23,919, primarily composed of Hui and Dongxiang people. Their economic and social conditions are generally comparable to the Han and are mainly engaged in livestock farming (confined) and crop planting. There are 3 townships and 102 villages of Sunan Yugur Autonomous County that are EM-concentrated township and villages or communities, with a total population of 22,590, mainly Yugur, Mongolian, etc. The ethnic minorities in other 5 project counties are mainly scattered and mixed with the Han. There is one EM-concentrated township and 19 EM-concentrated villages and communities in the remaining 5 project counties. Their economic and social conditions are comparable with the Han community.
  - (i) **EM people and the Program.** the Program activities target 700 existing farms and do not involve any activities on grasslands, but only include the improvement of livestock farming technologies, facilities and fodder production area management: To improve the sustainability and reduce emissions of the livestock sector, all target large family farms, cooperatives and enterprises can selectively use what they choose from the 19 technologies to achieve the target. It will not bring about changes in the mode of production and means of livelihood but will increase the level of production and increase incomes. The treatment and recycling of livestock and poultry manure will improve the environmental hygiene of breeding and production, increase organic fertilizer, and will not adversely affect the production mode. The recycling of manure as fertilizer in fodder production areas or organic fertilizer to the market will increase farmer's incomes. Animal vaccination, which has been carried out for many years, has long been familiar to farmers to improve the level of livestock epidemic prevention. There will be no permanent land acquisition of ethnic minorities contracted land. These activities are carried out on the basis of full disclosure of information and consultation, organized by government technical departments, and guided and trained by technical experts. Therefore, it is expected that there will be limited impact on EM people's production mode and livelihood during Program implementation.
  - (ii) **Potential impacts on EM's culture.** As listed above, the program activities do not include any cultural property or cultural activities, nor do they involve relocation, permanent land acquisition, and the expropriation or adverse impact of sacred sites or properties of special significance on ethnic minorities, so this program will not have a negative impact on minority culture.
  - (iii) **Accessibility of EM people.** While the ethnic minorities self-identify as a distinct group, they have few characteristics that identify them as being different from the majority. In terms of language, Mandarin is the official language and is used on a day-to-day basis by ethnic minority people although some older people living in remote villages still speak an ethnic minority language. In Sunan and Guazhou counties, where ethnic minorities are relatively concentrated, ethnic languages and local dialects (Northwest Chinese Dialect, similar to Mandarin) are the most commonly spoken languages in villages, including village-level meetings, consultations, and training provided by village-level or township-level technicians. Meetings and trainings organized by county governments are conducted in local Chinese dialects and Mandarin. In other program counties, ethnic minorities and Han Chinese live in scattered and mixed areas, and Mandarin is the most commonly used language. On informal institutions, ethnic minorities still adhere to customary cultural and social traditions to some

extent. These remaining characteristics do not bring barriers for their participation in the program activities..

- (iv) **Information disclosure and public participation.** For any activities to be implemented in EM concentrated areas, meaningful consultation with ethnic minority residents have been and will be carried out when the Program is in design, construction, and maintenance stages, so as to avoid or minimize significant negative impacts on them and respect their culture and customs. In addition, it is indicated through social survey that new livestock farming technologies and practices are provided to farmers on a voluntary basis so that farmers can choose whether and when to participate or adopt the new technologies or practices. A Program Action Plan is proposed to strengthen the existing consultation processes with Ethnic Minority communities.
- **Impacts on Vulnerable groups including ethnic minorities:** In the 7 project counties (district), there are 86,957 households with 226,482 persons who were categorized as low-income, accounting for 17% of the total population. Among these, 82,161 households with 217,455 low-income people live in rural areas. According to the social survey, low-income people can be characterized as two types. One low-income groups comprises of those with physical disabilities and prolonged illness, or older people with no family members. Such groups lack labor and do not engage in any crop planting or livestock farming activities. Their income sources rely highly on government subsidies and other forms of assistance, and income from LURT. It is not expected that Program activities will provide direct benefits to this group, however, it is anticipated that they will benefit indirectly through improved fodder production area, resulting in an income increase from LURT and improved living environment as a result of proper manure treatment and animal disease control measures taken by surrounding livestock farmers. The second main category of low income groups are those with low levels of education, limited skills and lack of start-up capital for production and who generally engage in crop planting and or livestock farming. The provincial and national governments have formulated a set of measures to support their sustainable livelihood and production, particularly in livestock husbandry, including i) provision of free trainings on livestock farming technologies, ii) provision of government subsidized small loans for each household (30,000-50,000 yuan), iii) provision of subsidies and priority to them for introduction of superior species of sheep or cattle, construction or renovation of livestock farming facilities and iv) given priority when there are any employment opportunities, etc. The Program has been designed (including specific Program Action Plans) so that low-income groups will not be negatively impacted by the PforR, and that – depending on individual circumstances – these groups have the potential to benefit from program activities.
  - **All employees or workers in the 700 Livestock entities:** 125 of the 700 Program livestock entities are owned or managed by ethnic minorities and they are likely to be employed in many of the other entities.

*Beneficiary engagement and grievance management or redress among livestock production entities*

38. Staff and other workers may not feel comfortable voicing their concerns on whether (and how) to engage with the Program. While stakeholder engagement systems exist, opportunities are likely to emerge for improvements to be made through the Program. In addition, existing engagement mechanisms depend on the size and structure (ownership, family farm, cooperatives, or enterprise), and may not be sufficient for all potential social risks that may emerge. So, as a mitigation measure, the Program would provide an opportunity to strengthen these systems through a PAP which focuses on ethnic minority people and women: Develop and deliver an improved Engagement and Grievance Management System for Beneficiaries and Workers.

*Risk of uneven benefit distribution among and within entities*

39. It is possible that certain cohorts within livestock production entities may benefit more than others. To address this, the Program includes a PAP: Develop and deliver a system for the development of a robust baseline dataset and ongoing monitoring of benefits across the Program, disaggregated by ethnicity, language, gender, and age. If the process is weak, or if it finds issues related to participation or benefit distributions, etc., the Bank team will identify corrective actions and agree on those with the client.

### 3.4.2 Indirect Impacts

40. The environmental and social team held discussions with relevant bureaus or agencies in the four sample counties in October 2023, and conducted on-site inspections of forage cultivation sites, animal veterinary workstations at county and township levels for better understanding of the business connection procedures with upstream and downstream facilities. Questionnaire survey was also done particularly with downstream medical waste disposal operators who handle medical waste from veterinary labs. On this basis, E&S screening of related facilities was made and assessed. The residual risks rating (see Table 3-1) shows that the environmental and social management system of these related facilities or activities is mature, capable of managing the environmental and social impact of such facilities or activities, and the residual environmental and social risks are controllable.

**Table 3-1 Review of Indirect E&S Impacts of Related Facilities**

<b>Existing Related Facilities or Activities</b>	<b>Potential E&amp;S Impacts and Management Measures</b>	<b>Residual E&amp;S Risks Rating</b>
Dam safety of reservoirs used for irrigating artificial forage land.	<p>China has a sound dam safety management system, including laws and regulations at the national and Gansu Provincial levels, such as the Water Law, Regulations on Reservoir Dam Safety Management, and Measures for Dam Registration, as well as implementation details at the local level. Reservoir operation and maintenance manual, emergency responsive preparedness plan, instrument plan and other management documents have been prepared for each reservoir as per the requirements of laws and regulations that are strictly observed and implemented. All reservoir dams are regularly reinforced or upgraded. Except for some small reservoirs operated at the village level, other reservoirs have set up special reservoir management units and are staffed with sufficient operation and maintenance personnel.</p> <p>Prior to drawing water for irrigating forage, Water users of enterprises, cooperatives, farmer households must obtain water use permission from local Water Resources Bureaus (WRBs), who are responsible for verifying that irrigation water consumption is controlled within the scope of the sectoral water quota of Gansu Province and is responsible for supervising the management of dam safety or reservoirs.</p>	The general E&S risk is Moderate to Substantial.
Facilities for disposal of medical or hazardous wastes from veterinary laboratories	The State has corresponding regulations, policies and norms, including the Law on the Prevention and Control of Solid Waste Pollution, the Regulations on the Management of Medical Waste, the Measures for the Management of Medical Waste in Medical Institutions, the Classification Catalogue of Medical Waste, and the Technical Specifications for the centralized disposal of Medical Waste, etc., to manage the facilities and operating institutions that undertake the transfer and disposal of medical waste from veterinary labs. Feedback from the seven counties on the E&S team’s questionnaires reveals that all counties or district are within the service coverage of the regional centralized and specialized medical waste disposal centers (the centers) that have been built and put into operation under the guidance of the government and are equipped with special vehicles with obvious medical waste labels.	The general E&S risk is Substantial.

Existing Related Facilities or Activities	Potential E&S Impacts and Management Measures	Residual E&S Risks Rating
	Medical waste from veterinary labs, sterilized by autoclaving and temporarily are stored in yellow barrels marked clearly with “medical waste”, are handed over to the medical waste disposal center and recorded in detail. Five unified bills are used during transferring process to avoid oversight and be ready for verification by regulatory agencies. Agreements are signed between the veterinary lab operators and the medical disposal centers to regularly collect, transfer and dispose medical waste and connected by the unified bill transferring system.	

**3.4.3 E&S Impacts Potentially Induced by “Soft” Activities**

41. In addition to physical activities, there are some “soft” activities under the PforR, such as the establishment and improvement of policies, technical standards and incentive mechanisms for low-emission livestock farming, the provision of relevant technical promotion and training, and the extensive public awareness of the concept of "One health", establishment of cross-sectoral collaboration mechanisms for veterinary and public health environments, etc. The implementation of these activities will help to improve the eco-environment management level of the Program counties (district), reduce GHG emissions, strengthen capacity for managing the PforR, improve the skills of livestock production entities in green and low-emission livestock production, and lead to long-term favorable E&S effects. In addition to a small number of health and safety risks involved in the employment of researchers and outdoor research activities, the implementation of soft activities does not involve any physical construction, there will be little, or even no direct E&S risks or impacts. . Technologies such as precision feeding may increase the cost of livestock production for buying forage. Off-site grazing in oasis straw fields may have some impacts (e.g., livestock waste disposal, animal diseases and zoonotic disease prevention and control) on the living environment of residents in agricultural areas. These risks are predictable and can be prevented or mitigated through existing environmental and social management systems, technologies and measures. Nevertheless, the implementation of such policies, mechanisms and technical standards will ultimately reduce carbon emissions and have long-term environmental and social benefits. In general, the non-physical soft activities of this PforR will not cause significant negative E&S impacts, but due to their wide coverage, they may cause downstream indirect environmental and social risks and impacts, especially where inter-governmental departments or bureaus are involved, so the comprehensive E&S risks is Substantial.

**3.4.4 Cumulative E&S Effects**

42. During implementation, different types of activities under the PforR (including such physical works as the construction of facilities related to livestock breeding and farming, artificial forage land construction and cultivation, livestock manure treatment and comprehensive utilization, livestock slaughtering and processing and value-chain extension related facilities, animal health and disease prevention and control, livestock product quality testing service facilities, etc.), other Government planned projects or programs in the region (such as large-scale intensive livestock farms, livestock industrial park construction driven by leading enterprises, high-standard farmland construction, building a system of "multi-points" protected natural areas, and develop national parks, nature reserves and natural parks, enhancing wildlife protection capacity, beautiful countryside construction, etc.) and other foreign funded projects or programs (such as the World Bank financed Yellow River Basin Ecological Protection and Pollution Control Program-Gansu and Shandong) may be geographically and temporally implemented in parallel or alternately with each other. This might cause certain synergistic effects or cumulative impacts on the natural or social environment of a larger region of Gansu province positively and negatively.

43. To assess and address the gaps of cumulative impacts of multi-projects or program activities on eco-environment that construction project EIA are unable to address, China's EPL and EIA Law, the *Regulation on Plan-EIA* (detailed in Section 4.2) has been enacted since 2009. This requires that programs or plans related to land use and special sector plans (including agriculture, animal husbandry development), have a Plan-EIA carried out to identify, analyze, project and assess cumulative impacts potentially caused by implementing the said plan by taking the resource and environmental carrying capacity into consideration, and proposing preventive and mitigative measures to reduce and minimize the adverse cumulative impact. Very similar to the project EIA, plan-EIAs are also required to conduct public consultation, reviewed by a panel of experts and approved by competent EEBs and be followed-up. The plan-EIA is the entry point and an important part of the strategic environmental assessment (SEA) instrument carried out at the early planning stage in China, which places environmental factors at the front of major macroeconomic decision-making chains by controlling and managing cumulative eco-environment impacts and proposing more reasonable strategic arrangements for major development. In practice, the "three lines, one list"<sup>6</sup> environmental zoning management mechanism (detailed in Section 4.2 & 4.4) is in place and provides a hard constraint for the implementation of strategic and plan-EIAs, the approval of construction project EIA, and provides a basis for space control for other environmental management work. Gansu Provincial Government in 2020, printed and circulated the Opinions of the People's Government of Gansu Province on the Implementation of the 'Three Lines, One List' *Eco-environment Zoning Control Access List* which was approved by MEE, further detailed by governments at municipal level, and implemented at county level. In the livestock sector, to manage the cumulative pollution from different scales of livestock farms, local livestock and poultry farming pollution control plans are required to be prepared to delineate prohibited zones, restricted zones, and farming zones to properly locate farms, to guide the construction, expansion, or upgrading of livestock and poultry farms or manure treatment facilities at the county level.

44. From a social perspective, firstly, the land use for these activities or projects, irrespective of whether they will be supported or not supported by the PforR, must follow local overall spatial planning of natural land, which can ensure that time-specific land use must be managed as required and not be carried out in a disorderly manner. Secondly, these activities or projects will be carried out in different counties or districts. Most of the activities are related to the upgrading of existing facilities so it is unlikely to have many development and construction activities taking place at the same time in the same place, and their site-specific E&S impacts are unlikely to become significantly cumulative (e.g., synergistic dust, noise, wastewater, solid waste, vegetation disturbance, interference of migrant workers to local communities, price changes, etc.). Thirdly, based on the PforR nature and the E&S exclusion criteria, the PforR activities will not include large-scale infrastructure that may adversely affect the production and livelihood of local residents, nor will it involve socially sensitive areas.

45. Civil works will not involve large-scale land acquisition and physical displacement, and the risk of cumulative adverse E&S impacts arising from interaction with other investment projects in the Program province is low. Therefore, the implementation of the PforR will not increase the regional negative cumulative social impacts.

46. Regarding the identification and management of cumulative social impacts related to planning activities: firstly, in accordance with the "Interim Regulations on Major Administrative Decision-Making Procedures" (2019), decision-makers are required to predict the potential cost and benefits, E&S impacts, conduct risk analysis, identify risks and propose risks mitigation measures and management plans when formulating significant plans in areas such as economic and social development. Secondly, following the "Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and

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<sup>6</sup> The "three Lines and one list" refer to the redlines of ecological protection, the bottom lines of environmental quality, the ceiling lines of resource utilization, and the ecological environment access list based on the environmental carrying capacity. The implementation of the "three-lines, one-list" eco-environment zoning control is an important work to promote differentiated and refined management in different regions or zones, strengthen the prevention and control of the ecological environment at the source, and promote green and high-quality development.

Matters (Interim)" (ZBF [2012] No. 2), a social stability risk assessment (SSRA) is mandatory for major decision-making matters that directly concern the immediate interests of the people, have a wide-ranging impact, and are prone to triggering social stability issues. Prior to making decisions, a comprehensive analysis of potential social risks and risk rating is conducted, considering the interplay between development and social stability, overall and local considerations, as well as the relationships among different stakeholders. Specific measures are then taken to prevent and mitigate risks in a proactive manner.

### 3.5 E&S Assessment and Risk Rating

47. **Risk criteria:** Following the E&S exclusion procedure, the ESSA team assessed the E&S risks or impacts of the PforR activities, using four criteria: 1) likely E&S effects; 2) E&S contextual risks; 3) institutional capacity and complexity risks; and 4) political and reputational risks. All activities involved in the PforR have been analyzed against the above four criteria which concludes that these activities have different levels of E&S risks. The following sections will provide general E&S assessment and risk screening and the details are presented in Appendix 2.

#### 3.5.1 Likely E&S effects

48. To achieve the PDO, the PforR Program designed a series of activities for construction and upgrading of low-emission animal husbandry facilities, and improvement of sustainable and low-emission livestock management and supervision systems. The PforR will bring important positive benefits to the environment and society in the region, including improving ecological and environmental management capacity, reducing GHG emissions, improving livestock breeding technology and efficiency, improving animal disease prevention and control and responsive capacity to accidents, reducing the incidence of zoonotic diseases among employees, ensuring human health and safety, and ensuring the quality and safety of livestock products, etc. and eventually improving overall capacity of rural areas in Gansu in addressing challenges brought by climate change and slower economic growth.

49. Activities with high E&S risks activities have been excluded. Typical environmental risks under the Program include: (1) construction risks or impacts which will be from small to medium-scale construction and are temporary and site-specific, such as nuisance dust, noise, wastewater, solid waste, vegetation and habitats disturbance, soil erosion, limited land acquisition or use, labor use and OHS issues; (2) operational risks or impacts which will occur due to the operation of the constructed facilities and application of extension technologies promoted under the PforR such as the potential discharge or emission of various wastes that may adversely pollute water, air, endanger farmland ecology, spread pathogenic microorganisms, agro-food contamination or contain large amounts of residual hazardous substances that pose risks to community health and public safety and bring risks to workers and public health. Typical social risks include: (1) social conflict, fairness and transparency of benefit sharing, (2) tangible culture heritage, (3) minor land acquisition, restriction on land use and resettlement, and (4) inclusion/exclusion of vulnerable groups including ethnic minorities.

50. . The proposed non-physical activities may have some downstream E&S impacts. In general, these adverse E&S impacts are neither significant nor irreversible, some are moderate and some are still substantial but can be easily identified, avoided, minimized, and mitigated through known and demonstrated technologies and good management practices. Given the large varieties of activities under the PforR in a broad coverage of 7 counties (district) in Gansu Province, the overall E&S effects risk associated with the PforR is rated **Substantial**.

#### 3.5.2 E&S contextual risks

51. The Program boundary is within the 700 identified livestock production entities. This ESSA recommends a Program Action Plan to enable ongoing monitoring of beneficiaries which will also allow

an ongoing assessment of the nature and scale of any risks that may arise and how (and whether) they will affect the program or affect the associated risks.

52. Considering China's strict management mechanisms of nature reserves, ecological conservation redlines (ERL) and the environmental exclusionary principles under this ESSA, the physical activities and climate-smart agricultural technological & practice application & extension activities under RA 2 of the PforR are unlikely to take place in ecologically sensitive areas. Instead, they will take place in rural agricultural areas and semi-urban areas. After excluding high environmental and social risk activities such as new construction of large-scale intensive livestock farms or industrial parks and new construction of large-scale slaughterhouses, the activities related to livestock production under PforR will help reduce the pollution loads of existing livestock production without additional pollution load to the region. The forage cultivation is planned to be managed with climate-smart technology, and the intensity of use of chemical fertilizers and pesticides will be significantly reduced compared with other crops' cultivation. However, nature reserves, ERL and ethnic minority-concentrated areas will still be involved in the Program areas. Compared to enterprises, cooperatives and family farms may face more challenges and vulnerabilities in livestock farming development. There is a potential risk of uneven benefit distribution; and with existing information disclosure channels and GRMs, there is still a need for improving and diversifying information delivery channels to farmers, such as written manuals, electronic versions, online platforms, specific promotion and awareness raising to different target groups like women, ethnic minorities, older people, etc. Therefore, the overall rating of the E&S contextual risks is **Substantial**.

### 3.5.3 Institutional capacity and complexity risks

53. The impact management of E&S risks will involve some government authorities, such as DRCs, finance bureaus (FBs), agriculture and rural affairs bureaus (ARABs) and animal husbandry and veterinary medical bureaus (AHVMBs), ecology and environment bureaus (EEBs), natural resources bureaus (NRBs), forests and grasslands bureaus (FGBs), water resources bureaus (WRBs), health commissions (HCs), emergency management bureaus (EMBs), market supervision and administrations (MSAs), human resources and social security bureaus (HRSSBs) etc. These authorities perform regular E&S management as per national or local laws and regulations with sufficient institutional organization, staffing, and budgets, and they will fulfill their responsibilities for implementing the PforR and managing the related E&S issues under the guidance of national and provincial governments and the coordination of the PPMOs.

54. The PforR activities are distributed in 7 counties (district) under 5 municipalities of Gansu Province covering a number of sectors. Strong coordination and cooperation among the related authorities is necessary to manage the activities well and address the associated E&S impacts. The PforR involves some innovative activities that are cross-sectoral in nature and cannot be easily implemented by ARABs alone. Therefore, the PSC at provincial and PLGs at county (district) level were established to strength governmental inter-sector coordination. As for managing the Program's E&S risks, the DARA has capacity and experience in managing these risks proven by managing other projects funded by international finance institutions. The county (district) CPCG and CPMOs will provide further coordination to support PPMO which is technically supported by a panel of experts at provincial and county levels to strengthen coordination vertically and horizontally among government authorities and act as an advisory body. All relevant sector authorities must implement activities in accordance with their respective responsibilities under the guidance of the government's program. Given the large number of governmental authorities from provincial, municipal, county and grass-root levels, considerable effort will be needed and PSC and PLGs were established to coordinate them. The overall rating of institutional capacity and complexity risks is **Moderate to Substantial**.

### 3.5.4 Political and reputational risks

55. The PforR will help contribute to the demonstration role of Gansu Province in green and low-

emission livestock production and to enhancing the “one health” concept. The objectives of the PforR are consistent with national and local policies and plans with high political security. Local people will largely benefit from the PforR and will make efforts to support it. There will be minimal or no political risk to the PforR, which has been demonstrated by a variety of similar projects that were implemented in the past. Compared with the developed countries, there are still certain gaps in animal welfare protection in China. In recent years China has enacted numerous animal husbandry laws and regulations and established a system of animal welfare standards, including national standards, sectoral standards and association standards (as listed in subsection 4.5.1). Animal welfare awareness-raising by strengthened publicity, education and training are recommended in the E&S PAP to mitigate potential reputation risks associated with the proposed PforR activities. Therefore, the overall rating of the political and reputational risks is **Low to Moderate**.

### **3.5.5 Overall Risk**

56. The overall rating of the E&S risks associated with the PforR is **Substantial**.

## 4. Environmental Management System Assessment

### 4.1 General Principles

57. The Bank adopts six core principles for E&S system assessment, of which the first three are associated with environmental management systems (EMSs):

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

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

**Core Principle 3:** Health and safety management. Program EMSs are designed to protect public and worker safety against the potential risks associated with (a) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the program; and (b) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards. The risk management of animal health & animal infectious diseases of zoonotic diseases and some quality management of animal products under the PforR are assessed in Chapter 4; The risk management of human infectious diseases of zoonotic diseases and the quality management of some animal products are assessed in Chapter 5.

58. Corresponding to these principles, China also has a sound eco-environmental protection management system, including:

- a. **A comprehensive eco-environmental management system**, under the legal framework with the Environmental Protection Law (EPL) as the fundamental law, supported by a series of specific laws & regulation covering environmental impact assessment, resources & ecological conservation or protection, water and soil conservation (WSC), pollution prevention and control, a special chapter on agricultural resource, and agro-environmental protection under Agricultural Law, Animal Husbandry Law, Clean Production Promotion Law and other fields. These laws & regulation empower various authorities, led by EEBs and assisted by multi-sectoral authorities to regulatory manage these environmental issues.
- b. **Animal Health and safety Management System**, under a set of laws, regulations, standards and guidelines governed by the Animal Husbandry Law, the Animal Epidemic Prevention Law and the Agricultural Product Quality Safety Law and a series of separate laws, including the Law on the Prevention and Control of Infectious Diseases, the Law on Import and Export Animal and Plant Quarantine, the National Biosafety Law and the Food Safety Law, etc. covering the field of livestock and poultry production, epidemic prevention of captive animals, management of animal health and safety activities, promotion of livestock production, prevention and control of zoonosis, protection of public health and human health, especially livestock products and food safety. The system is similar to or even more complex than the environmental protection and pollution control system.

59. China has a sound environmental management system consistent with the Bank's core principles. Since the promulgation of its first Environmental Protection Law in 1979 (trial) and its amendment in 2014, which establishes the legitimate position of environmental protection as national strategy, China has gradually established and improved a comprehensive environmental management legal framework, with the environmental protection law as the fundamental comprehensive law, consisting of a series of specific laws, departmental bylaws, thousands of technical guidelines and standards at national level and numerous

local regulations and implementation plans covering marine environment, wetland protection, clean production promotion, environmental impact assessment (EIA), water and soil conservation (WSC) pollution control, natural environment and biodiversity conservation, resource protection and utilization, and special geographic areas or watershed protection. China has also signed a series of international conventions on environmental protection, including those on climate change. Environmental protection provisions in the relevant laws relating to livestock development that the PforR focused, special chapters or articles in the Agricultural Law, Animal Husbandry Law, Animal Epidemic Prevention Law, and Agricultural Product Quality Safety Law on agricultural resources, ecological environmental protection of agriculture and animal husbandry, management of animal epidemic prevention activities, and quality and safety of livestock products are put in place. In general, this legal framework can be roughly grouped into three categories: (1) laws and regulations issued by National People's Congress (NPC) and the State Council (SC); (2) administrative regulations, standards and technical guidelines issued by various ministries; (3) regulations, polices and standards issued by local people's congress and local government.

60. These legislations have basically put in place a legal system for eco-environmental conservation and resource protection and management including natural habitats, farmland, pollution prevention and control, WSC, energy management, circular economy promotion and ecological civilization construction as the mainstay and established following environmental protection management system and sustainable agricultural and livestock development system that are continuously improved and run under an institutional structure led by EEBs supported by multi-sectoral authorities.

#### **Eco-environmental conservation and pollution control management systems**

- **Ecological compensation system:** a new type of environmental management system aiming at preventing damage to the ecological environment and enhancing & promoting the sound development of the ecological system, targeting at those engaged in production, management, development and use that have or may have an impact on the ecological environment, with the rehabilitation and restoration of the ecological environment as the main content, economic regulation as the means, and law as the guarantee.
- **Ecological protection redlines (ERL) system:** The core system for ecological protection and the guarantee line for ecological security;
- **Environmental monitoring system:** Monitoring data is the basic data for objective evaluation of environmental baselines and the results of implementing environmental management;
- **EIA system:** As an important system in China's environmental protection legal system, EIA is a mandatory legal system covering both government programs or plans<sup>7</sup> and construction projects. The plan-EIA consider the comprehensive environmental impact of multiple construction projects that are planned, solve the significant cumulative impact of the project EIA by considering resources and environmental carrying capacity. The construction project EIA focus on relatively short-term adverse effects of an individual development or construction activity on the environment to determines whether a construction project can be carried out. It is also the first gate of environmental management to implement the principle of prevention and control over incremental pollution;
- **Pollutant discharge permitting system:** A management system for fixed pollution sources, polluters shall discharge their pollution in accordance with the pollutants discharge permit requirements. Discharge pollutants are not allowed without holding pollutant discharge permits;
- **Total loads control and regional limited system:** The total loads control of key pollutants is a pollution control method and system that distributes pollutant discharge indicators to a certain

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<sup>7</sup> Programs or plans refer to land use plans; plans to develop and utilized region, a river basin, and a sea area; as well as special plans for industry, agriculture, stockbreeding, forestry, energy, water resources, traffic, urban construction, tourism, and natural resource development.

region and controls the amount of pollutant discharge within prescribed limits

- **Joint prevention and control system:** A coordination mechanism established to prevent and control environmental pollution and damage ecology on focus areas across administrative areas and across watersheds;
- **Government responsibility system:** Strengthening government's responsibility for environmental protection to establish a backhand mechanism and encourage local governments to properly strike a balance between economic development and environmental protection;
- **Information disclosure and public participation system:** Information disclosure and public participation, as social supervision mechanisms, are conducive to solving social conflicts at the source;
- **Environmental protection regulatory and "three simultaneous"<sup>8</sup> system of construction project:** In order to prevent the construction project from causing damage to the ecological environment, the environmental protection facilities in the construction project that are legally required to prepare EIA documents shall be designed, constructed and put into operation simultaneously with the main facilities of the project;
- **WSC management system and the "three Simultaneousness" system :** To prevent soil erosion and ecological damage caused by productive and construction projects, China has established a water and soil conservation (WSC) system under the management of WRBs. For any productive construction project that may lead to soil erosion, the responsible project implementation unit (PIU) should prepare a WSC scheme and submit it to the corresponding WRBs for approval. For any construction project that is subject to WSC scheme, the related WSC works, must be designed, constructed, and put into operation simultaneously with the main facilities of the project;
- **Environmental public interest litigation system:** An important weapon for environmental protection. Social organizations and procuratorial organs that meet the conditions may file lawsuits in court against acts that pollute the environment, destroy the ecology and harm the social and public interests;
- **Responsibility system for environmental complaints and visits:** citizens, legal persons or other organizations are permitted and regulated to report their situation of environmental protection, and make suggestions, opinions or complaints to the competent EEBs at various levels by means of letters, e-mails, faxes, telephone calls or visits, which shall be handled by the EEBs in accordance with law. The EEBs at all levels shall establish and improve the responsibility system for environmental complaint reporting. In accordance with localization management, hierarchical responsibility, safeguard the public's right to know, participate in and supervise environmental protection work, implement the principles of openness in government affairs, conduct in-depth investigations and studies, seek truth from facts, properly handle and solve problems.
- **Legal liability system:** Increased penalties to illegal acts that pollute environment and damage ecology.
- **Other systems:** include planning, standards, eco-environmental taxes and fees, ecological compensation, emergency response to ecological and environmental emergencies, soil pollution risk control and remediation, classification of wildlife protection, and access list for important ecological functions.

### **Green agricultural & livestock development management systems**

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<sup>8</sup> The "three Simultaneousness" refers to the environmental protection facilities shall be designed, constructed, and put into use simultaneously with the main facilities

- Establishing an institutional system for green agricultural development, and put in place a negative list for agricultural industry access, a system for fallow crop rotation, and a system for the utilization of livestock and poultry manures as resources;
- Establishing green ecological oriented agricultural & livestock subsidy system and giving priority of central government investment in rural and agriculture & livestock sector;
- Establishment and improvement of a modern livestock production system: vigorously develop standardized large-scale farming, promote intensive and large-scale livestock production equipped with modern facilities and equipment such as automatic feeding, automatic drinking water and pollution control, technological extension and application of reduced use of mineral element and feed additives, and promote clean farming techniques such as water, material and energy saving and advanced practical technologies such as dry manure removal and microbial fermentation, so as to reduce emissions at source;
- Slaughter pigs at designated sites, in Gansu province, slaughter pigs, cattle, sheep at designated sites

### **Management systems for animal health and epidemic prevention & control**

- Risk assessment system for animal epidemics and compulsory immunization system: Carry out risk assessment of animal epidemics, formulate and publish measures and technical specifications for the prevention, control, purification and elimination of animal epidemics. Compulsory immunization shall be carried out against animal epidemics that seriously endanger livestock production and human health.
- Sites certificate and employment institution license system: animal farms, animal isolation sites, animal slaughtering and processing sites and sanitary treatment sites of animals and animal products shall meet the conditions for animal epidemic prevention stipulated in the ***Measures for Reviewing Conditions for Animal Epidemic Prevention***, and obtain the certificate of animal epidemic prevention conditions; Institutions and units engaged in animal diagnosis and treatment, veterinary drug production, veterinary drug management, and the establishment of livestock and poultry farms or communities need to apply for, and shall be reviewed by the AHVMBs with the conditions prescribed by laws and regulations, and shall issue the corresponding production or business license after being deemed qualified.
- Classified management on pathogenic microorganism laboratory (PML) with unified biosafety standard: The State classify PMLs (including veterinary laboratories) into 4 categories according to the infectivity of pathogenic microorganisms and the degree of harm to individuals or groups after infection; the State divide PMLs into BSL-1, BSL-2, BSL-3 and BSL-3 based on according to the biosafety protection level of the laboratory against pathogenic microorganisms, and in accordance with the provisions of the national standards for laboratory biosafety. BSL-1 & BSL-2 labs shall not engage in experiments on highly pathogenic microorganisms.
- Veterinary laboratory examination system: The State implements an examination system for veterinary laboratories. Only veterinary laboratories that have passed the examination and obtained the examination certificate may undertake the tasks of diagnosis, monitoring and testing of animal epidemics.

61. Based on environmental and social screening as described in Chapter 3, and following the Bank's core principles and China's environmental management requirements, the Bank's ESSA team classified the domestic EMSs that handle the environmental issues related to activities on low-emission livestock development, animal health, disease prevention & control and agro-food safety under the PforR into four groups: (i) EIA and follow-up management system, (ii) pollution control system, (iii) eco-environmental conservation management system and (iv) health & safety management system. The legal and regulatory

framework, management mechanism, institutional arrangement, and implementation performance for each system are reviewed, assessed, and compared with the Bank’s core principles to identify any gaps to address during the PforR implementation. The EMSs that will serve the PforR activities are listed in Table 4--1.

**Table 4--1 Domestic EMSs Applicable to the PforR**

Bank core principles	Potential impacts form typical activities	Domestic EMSs	Responsible authorities
<p>1. Environmental assessment and management</p>	<p><b>- During construction:</b> The construction of above-mentioned facilities during construction will generate temporal and limited adverse environmental impact, such as nuisance dust, noise, traffic disturbance, etc.,</p> <p><b>- During operation:</b> 1) once the constructed facilities (e.g., livestock breeding and production sheds, slaughter houses, meet or dairy processing plants, feed processing plants, manure treatment and integrated utilization facilities, agro-food storage, distribution and marketing facilities, etc.) are put into operation, following types of wastes will be discharged or emitted to potentially pollute water, air, endanger farmland ecology, spread pathogenic microorganisms, and bring risks to public health:</p> <ul style="list-style-type: none"> <li>• Solid waste (waste feed, animal waste, and carcasses), sludge from wastewater treatment plants installed for slaughterhouses, feed processing plants, veterinary labs, animal product quality and safety testing labs;</li> <li>• Wastewater: first, the non-point source effluents due to runoff from feed (including silage) storage, loading, and unloading, livestock housing, feeding, and watering, waste management facilities, and areas of land application of manure; second, production wastewater generated during animal slaughter and meat processing; third, effluent from animal disease control and food safety laboratories; and fourth, wastewater generated in the process of feed processing, livestock and poultry manure treatment and resource utilization.</li> <li>• GHG and air emission: First, ammonia (e.g. management of animal waste), methane and nitrous oxide (e.g. animal feeding and waste management), odors (e.g. animal housing and waste management), bioaerosols, and dust (e.g. feed storage, loading, and unloading, feeding, and waste management activities). Second, the odor and exhaust gas, dust and particulates produced during slaughtering and meat processing; Third, waste gas from animal disease control and food safety testing laboratories; and Fourth, dust produced during feed processing.</li> <li>• Hazardous Materials: are used throughout the livestock production cycles, e.g. (a) disinfecting</li> </ul>	<p><b>- EIA and follow-up management system</b></p> <p><b>- Pollution control system</b> (livestock production pollution control, artificial forage and feed processing pollution control, and pollution control for veterinary lab and animal products quality testing lab, etc.)</p>	<p>- Ecology &amp; Environment Bureaus (EEBs)</p> <p>- Agriculture and Rural Affairs Bureaus (ARABs) and Animal Husbandry Veterinary Medicine Bureaus (AHVMBs)</p>

	<p>agents spread on animals and sheds; (b)antibiotic used for control of animal disease, (c) hormonal products use for animal breeding and milk production); (d) hazardous biological waste and chemical waste from veterinary laboratories and livestock quality testing laboratories, etc.</p> <ul style="list-style-type: none"> <li>• Special risk materials (SRM) are tissues in cattle that contain the agent that may transmit bovine spongiform encephalopathy (BSE), transmissible spongiform encephalopathy (TSE), or scrapie disease if reprocessed into animal feed. The human disease, Creutzfeldt-Jakob Disease (vCJD), may result from human consumption of products from animals infected with BSE.</li> </ul> <p>2) Artificial forage cultivation, application of pesticides and fertilizers, which will lead to the consumption of water resources, agricultural NPS pollution, and soil compaction and so on. Non-point source pollution caused by the use of chemical agents, pesticides for the prevention and control of fodder pest will bring negative impacts on the environment.</p>		
2. Natural habitat protection	<p>During design: site selection might trigger the local ecological protection redlines;</p> <p>During construction: The construction of facilities and forage plantation land may destroy vegetation and disturb habitats. A large amount of land leveling may cause water and soil erosion, but the operation period is beneficial to improve the natural conditions for regional water and soil conservation.</p> <p>During operation: livestock with access to creeks, rivers, and other natural water sources may cause environmental damage by contaminating the water with animal waste, destroying riparian habitat, and eroding the stream banks.</p>	- <b>Eco-environment conservation management system</b> (natural eco-environment conservation, water and soil conservation)	- Natural Resources Bureaus (NRBs) - EEBs - ARABs - Water Resources Bureaus (WRBs)
3. Health and safety management	<p>Livestock production, especially in the context of large-scale, high-density intensive farming practices, involves potential health and safety risks from the lax control of animal diseases, including infectious diseases, and some zoonosis pose potential threats to human health.</p> <ul style="list-style-type: none"> <li>- Animal diseases have a negative impact on livestock health and livestock productivity;</li> <li>- Breeding personnel and operators of animal disease prevention and control may be exposed to physical hazards, chemicals, raw materials, narrow Spaces, etc.), bringing occupational health and safety risks;</li> <li>- Impact on community health and agro-food health and safety: zoonotic human diseases may spread animal diseases to communities around animal farms and animal farming zones; Public ingestion of animal foods, dairy products, etc. that are contaminated or spoilt, or contain large amounts of residual hazardous substances (growth hormones, residual pesticides, antibiotics, etc.) poses risks to community health and public safety;</li> </ul>	- <b>Health and safety management system</b>	- Health Commissions (HCs) - Emergency Management Bureaus (EMBs) - ARABs (AHVMBs) - EEBs - Market Supervision Administrations (MSAs)

	- Risks to the health and safety of practitioners and the public from improper disposal of hazardous biological and chemical waste in veterinary laboratories and animal product quality testing laboratories;		
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## 4.2 EIA and Follow-up Management System

### 4.2.1 Applicable legal framework

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

**Table 4-2: A List of Applicable Laws and Regulations on EIA and Follow-up**

Names of laws, regulations, standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>Environmental Impact Assessment Law</i>	SC approved in 2002 and 2 <sup>nd</sup> amended in 2018	It's required that when preparing government programs or plans <sup>9</sup> and construction projects, potential environmental impacts should be early identified, screened, and assessed, mitigation measures should be recommended, and follow-up monitoring and supervision should be conducted. It also stipulates basic requirements on EIA classification, EIA approval hierarchy, and ban from construction without EIA approval, etc. Entities, experts, and individuals are encouraged to participate in public consultation on an EIA. EIA must be objective, open and fair and comprehensively consider the possible impacts of planning or construction projects on various environmental factors and the ecosystem they constitute, so as to provide a scientific basis for decision-making.
<i>Construction Project Environmental Protection Management Regulations</i>	SC issued in 1998, amended in 2017	It reinforces the requirements on EIA screening and classification, EIA approval hierarchy, “Three Simultaneousness”, and environmental acceptance check for construction completion, etc.
<i>Plan-EIA Regulations</i>	SC issued in 2009	The <b>Regulation</b> provided that plans or program related to land use, integrated development plans or programs in a region or river basin or sea area, sectoral development plan (including industrial, agricultural, animal husbandry, etc.), the planers of such plans or programs shall have the plan-environmental impact assessed. The plan-EIA shall focus on the analysis, prediction and assessment of the overall or cumulative impact of planning implementation on the ecosystem of the relevant region, basin and sea area, and the long-term impact on the environment and human health, so as to prevent environmental pollution and ecological damage at the source, and promote comprehensive, coordinated and sustainable development of

<sup>9</sup> Government programs or plans refer to land use plans; plans to develop and utilized region, a river basin, and a sea area; as well as special plans for industry, agriculture, stockbreeding, forestry, energy, water resources, traffic, urban construction, tourism, and natural resource development.

		economy, society and environment.
<b><i>Regulation on Pollution Prevention and Control of Scaled Livestock and Poultry Production</i></b>	SC issued in 2013	New construction, reconstruction or expansion of livestock and poultry farms and farming zones shall conform to the development plans for animal husbandry, pollution prevention and control plans for livestock and poultry farming shall meet the conditions for animal epidemic prevention & control, and EIA shall be conducted. For large, scaled livestock and poultry farms and farming zones with significant impact on the environment, EIA reports shall be prepared; For other livestock and poultry farms and farming zones, environmental impact registration for EEBs endorsement shall be practiced.
<b><i>Measures of Public Consultation in EIA</i></b>	Ministry of Ecology and Environment (MEE) issued in 2018	If a construction project or a government program is likely to have potential significant impacts on the environment, it is required to carry out public consultation during preparing EIA report. The Measures clearly specify the relevant content and time limit to be disclosed by the PIU construction projects, and two-times disclosure, one announcement to be made by the approval authorities.
<b><i>Construction Project EIA Follow-up Supervision Regulations</i></b>	Ministry of Environmental Protection (former MEE) issued in 2015	From EIA preparation till project commissioning, EEBs should oversee whether mitigation measures are implemented as per EIA instruments and approval documents. After the project becomes operational, EEBs should check whether relevant environmental regulations are complied with and whether post EIAs are conducted.
<b><i>Regulations on Environmental Acceptance Check for Construction Completion</i></b>	MEE issued in 2017	The Project Implementation Unit (PIU) is responsible for undertaking environmental acceptance check for construction completion, preparing an investigation or monitoring report, and disclosing it to the public. The project is not allowed to start commissioning until proper mitigation measures and pollution control facilities are put in place with a pollutant discharge permit obtained following relevant requirements. The project should not start formal operation until the mitigation measures and or the pollution control facilities have passed the environmental acceptance check.
<b><i>Construction Project EIA Classified Management Catalogue</i></b>	2021 edition	Criteria are given for classifying environmental impacts of 173 types of projects in 55 sectors into three levels (Class A – high and significant, requiring preparation of EIA report; Class B – small to moderate, requiring the preparation of EIA form; and Class C – minor, requiring registration by filling in a form), based on project nature, project scale, and contextual environment.
<b><i>Fixed-Source Pollutant Discharge Permit Classification Catalogue</i></b>	2019 edition	The guidelines for classification of pollutant discharge permits for 112 specific industries or sectors were provided; Considering the amount or volume of pollutants produced, the quantity of pollutants discharged and the degree of impact on the environment, the specific criteria for dividing the focused management, simplified management and registration management are put forward.
<b><i>EIA Technical Guidelines</i></b>	or	China has developed more than 20 sets of EIA technical guidelines, including the General Guidelines and a series of specific guidelines on different environmental factors such as surface water, groundwater, soil, air, noise, and ecology and on different industries such as water engineering, hydropower, coal,

		pharmacy, and steel, etc. The General Guidelines provides fundamental guidance on the preparation EIA preparation documents (namely, the EIA report and EIA form) in terms of alternatives analysis, positive and negative impact assessment, long-term and short-term impact assessment, direct and indirect impact assessment, cumulative impact assessment, mitigation measures, cost estimate, and environmental management and monitoring plans, etc.
<b><i>Technical Specification on Pollutant Discharge Permit Application and Issuance;</i></b>	or	China has developed more than 70 guidelines on how to apply and issue pollutant discharge permits, including General Guidelines and a series of specific guidelines for important industries (e.g., non-ferrous metals, food processing, coal, pharmacy, steel, livestock and poultry farming, municipal sanitation, and water and wastewater treatment, etc.). The entities subject to the permits are required to submit pollutant discharge information, conduct pollutant monitoring, keep environmental management track records, and prepare implementation reports. The guidelines also recommend good technical practices on prevention and control of wastewater, waste gas, odor, and solid waste, etc.
<b><i>Guiding Opinion on Ecology and Environment Zoning Management under the "Three Lines and One List" Mechanism (Trial)</i></b>	MEE issued in 2021	It requires that ecological functions be kept from degrading by applying ecological protection <b>redlines</b> ; the environment be protected from deteriorating by holding the environmental quality <b>bottom lines</b> ; natural resources be conserved by keeping the utilization <b>ceiling lines</b> ; and construction or operation activities that are to be carried out in any ecology and environment zones follow the lists of environmental entry criteria to strengthen pollution control. The "Three Lines and One List" mechanism provides a strong fundament for implementing strategic EIAs, program EIAs, and project EIAs and a basis for other environmental work.
<b><i>Notice on the issuance of the "Ecological Protection Red Line Ecological Environment Supervision Measures (Trial)"</i></b>	MEE issued in 2022	Within the scope of ERL, human activities are prohibited in principle in the core protected areas of nature reserves, and development and productive construction activities are strictly prohibited in other areas. Under the premise of complying with current laws and regulations, only limited human activities that do not cause damage to ecological functions are allowed, except for major national strategic projects.
<b><i>Guiding opinions on further strengthening the supervision of the ecological environment "double random and one open"</i></b>	MEE issued in 2021	The "double random, one open" <sup>10</sup> is the basic mean and method of ecological environmental supervision activities, supplemented by focused supervision, and a regulatory mechanism based on credit supervision. This method can effectively reduce the interference to the normal production and business activities of enterprises, reduce the burden on enterprises, and promote the institutionalization and standardization of ecological environment.
<b><i>Management Measures on Environmental Impact Registration and Endorsement</i></b>	MEE issued in 2016	The PIU shall fill in the environmental impact registration form for county EEB's endorsement for construction projects with minor environmental impact as pre requirement of Construction Project EIA Classification Catalogue, construction project. The

<sup>10</sup> Double random and one open" refer to, in the supervision process, random inspection objects are selected, law enforcement inspectors are randomly selected, and the random inspection situation and investigation results are disclosed to the public in a timely manner

		registration can be made on an online Filing Management System established and publicized by MEE. The PIU shall login the entity’s real information and submit the filled in environmental impact registration form at the said online system.
<b>Measures on Environmental Complaints</b>	MEE issued in 2021	This measure is promulgated in accordance with Regulations on Complaint Letters and Visits and relevant environmental legislations to standardize the forms and channels of environmental complaints and visits, the acceptance of environmental complaints and visits, the handling and supervision of environmental complaints and visits. The administrative head is required to assume responsibility for environmental complaints and visits.
<b>Gansu Provincial and local Regulations</b>		Under the national legal framework, Gansu Province and local governments have also formulated more specific and stricter local regulations or measures, such as: Gansu Provincial Environmental Protection Regulation (GPPC issued in 1994 and amended in 2020), Opinions of the People's Government of Gansu Province on the Implementation of the "Three-lines, One-List" Ecological Environment Zoning Control (2023), Provisions of Gansu Provincial DEE on Approval Procedures for Construction Projects’ EIA Documents (amended in 2023), Catalogue Construction Projects’ EIA Documents Subject to Gansu Provincial DEE’s Review and Approval (2023 edition), Implementation Rules of Gansu Province for the Administration of Pollutant Discharge Permits (Trial) (2021), etc. These local regulations, measures have specified specific requirements and procedures for the spatial control of site selection for construction projects in Gansu Province and the classification and approval of EIA documents, providing a legal framework for the EIA of construction projects and the environmental management throughout the life-cycle of projects.

**4.2.2 Implementation Mechanisms and Procedures**

63. To implement above-mentioned relevant laws and regulations for EIA, China has established and is gradually improving the relevant implementation mechanism, which are listed in Table 4-3 below.

**Table 4-3 Mechanisms for EIA and Follow-up**

<b>Implementation Mechanisms or Procedures</b>	<b>Description</b>
Environmental impact screening and classification	To implement the EIA system, China has established a detailed and comprehensive catalogue for screening environmental impacts and classifying EIA processes proportional to project nature, location, scale, environmental context, etc. Environmental impacts of construction projects are classified into three levels, namely Class A – high and significant impacts, Class B – small to moderate impacts, and Class C - minor impacts. Correspondingly, the EIA instruments are divided into three categories, namely EIA report (Class A), EIA form (Class B), and EIA registration (Class C). With the exclusionary criteria, the PforR will not include any activities requiring EIA reports preparation, the physical activities to be supported by the PforR may include land levelling for artificial forage cultivation, livestock breeding and farming, livestock slaughtering and processing, veterinary service labs, agro-food quality testing labs, dead and diseased animal sanitary

	<p>treatment, organic fertilizer production by use of manure, etc. These physical activities are subject to EIA-forms preparation or environmental impact registration for EEB’s endorsement. Their environmental classification is listed in Table 4-4. Other activities with minor adverse environmental impact, no EIA will be required as per domestic EIA management requirement. This section only gives an initial analysis of EIA classification related to the PforR activities and specific types of EIA instruments applicable to each construction activities will be determined by local EEBs during the PforR implementation.</p>
<p>Key procedures for processing EIA</p>	<p><b>EIA preparation:</b> PIUs are responsible for the quality and conclusions of EIA instruments for their projects, and the agencies engaged to prepare the EIAs also have certain responsibilities. Under the national EIA engineer qualification system, chief technical personnel that are in charge of preparing EIA instruments must be certified EIA engineers who have passed the national exam and gotten related certifications and be the fully-time staff of the EIA consultant agency.</p> <p><b>EIA technical review:</b> as the approval authorities, EEBs may organize technical agencies to go through a technical review of EIA-report and EIA-form. Technical review of EIA report for a Class A project is usually undertaken by a panel of at least 3 independent experts who will be randomly selected from EEBs’ expert database. EIA forms for Class B projects can be reviewed by either an expert panel or by staff of EEBs.</p> <p><b>EIA approval:</b> EIA report and EIA form should be submitted to competent EEBs for approval, while a simple EIA registration can be done online by PIUs themselves. EIA instruments (reports and forms) are approved by EEBs at different levels proportional to nature and scale of the corresponding projects, magnitude of the environmental impacts, and sensitivity of the environmental context, etc.</p> <p><b>Public consultation and information disclosure:</b> In EIA process, PIUs (or under the assistance of EIA agencies) should carry out public consultation as required or needed, generally through website, newspapers, placard discussing meetings, hearing, s etc. The PforR activities do not include Class A projects that are subject to mandatory public consultation. While for Class B projects, public consultation is not compulsory, but local EEBs would usually suggest the PIUs to conduct proper public consultation. In addition, it’s legally required that EIA documents and approval comments be disclosed to the public for all construction projects requiring the preparation of EIA report or EIA form.</p>
<p>EIA Follow-up and supervision</p>	<p><b>Environmental ‘Three Simultaneousness’:</b> Design, construction, and operation of a pollution control facility that is to support a construction project must be carried out simultaneously with the project main parts. The project design report must include a specific chapter to specify mitigation measures, pollution control facilities, and necessary cost estimates. To ensure the pollution control facilities be built properly as designed, the PIU is responsible for including the physical works of pollution control facilities into civil works contracts and ensuring construction or installing schedule and budget to be sufficient. The PIU is also responsible for implementing other mitigation measures that are recommended in the EIA instruments and approval documents. The project is not allowed to start operation until all pollution control facilities and mitigation measures have passed the environmental acceptance check for construction completion.</p> <p><b>Environmental management during construction:</b> PIUs are responsible for implementing proper measures to mitigate environmental impacts during construction. As per China’s “Standard Construction Bidding Regulations”, a bidding document should include an environmental protection chapter to include the mitigation measures that are recommended in the approved EIA instruments. A standard civil work contract will also include an environmental protection chapter to clarify the contractor’s duties on environmental management such as implementing the mitigation measures. After the contract is signed, the contractor should develop construction implementation programs which should include environmental management plans that are reviewed and agreed upon by the PIU and supervision engineer prior to construction commissioning. During construction, the PIU and supervision engineer will oversee the implementation of the</p>

	<p>environmental management plans.</p> <p><b>Environmental acceptance check for construction completion:</b> When construction of a project is completed, the PIU (or under the assistance of qualified agencies) should carry out a specific check for environmental acceptance, by undertaking tests or investigations, preparing an environmental acceptance check report, and seeking relevant experts' comments. The PIU should disclose the environmental acceptance check report within 5 working days once the report is completed and keep it open to the public for at least 20 working days. Within 5 working days after the disclosure, the PIU should log into the national platform for environmental acceptance check to upload the project description, the review comments on the environmental acceptance check, and other basic information etc. This information will be disclosed to the public by EEBs who will supervise the procedures of the environmental acceptance check.</p> <p><b>EIA Follow-up supervision:</b> The follow-up supervision during EIA is to check whether EEBs have justly fulfilled their duties in EIA approval, whether technical review agencies have provided rational review comments on the EIA, whether EIA agencies have done accurate EIA based on true data and in a reliable way, and whether PIUs have gone through proper EIA procedures and conducting public consultation as required. The follow-up supervision after EIA is to check whether EEBs have fulfilled their duties in “Three Simultaneousness” supervision and whether PIUs have implemented the “Three Simultaneousness” and other environmental management measures as required in the stages of design, construction, environmental acceptance check, and operation.</p>
<p><b>Classified management of pollutant discharge permits</b></p>	<p>Entities that are to discharge pollutants to the environment are classified to three categories based on the quantity of pollutant production and discharge and the potential impacts on the environment: (i) an entity with a large amount of pollutant production or discharge or substantial environmental impacts is subject to focus management; and (ii) an entity with a medium level of pollutant production and discharge and moderate environmental impacts is subject to general management; and (iii) an entity with minimal pollutant production and little environmental impacts is subject to online registration (It is not necessary to apply for a pollutant discharge permit, but it should be filed on the national pollutant discharge permit management information platform). Any entity that is subject to pollutant discharge permitting should strictly follow the permit requirements when discharging pollutants, conduct monitoring of the effluents or emissions, establish environmental management and monitoring records and archives, and submit regular reports to EEBs. Entities under focus management must install and maintain automatic monitoring devices and connect them with the EEBs' online systems. The indicative pollutant discharge permitting classification for the PforR activities such as livestock breeding and farming, artificial forage cultivation and processing, livestock slaughtering and processing, and livestock or poultry manure treatment and utilization (organic fertilizer production), etc. is shown in Table 4-5; while other activities may not be subject to the permitting requirements. This section only gives an initial analysis on permitting classification, and specific types of permits that are applicable to the PforR activities will be determined by local EEBs during implementation.</p>
<p><b>Environmental Monitoring</b></p>	<p>(1)Environmental quality monitoring: carry out in-depth monitoring of air, water, soil, ocean, sound, and ecology, and establish a unified monitoring network and evaluation system; (2)Pollution sources monitoring: entities with pollutant discharge permits shall monitor and disclose information on their own, and EEBs jointly carry out law enforcement monitoring in accordance with the "double random" inspection; (3) Environmental emergency monitoring: Set up regional emergency monitoring bases and frame a cross-provincial emergency monitoring support system; (4) Other environmental monitoring activities: provide monitoring data for environmental management activities such as environmental status surveys and assessments.</p>

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

PforR Typical activity	Sector	Domestic EIA classification			Likely EIA category of the PforR	
		Sub-sector	Category A: EIA report	Category B: EIA form		Category C: EIA registration
Artificial forage cultivation base	Agriculture	Agricultural products base project (including medicinal materials base)	or	Involve environmental sensitive area	others	Usually, no EIA is to be carried, only EIA registration for endorsement is required.
Livestock breeding and farming	Livestock sector	Livestock production	Large-scale livestock and poultry farming with capacity of annual marketable fattened 5000 pigs (or other animals equivalent to fattened 5000 pigs); or annual stock of 2,500 pigs (or other animals equivalent to the stock of 2500 pigs <sup>11</sup> ) and above; Large-scale livestock and poultry farming involving environmentally sensitive areas.	or	Others (except those below scale) (The specific scale standards shall be referred to the Regulations on Pollution Prevention and Control of Large-scale Livestock and Poultry Farming)	The PforR have excluded the large-scale livestock farms and farming zone requiring EIA-report. The other small to medium scale farming zones require only environmental impact registration for endorsement.
Livestock slaughtering and processing	Agro-food processing	feed processing	or	with fermentation process; Annual processing of 10,000 tons or more	or	EIA-forms are required for annual processing 10,000 tons or more feeds.
		Slaughtering and meet processing	Slaughtering 100,000 live pigs, 10,000 beef cattle, 150,000 mutton sheep and 10 million or more poultry	Other slaughtering; Annual meet processing of 20,000 tons and above	Other meet processing	The PforR have excluded the large-scale of livestock slaughtering and meet processing activities requiring EIA-

<sup>11</sup> With reference to the "Pollutant Emission Standards for Livestock and Poultry Industry" (GB18596 or 2001), the conversion coefficient between different types of livestock and pigs is as follows: 1 sow or boar is converted into 5 adult pigs, 1 cow is converted into 10 pigs, 1 beef cow is converted into 5 pigs, and 3 sheep is converted into 1 pig.

PforR Typical activity	Sector	Domestic EIA classification				Likely EIA category of the PforR
		Sub-sector	Category A: EIA report	Category B: EIA form	Category C: EIA registration	
						report.
	Food manufacturing industry	Dairy products manufacturing	or	except those with simple mixing and sub-packing	or	EIA-forms are required for dairy products manufacturing activities, except those with simple mixing and sub-packaging.
Veterinary service labs and agro-food quality testing labs	Professional laboratory, research and development (test) bases	Research and experimental development	P3, P4 Biosafety Laboratory; Transgenic laboratory	Others (except those that do not produce experimental waste gas, waste water and hazardous waste)	or	The PforR do not involve P3, P4 Biosafety Laboratory; Transgenic laboratory
Sanitary treatment of dead and diseased animals	Ecological protection and environmental management sector	Medical wastes disposal, sanitary treatment of dead and diseased animals	Centralized disposal of medical waste (except for simple collection and storage	others	or	EIA-forms are required for sanitary treatment of dead and diseased animals
Livestock and poultry waste to produce organic fertilizer	Manufacturing of chemical raw materials and chemical products	Fertilizer manufacturing	Project producing nitrogen fertilizer, phosphate fertilizer and compound fertilizer by chemical methods	others	or	EIA-forms are required for producing organic fertilizer by using livestock and poultry waste

**Table 4-5: Classification management of pollutant discharge permits for the main activities under the PforR**

PforR activities	Sectors	Categories of Pollutant Discharge Permit		
		Category A: focus management	Category B: general management	Category C: registration management
Livestock farming	Livestock breeding and farming	Large-scale livestock and poultry farms and farming zones with effluent discharge outlets (the specific scale standards shall be implemented according to the Regulations on Pollution Prevention and Control of Large-scale Livestock and	or	Large-scale livestock and poultry farms and farming zones without effluent discharge outlets, livestock and poultry farms and farming zones below the scale with effluent discharge outlets

PforR activities	Sectors	Categories of Pollutant Discharge Permit		
		Category A: focus management	Category B: general management	Category C: registration management
		Poultry Farming)		
Forage cultivation and feed processing	Feed processing	or	Feed processing (with fermentation process)	Feed processing (without fermentation process)
Livestock slaughtering and processing	Slaughtering and meat processing	Slaughterhouses with annual capacity of 100,000 or more live pigs, 10,000 or more beef cattle, 150,000 or more beef sheep, and 10 million or more poultry	Slaughterhouses with annual capacity of 20,000 or more live pigs and less than 100,000 heads, 20,000 or more beef cattle and less than 10,000 heads, 25,000 or more mutton sheep and less than 150,000 heads, 1 million or more poultry and less than 10 million birds and 20,000 tons or more meat and poultry	others
	Dairy products manufacturing	Annual processing of 200,000 tons and above (excluding simple mixing or packaging)	Annual processing of less than 200,000 tons (excluding simple mixing or packaging)	simple mixing or packaging
Livestock and poultry waste to produce organic fertilizer	Manufacturing of chemical raw materials and chemical products	Nitrogen fertilizer manufacturing, phosphate fertilizer manufacturing, compound fertilizer manufacturing, the above do not include simple mixing or packaging	Potash fertilizer manufacturing, organic fertilizer and microbial fertilizer manufacturing, other fertilizer manufacturing, the above do not include simple mixing or packaging; Nitrogen fertilizer manufacture (simply mixed or packaged)	others

### 4.2.3 Institutional Organization and Performance

64. EEBs are the competent authorities responsible for EIA and follow-up management. The EIA and Pollution Control Department under the Ministry of Ecology and Environment (MEE) is responsible for overseeing EIAs and project life cycle environmental management at national level. The notice of the DEE of Gansu Province on the issuance of the Provisions on the Approval Procedures for EIA Documents of Construction Projects (2023 edition) stipulates the procedures for the application and acceptance of EIA documents of construction projects, assessment review (including the main points and requirements of the review) and announcement, approval, deadline, supervision and management. In Gansu Province, EEBs from the provincial, prefecture-level to the county levels is staffed with EIA division or sections or administrative approval sections, respectively with full-time staff.

65. In comparing with the Construction Project EIA Classified Management Catalogue (2021 edition), and after exclusion of these activities with major and significant high E&S adverse impact, the typical activities related to low-emission livestock production, veterinary service labs and agro-food quality testing labs, are classified as activities or projects requiring EIA-form or EIA registration for endorsement. Most of them are only subject to EIA registration for endorsement and no EIA-reports or EIA-forms are to be prepared, and reviewed and approved.

66. **The Provincial DEE** has an EIA and Emission Management Division (4-5 staff), undertaking the comprehensive coordination and management of plan EIA, policy EIA, and construction project EIA, as well as pollution discharge permitting, and formulate and implement the ecological environment access list. An Assessment Center subordinated to the DEE (42 staff) provide technical support service to DEE to carry out EIA documents approval for construction projects. There is an Environmental Law Enforcement Bureau (about 40 staff) under the EDD responsible for overseeing the implementation of ecological and environmental policies, plans, regulations and standards, and undertake the enforcement of provincial environmental protection permits, the investigation and handling of major illegal cases, and coordinate the settlement of trans-regional environmental pollution disputes. DEE organize the implementation of the "three simultaneous" system for construction projects. Environmental Monitoring Division under the DEE undertakes assignment on ecological environment monitoring network establishment and management, under which, an Eco-Environmental Monitoring Center is responsible for provincial-wide eco-environment quality monitoring and management of the monitored data, provides technical support for pollution sources monitoring and technical guidance trainings on provincial-wide eco-environment monitoring system;

67. **The Municipal EEBs** have administrative approval sections (4~5 staff), who are responsible for reviewing and approval of EIA documents of those projects with proposals, check and approval, endorsement at provincial level but outside the provincial DEE's approval authority, responsible for reviewing and approval of EIA documents of those projects with proposals, check and approval, endorsement at municipal level. There are environmental monitoring sections under municipal EEBs (2~5 staff) responsible for planning the sites for eco-environmental quality monitoring, organizing EPL enforcement, supervisory monitoring of pollution sources, and environmental emergency monitoring, etc., under which, eco-environmental monitoring stations (about 20 staff) are responsible for municipal-wide eco-environmental monitoring and surveys.

68. **The County EEBs** have also EIA approval sections (2~3 staff) with duties cooperating with corresponding municipal EEBs, providing advice to projects owners prior to the preparation of EIA documents, guiding and supervising enterprises or entities to implement measures recommended by EIA documents in the later stage. At the town or township level, governments generally set up 1-2 full-time environmental cadres, responsible for environmental management assignment delegated from higher-level EEBs.

69. The E&S team found through its due diligence that environmental management records of activities similar to the typical PforR activities in sample counties, such as forage cultivation base development, large scale livestock farms and farming zones, multi-purpose utilization of livestock waste, and sanitary treatment of dead and diseased animals, organic fertilizer produced from livestock manure, etc.) were clearly kept. In general, these activities have been subject to EIA and follow-up management. For example, the two phased livestock production project located in industrial park for rural revitalization in Lanzhou New District, including feed processing, manure treatment facilities, EIA reports for the two phases (with capacity of 10,000 dairy cow 10000 head for phase one and additional 10000 head for phase two) were prepared and approved by EEB of Lanzhou New District. The hayshed and feed processing zone, mature treatment and recycling, air emission control facility, wastewater treatment station in the livestock farms have been subjected to the environmental acceptance-check for construction completion. The regular monitoring of the effluent, odor, and noise level indicated to have been compliance with the discharge or emission standards. Other examples include construction projects of organic fertilizer or matric (100,000 tons or a) and centralized sanitary treatment plant of dead and diseased animals in Guazhou County. EIA reports were prepared for the said two construction projects and reviewed and approved by EEB of Jiuquan Municipality (to whom Guazhou County is subordinated) in 2022 and 2023 respectively. EEB, together with ARAB of Guazhou jointly performed their regular inspection and supervision to the operation of the constructed projects. In the field visits during Oct. 2023, the ESSA team reviewed a variety of track records on environmental management for similar facilities or activities in the 4 sample counties (seeing Appendix 7 of this report).

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

#### 4.2.4 Brief Summary

71. The EIA and follow-up supervision system, covering EIA processing, the “Three synchronizations, environmental acceptance check for construction completion, and pollutant monitoring etc., has been implemented in China for several decades and has kept improving towards project life cycle management. It is found through virtual interview that existing activities or facilities similar to that of the PforR have been subjected to EIA and follow-up supervision to avoid, reduce and mitigate adverse environmental impacts. The system is deemed satisfactory and basically complies with the Bank’s core principles. Appendix 8 of this report provide generic mitigation measures for addressing potential adverse environmental impacts of main activities under the PforR program. During the Program implementation, a program implementation plan (PIP) is to be developed, which will include a detailed environmental and safety code of conduct (ESCOP), which can refer to the generic mitigation measures listed in Appendix 8 of this report. These mitigation measures and ESCOP with estimated cost shall be included into the bidding documents for contractors to take specific actions.

### 4.3 Pollution Control System

#### 4.3.1 Environmental Management for Livestock Farming and Slaughtering

72. Pollution control in livestock production was initiated relatively later in China. Since entering the 21st century, based on the "*Environmental Protection Law*" and various pollution prevention & control laws "*Animal Husbandry Law*", in combination with the needs of environmental management, the State has successively issued a pollution prevention and control laws, regulations, policies, standards and norms related to livestock and poultry breeding, livestock and poultry slaughter, livestock and poultry manure treatment and comprehensive utilization, to strengthen environment management of pollution prevention and control in livestock and poultry farming.

##### 4.3.1.1 Applicable Legal Framework

**Table 4-6: A list of Main Laws & Regulations on Livestock Sector**

<b>Names of laws, regulations, policy standards and specifications</b>	<b>Issuing authority or time</b>	<b>Relevant Main Provisions</b>
<i>Law of the PRC on Water Pollution Prevention and Control</i>	NPC issued in 1984, 2 <sup>nd</sup> revised in 2017	Livestock and poultry farms and farming zones shall build comprehensive utilization or sanitary treatment facilities for livestock and poultry feces and wastewater and ensure the normal operation of the facilities and ensure the discharge of effluents meeting the standard.
<i>Law of the PRC on the Prevention and Control of Environmental Pollution by Solid</i>	NPC issued in 2004, 3 <sup>rd</sup> revised in 2020	In large-scale livestock and poultry farming, solid wastes such as livestock and poultry manure generated in the farming process should be collected, stored, utilized or disposed of in a timely manner to avoid environmental pollution.

<b>Waste</b>		
<b>Law of the PRC on the Prevention and Control of Atmospheric Pollution</b>	NPC issued in 1987, 2 <sup>nd</sup> revised in 2018	Livestock and poultry farms and farming zones shall promptly collect, store, clear and dispose of wastewater, livestock and poultry feces and carcasses, and prevent the emission of malodorous gases.
<b>Law of the PRC on the Prevention of Soil Pollution</b>	NPC issued in 2018	Strengthen the supervision of the collection, storage, utilization and disposal of livestock and poultry manure, biogas residue and biogas slurry to prevent soil pollution.
<b>Law of the PRC on Animal Husbandry</b>	NPC issued in 2005, amended in 2022	Livestock farming: One of the conditions that livestock and poultry farms and farming zones shall have is the facilities and equipment suitable for the sanitary treatment and resource utilization of livestock and poultry manure; Livestock and poultry farms shall ensure the normal operation of facilities for the sanitary treatment and resource utilization of livestock and poultry manure, ensure the comprehensive utilization of livestock and poultry manure or discharge meeting standard, and prevent environmental pollution. Where illegal discharge of waste material causes environmental pollution hazards, the hazards shall be eliminated, and compensation shall be made according to law. Slaughtering: The state implements a system of designated site for slaughtering of live pigs. Livestock and poultry other than live pigs may be slaughtered at designated points.
<b>Regulation on Pollution Prevention and Control of Scaled Livestock and Poultry Production</b>	SC issued in 2013	Animal husbandry development planning shall take into account the environmental carrying capacity and the requirements for pollution prevention and control of livestock and poultry farming, and scientifically determine the variety, scale and total amount of livestock and poultry farming. Livestock and poultry farms and farming zones shall, according to the scale of farming and the needs of pollution prevention and control, install sanitary facilities for separating manure, wastewater from storm water, storing, bio-digesting, composting manure or processing the manure into organic fertilizer or biogas, storing and treating wastewater, comprehensive disposal or utilization of animal carcasses. Only in the case that livestock farms or farming zones have contracted with the third parties for comprehensive utilization and sanitary treatment of livestock and poultry farming wastes, the farms or farming zones may not be necessary to build or install facilities for comprehensive utilization and sanitary treatment may not be built on their own. The State encourage and support the comprehensive utilization of livestock and poultry farming waste by returning manure to the field, producing biogas and producing organic fertilizers.
<b>Technical Policy on Pollution Control of Livestock and Poultry Sector</b>	Ministry of Environmental Protection (the former MEE) issued in 2010	It stipulates the general principles of "source reduction, clean production, comprehensive utilization of resources, and prevention of secondary pollution" for the treatment of livestock and poultry manure.
<b>Regulations on the administration of pig slaughter</b>	SC issued in 1997, 4 <sup>th</sup> amended in 2021	The state implements a system of designated sites for slaughtering of live pigs. One of the conditions that a customized slaughterhouse should meet is that it has inspection equipment, disinfection facilities and pollution prevention

		measures that meet the requirements of environmental protection.
<b><i>Measures for the Administration of Livestock Slaughtering in Gansu Province</i></b>	GPPG issued in 2005	The conditions for the establishment of designated slaughterhouses (plants) of cattle and sheep shall include: (1) The site selection, layout and construction shall meet the requirements for epidemic prevention and environmental protection stipulated in the Law of the PRC on Animal Epidemic Prevention; (2) there should be lairage for reception of animals before slaughtering, slaughtering rooms and sanitary treatment facilities for diseased animals, wastewater, feces and bedding grass proportionated with the slaughtering capacity; (3) slaughterhouse ground shall be impermeable layer with no less than 1 meter cement wall skirt, and the operation process shall be reasonable to prevent cross-contamination.
<b><i>Opinions of the Ministry of Agriculture on Accelerating the Standardization of large-scale livestock and Poultry Farming</i></b>	Ministry of Agriculture (the former Ministry of Agriculture and Rural Affairs (MARA) issued in 2010	The standardized production of livestock and poultry implies siting livestock farms or farming zones, constructing livestock sheds and other facilities, selecting good varieties for breeding, feeding and other inputs, ensuring animal health and preventing epidemic, sanitary treating wastes and organizing producing process by strictly implementing relevant laws, regulations and standards to achieve improved livestock and poultry production with good varieties, sound farming facilities, standardized production, systematized epidemic prevention, sanitary manure treatment and normal supervision. MARA promote a shift to large-scale intensive livestock production through government guidance, policies support and market driven to lay a good foundation for effective prevention and control pollution from livestock sector.
<b>Relevant National Policies, Specifications, Standards</b>	or	Livestock and Poultry Farm Scale Standards and Filing Management Measures (Trial) (Draft for Comment) (2023); Standards for Supervision and Inspection of Pig slaughterhouses (plants); Environmental Quality Standards for Livestock Farms (NY or T 388-1999); Pollutant Discharge Standard of Livestock and Poultry Industry (GB 18596-2001), Technical Specification for Pollution Prevention and Control of Livestock and Poultry Industry (HJ or T 81-2001), Technical Specification for Sanitary Treatment of Livestock and Poultry Manure (GB or T 36195-2018); Notice on Further Clarifying the Requirements on Returning Livestock Manure to Field with Strengthened the Supervision of Pollution from Livestock Sector (2020), Technical Specification for Composting Livestock Manure (NY or T3442-2019), Technical Specification for Returning Livestock Manure to Field (GBT25246-2010), Technical Specification for Pollution Control Project of Livestock and Poultry Industry (HJ497-2009), "Technical Guide for Estimating the Carrying Capacity of Livestock and Poultry Waste Land" (2018), etc.
<b>Gansu Provincial and Local Rules or Regulations</b>	or	Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management (2007), Measures for the Administration of livestock Slaughter in Gansu Province (2005), Application Conditions and Acceptance procedures for Livestock Slaughtering at Designated Site in Gansu Province, Notice of

		the General Office of the MARA and MEE on Further Clarifying the Requirements for Returning Livestock and Poultry Manure to the Field and Strengthening the Supervision of Pollution from Livestock Sector (2020), etc.
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### 4.3.1.2 Implementation Mechanisms and Procedures

73. In order to implement the above-mentioned laws and regulations on livestock and poultry breeding, China has established and is gradually improving the relevant implementation mechanisms, which are listed in Table 4-7 below.

**Table 4-1 Mechanism for Pollution Control in Livestock Sector**

<b>Implementation Mechanisms or Procedures</b>	<b>Description</b>
<b>Pollution Prevention</b>	(i) Prepare local livestock and poultry farming pollution control plans. (ii) Establish prohibited zones, restricted zones, and farming zones to properly site farms. (iii) Construction, expansion, or upgrading of livestock and poultry farms or manure treatment facilities should follow relevant government plans and EIA requirements.
<b>Pollution Management</b>	(i) <i>Reduction</i> : Scientific manure cleaning methods (e.g., dry-and-wet manure separation, wastewater and storm water separation, dry manure collection, biological fermentation bed) are proposed to reduce wastewater and odor generation. (ii) <i>Treatment</i> : Discharge of treated effluent or emission should comply with applicable national and or local standards. (iii) <i>Utilization</i> : Comprehensive use of manure is encouraged such as applying manure to farmland or using manure to make organic fertilizer or biogas. Applying manure to farmland as fertilizers must match the farmland carrying capacity. Third-party professional entities should be engaged to accomplish manure utilization or disposal when the farms cannot find sufficient farmland to carry their manure. Biogas residues and slurry can be applied to farmland as fertilizers following sufficient treatment. (iv) Sanitary disposal, dead and diseased animals and related products should be disposed of by means of deep bury, rendering, incineration, sterilized by autoclaving.
<b>Integrated Utilization</b>	Integrated utilization of manure by returning them to farmland, producing biogas, manufacturing organic fertilizer are highly supported; combination of crops cultivation with livestock farming for returning manure matching the farmland carrying capacity. Encourage entities act as third party to provide service on manure collection, transfer and farmland application. Upgrade the level of facilities and equipment and implement the mechanized return of livestock and poultry manure to the farmland; Strengthen supervision of commercial organic fertilizer products with livestock and poultry manure as the main raw material, and promote the development of green organic geographical indication agro-food.
<b>Entity Responsibility</b>	Enterprises, cooperatives, farmers and herdsman engaged in livestock sector are the main entities responsible for the utilization of manure and pollution prevention and control and should build facilities for the sanitary treatment and resource utilization of manure, ensure the normal operation of the facilities, provide adequate farmland proportionated to caring capacity for application of manure. Third-party professional entities should be engaged to accomplish manure utilization or sanitary disposal.

### 4.3.1.3 Institutional Organization and Performance

74. **ARABs:** are the competent authorities responsible for guiding, serving and regulatory of livestock and poultry manure treatment and resource utilization. At the county level, livestock sections (1~4 staff) under ARABs are responsible for day-to-day management of manure treatment and utilization facilities. They pay sites inspections at least once a month while providing guiding services. The County ARABs develop implementation plans for treating and utilizing manure, and conduct regulatory assignment jointly with local EEBs, WRBs and town or township governments, and guide livestock farms or farming zones to upgrade their facilities on the manure resource utilization.

- **Registration for Endorsement:** As per Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management (2007), livestock farms or farming zones will have priority enjoy the relevant national and provincial support policies if they have registered for ARABs endorsement. Information for registration include selected site for livestock farming, production zones, animal epidemic prevention conditions reached, facilities used for sanitary treatment and resources utilization of manure and dead & diseased animals, agreement signed for applying manure to farmland as fertilizer, EIA documents, pollutant monitoring data etc., ARABs at county, municipal and provincial levels shall review and examine this information. With these registered information ARABs are able to effectively supervise and manage livestock manure.
- **Direct Connection and Reporting:** A Livestock Farms Direct Connection & Reporting Information Platform is a livestock production management assessment information platform organized and developed by the National Livestock Station in 2018 based on the Internet and the Internet of things. It has the function of big data collection and reporting and cloud computing monitoring of production. All the livestock farms registered in the county ARABs system are required to fill in their farming scale, pollutant treatment facilities and volume or amount of pollutants generated into the platform. The county ARABs can effectively monitor the number of animal husbandry and the resource utilization of livestock and poultry manure through the system platform.

75. **EEBs:** Livestock farms and farming zones, slaughterhouse and meet processing are subject to environmental management such as EIA, and pollution discharge permitting etc. Such information as breeding varieties, farming capacity, volume of waste produced, discharged during livestock farming, and integrated utilization of waste, etc., are also registered for EEBs endorsement. The county EPL enforcement team (about 10 staff) regular inspect and supervise the livestock farming facilities by means of “double random, one open” to assist and urge the livestock farms or farming zones to fully implement the primary responsibility for pollution prevention and control.

- **EIA System Implementation:** In accordance with local national laws and regulations on pollution prevention and control and environmental impact assessment, EEBs conduct review and approval or endorsement of EIA documents (documents cover detailed analysis and assessment of waste and sanitary treatment facilities) for projects and construction of large-scale livestock farms and farming zones, slaughtering and processing plants, veterinary laboratories and or animal product quality and safety testing labs, dead and diseased animal disposal centers, livestock product deep processing, storage, transportation and distribution facilities, and related medical waste treatment centers, and managing, environmental acceptance check at construction completion, and supervision during and after the event (see Section 4.2 of this report for details).
- **Pollution Discharge Permitting System Implementation:** Pollution discharge permitting system is a basic system in China's eco-environment governance mechanism, which plays a key role in connecting the "three simultaneous" environmental protection and improving the post-management of environmental protection. As per Catalogue of Classified Management of

Discharge Permits for Fixed Pollution Sources (2019 Edition) issued by MEE, EEBs carry out focus management, general management and registration management for large-scale farms and farming zones, slaughtering, meat processing, feed processing and other facilities (as listed in Table 4-5). The E&S team noticed in its site visits during October 2023 that the large-scale farms and farming zones in the 7 Program counties(district) have achieved zero emission of manure (by return to the farmland as fertilizer) without fixed effluent outlets, therefore, these farms and farming zone are only required to register in local EEBs pollution discharge permitting management platform for endorsement by filling such data as entities basic data, where or how pollutants go or treated, applicable pollution discharge standards, measures taken for controlling pollution, etc. It is not necessary for them to apply for and be issued of pollution discharge permits. Enterprises operating slaughterhouses and meat processing facilities need to apply for permits to discharge pollutants. The permits will state clearly whether they are subject focus management, general management or registration management depending on scales of their facilities. With information documented in the pollution discharge permits or recorded in the registration, EEBs, ARABs will be capable of regulatory to the operation of these facilities.

76. In terms of resource utilization of livestock manure, county ARABs and EEBs are staffed with sufficient funding budget to conduct supervision management of pollution prevention & control and great progress has been made. During the field visits to the 4 sample counties i.e., Lanzhou New District, Guazhou County, Sunan County and Jingchuan County in Gansu Province, the E&S team witnessed various facilities or ways for sanitarily treating and utilizing livestock manure were placed in livestock farms visited. (1) The large-scale livestock farms can basically treat and utilize livestock manure effectively. For example, a large-scale livestock farming project located in rural revitalization industrial park of Lanzhou New District (with farming capacity of 20,000 head of dairy cow after 2 phases of construction), manure was delivered by pipelines to a black file tank for fermentation. After dehydration and desulfurization, the biogas generated in from the fermentation tank were treated by means of internal combustion. After the separation of biogas slurry, the solid was fermented and used as organic fertilizer and applied to farmland surrounding the farm. Wastewater from the black file tank were treated by an on-site treatment station and the treated effluent were applied to farmland surrounding the farm. The enterprise who run this farm have gone through all environmental management procedures, including the preparation of EIA-report that was approved by EEB, the environmental acceptance check at construction completion, keeping a ledger of manure treatment and utilization, keeping monitoring odor and treated effluent as specified in its pollution discharge permit to ensure monitored data compliance with applicable discharging standards. (2) Some of small to medium scale livestock farming zone with capacity reaching scale<sup>12</sup> defined in “Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management (2007)” that are operated by cooperatives or smallholders have inadequate manure treatment and utilization and animals’ diseases control facilities. Some of which employ open-air manure stacking sheds with low processing levels. Some of which lack corresponding operational procedures and internal management systems. In comparison with “*Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management (2007)*”, there are rooms for such small to medium scale livestock farming zones to improve in terms of hardware facilities and internal management system.

77. Meanwhile, the *14th Five-Year Plan for Pollution Control of Livestock and Poultry Farming* were developed at Gansu provincial, municipal and county levels. For example, in the same Plan developed by Guazhou County in Oct. 2022, the objectives, tasks and key areas for pollution prevention and control of livestock and poultry farming are clarified. The requirements for the construction of pollution control facilities are determined, and pollution prevention and control measures such as the comprehensive

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<sup>12</sup> As per *Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management*, the scale of a livestock farming zone is defined as: raising 200-300 basic sows, or 1500-3000 fattened marketable pigs (including breeding pigs) per year; Raising and breeding 100-150 beef cattle (cows), or 300-500 beef cattle per year; Raising and breeding 300-500 ewes, or 1,000-1,500 meat sheep per year; Raising 10,000 to 20,000 laying hens;

utilization of livestock and poultry manure are determined. It is planned that by 2025, the comprehensive utilization rate of livestock and poultry manure will be increased from 83% to more than 85%, the rate of installed equipment for livestock and poultry farms' manure treatment will be increased from 83% to 100%, the rate of ledges of livestock and poultry farms' manure resource utilization will be increased from 70% to more than 85%, and the self-monitoring coverage rate of livestock and poultry farms that meet the discharge standards will reach 100%.

#### **4.3.1.4 Brief Summary**

78. China and Gansu Province have a relatively complete legal system and institutional setup in terms of livestock manure treatment and resource utilization. Particularly, since the beginning of the 21st century, the relevant departments of the Nation, Gansu Province and local governments have issued policies, regulations, management methods, planning and technical guidelines or norms related to pollution control in livestock and poultry farming and animal slaughter and processing, guiding the traditional decentralized farming shift to centralized, intensive, standardized, livestock production which combining livestock farming with crop cultivation to be more green and circular. This management system is qualified to better manage the impact of pollution from livestock sector and is in line with the World Bank Group's (WBG's) Environmental, Health, and Safety (EHS) Guidelines for Mammalian Livestock Production, and for the Meat Processing, covering good international industrial practice (GIIP) for environmental protection in livestock production and agro-food processing. In order to further improve and standardize the hardware facilities of small and medium scale livestock farming zones in pollution prevention and control, and improve internal management mechanism or procedure of livestock cooperation who run the farming zones and enabling them to achieve the relevant standards set forth in the Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management (2007), it is recommended: document cases of good practices and experience various counties in the prevention and control of livestock pollution and share with small-medium livestock farming facilities operators for them to prepare pollution control measures to be included into the Environmental and Safety Code of Procedures (ESCOP), and also take advantage of the implementation of the PforR to equip the necessary waste treatment facilities and incorporate them into the Program Implementation Plan (PIP). Appendix 8 of this report list generic mitigation measures for managing adverse E&S impacts which can be referred to by small and medium-sized farming zones to prepare their ESCOP.

### **4.3.2 Environmental Management for Artificial Forage Cultivation and Feed Processing**

79. The varieties of artificial forage in Gansu Province mainly include perennial and annual crops such as alfalfa, oats and forage corn. Artificial forage cultivation due to irrigation, fertilization, use of agricultural mulch film, forage crop protection and prevention of pests and diseases, there is potential for the prevention and control of agricultural non-point source pollution caused by excessive or unreasonable fertilization of fertilizers and pesticides, including nutrient and fertilizer management, pest and pesticide management, irrigation water quality management. Forage production product nearly no straw waste but will involve non-crop waste management. Other crop straw can be used as animals' feed, feed processing will and emit dust. With the deepening of China's ecological civilization construction and the concept of green agricultural development, China is accelerating the construction of agricultural and rural ecological environmental protection systems, including agricultural non-point source pollution, integrated prevention and control of crop diseases and pests, crop waste management and safety management systems closely related to forage cultivation and feed processing activities under the PforR.

### 4.3.2.1 Applicable Legal Framework

80. The main applicable laws & regulations on artificial forage cultivation and feed processing are listed in Table 4-7 below.

**Table 4-7: Main Laws and Regulations on Forage Cultivation and Feed Processing**

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
1. Nutrient and Fertilizer Management-prevention & control agricultural NPS pollution and soil degradation due to over-fertilization		
<i>Law of the PRC on Agriculture</i>	NPC issued in 1993 and 2 <sup>nd</sup> amended in December 2012	The Law stipulated that the production and operation of fertilizers shall be subject to a registration or licensing system in accordance with the provisions of relevant laws and administrative regulations. Rational use of chemical fertilizers, pesticides, agricultural mulch film, increase the use of organic fertilizers, to prevent the pollution to farmland, soil fertility declining.
<i>Measures for the Administration of Fertilizer Registration</i>	Ministry of Agriculture issued in 2006, amended by MARA in 2022	The registration and management system for fertilizer products shall be implemented. Unregistered fertilizer products shall not be imported, produced, sold or used, nor shall they be advertised. Before applying for fertilizer registration, producers conduct standardized field tests in China and pass the evaluation of the fertilizer chemistry, the fertilizer efficiency and safety organized by MARA. If the registered fertilizer is proved to be harmful to people, livestock and crops within the validity period of the registration, shall be deliberated by the fertilizer registration and evaluation committee and announced to be restricted or prohibited form use by MARA.
<i>Action Plan on Zero Growth of Chemical Fertilizer Use by 2020</i>	Ministry of Agriculture issued in 2015	The plan sets the goal of zero growth of chemical fertilizer use for major crops by 2020 in view of excessive and blind application of chemical fertilizer. It also puts forward action plans such as promoting soil tested formula fertilization, improving fertilization methods, promoting the use of efficient slow-release fertilizers, and increasing organic fertilizer application, etc.
<i>Technical Guidelines for Environmental Safety of Chemical Fertilizer Use</i>	Ministry of Environmental Protection issued in 2010	The guidelines set forth the principles, control technical measures and management measures for the environmentally safe use of chemical fertilizers, focusing on reducing the use of chemical fertilizers, their loss and NPS pollution.
<i>Implementation Plan for Agricultural NPS Pollution Control and Supervision and Guidance (Trial)</i>	MARA and MEE jointly issued in 2021	It is planned to further promote the prevention and control of agricultural NPS pollution such as the reduction of chemical fertilizers and pesticides, the comprehensive utilization of straw, the recycling of agricultural mulch film, and the treatment of livestock manure. It is also planned to improve laws and regulations, standards, optimize economic policies, and establish a pluralistic model of co-governance, carry out investigation and monitoring of agricultural pollution sources, assess the environmental impact of agricultural NPS pollution, and build a monitoring platform for

		agricultural NPS pollution.
<b>Other relevant national laws and regulations</b>	or	In addition, there are a large number of sector laws and regulations that cover the rational use of chemical fertilizers and the reduction of environmental pollution, including: the Environmental Protection Law, the Water Pollution Prevention and Control Law, the Agricultural Technology Extension Law, the Marine Environmental Protection Law, the Agricultural Product Quality and Safety Law, and so on.
<b>Gansu Provincial relevant regulations</b>		Regulations of Gansu Province on the Protection of Agro-Ecological Environment (2007)
2. pests <sup>13</sup> and pesticide use		
<b><i>Regulations on Crop Pests Prevention and Control</i></b>	SC issued in 2020	The prevention and control of crop diseases and pests is guided by the principle of prevention first followed by comprehensive control. The government shall take the leadership and local authorities shall take responsibility within its jurisdiction to apply green prevention and control approaches supported by scientific and technological technologies to manage pesticides in the manner that are classified. Information technology and biotechnology should be applied to promote intelligent and green control crop pests. The use of green technologies, advanced spraying equipment and safe and efficient pesticides should be encouraged. Government encourages and supports specialized pest control service organizations through government purchase of services and encourages them to use green prevention and control technologies.
<b><i>Measures for the Administration of Specialized Services for the Control of Crop Pests</i></b>	MRAR issued in 2021	ARABs at or above county levels shall strengthen the management of specialized service <sup>14</sup> organizations for the prevention and control of crop pests, provide them with technical training, guidance and service for specialized pests prevention and control to standardizes their service behavior. Field operators of specialized service organizations shall be able to correctly identify crop diseases and insect pests in the service area with knowledge on correct scope, methods, intervals of various pesticides applications, as well as the knowledge of safety protection in field operations. Field operators of specialized service organizations shall correctly use the application machinery and related articles for crop pests control and shall provide specialized services for the prevention and control of pests by taking comprehensive measures (such as agricultural, physical, biological and chemical measures), and apply pesticides scientifically in accordance with the relevant regulations on the safe use of pesticides.
<b><i>Technical Guidelines for Green Agricultural Development</i></b>	MARA developed in 2018	In order to build a technical system supporting the green development of agriculture, vigorously promote the construction of ecological civilization and the green development of agriculture, the Guideline proposed a number of important tasks related to the development of green inputs, including research and development

<sup>13</sup> Crop pests here refer to diseases, insects, grass, rats and other harmful organisms that farm to crops and their products

<sup>14</sup> Specialized control service for crop pest refers to behaviour that specialized control service organizations provide crop pests control services for agricultural producers and operators

<i>(2018-2030)</i>		of green production technology, development of green value-added technology, etc., in terms of research and development focus, integrated demonstration, promotion and application. The important tasks include the application and extension of environmental-friendly high-efficient fertilizer, pesticides and biological agents, technologies on agricultural non-point source pollution control, fertilizer and pesticide uses reduction and efficiency improvement and agricultural waste recycling, etc.
<b><i>Pesticide Management Regulations</i></b>	SC issued in 1997, 2nd amended in 2022	Pesticide producers and sellers have responsibility for the safety and quality of their pesticide products and should accept government and public supervision. Government should encourage and support the research, production and use of safe, efficient and economical pesticides, promotes the specialized use of pesticides, and promotes the upgrading of the pesticide industry. Government should promote biological and physical approaches in pest control and encourage to use advanced spray equipment to reduce pesticide use. Pesticide producers and sellers are subject to pesticide registration and permitting requirements. Pesticide users are asked to follow specifications when applying pesticides. ARABs should regularly oversee pesticide production, sale, and use. Pesticide users shall protect the environment, beneficial organisms and rare species, and shall not discard pesticides, pesticide packages or clean application instruments in drinking water source protection areas or river courses.
<b><i>Action Plan on Zero Growth of Pesticides Use by 2020</i></b>	Ministry of Agriculture developed in 2015	To address the issue of high production cost, pesticides residue of products exceeding applicable standard, environmental pollution due to excessive application and unscientific application of pesticides, the Plan set up the goals on green prevention and control, unified control and scientific application of pesticides and strive to achieve zero growth of total pesticide use.
<b><i>Management Measures on Recycling and Disposal of Pesticides Packaging Waste</i></b>	MARA, MEE issued jointly in 2020	pesticide producers and operators are required to perform the corresponding pesticide packaging waste recycling obligations in accordance with the principle of "who produces, manages, and who recycling", and take effective measures to guide pesticide users to return pesticide packaging waste in time.
<b>Other relevant national laws and regulations</b>	<b>or</b>	In terms of pesticide safety management, the relevant laws and regulations include the "Agricultural Product Quality Safety Law", the "Food Safety Law", the "Regulations on the Administration of Hazardous Chemicals", the "Measures for the Administration of Pesticide Registration", the "Measures for the Administration of Pesticide Production Licensing", the "Measures for the Administration of Pesticide Business Licensing", and technical norms such as the "Code for the Safe Use of Pesticides" and the "Technical Guidelines for the Environmental Safety of Pesticide Use". At the same time, the MARA also regularly updates the "List of Prohibited Pesticides", and dynamically updates the prohibited and restricted pesticides. These laws and regulations directly or indirectly put forward requirements for the safety management of pesticides and constitute the legal framework of pesticide

		management system.
<b>Gansu Relevant regulations</b>	2020	Gansu Action Plan on Zero Growth of Pesticides Use by 2020
3. Agricultural wastes management		
<b><i>Measures for the Administration of Straw Burning Ban and Comprehensive Utilization</i></b>	State Environmental Protection Administration issued in 1999	Areas with concentrated population, important transportation facilities, and nature reserves are prohibited from straw burning, taking town or township as burning-ban zone. It is encouraged to make comprehensive utilization of straw.
<b><i>Agricultural Mulch Film Management Regulations</i></b>	MARA, The Ministry of Industry & Information Technology, MEE, State Administration for Market Regulation jointly issued in 2020	Agricultural mulch film producers and sellers should establish and keep mulch film sales records; farm owners, farmer cooperatives, and other users should establish and keep use records; mulch film collection and recycling entities should keep collection and recycling records; and mulch film users should pick up mulch film residues in a timely manner and deliver them to collectors or recycling enterprises instead of dumping, burying, or burning them.
<b><i>Measures for the Management of Recycling and Disposal of Pesticide Packaging Waste</i></b>	MARA, MEE jointly issued in 2020	Pesticide producers and operators are required to fulfill the corresponding obligation of recycling pesticide packaging waste in accordance with the principle of "who produces and manages, who recycles", and take effective measures to guide pesticide users to return pesticide packaging waste in a timely manner
<b><i>Guidance on the Recycling and Treatment of Fertilizer Packaging Waste</i></b>	MARA issued in 2020	Overall consideration and coordination with the recycling and treatment of pesticide packaging waste to implement classified disposal. Pesticide producers, sellers and users shall bear their respective obligations in collection and recycling under the principle of "who produces, who recycles, who sells, who recycles, who uses, who recycles".
<b><i>National Hazardous Waste Catalogue</i></b>	MARA, 2021 edition	Packaging materials that are in direct contact with pesticides or contain pesticide residues that are discarded after the use of pesticides shall be managed as hazardous waste <sup>15</sup> , unless they are collected and transferred to a set centralized storage point in accordance with the Measures for the Management of Recycling and Treatment of Pesticide Packaging Waste (hereinafter referred to as the "Management Measures"), pesticide packages are exempted from hazardous waste if they are collected, transported, and disposed of as required. Recycling process of pesticide packages by entities who reuse them satisfying to the requirement of the "Management Measures" are exempted from hazardous waste

<sup>15</sup>As per the Measures for the Management of Recycling and Treatment of Pesticide Packaging Waste (hereinafter referred to as the "Management Measures"), if pesticide packages are collected and transferred to the designated site for centralized storage points, the process of collection is exempted from hazardous waste, the process of transferring is exempted from hazardous waste if meeting transportation conditions specified in the Management Measures. Recycling process of pesticide packages by entities who reuse them satisfying the requirement of the "Management Measures" are exempted from hazardous waste management. Disposal process pesticide packages by means of sanitary landfill for domestic solid waste are also exempted from hazardous waste management.

		management. Disposal process pesticide packages by means of sanitary landfill for domestic solid waste are also exempted from hazardous waste management.
<i>The 14th Five-Year Plan for National Agricultural Green Development</i>	MARA, NDRC, Ministry of Science and Technologies, Ministry of Natural Resource (MNR), MEE, National Forestry and Grassland Administration (NFGA) developed in 2021	Promote the utilization of straw as fertilizer, feed, fuel, base material and raw materials, strictly prohibit burning and control, and prevent regional air pollution caused by straw burning.
<b>Relevant Gansu Provincial regulations</b>	or	"Gansu Province on Implementation Plan for Further Strengthening Plastic Pollution Control", "Gansu Provincial Implementation Plan for Pesticide Packaging Waste Recycling and Treatment ", "Gansu Provincial Regulation on Agricultural Mulch film Recycling", etc.

#### 4.3.2.2 Implementation Mechanisms and Procedures

81. Mechanisms for controlling pollution from forage cultivation and feed processing are listed in Table 4-8 below.

**Table 4-8: Mechanisms for Controlling Pollution from Forage Cultivation and Feed Processing**

<b>Implementation Mechanisms or Procedures</b>	<b>Description</b>
<b>Mechanism of Fertilizers registration and Approval</b>	As per Measures for the Administration of Fertilizer Registration, MARA is responsible for nation-wide fertilizer registration review, issuance of registration certificate, publicity, and regulatory management of fertilizers. Only the registered fertilizers can be produced. Chemical fertilizer producing and selling activities are not subject to permitting requirements like pesticides; instead, they are produced and sold in a market-based manner. Producers and sellers manage their activities in line with market rules; The general practice is to sell to farmers through agricultural material companies at all levels and agricultural technology extension stations, soil fertilizer stations, plant protection stations or sales agents
<b>Approaches on nutrient management and chemical fertilizer use reduction and efficiency improvement</b>	BRARs at all levels issued guidelines on scientific fertilization of major crops and set up teams of fertilizer experts to provide technical guidance on managing nutrient and fertilizer use reduction and efficiency improvement. Main approaches includes: (1) advancing test-based fertilization with formula constantly improved; (2) planting green manures to promote energy-saving and low-carbon agricultural development; (3) replacing chemical fertilizer with organic fertilizer or mixture of the two; (4) promoting returning straw to the field to maximize the substitution and reduction of potassium fertilizer; (5) optimizing composition of fertilizers by means of application of special formula fertilizers (e.g., alkaline fertilizer (applicable to Hunan where soil is dominated by acidic red soil), water-soluble fertilizer, and soil conditioner, etc., selected rationally according to soil, role, nutrient demand of crops, and local ecosystem; (6) improving fertilization methods, such as water integrated water & fertilizer management, deeper mechanical fertilization, foliar fertilization, etc.; (7) emphasizing on provision of technical training, etc.
<b>Fertilizer packages</b>	They are subject to integrated management considering: (1) Scope of management: All packages of chemical, organic, microbiological and water-soluble fertilizers should be properly

<b>management</b>	managed; (2) Responsible entities: Fertilizer producers, sellers and users should take the lead in fertilizer packages recycling. Fertilizer producers and sellers should set up specific facilities to keep collected fertilizer packages. Farming service agencies, marketing cooperatives, and recycling enterprises are encouraged to participate in collection and recycling of fertilizer packages. (3) Recycling approaches: reusable packages should be collected by users, recycled by sellers, and utilized by professional enterprises; and non-reusable packages can enter local rural solid waste systems or pesticide packages management systems; (4) Source reduction: Fertilizer producers are encouraged to use large-volume recyclable packages, and recoverable reused packages; (5) Social services: It's promoting socialized fertilizer formulation and application services, providing large-volume package of fertilizers to large-scale sellers, and encouraging unified fertilization service to large pieces of farmland etc.
<b>Pesticides Producers management</b>	The State implements a licensing system for pesticide production. Pesticide producer must be the holder of pesticide production license and should apply for a registration certificate for each pesticide product that provides basic information such as the pesticide name, ingredients, toxicity, scope of application, usage and dose, valid period, certificate holder, reference number, etc. A pesticide product must pass a quality test and obtain a qualification certificate before entering the market. The pesticide label should give key information of the product. Pesticide producer should keep sale records for at least two years and recycle pesticide packages as per government requirements. Pesticide packaging shall comply with the relevant provisions of the State, and wasted pesticide packages shall be recycled.
<b>Pesticides sellers management</b>	The State implements a licensing system for pesticide selling, sellers must hold pesticide management licenses issued by ARAB at or above the county level and be staffed with professional education background or 56-hour on-the-job training certifications in the field of agriculture, plant protection, pesticide, or other related subjects. Pesticide seller should have suitable selling and storage spaces and facilities, have proper systems and regulations on recording, safety management, emergency response, storage management, waste recovery and disposal, technical instruction, etc. Pesticide seller should not buy pesticides from any producer who doesn't have a pesticide production permit or from any pesticide seller who doesn't have a pesticide selling permit and should not process or sub-package any pesticides. Pesticide seller should explain the scope, method, dose, requirement, and precautions about pesticide application to buyers and recycle pesticide packages.
<b>Pesticides users management</b>	Pesticide user should strictly follow the specifications on pesticide application scope, function, dose, methods, and precautions and should not apply pesticide beyond the specifications. Users are not allowed to use any prohibited pesticides and apply any pesticides in drinking water source protection areas, or dump pesticides or pesticide packages in drinking water source protection areas or rivers
<b>Reduced use of pesticides</b>	(1) improvement of technique and use of new pesticide application devices: for example, using drones to increase spraying efficiency; (2) selection of pesticides to vigorously promote high-efficiency, low-toxicity, and low residue pesticides by following the latest Recommended Catalogue of Scientific Use of Pesticides for Pest Control of Major Crops published by Hunan Provincial DRAR; (3) green pest control: combining multiple ways such as agronomic methods (e.g., ploughing), ecological methods (e.g., improving soil environment, removing weeds), physical methods (e.g., pest killer lamps, food or sexual attractants, insect nets, sticky colored boards), biological methods (e.g., ladybirds against aphids, microorganisms, and other biological pesticides); (4) promotion and increasing the coverage of specialized organization to provide prevention and control service, and (5) pesticide source control: ARABs at county level (who have agricultural comprehensive law enforcement brigade) supervises and inspects the license of pesticide operators, pesticide quality and safety, and conducts training for pesticide users
<b>Crop straw management and multi-purpose</b>	(1) Straw burning ban management: delimit area for straw burning ban where fire is monitored for fire warning and response. (2) Fertilizer utilization: use straw as fertilizer by returning decomposed or bio-reacted straw to farmland or processing straw into organic fertilizer production, etc.; (3) Feed utilization: use straw as silage, or processed into granulated feed by

<b>utilization</b>	means of ammoniating; (4)Energy utilization: Promote straw bio gasification, pyrolysis gasification, curing molding, carbonization, direct combustion for power generation, biomass energy utilization; (5) Utilization of straw as culture base for mushroom cultivation or seedlings by means of bio-chemical technology; (6) Raw material utilization: Using straw as raw material to produce non-wood pulp paper, xylitol, packaging materials, degradable films, tableware, artificial plates, composite materials, woven products, etc.
<b>Agricultural Mulch Film Management</b>	With support from government, farmers and agricultural operators are required to pick up the agricultural mulch film at farmland, store them in collection outlets at the village level, recycled by township enterprises. Users, collection outlets and township recycling enterprise of agricultural mulch film shall establish ledgers respectively. Measures oriented for managing agricultural mulch film include: (1) reduced use: promote the rational application of mulching technology, strengthen the exploration of the crop rotation system, and demonstrate and promote technologies such as multi-use of one piece of film and inter-row mulching; (2) Standardization: introduce and implement local standards for mulching film, and promote the application of thicker mulching film above 0.01mm; (3) Film picking mechanization: strengthen the research and development of agricultural mulch film recycling machinery and technology integration; (4) Specialized recycling: Support specialized social service organizations or enterprises to provide service on agricultural mulch film recycling and processing.
<b>Pesticides Packaging Waste Management</b>	As per the latest Hazardous Waste Catalogue, pesticide packaging waste is no longer collected, transported and processed as hazardous waste if it meets the national exemption conditions, but it needs to be properly managed through the following mechanisms: (1) Recycling: packaging directly contacting with pesticides or containing residues of pesticides, including bottles, cans, drums, bags, etc., that are discarded after the use of pesticides; (2) Entities responsible for recycling and treatment: pesticide producers, operators and users are the main entities responsible for pesticide packaging waste recycling, the first two of whom shall not refuse to accept the packaging waste produced and sold by them, and take effective measures to guide pesticide users to return pesticide packaging waste in a timely manner by setting up recycling devices for pesticide packaging waste recycling. Pesticide users shall collect pesticide packaging waste in time and return it to pesticide seller or pesticide packaging waste recycling sites, and shall not discard it at will. (3) Approaches for collection, storage, transportation and treatment: the layout of the recycling site should be designed to cover pesticide production enterprises, pesticide stores, large-scale planting bases, agricultural parks, large pesticide users, cooperatives and administrative villages. In principle, a temporary storage point for pesticide packaging waste should be established in each administrative village group, a transfer point for pesticide packaging waste should be established in each township, and a centralized storage point for pesticide packaging waste should be established in each county. Use rural waste recycling and disposal system to transfer regularly; Encourage and support the resource utilization of pesticide packaging waste (such as garbage power generation, manufacturing sewer manhole covers and underground pipelines), others that are not utilization, shall be disposed of legally by means of landfilling, incineration and other sanitary treatment. (4) Recycling and treatment costs: the costs shall be borne by the corresponding pesticide producers and operators; If the pesticide producer or operator is unclear, the disposal expenses shall be paid by the local people's government at the county level. (5) Source reduction: Pesticide producers are encouraged to use packaging that is easy to recycle and dispose of, water-soluble polymer packaging or packaging that is degradable in the environment. Aluminum foil packaging shall be phased out, the use of large-capacity packaging will be encouraged for easy to recycling. (6) Social services: industry associations are encouraged to play a role in organizing and coordinating providing technical guidance and services in the recycling and treatment of pesticide packaging waste; and specialized service institutions are encouraged and supported to carry out the recycling and treatment of pesticide packaging waste.
<b>Fertilizers</b>	Fertilizers packaging waste can be managed through: (1) Recycling: including chemical

<b>Packaging Waste Management</b>	fertilizers, organic fertilizers, microbial fertilizers, water-soluble fertilizers, soil conditioners and other fertilizer packaging waste; (2) Entities responsible for recycling: fertilizer producers, operators and users are the main entities responsible for fertilizer packaging waste recycling, the first two of whom shall set up recycling devices for fertilizer packaging waste recycling. Agricultural production service organizations, supply and marketing cooperatives, and renewable resources enterprises are encouraged to carry out fertilizer packaging waste recycling. (3) Approaches for collection, storage, transportation and treatment: fertilizer packaging waste with reuse value is collected by users, recycled by market players, and reprocessed by enterprises; Those waste with no reuse value can be included in the rural garbage collection and disposal system or the pesticide packaging waste recycling and treatment system; (4) Source reduction: fertilizer producers are encouraged to use packaging that is easy to recycle and dispose of; The use of large-capacity packaging will be encouraged for easy to recycling. (5) Social services: shift to unified distribution and application of fertilizer by unified social services organizations who can be provided with large size packaging fertilizer products and carry out centralized continuous fertilization. Etc.
<b>Feed Processing Facilities Management</b>	The establishment of feed and feed additives production enterprises shall conform to the feed industry development plan and industrial policies, and meet the following conditions: (1) there are plants, equipment and storage facilities suitable for the production of feed and feed additives; (2) There are full-time technical personnel suitable for the production of feed and feed additives; (3) Having the necessary product quality inspection institutions, personnel, facilities and quality management systems; (4) A production environment that meets the safety and health requirements stipulated by the State; (5) having pollution prevention measures that meet the requirements of the State for environmental protection; (6) Other conditions stipulated in the quality and safety management standards for feed and feed additives formulated by the MARA.

**4.3.3.3 Institutional Organization and Performance**

82. **ARABs** are the main competent authority for managing fertilizers. The Gansu Provincial DARA is responsible for provincial-wide planning and directions. ARABs at or above the county levels are responsible for the supervision and administration of fertilizers within their respective administrative areas, and, through their comprehensive law Enforcement Bureau, conduct regular or irregular supervision and inspection of fertilizers produced, operated and used by entities or farmers under their jurisdiction, require improvement of products with unqualified quality within a time limit, and shall not renew the fertilizer registration certificate after the expiration of its validity period for products with continuous unqualified quality. And through the county or township agricultural extension stations, soil fertilizer stations, plant protection stations, farmers training schools and other institutions to provide training and technical guidance to farmers

83. In the Program Counties(district), there are farming centers under each county ARAB (2~5 staff) responsible for day-to-day farmland fertilization, including the preparation of annual implementation plan for reduced use of chemical fertilizer wit efficiency improvement, provide or organize to provide services on test-based formula fertilization and technical guidance, distributing fertilizer knowledge and publicity materials to farmers, regularly releasing fertilization formulas, organizing and providing relevant training, conducting in-depth investigation and statistics on fertilizer reduction performance of farmers, making annual work summary, and improving the work plan for the next year. The E&S team’s due diligence noticed that a few counties (district) still face some difficulties in promoting technology extension, and more training needs to be provided to strengthen farmers' awareness and knowledge of scientific fertilization.

84. **ARABs** at all levels are also the competent authorities responsible for regulatory of pesticide production, selling and using. The new pesticides registration certificate shall be pre-examined by the

provincial DARA, reviewed and issued by MARA; The pesticide production license shall be examined and approved by the provincial DARA; ARABs at or above the county levels shall examine and approve the pesticide selling license. The ARABs at the county level are responsible for the green prevention and control of pests and diseases, pesticide reduction and safe use related to the forage crops cultivation under the PforR, and different units are set up to manage the integrated management of planting, livestock farming, agricultural product quality and safety, and farmland construction. In addition, the agricultural comprehensive law enforcement brigade under the ARABs is responsible for the supervision and inspection of the license of pesticide operators, pesticide quality and safety management; Agricultural institutions (such as agricultural technology extension stations, plant protection stations, etc.) are responsible for providing technical services and training to pesticide users, including training on the safe use of pesticides.

85. ARABs at or above the county levels are responsible for taking the lead in supervising the recycling and comprehensive utilization of agricultural waste such as agricultural mulch film, pesticide and fertilizer packaging waste and crop straw, and guiding the construction of recycling and utilization systems; EEBs at or above the county level are responsible for the supervision of waste agricultural plastic recycling and treatment activities, the prevention & control of environmental pollution from straw burning. ARABs at county level have plant protection stations or rural service centers and other institutions (2-5 people) who pay on-site survey, inspection on the recycling, comprehensive utilization of mulch film and crop straws; They have other duties, such as double checking recycling archives, conduction publicity and education activities, organization the construction relevant facilities for collection, storage and utilization of agricultural wastes and overseeing the operation of facilities. The county EEBs has Pollution Control Divisions (2~5 staff), or EPL enforcement teams (about 10 staff) to supervises the environmental protection and pollution prevention activities related to crop cultivation activities.

86. It is noticed during E&S team's due diligence that; Gansu Province issued the *"Implementation Plan of the Pilot Project of Comprehensive Utilization of Crop Straw"* in June 2023. All counties designated to the demonstration one for recycling agriculture mulch files developed their respective implementation plan, and some counties also formulated the "plans for alfalfa cultivation and pesticide use in alfalfa base". It was recorded in the annual performance summary report of ARAB of Minle County in Zhangye Municipality in 2021 that the County has carried out the zero-growth action of fertilizer and pesticide use, promoted mechanical fertilization, extended integrated water and fertilizer technologies, improved fertilizer utilization efficiency, promoted pesticide reduction and efficiency, and established 10 green organic agricultural product demonstration bases, resulting in reduced use of fertilizers and pesticides by 30%, saving water by 50%, established 10 demonstration bases for production of green and organic agro-food, 50 demonstration sites for integrated water-nutrient irrigation. A county-wide action on recycling agricultural mulch film and crop straw was taken to have built 16 standardized recycling outlets in towns and villages and a recycling network supported by village collection, enterprises transferring the reprocessing. As the result, in 2021, the county's comprehensive utilization of straw amounted to 1.817 million tons with comprehensive utilization rate of 92.47%, a total of 2,292.6 tons of wasted mulch film were recycled with a recycling rate of 73.5%.

#### **4.3.3.4 Brief Summary**

87. In terms of nutrient management, fertilizer reduction and efficiency improvement, green prevention and control of diseases and pests, pesticides use safety management, and agricultural waste management, China and Gansu Province have healthy legal frameworks, appropriate institutional Settings, personnel arrangements and financial guarantees, and have achieved significant results, which can provide guarantee for agricultural wastes management related to the PforR activities. These measures and tools are in line with the WBG's Guidelines for Annual or Perennial Crops Production, which cover good international industry practices, such as Integrated Pest Management (IPM), in line with the Bank's core principles. Appendix 8 of this report include a list of generic mitigation measures for adverse environmental and social impacts associated with typical activities of the PforR, which can be used to combat pollution in forage

cultivation and feed processing.

### 4.3.3 Environmental Management for Veterinary Service and Agro-food Quality Service Facilities.

#### 4.3.3.1 Applicable Legal Framework

88. The main applicable laws & regulations on animal health, veterinary service and agro-food quality testing facilities are listed in Table 4-9 below

**Table 4-9: List of Main Applicable laws & regulations on animal health, veterinary service and agro-food quality testing facilities**

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<b>1. Animal health and diseases prevention &amp; control</b>		
<i>Law of the PRC on Animal Husbandry</i>	NPC issued in 2005, amended in 2022	The <i>Law</i> stipulates that the ARABs shall be responsible for the supervision and control of animal husbandry; Animal husbandry producers and operators shall fulfill their obligations of animal epidemic prevention and ecological environmental protection according to law, and accept the supervision and inspection carried out by relevant competent departments according to law. One of the conditions that livestock and poultry farms shall meet, are livestock and veterinary technicians available to serve them; Livestock and poultry farms shall establish breeding files that shall include the source, name, object of use, time and amount of inputs such as veterinary drugs; Quarantine, immunization and disinfection; and sanitary treatment of dead and diseased livestock and poultry, as well as manure collection, storing, sanitary disposal and resources utilization, etc.
<i>Law of the PRC On Animal Epidemic Prevention</i>	NPC issued in 1997, 2 <sup>nd</sup> amended in 2021	The Law stipulates that animals infected with epidemic diseases and their excrement, products of animals infected with epidemic diseases, animal excrement in vehicles of transport, bedding, packaging, containers and other contaminated articles shall be disposed of in accordance with the relevant provisions of the State and shall not be disposed of at will.
<i>Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste</i>	NPC issued in 1995, 2 <sup>nd</sup> amended in 2020	The provisions in Chapter VI of the <i>Law</i> - Hazardous Waste are applicable to the prevention and control of environmental pollution by hazardous waste. It includes containers and packaging of hazardous waste, as well as facilities, sites and provisions for the collection, storage, transportation, utilization and disposal of hazardous waste.
<i>National Hazardous Waste Catalogue</i>	MEE, NDRC, Ministry of Public Security, Ministry of Transport, National HC, edition of 2021	The <i>National Hazardous Waste Catalogue</i> classifies medical waste as hazardous waste. The <i>National Medical Waste Catalogue</i> classifies medical waste into infectious waste, injurious waste and pathological waste. Each of the above two Catalogues has a "List of Hazardous Waste or Medical Waste Exemption Management " that lists the specific

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>National Medical Waste Catalogue</i>	MEE, National HC edition of 2021	waste names, exemption links, exemption conditions and exemption contents.
<i>Medical Waste Management Regulation</i>	SC issued in 2003, amended in 2011	The <b>Regulation</b> is enacted to strengthen the safe management of medical waste, prevent the spread of diseases, protect the environment and human health, and is applicable to the collection, transportation, storage, disposal and supervision and management of medical waste. The <b>Regulation</b> stipulates that the EEBs and HCs of the government at or above the county level shall, in accordance with the provisions of the Regulation, supervise and inspect the medical and health institutions and medical and health treatment units according to the division of responsibilities.
<i>Management Measures for Sanitary Treatment of Dead and Diseased Livestock and Poultry and Diseased Livestock and Poultry Products</i>	MARA issued in 2022	The <b>Management Measures</b> is enacted to strengthen the sanitary treatment of dead and diseased livestock and poultry and diseased livestock and poultry products, prevent and control animal diseases, promote the high-quality development of animal husbandry, and protect public health safety and human health. It is suitable for the collection, sanitary treatment and supervision and management of sick dead livestock and poultry and diseased livestock and poultry products in the process of livestock production, slaughtering, operation, isolation and transportation. The <b>Management Measures</b> stipulates that ARABs of the local people's governments at or above the county level shall be responsible for the supervision and administration of the sanitary treatment of dead and diseased livestock & poultry and diseased livestock and poultry products in their respective administrative areas.
<i>Technical Specification for Harmless Treatment of Livestock and Poultry Manure</i>	2018	The technical requirements for the layout of livestock and poultry farms and farming zones, manure storage, wastewater treatment, solid manure treatment and utilization, feeding and management, treatment of dead and diseased animals, and pollutant monitoring are specified.
<i>Regulation on Pollution Prevention and Control of Scaled Livestock and Poultry Production</i>	SC issued in 2013	The <b>Regulation</b> applies to the prevention and control of pollution from livestock farms and farming zones (excluding grazing and breeding in pastoral areas). The EEBs of the people's government at or above the county level shall be responsible for the unified supervision and administration of the prevention and control of pollution from livestock and poultry production.  The <b>Regulation</b> prohibits the construction of livestock farms and farming zones in environmentally sensitive areas such as urban residential areas, cultural, educational and scientific research areas and other populated areas. The construction, reconstruction or expansion of livestock farms and farming zones shall conform to the plans for the development of animal husbandry, the plans for the prevention and control of pollution from livestock and poultry

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
		production, and meet the conditions for animal epidemic prevention. The corresponding pollution control facilities to be built in livestock and poultry farms and farming zones shall include comprehensive utilization and sanitary treatment facilities such as disposal of livestock and poultry carcasses.
<i>Measures for Biosafety Environmental Management of PMLs</i>	State Environmental Protection Administration (former MEE) issued in 2006	PMLs shall install or be equipped with pollution prevention facilities and equipment in accordance with the state regulations on environmental protection, the EIA documents approved by competent EEB. To prevent and control potential adverse environmental pollution from the operation PMLs, the Measures set forth a number of provisions, including 1) pollution control facilities or equipment to be installed, environmental acceptance check at construction completion, pollution permits; 2) proper collection, storage and disposal of hazardous waste generated from the PMLs; 3) Keep recording of and filling of experiment activities, which shall cover the harmless treatment, centralized disposal and inspection of wastewater, exhaust gas and hazardous waste; 4) PML shall formulate emergency plan for environmental pollution, submit it to the competent administrative department of environmental protection of the local people's government at the county level for the record, and conduct exercises regularly; 6) formulate the rules and regulations for the prevention and control of laboratory waste water, waste gas and hazardous waste pollution, and assign special (and part-time) staff responsible for environment, and be subject to the supervision of EEBs at or above the county level.
<b>2. Agro-food Quality and Public Health &amp; Safety Management</b>		
<i>Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste</i>	NPC issued in 1995, 2 <sup>nd</sup> amended in 2020	Article 73 of the Law - Laboratories of all types and levels and their establishment entities shall strengthen the management of solid waste generated by laboratories, and collect, store, transport, utilize and dispose of laboratory solid waste according to law. Laboratory solid waste belongs to hazardous waste, shall be managed as hazardous waste.
<i>National Hazardous Waste Catalogue</i>	MEE, NDRC, Ministry of Public Security, Ministry of Transport, National HC, edition of 2021	The provisions in Chapter VI - Hazardous Wastes of the Law apply to the prevention and control of environmental pollution by hazardous wastes. The provisions include containers and packaging of hazardous waste, as well as facilities, sites and stipulate the collection, storage, transportation, utilization and disposal of hazardous waste. The Catalogue classifies part of the experimental waste generated by chemical and biological laboratories as hazardous waste; At the same time, the Catalogue listed the "exemption Management activities for handling hazardous waste", including the specific waste names, exemption links, exemption conditions and exemption contents
<b>3. Gansu Provincial Regulations and Measures</b>		
<i>Regulation for the Construction of</i>	Gansu Provincial Government	The <b>Regulation &amp; Measures</b> put forward specific requirements for epidemic prevention, waste sanitary treatment facilities and on the site selection, layout, and introduction of breeding stock, animal

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management</i>	issued in 2007	immunization, required veterinary drugs, and sanitary treatment of dead and diseased livestock.  The <b>Regulation &amp; Measures</b> also put forward specific requirements for waste treatment and pollution prevention.
<i>Gansu Province "Notice on Further Standardizing the Management of Medical Waste"</i>	HC, DEE, DRC, Department of Public Security of Gansu Province issued in 2017	The <b>Notice</b> puts forward relevant provisions to strengthen the management of medical waste in medical and health institutions, standardizes the operation activities of entities engaged in centralized disposal of medical waste, calls for strengthened management of medical waste in grass-roots medical and health institutions, and standardized management and supervision of medical waste.

#### 4.3.3.2 Implementation Mechanisms and Procedures

89. Implementation mechanisms and procedures for controlling pollution from animal health and agro-food quality service facilities are summarized in Table 4-10 below.

**Table 4-10: Implementation Mechanisms and Procedures for Controlling Pollution from Animal Health and Agro-food Quality Service Facilities**

Implementation Mechanisms or Procedures	Description
<b>Hazardous Waste Collection and Disposal</b>	Hazardous waste transfer shall be efficiently controlled throughout the process, and go through relevant procedures in accordance with laws, administrative regulations and relevant provisions of the State. No transfer shall be made without the approval of the competent authority. Any entity engaged in the collection, storage, utilization and disposal of hazardous waste shall obtain a license in accordance with the relevant provisions of the State and operation of the entity shall comply with relevant laws and regulations and applicable environmental protection standards. Hazardous waste shall not be dumped or stacked without authorization. Pursuant to legal requirement, entities producing hazardous waste shall develop plans for managing hazardous waste and register for endorsement by following legal procedures. If entities producing hazardous waste have obtained pollution discharge permits, the provisions of the discharge permit management system shall be applicable.
<b>Hazardous Waste Transfer</b>	Entities producing hazardous waste shall establish ledger for managing hazardous waste and keep records of relevant information, monitoring data, and declare to local EEBs of their hazardous waste categories, production quantity, source, flow direction, utilization, storage, disposal and other relevant information through the hazardous waste information management system.
<b>Hazardous Waste Emergency Response</b>	Entity engaged in the collection, storage, utilization and disposal of hazardous waste shall formulate prevention measures and emergency plans for control environmental pollution by hazardous waste. Relevant responsible departments shall inspect the implementation of the said preventive measures and emergency plans.
<b>Medical Waste</b>	Medical and health institutions and centralized medical waste disposal entities shall obey

<b>Management</b>	by laws, administrative regulations and relevant provisions of the State, submit information on the generation, collection, storage, transportation and disposal of medical waste to the HCs, transportations, EEBs of the people's governments at or above the county level, and take effective measures to prevent the loss, leakage, infiltration and spread of medical waste. Medical and health institutions shall, according to law, sort and collect the medical waste generated and hand it over to the centralized treatment entities for disposal. The centralized medical waste disposal entity shall be reasonably equipped with collection and transfer facilities and vehicles, and collect, store, transport and dispose of medical waste in accordance with applicable regulations. Infectious medical waste shall be collected, stored, disinfected, transported, disposed of and kept in accordance with applicable regulations and keep record of such data.
<b>Labs Waste Management</b>	Laboratories at all levels and of all types and their establishment units shall, in accordance with the law, strengthen the management of solid waste generated by the labs, and collect, store, transport, utilize and dispose of laboratory solid waste in accordance with the law. Labs solid waste belongs to hazardous waste, shall be managed as hazardous waste.

**4.3.3.3 Institutional Organization and Performance**

90. During the due diligence, the Bank E&S team was informed that Gansu DARA once developed a provincial-wide plan for sanitary disposal of dead and diseased animals, including 18 regional centralized sanitary disposal centers by the year 2025, 8 of them have been constructed and operated as of the 1<sup>st</sup> half of 2023, 4 of them are under construction, and remaining of 6 of them (like the one sited in Jingchuan county serving Pingliang Municipality) are to be supported by the PforR or funded by other sources in parallel. In the Program counties (district), means of dead and diseased animals vary among different livestock farms, farming zones, cooperatives and smallholders. Those large scale livestock farms run by enterprises, due to the large scale farm facilities with standardized design, are well-equipped with dead and diseased animal sanitary treatment facilities (e.g., rendering machine, incinerator, etc.) or have their dead and diseased animals outsourced to specialized enterprises for sanitary treatment or resources utilization (e.g., biodiesel, organic fertilizer) and operated under standardized procedures set forth in the corporate management system. Pollution from dead and diseased animals can be well-controlled and comply with the *"Measures for the Management of Sanitary Treatment of Dead and Diseased Livestock and diseased livestock and Poultry Products"*, While, those livestock farming zones run by farmer cooperatives or households, with farming capacity relatively smaller than that of farms, have inadequate or poorly-equipped rooms for isolating diseased animals, storing and sanitary treatment of dead and diseased animals. Layout and farming facilities can be improved to meet the requirements of *"Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management"* and these improvements can be supported by the PforR. In the past, dead and diseased animals were deeply buried far away from the villager’s residential areas. In recent years, through the implementation of the mechanism of linking insurance with sanitary treatment of dead and diseased livestock, the government provides subsidies to all farmers and livestock farming cooperatives to encourage them to buy insurance from professional insurance companies against the sanitary treatment of their dead and diseased animals. Once the insurance buyers notify the cases of dead and diseased animals, the insurance company shall mobilize the sanitary treatment center or the qualified enterprise that meets the sanitary treatment standards to transfer the dead and diseased animals to the designated sanitary treatment point or facility by special transportation means for disposal, and accept the supervision of county-level AHVMBs.

91. HCs and EMBs are responsible for macro coordination and supervision of health and safety issues related to livestock production. The facilities’ operators or enterprises are responsible for specific health and safety management. The sector authorities (ARABs, EEBs, Housing and Urban & Rural Construction Bureaus) at county-level are responsible for supervision of the respective sectoral health & safety issues. These sectoral authorities conduct regular inspection (normally once a month) on occupational health and safety (OHS) issue. For example, the law enforcement teams of ARABs, during their regular inspections,

will request livestock farms and farming zones to enhance OHS of their employees and improve their deodorization devices, remind and guide farmers or cooperatives to store and use pesticides safely and wear personal protective equipment (PPE) at work to protect themselves and avoid toxic accidents to the public or users.

92. To handle medical waste, other hazardous waste from veterinary service labs and agro-food quality testing labs, certified competent agencies or companies were assigned to provide unified recycling and disposal of the said wastes. For example, Gansu Jinchuang Lufeng Environmental Technology Co., LTD has been assigned to serve for Lanzhou New District, Minle County and Sunan County; Pingliang Municipal Huanchuang Medical Waste Centralized Disposal Co., LTD has been assigned to serve for Jingchuan County and Lingtai County; Qingyang Municipal Medical Waste Center has been assigned to serve for Zhengning County; and Yumen Municipal Runze Environmental Protection & Renewable Energy New Technology Co., LTD has been assigned to serve for Guazhou County. Agreements have been signed among them respectively for recycling and disposal of hazardous waste and unified bills are used to transfer hazardous waste regularly for recycling or disposal. The veterinary service labs and agro-food quality testing labs have been subjected to EIA and environmental acceptance check at construction completion (see Appendix 7 for details).

#### 4.3.3.4 Brief Summary

93. China and Gansu Province have a mature regulatory framework for managing environmental pollution from veterinary service labs and food quality testing labs, appropriate institutional settings, staffing and financial support, and have achieved significant results to support the management of the program activities. The management system is consistent with the WBG's Environmental, Health and Safety Guidelines and is in line with the Bank's core principles.

## 4.4 Eco-environmental Conservation Management System

### 4.4.1 Natural Ecological Conservation

94. Gansu Province is in the Yellow River water conservation area, and other inland rivers birthplace, such as rivers of Dang, Shule, Black, Shiyang etc. It has irreplaceable ecological regulation functions such as water conservation, ecological function and wildlife protection function. The Qilian Mountains, located in the northeast of the Qinghai-Tibet Plateau, span Gansu and Qinghai provinces. It is an important ecological security barrier and an important source of water in western China, as well as a key ecological functional area and a priority area for biodiversity conservation in China. Qilian Mountain National Park covers an area of 50,200 square kilometers, more than two-thirds of which are in Gansu province, involving Sunan County and Minle County of the project; Anxi Extreme Arid Desert National Nature Reserve (covering 800,000 square hectares) is in Guazhou County.

- **Qilianshan National Park** is located at the junction of Gansu and Qinghai provinces. It is one of the top ten national parks in China. The Park covers total area of 50,200 square kilometers, including 34,400 square kilometers in Gansu and 15,800 square kilometers in Qinghai. In September 2017, the Chinese government approved the establishment of the Qilian Mountain National Park, with the main responsibility of protecting the biodiversity, the authenticity and integrity of the natural ecosystem in the Qilian Mountain. As one of the important parts in the Park, the Gansu Qilian Mountain National Nature Reserve, is in the middle and east section of the north slope of the Qilian Mountains in Gansu Province, covering municipalities of Wuwei, Jinchang and Zhangye, involving 8 counties including Minle County and Sunan Yugur Autonomous County. In 1988 The State Council approved the Natural Reserve to be a forest and wildlife type targeting the conservation of Qinghai spruce, Qilian cypress, demoiselle crane and other creatures.

- **Anxi Extreme Drought Desert Natural Reserve** is located at the intersection of temperate desert, extreme arid desert and typical desert in central Asia. This Natural Reserve is in the junction of Qinghai-Tibet Plateau and Mongolia-Xinjiang Desert, and its desert ecosystem is typical and representative in the whole ancient Mediterranean region. It is the only multi-functional comprehensive natural reserve in China to protect the extremely arid desert ecosystem and its biodiversity. The reserve covers a total area of 800,000 ha, of which, the core zone covers 83,900 hectares, accounting for 10.5% of the reserve area. The buffer zone covers 131,200 hectares, accounting for 16.4% of the protected area. The experimental zone covers 584,900 hectares, accounting for 73.1% of the protected area.
- **Guazhou Tangtun Lake Nature Reserve** (protected at provincial-level) is a typical wetland in the extreme arid desert area in the western inland. Part of the groundwater that has infiltrated into the protection area forms surface runoff in the form of spring water, which evolves into seasonal marshes and spring-fed rivers, forming a unique ecological landscape of the reserve and becoming an ideal place for migratory birds to live and breed. The core zone is 22,496.7 hectares, the buffer zone is 20,211 hectares, and the experimental zone is 28,852.3 hectares, accounting for 40.3%. Among the protected area: forest land accounted for 60.4%; grassland accounted for 22.3%; wetlands account for 6%.

95. Gansu Province is located at an area prone to soil erosion in China. The seven Program counties (district) are in the Hexi (west to the Yellow River) Corridor and Qilian Mountain key soil erosion prevention and prevention areas, and the Longzhong (middle Gansu) and Longdong (eastern Gansu) key soil erosion management areas. Gansu bears responsible for ecological protection and restoration, water and soil conservation, and the construction of ecological safety protection barriers.

96. The typical activities of livestock breeding & raising and animal health & disease prevention and control under RA 1 of the PforR will be almost implemented in rural and quasi-urban area; activities on fodder productions area will also be conducted on farmland in agricultural area and forage produced from them will support shifting to confined-feeding, thus alleviated pressure of grazing on natural grassland (part of them within the scope of natural reserves, and thus benefit to the conservation of these natural reserves .

#### 4.4.1.1 Applicable Legal Framework

97. The National and Gansu Provincial applicable laws and regulations on natural eco-environment are listed in Table 4-11 below.

**Table 4-11: A List of Applicable Laws and Regulations on Natural Eco-environment**

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<b>1. Natural Ecology Conservation</b>		
<i>Law of the PRC on Wetland Protection</i>	issued by National People’s Congress (NPC) & State Council (SC) in 2022	This law is to strengthen the protection of wetland, maintain wetland ecological function and its biodiversity, safeguard ecological security and promote the construction of ecological civilization. Wetlands are classified into important wetlands and general wetlands for better management in China. Except for national major projects, no other project is allowed to occupy national important wetlands. All construction projects are required to avoid wetlands in site or route selection, while if wetlands cannot be avoided, efforts should be made to minimize occupation and proper measures should be taken to mitigate the adverse impacts on the ecological functions of the wetlands. If site

		or route selection cannot avoid national important wetlands, comments must be sought from the national FGB. If provincial important wetlands or general wetlands are involved, comments must be sought from the FGBs at or above county level.
<b><i>Law of the PRC on Wild Animal Protection</i></b>	NPC issued in 1988, 4 <sup>th</sup> amended in 2022	If a construction project may have adverse impacts on nature reserves or wild animals' migration routes, the EEB that oversees reviewing and approving EIA documents <sup>16</sup> for a construction project, should seek opinions of the same-level wildlife protection authorities. Any illegal hunting of wild animals and destruction of natural habitats are prohibited.
<b><i>Wild Plants Protection Regulations</i></b>	SC issued in 1996 and amended in 2017	If a construction project may have adverse impacts on growing environment of national or local protected wild plants, the PIU must ensure the impacts be assessed appropriately in the EIA. Any entities or individuals are prohibited to illegally collect wild plants or damage their growing environment. Hunan Province also has the corresponding Regulations on the Protection of Wild Animal and Plant Resources (promulgated by the People's Congress of Hunan Province in 1988 and revised for the sixth time in 2020).
<b><i>Nature Reserves Regulations</i></b>	SC issued in 1994 and 2 <sup>nd</sup> amended in 2017	A nature reserve must be set up to protect an important habitat. No one is allowed to enter core zones of nature reserves (except for approved scientific research activities). No production facility is allowed to be built in core and buffer zones of nature reserves. No production facility that may pollute the environment or destroy natural resources or landscape is allowed to be built in experimental zones.  Accordingly, Gansu Province first promulgated Gansu Provincial Natural Reserves Regulation in 1996 and amended it in 2018.
<b><i>Law of the PRC on Agriculture</i></b>	NPC issued in 1993 and 2 <sup>nd</sup> amended in December 2012	To develop agriculture and rural economy, natural resources such as land, water, forests, grasslands, wild animals and plants must be rationally utilized. Ecological agriculture shall be developed for improving the ecological environment.
<b><i>Law of the PRC on Forest</i></b>	NPC issued in 1984, 2 <sup>nd</sup> amended in 2019	This Law applies to the protection, cultivation and utilization of forests, trees and the management of forests, trees and woodlands within the territory of China. Forest resources shall be owned by the State, except those owned by collectives as prescribed by law. The Law stipulated that the State shall strengthen the protection of forest resources, and give the functions of forests (e.g., as water storage and soil conservation, climate regulation, environment improvement, biodiversity maintenance and forest products) into full play. A system of natural protected areas with national parks as the mainstay shall be established in the typical forest ecological areas in different natural zones, forests where precious animals and plants grow and reproduce, natural tropical rainforests and other natural forests of special protection value for strengthened protection and management.
<b><i>Law of the PRC on Animal Husbandry</i></b>	NPC issued in 2005, amended in 2022	Animal husbandry producers and operators shall fulfill the obligations of animal epidemic prevention and ecological environmental protection according to law, and accept the supervision and inspection carried out by the relevant competent departments according to law.

<sup>16</sup> EIA documents: refers to the EIA report, and EIA form to be prepared respectively for the construction projects that may cause major environmental impact and mild environmental impact as per the requirement of Classified EIA Management Catalogue Construction Projects.

<b><i>Guiding Opinions on Establishing a System of Natural Protected Areas with National Parks as the Mainstay</i></b>	SC issued in 2019	The aim is to build a Chinese special system of natural protected areas with national parks as the mainstay. In accordance with the natural ecosystem of authenticity, integrity, systematisms and inherent law, nature protected areas are classified into three categories based on the ecological value and significance in the order of protection intensity: e.g., national parks, then nature reserves, and natural parks.
<b><i>Opinions on Accelerating the Construction of Ecological Civilization</i></b>	SC issued in 2015	It is required to strictly safeguard ecological conservation redlines (ERL), and delineate ERL in key ecological function areas, sensitive and vulnerable areas to ensure that ecological functions are not reduced, their size is not reduced, and their nature is not changed. Subsequently, the Chinese government issued the Technical Guidelines on Delineating ERL, the Guiding Opinions on Strengthening the Management and Control of the Red Lines for Resources, Environment and Ecology, and the Technical Guidelines on the Preparation of the "Three Lines and One Order", and so on.
<b><i>China Biodiversity Conservation Strategy and Action Plan (2011-2030), etc.</i></b>	SC issued in 2010	Three strategic objectives of biodiversity conservation in China are put forward: the immediate goal is to effectively curb the decline of biodiversity in key areas by 2015; The medium-term goal of achieving basic control of biodiversity loss and loss by 2020; The vision is to ensure that biodiversity is effectively protected by 2030. Relevant to the Action Plan are: <ul style="list-style-type: none"> <li>• <b><i>National List of Rare and Endangered Plants, 1991</i></b></li> <li>• <b><i>List of Wildlife under Special State Protection, 1989, etc.</i></b></li> </ul>
<b><i>Opinions on Further Strengthening Biodiversity Conservation</i></b>	Central Committee of Communist Party of China (CPC) & SC issued in 2021	On the basis of the current system of protected natural areas with national parks as the mainstay, China will continue to promote the baseline survey and assessment of priority regions and national strategic regions for biodiversity conservation and build a national biodiversity monitoring network and a relatively stable spatial framework for biodiversity conservation. China will speed up the establishment and improvement of laws & regulations for biodiversity conservation, incorporate biodiversity conservation into mid-term, long-term plans of all sectors and all levels of government, formulate and improve policies and institutions related to biodiversity conservation, build a complete monitoring system for biodiversity conservation, improve biosafety management, innovate mechanisms for sustainable use of biodiversity, and strengthen enforcement, supervision and inspection of relevant laws & regulations. China will deepen international cooperation and exchanges, comprehensively and promote public participation in biodiversity conservation, and improve safeguard measures for biodiversity conservation.
<b><i>Guiding Opinions on Delineation and Implementation of Three Control Lines in Territorial</i></b>	SC issued in 2019	The three control lines in terms of ecological protection redlines, permanent basic farmlands, and urban development boundaries should be delineated and implemented in an integrated way. A national territorial spatial basic information platform should be established and improved to realize cross-sectoral information sharing and monitor the implementation of the three control lines. Occupying any ecological protection redlines or permanent basic farmlands is subject to approval by the State Council.

<b><i>Spatial Planning</i></b>		
<b><i>Opinions on Delineation and Strictly Safeguard Ecological Protection Redlines</i></b>	Central Committee of CPC, SC issued in 2017	It aims to protect important ecological space by setting up redlines to ensure non-degradation of ecological functions, non-reduction of ecological space, non-changes of ecological property, and to protect the country's ecological safety and promote sustainable economic and social development. In principle, the ecological protection redlines should be regarded and managed as the areas within which developments are prohibited.
<b><i>Circular on Strengthening Management of Ecological Protection Redlines (Trial)</i></b>	MNR, MEE, NFGA jointly issued in August, 2022	The ERL will be strictly managed and controlled through: (1) enhanced data sharing, e.g., the ERP scheme approved by the State Council is incorporated into "one map" of national land spatial planning, connected with the ERL environmental monitoring platform under MEE for information sharing; (2) intensified regulatory management, e.g., the NRBs at all levels shall work together with relevant authorities to strengthen oversight and inspection of the implementation of BPR. NRBs at all levels shall strictly control and supervise the territorial and spatial use regulation, EEBs at all levels should conduct ecological and environmental supervision on the ERL, FGBs at all levels should focus on the supervision and administration of natural protected areas; (3) controlled strictly adjustment procedures, e.g., once the ERL has been delineated, it is strictly prohibited to be adjusted without approval. Based on the monitoring of the carrying capacity of resources and the environment, the evaluation on the importance of ecological conservation and the implementation of the territorial and spatial planning shall be carried out once in five years, provincial level government may work out partial adjustment on the ERL scheme, incorporate them into the revised plans for the territorial and spatial planning that are subject to the approval of The State Council, and send a copy to MEE.
<b><i>Guiding Opinions on the Implementation of the "Three-line, One-List" Ecological Environment Zoning Control (Trial)</i></b>	MEE issued in Nov. 2021	With no reduction in ecological functions, no decline in environmental quality, and no breakthrough in the carrying capacity of resources and the environment as the bottom line, it is required to implement the "three-line, one-list" ecological environment zoning control requirements, resolutely stop production and construction activities in violation of the provisions of the ecological environment access list, and constantly strengthen the prevention and control of the ecological environment at the source. The "three lines, one order" system provides a hard constraint for the implementation of strategic and planning EIA, the approval of construction project EIA, and provides a basis for space control for other environmental management work.
<b><i>Measures for Ecological and Environmental Supervision on the ERL (Trial)</i></b>	MEE issued Dec. 2022	This Measures is applicable to the ecological environment supervision work carried out by the MEE or EEBs. It is stipulated that the MEE is responsible for organizing the supervision of the ecological environment of the national ERLs, and the provincial EEDs are responsible for organizing the supervision of the ERLs in the administrative region, the content of the supervision work and the main process of the supervision work.
<b><i>Regulations on the Management of</i></b>	GPPC issued in Nov. 2017	In the conservation areas, we must focus on management and protection, carry out comprehensive and in-depth scientific research, carry out ecological restoration work such as sealing mountains and

<b><i>Qilian Mountain National Nature Reserve in Gansu Province</i></b>		cultivating forests and grass according to local conditions, continuously expand forest and grass vegetation area, strengthen the protection of glaciers, wetlands, frozen soil and wild animals and plants, obey the positioning of key ecological functional areas determined by the main functional zoning of the State, and improve ecological service functions. No production facilities shall be constructed in the core zone and buffer zone of the reserve. It is prohibited to hunt, kill, and purchase or traffic wild animals in the reserve. It is prohibited to introduce exotic wild plants in the reserve; It is also prohibited to release wild animals introduced from outside the area in the reserve.
<b><i>Interim Measures for Supervision and Administration of Construction Projects in Qilian Mountain National Park</i></b>	NFGA issued in 2020	The Interim Measures is a sectoral regulation for the standardization supervision and management of the construction facilities <sup>17</sup> or construction projects in Qilian Mountain National Park. The park zoning is divided into core protected zone and general control zone, and differentiated management is implemented. The Interim Measures stipulated the types of new production facility activities that could be allowed or couldn't be allowed to be approved in the core zone and the general control zone respectively.
<b><i>Qilian Mountain National Park Industrial Access List</i></b>	NFGA issued in 2020	<p>The Access List is an important basis for strictly controlling all kinds of development activities in Qilian Mountain National Park. The main body of the list is "restricted access", and the items outside the list are prohibited. It is divided into the access lists in general control zone and core protected zone respectively:</p> <ul style="list-style-type: none"> <li>• <b><i>Industrial access list in general control zone (2020 edition)</i></b>: It is stipulated, only the listed projects, ecological protection and restoration projects, the transformation of residents' production and living facilities that do not damage the functions of the ecosystem, as well as natural tourism, ecological experience, indigenous grazing, farming and other activities in line with the national park planning can be allowed access projects or activities in the core protected zone. Other production and construction activities are prohibited.</li> <li>• <b><i>Industrial access list in core protected zone (2020 edition)</i></b>: It is stipulated that in addition to the necessary protection facilities, ancillary facilities and scientific experiments, no other construction and production activities shall be carried out in the protected zone.</li> </ul>
<b><i>Regulations on the Management of Anxi Extreme Drought Desert National Nature Reserve in Gansu Province</i></b>	GPPC issued in 2008, repealed in 2020	Since some provisions in the Regulation do not comply with the provisions of the upper Law and other reasons, it was repealed by GPPC in July 2020. At the same time, the current relevant laws and regulations have been able to meet the needs of the protection and management of nature reserves, and the content of the above law has been clearly stipulated without repetitive provisions.
<b><i>Other agricultural</i></b>		<b><i>Seed law, Measures for Management of Agricultural Seed Substance Resources</i></b> , implemented a series of programs for conserving agricultural

<sup>17</sup> Construction facilities refer to the construction of facilities by means of traversing space or occupying land, including the construction of permanent facilities and temporary facilities.

<b>biodiversity protection laws and regulations</b>		biodiversity, such as China's biodiversity Conservation Strategy and Action Plan, Outline of the National Plan for Conservation and Utilization of biological species Resources, National Medium-and long-term Development Plan for the Protection and Utilization of Crop germplasm Resources (2015-2030), etc. In the construction of the natural protected areas system, a multi-level agrobiodiversity conservation system is also established, which combines the original habitat protection sites of agricultural wild plants and the ex-situ conservation of germplasm banks and germplasm nurseries; Efforts are made in increase diversity of flora, fauna and microorganisms in agroecosystems through the reduction of pesticides and chemical fertilizer use, recycling and reusing of livestock and poultry manure, crop residues, agricultural mulch for agricultural NPS pollution reduction.
<b><i>Opinions of the People's Government of Gansu Province on Implementing the "Three-line, One-list" ecological Environment zoning Control</i></b>	Gansu Provincial Government issued in 2020	<p>The provincial territory was delineated into a total of 842 environmental control units, categorized as priority protection units (491), key control units (263) and general control units (88). The units will be implemented in the way that are classified management and control.</p> <p>To manage and control the environmental control units, it is stipulated that "ecological environmental laws and regulations, national, provincial and key regional (river basin) environmental management policies shall be strictly implemented, the regional development strategy and ecological function positioning shall be accurately followed to establish and improve an our-level lists system of the "1+5+15+N", comprising provincial, key regions or river basin), municipal and all types of environmental control units for implementation, i.e.,</p> <ul style="list-style-type: none"> <li>• "1" refers to the provincial-level list, reflecting the fundamentality and bottom linearity requirement of units in the Province.</li> <li>• "5" refers to the list of key regions or river basins of inland rivers under Qilian Mountain, the Yellow River in the middle, Gannan plateau region, eastern &amp; middle region of Gansu, Qinba mountainous at the south of Gansu, reflecting the special characteristics and specialties of units in the key regions or river basins.</li> <li>• "15" refers to municipal-level list, reflecting territoriality, locality requirement of the units within the municipality.</li> <li>• "N" (842) refers to the list of environmental control units, reflection difference and site-specific.</li> </ul>
<b><i>Grassland Law of the PRC</i></b>	NPC issued in June 1985, 3 <sup>rd</sup> amended in 2021	<p>The purpose of the law is to protect, build and rationally use grasslands (natural grasslands and artificial grasslands), improve the ecological environment, maintain biodiversity, develop modern animal husbandry and promote sustainable economic and social development. Grasslands are owned by the state, except those that are owned by collectives as prescribed by law. The regulations stipulate the ownership of grasslands and the planning, construction, utilization, protection, supervision and inspection of grasslands. Three important mechanisms for grassland protection are provided, namely, basic grassland protection mechanism, grassland and livestock balance mechanism, and grazing ban mechanism. The State encourages and supports the construction of artificial grasslands, the improvement of natural grasslands and forage and feed bases. The State applies a mechanism of protection to basic</p>

		grasslands <sup>18</sup> , and prohibits the extraction of plants and other activities that damage grassland vegetation in deserts, semi-deserts, grasslands that are seriously degraded, sanded, salinized, stony desertification, soil erosion, and grasslands in ecologically fragile areas.
<b>Regulation on Grasslands of Gansu Province</b>	GPPC issued in 2006, amended in 2022	According to the <b>Regulation</b> , people's governments at all levels shall, in accordance with the plans for the protection, construction and utilization of grasslands, designate areas for the control of grasslands that are degraded, decertified, salinized, desertification and soil eroded, and make special efforts to control them. Efforts shall be made to promote and improve grasslands by means of no-tillage supplementary sowing, broadcast sowing and air sowing in accordance with local conditions, strengthen the construction of grass seed bases, encourage and support the selection, introduction and promotion of fine forage varieties suitable for local conditions, strengthen supervision and management of grass seed production, processing, introduction, promotion, management, inspection and quarantine, and ensure the quality of grass seeds. At the same time, people's governments at all levels shall implement the mechanism of determining grazing capacity based on biomass of grassland and balance between forage and animal. The governmental FGBs at or above county level shall, in accordance with the standards for the carrying capacity of livestock on the grasslands formulated by NFGA under The State Council, check and approve the carrying capacity of livestock once in every five years, and establish a file for the grass-livestock balance.

**2. National Sectoral Technical Standards**

<b>EIA Technical Guidelines - Ecological Impacts</b>	HJ19-2022 sectoral standard issued by MEE	Efforts should be made to avoid occupation of any ecological sensitive areas when selecting site or alignment for a construction project. Ecological impacts at different stages should be identified, predicted, and evaluated. Feasibility of the project should be determined by taking consideration the ecological impacts. Ecological protection measures should be proposed in accordance with the mitigation hierarchy of avoidance, reduce, restoration, and compensation.
<b>Technical Specifications for ERL Supervision-Baseline survey</b>	HJ 1140—2020 sectoral standard issued by MEE	This technical specifications specified the requirements for the process, content, technology and method of the baseline survey on ERL and application of taking the baseline survey as basic information for ERL supervision, as well as the application of the result of baseline survey.
<b>Technical Specifications for ERL Supervision-ecological status monitoring (trial)</b>	HJ 1141—2020 sectoral standard issued by MEE	This technical specifications specified the monitoring method, technical process, monitoring items, monitoring indicators and frequency, and quality control requirements of ecological status within the scope of ERL. This technical specifications is applicable to the dynamic monitoring of the surface area, nature and function and human disturbance activities within the territorial area of ERL by the comprehensive use of satellite remote sensing, aerial remote sensing and ground monitoring methods, and applicable to the monitoring of dynamic changes of ecological status within the territorial ERL in

<sup>18</sup> Basic grasslands include: 1) important pasture, 2) hayfield, 3) artificial grassland, grassland returned from farmland and improved grassland, and grass seed base for animal husbandry production, 4) grassland with special function for regulating climate, conserving water source, conserving soil and water, preventing wind and fixing sand, 5) grassland that are the key the living environment for national key protected wild animals and plants, 6) grassland used for scientific research or used as teaching experimental base, 7) other grasslands that shall be classified as basic grasslands as stipulated by The State Council

		administrative regions at and above the county level.
<b>Other Gansu provincial and local relevant laws and regulations and policy opinions, notices Gansu provincial and local relevant laws and regulations and policy opinions, notices</b>		<ul style="list-style-type: none"> <li>• Implementation Opinions on Further Strengthening Biodiversity Conservation in Gansu Province (2022) , and county-level Biodiversity Conservation Plans.</li> <li>• The Implementation Opinions on Comprehensively Promoting the Three-year Action of "Green Guazhou" to further implement the strategy of "Ecological County Development"</li> <li>• Notice on issuing the System for the Management and Protection of Natural Forest Resources in Qilian Mountain Nature Reserve (Qilian Mountain National Park) and other regulations</li> <li>• Notice of Zhangye Municipal People's Government on printing and distributing the "Three-Line, One-List" Ecological Environment Zoning Control Plan</li> <li>• Minle County's Implementation plan for Strengthening supervision of "Green Shield 2022" Nature Protected Area</li> </ul>

**4.4.1.2 Implementation Mechanism and Procedures**

98. To implement the above laws and regulations on the conservation of the natural eco-environment, China has established and is gradually improving the relevant implementation mechanisms, which are listed in Table 4-12 below.

**Table 4-12: Implementation Mechanism and Procedures for Eco-environmental Conservation**

<b>Implementation Mechanisms or Procedures</b>	<b>Description</b>
<b>Mechanism of nature protected areas</b>	Following the instruction of Guiding Opinions on Establishing a System of Natural Protected Areas with National Parks as the mainstay, China is accelerating the establishment of a system of protected natural areas with national parks as the mainstay, and step up efforts to protect the natural ecosystem. To promote functions optimization and system restructuring, the various types of existing natural protected areas <sup>19</sup> , are comprehensively assessed and reclassified based on their nature, value, and significance, to form a nature protected areas system composed of national parks, nature reserves, and natural parks. Almost all the natural protected areas are delineated within the scope of ERL and strictly protected. National parks and nature reserves have core zones and ordinary zone. Human activity is prohibited in core zone and restricted in ordinary zones. Natural parks are managed as ordinary zones in principle. To deepen institutional reform, the National Forest and Grassland Bureau was established based on original National Forest Bureau and its counterpart (FGBs) at all levels who integrated responsibility of supervision and management on natural protected areas distributed originally to various government authorities to preform integrated management on natural protected areas.
<b>Mechanism of ecological conservation redlines</b>	ERL mechanism is an important institutional innovation in ecological and environmental protection in China. Government authorities such as NRBs, EEBs and FGBs integrate and reorganize the areas that have important ecological functions (such as water conservation, biodiversity conservation, water and soil conservation, wind prevention and sand fixation, and coastal protection, etc.) and the areas that are extremely sensitive or vulnerable (e.g., soil erosion, soil desertification, rock desertification, and coastal erosion,

<sup>19</sup> Existing natural protected areas include nature reserves, scenic areas, geological parks, forest parks, ocean parks, wetland parks, glacier parks, meadow parks, desert parks, meadow scenic areas, aquatic germplasm resource conservation areas, wild plant habitat conservation areas, nature mini-reserves, and key wild animal habitats, etc.

	<p>etc.) and have them be delineated within the scope of ecological protection redlines. All provinces, municipalities and autonomous regions have completed the delineation of their respective ERL schemes. After the approval of the ERL by the State Council, the Provincial Governments promulgated the ERL schemes for implementation. The nation-wide ERL covers all the national biodiversity protection ecological functional areas, ecological vulnerable areas and released biodiversity key areas: about 90% of critical ecosystem types and 74% of wildlife are within the scope of ERL and well-protected. Development &amp; productive construction activities outside the core protection areas of the natural protected areas within the ERL, are prohibited, in principle, only the limited, managed, controlled, normalized human activities without destruction to ecological function, under the premise of complying with laws and regulations can be allowable. An ERL regulatory system is being established. In addition to above-mentioned Circular on Strengthening Management of Ecological Protection Redlines (Trial), recently MEE issued Measures for Ecological and Environmental Supervision on ERL (Trial), ERL Indicators System (trial), and Technical Specification for the Supervision of ERL – Protection Effectiveness Assessment (trial) and so on. For reviewing and approval a proposed construction project, NRBs take the lead in checking whether selected site is within the scopes of ERL on not when pre-examine PIUs’ application for land use. PIUs should seek opinions of FGBs and EEBs to confirm that the project sites do not occupy any ecological protection redlines before NRBs completing the pre-examination of land use application and report to the corresponding government for approval.</p>
<p><b>Mechanism of “Three-lines, One-List” zoning management and control</b></p>	<p>The various areas within the administrative area are divided into environmental units, which are divided into priority protection units<sup>20</sup>, key control units<sup>21</sup> and general control units<sup>22</sup>. Based on the environmental unit, combined with the delineation of the "three lines", from the aspects of spatial layout, pollutant emission management, environmental risk prevention and control, and resource utilization efficiency, the requirements for access, restriction and prohibition are clearly defined, and the ecological environment access list of each environmental control unit is listed to implement the requirements of ecological environment control. During EIA for a construction project, the project developer or EIA consulting unit shall check with the local EEBs on which kind of environment control unit that the proposed project site belongs to, and whether the project components are in the ecological environment access list. After such initial screening, the proposed construction project can be proceeded to the following step of environmental impact assessment and analysis.</p>
<p><b>Control mechanism of ecological-sensitive area under EIA system</b></p>	<p>Any kinds of ecological or environmentally sensitive areas should be avoided in site selection of a construction project following the requirements on ecological protection redlines, territorial spatial planning, and ecological environment zoning. As per requirement of the Technical Guidelines for EIA – for Ecological Impact, when preparing the EIA documents, ecological impacts during construction, operation and decommissioning shall be identified, predicted and assessed properly and ecological protection measures should be proposed in accordance with the mitigation hierarchy of avoidance, reduce, restoration, and compensation to justify ecological feasibility of the said construction project. When reviewing and approval the EIA documents on a construction project, EEBs will require a written explanatory note from the correspondent NRB at county level for inquiring whether the selected site or alignment of a construction project is against the ERL, usually together with indicative figures showing relationship between the selected site or alignment and the scope of ERL be attached in the annexes.</p>

<sup>20</sup> Priority protection units: they mainly include ERL, natural protection areas, centralized drinking water source protection areas and other important ecological function areas and ecological environment sensitive areas.

<sup>21</sup> Key control units: they mainly include central urban areas and urban planning areas, industrial parks (agglomeration areas) and other areas with high development intensity and relatively concentrated environmental problems.

<sup>22</sup> General control units: within such units, the main goal is to promote the coordination of ecological functions of production, to implement the basic requirements of ecological and environmental protection, strengthen the control of domestic pollution and agricultural non-point source pollution, and promote the continuous improvement of regional ecological and environmental quality and the sustainable development of regional economy and society

	Such written explanatory note will be one of the important bases for decision-making.
<b>Mechanism of negative list for industrial or sectoral access in key ecological functional zones</b>	In 2016, the NDRC issued the <i>Measures for the Preparation of the Negative List for Industrial or Sectoral Access in Key Ecological Functional Zones</i> , to actively promote the establishment and implementation of a negative list mechanism for industrial or sectoral access in key ecological functional zones, and improve the quality of the ecological environment by curbing new prohibited industries and promoting structural adjustment, transformation and upgrading of restricted industries. Or, for investment projects involving ecological environmental protection, a list of a series of access standards and conditions are formulated for the approval of the proposed project.

#### 4.4.4.3 Institutional Organization and Performance

99. The above laws and regulations on eco-environmental conservation entrust the following levels of governments and competent authorities with the responsibility to implement and enforce relevant laws, regulations and mechanisms. Their respective responsibilities, procedures and means for performing their duties, the management performance, and their collaboration found by the E&S team for this PforR are analyzed as follows.

100. **Natural Resources Bureaus (NRBs):** are the regulatory authorities that manage and supervise natural resource. NRBs leading the oversight and inspection of the implementation of ERL, together with relevant government authorities, have the responsibility of, particularly regulating territorial and spatial use. Specifically, from the perspective of territorial space use control, NRBs are responsible for pre-review whether the site selection of a construction project is within the scope of applicable construction land and whether it is within the scope of ERL before approval of a land use application. NRBs actively participate in the project developers for site selection, based on the territorial spatial planning and land use control rules, with the "one map" of the territorial spatial planning as the working base map (supported by territorial spatial basic information platform, MNR's natural resources usage regulatory system, and the provincial-wide intelligent approval and supervision system for construction land use). They focus on the protection of cultivated land and permanent basic farmland, the conservation of ERL, and conservation and intensive land use, fill in the site selection suggestion forms, and deliver written opinion of NRBs participating in site selection. Of their administration duties in regulating territorial space use for safeguarding the ERL, there are two key points for NRBs to pre-review and approval of construction land use:

- Investment projects subject to land use pre-review or planned site selection, justification of site selection will be required. If the proposed site is to do with ERL, the proposed project will be required to justify that the ERL are unavoidable.
- For the construction projects with proposed sites pre-reviewed, before the formal approval of the land use, a stand-alone justification report on the limited human activities allowed within the scope of ERL or the ERL(s) is or are unavoidable will be required. The municipal or prefectural government will be required to give their ascertaining opinion on limited human activities allowed within the scope of ERL or the ERL(s) or argumentation on the non-avoidance of ERL.

101. NRBs at county or district level, there are:

- Territorial planning and land use section or Land consolidation center (2-6 staff), or or and County Planning Service Center (about 8 staff), who are responsible for pre-review and approval of land use application for investment projects and control over the ERL in accordance with *Guiding Opinions on the Overall Delineation and Implementation of the Three Lines of Control in Territorial Space Planning*. Is the proposed site being to do with ERL, the decision must be made by the NRBs at high levels.

102. **FGBs:** at the county level, the secondary bureaus under NRBs, are administrative agencies in charge of natural protected areas (including national parks, nature reserves, etc.), wildlife protection and

wetland management, forest resources management, grassland management, etc. They are regulatory bodies for forestry and grassland resources management.

- **Natural Protected Areas** are specifically managed and protected by the administrative bodies of the natural protected areas. For example:
  - Zhangye Branch of Gansu Provincial Administration Bureau for Qilian Mountain National Park is a branch of the Qilian Mountain National Park Administration. It is entrusted to perform the duties of the owners of natural resource assets owned by the whole people in domestic parks, and implement unified supervision and classified management of construction projects. There are 22 protection stations in 19 sections, with nearly 1,500 employees (including long-term village level grass-root intendants); Among them, there are Dahekou Nature protection Station in Minle County and Xishui Nature Protection Station in Sunan County, which are specifically responsible for the use of forest and grass land for construction projects in nature protection areas and the examination and approval of related construction activities, and work hard for ecological restoration and wildlife protection.
  - Anxi Extreme Drought Desert National Nature Reserve Management Center, has 4 sections and 2 conservation stations, which are staffed with professional technical and management personnel, among which the Tangdunhu Provincial Nature Reserve Management Station in Guazhou, Gansu Province has 9 employees.
  - Tangdunhu Provincial Nature Reserve Management Station in Guazhou, Gansu Province, has 9 employees and two grass-root protection stations. It is responsible for improving rules and regulations, improving the management basis, implementing management and protection measures, intensifying inspection and supervision (inspection frequency is at least once a week), carrying out the overall planning, completing the baseline survey of resources, conducting the survey of invasive alien species, and survey of germplasm resources. The results of their works are reflected by the stable of the ecosystem and its function of the protected zone.

103. **Ecology & Environment Bureaus (EEBs):** are the governmental authorities implementing the mechanism of the “three-lines, one list” (i.e., ecological conservation redlines, environmental quality bottom lines, resources utilization topline and eco-environment zoning control access list) for eco-environment zoning management and control and carry out eco-environmental regulatory of any activities within the scope of ERL. EEBs are responsible for the implementation of “three-lines, one list” eco-environment zoning management & control plan, follow-up assessment, updating the plan, and establishment of the “three-lines, one list” application system, coordination with other government line agencies about the “three-lines, one list” for eco-environment zoning management and control mechanism. Since 2028, the Provincial EED, drafted the provincial-wide “*Three Lines, One List*” *Eco-environment Zoning Control Access List Scheme*, which were reviewed by the Provincial Government, who coordinated to connected it with the provincial wide the functional zone strategy, territorial space planning, zoning and use control, energy and resources management, and eco-environmental elements management. The revised Scheme were submitted to MEE. With the final approval of MEE, Gansu Provincial Government in 2020, printed and circulated the Opinions of the People's Government of Gansu Province on the Implementation of the ‘*Three Lines, One List*’ *Eco-environment Zoning Control Access List*. On this base, the Provincial EED defined the Provincial-level *Eco-environment Zoning Control Access List for implementation*; The Municipal EEBs, drafted their respective Municipal-wide *Eco-environment Zoning Control Access List schemes* covering counties within the respective jurisdiction. With the approval of the respective municipal governments, the *Municipal-wide Eco-environment Zoning Control Access List schemes* were printed and circulated to the respective municipalities and counties for implementation. In responding to the requirement of establishing dynamic updated and regular adjustment mechanism stipulated in the MEE’s *Guidance on the Implementation of the ‘Three lines, One List’ Eco- environment Zoning Control (Trial)*,

recently, from the provincial to the municipal level in Gansu, are making the 2<sup>nd</sup> round revision of the respective *Schemes*. In addition, EEBs, together with DRCs, NRBs, FGBs, WRBs, etc., are responsible for implementing the government's work on biodiversity conservation, including the improvement of relevant policies and laws, the formulation of medium and long-term plans and policies, the continuous optimization of the spatial pattern of biodiversity conservation, the protection and restoration of ecosystems, the establishment of a complete biodiversity conservation monitoring system, and the improvement of the biodiversity assessment system, etc. Under each county's EEBs' branch, the Atmospheric Environment and Natural Ecology Protection Section (2-5 staff) and the Eco-environment Protection Administrative Enforcement Team (8 people) are responsible for the supervision of the ERL in the "three lines and one list"; The Environmental Development and Regulatory Publicity Section (2-5 staff) is responsible for publicity and education activities related to biodiversity conservation in grasslands. Any livestock production and construction activities (such as large-scale farming) in natural protected areas, or in or along the scope of ERL, it is requirement according to the latest EIA Classification Catalogue to prepare EIA report. The said report will be technically reviewed by experts nominated by EEB at or above municipal level. Based on technically approval of experts, EEB will give its review opinion on the said report (see Figure 4-4-3 EEB's review comments on the Special Report on the Impact of Breeding Stock Construction Projects on the Eco-environment of a Natural Protected Area in Appendix 7 of this report).

104. **Agriculture & Rural Affairs Bureaus (ARABs):** are administrative regulatory agencies of agriculture, animal husbandry production, animal health, and forage production. At the county-level, sections or units involved in fodder production are crop farming section (2-5 staff). They are responsible for developing forage cultivation bases on unused state-owned land in agricultural areas or utilizing farmland to produce increased forage supply by means of (a) "conversion of grains to forage"<sup>23</sup> to plant high-yield and high-quality forage by adopting efficient water-saving drip irrigation, sprinkler irrigation technology and green agricultural technology with reduced use of fertilizers and pesticides compared to general crops, (b) the remaining harvested crop straw processed and distributed by enterprises or special cooperatives, (c) lending the harvested straw field to pastoral area for herbal livestock grazing (see Figure 4-4-45 in Appendix 7 of this report), etc. The increased forage supply not only greatly reduces the pressure of insufficient forage supply for livestock production due to reduced grazing load on grasslands and changes of livestock raising methods, but also promotes the sustainable development of agriculture and animal husbandry inside and outside the jurisdiction areas (see Figure 4-4-5, Figure 4-4-6 artificial forage bases development and forage plantation, processing and distribution in Appendix 7 of this report). Other units related to livestock breeding, raising, animal health at county-level are Animal Husbandry Section (1-3 staff), or or and Animal Husbandry and Veterinary Technology Center (14-120 staff) who are responsible for, in addition to animal health, disease prevention and control, leading the construction, provision of relatively centralized standardized livestock facilities relatively concentrated into a scale to form livestock zone to guide the transition of the traditional grazing on natural grasslands to centralized, scaled and standardized shed-feeding livestock production (see Figure 4-4-7 standardized livestock zone in pastoral area in Appendix 7 of this report).

#### 4.4.1.4 Brief Summary

105. The typical physical activities of the PforR will be carried out in a wide range of areas within the

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<sup>23</sup> Conversion of grains to forage" is an agricultural reform carried out by the MARA, which mainly guides the planting of whole silage corn, in adaptation to local conditions, promotes forage grass in areas suitable for high-quality forage (such as alfalfa, oats, etc.), changes the simple granary into "granary + milk tank + meat warehouse", and adjusts the dual structure of food and cash crops to the triplex structure of food, cash-crops and feed crops. The focus is to adjust the planting structure, combining of plantation with breeding for circular development, guide the planting of high-quality forage, develop herbivorous animal husbandry, and promote the optimization of agricultural production structure. Financial departments at all levels take the form of awards instead of subsidies as incentives.

seven Program counties or district in Gansu Province, which involve mixed agricultural and animal husbandry areas. In view of the fact that China, Gansu Province and the Program area have established and are improving the corresponding laws and regulations system, and have been and are practicing the relevant mechanisms to promote ecological civilization and the green cycle of agriculture and animal husbandry, in terms of controlling the ERL and natural habitat, in terms of monitoring the ecological environmental impact of construction projects related to the development of animal husbandry, there is a completed set of laws and regulation and mechanisms with reasonable institutional settings of all levels and relevant management units for natural protected areas staffed with relatively complete personnel, the eco-environment conservation management system is sound and there will be no activities to be supported by the Program on natural habitats and grassland ecosystems. The program of “convention grains to forage” can not only promote the adjustment of agricultural structure, optimize land utilization, reduce feeding costs, increase farmers' income, but also improve the rural environment, reduce the use of fertilizers and pesticides, reduce the generation of agricultural waste, and help protect and improve the rural ecological environment. The Program environment and social team found that in the Program counties or district in recent years, the development and productive activities related to livestock production that would damage the ecological function of the protected area within the ERL have been avoided. Those development and productive activities of livestock production (such as the development and production of large-scale livestock and poultry farm, slaughtering and processing, etc.) are in agricultural or quasi-urban areas that have been disturbed by human activities without occupying important natural protected areas or habitats. The typical activities to be supported by the PforR are those that further orient existing activities to areas that are more conducive to more climate-smart green cycling, improving livestock production efficiency, and reduction of pollution and GHG emissions. In addition, China has corresponding legal and regulatory management systems and measures for the protection of agricultural biodiversity. The system is in line with the WBG's Environmental, Health and Safety Guidelines for Perennial Crop Production, which covers agro-ecological and environmental protection practices in (GIIP), as well as the Bank's Core Principles for Natural Habitats.

#### 4.4.2 Water and Soil Conservation

106. In the field of soil and water conservation, the prevention of soil erosion caused by construction projects, and the maintenance and construction of ecological environments, China has established a water and soil conservation (WSC) system under the management of WRBs which is in parallel with EIA process for construction projects. The ESSA team, therefore, conducted due diligence to the WSC system.

##### 4.4.2.1 Applicable Legal Framework

**Table 4-13: A List of Applicable Laws and Regulations on Water and Soil Conservation**

<b>Names of laws, regulations, policy standards and specifications</b>	<b>Issuing authority or time</b>	<b>Relevant Main Provisions</b>
<i>Water and Soil Conservation Law</i>	SC issued in 1991, amended in 2010 and implemented since 2021	To prevent and control water and soil erosion, it is stipulated that cultivation of crops on steep slopes above 25 degrees is prohibited. Selection of site or alignment of productive construction project shall avoid the focused areas for soil prevention and rehabilitation. If it cannot be avoided, the prevention and control standards shall be upgraded by prioritizing the construction process to minimize surface disturbance and vegetation damage and effectively control loss of water and soil. For any construction project located at mountainous or hilly or sandstorm areas or other areas prone to soil erosion as determined by soil WSC Plan, the responsible PIU should prepare a WSC scheme and submit it to the corresponding WRBs for approval. For any construction project that is subject to

		WSC scheme preparation, the related WSC works must be designed, constructed, and put into operation simultaneously with the project main parts. Once the construction is completed, the WSC works must be checked for acceptance. The project is not allowed to put into operation if the check is not conducted or accepted.
<b><i>Law of the PRC on Yellow River Protection</i></b>	NPC issued in 2022	The local people's governments at or above the county level in the Yellow River Basin shall organize and promote key soil and water conservation projects such as comprehensive management of small river basins, comprehensive improvement of sloping farmland, treatment and protection of the Loess tableland, and construction of suitable vegetation, adopt measures such as protection of loss table land surface, protection of gully heads, gully slopes and gully channels, strengthen control of areas with heavy and coarse sand, and carry out ecological clean watershed construction. PIUs of production and construction projects shall work out and strictly implement approved plans for water and soil conservation pursuant to law.
<b><i>Agricultural Law</i></b>	SC issued in 1993, 2 <sup>nd</sup> amended in 2012	It is stipulated in Article 58 that farmers and agricultural production organizations shall conserve cultivated land, utilize chemical fertilizers, pesticides and agricultural mulch rationally, increase the use of organic fertilizers, adopt advanced technologies, protect and improve soil fertility, and prevent farmland from pollution, damage and fertility declining.
<b><i>Measures for Construction Projects Water and Soil Conservation Supervision</i></b>	MRW issued 2022, to be implemented starting from March 2023	PIUs of production and construction projects are the main entities responsible for the prevention and control of soil erosion in production and construction projects. They should strengthen the management of WSC in the whole project life cycle, optimize the construction process and timing, improve the utilization efficiency of soil and water resources, reduce surface disturbance and vegetation damage, take WSC measures in a timely manner, and effectively control soil and water loss that may be caused.
<b><i>Technical Standards for Soil and Water Conservation in Production and Construction Projects GB or T50433-2018</i></b>	MWR, Ministry of Housing & Urban and Rural Development jointly issued in 2018	This standard has 5 chapters and 5 appendices, the main content includes general provisions, terminology, basic provisions, soil and water conservation program, soil and water conservation measures design requirements. The technical work of soil and water conservation in production and construction projects should mainly include i) the preparation of soil and water conservation plans, ii) the design of soil and water conservation measures, iii) the supervision on construction of soil and water conservation, iv) soil and water conservation monitoring, and v) the acceptance of soil and water conservation facilities
<b><i>Standard of Soil Erosion Control for Production and Construction Projects GB or T50434-2018</i></b>	Ministry of Housing & Urban and Rural Development, State Administration for Market Regulation	The standard levels of soil erosion prevention and control in production and construction projects should be classified into Class I, Class II and Class III. The standard indicators of soil and water loss control should include: percentage of controlled soil erosion area, proportion of soil erosion control, percentage of blocked dregs and soil, percentage of protected topsoil, percentage of recovered forestry and grass, percentage of forestry and grass coverage. Soil and water loss control indicators' values should be divided

	jointly issued in 2018	into eight areas according to soil and water conservation areas: Northeast black soil area, north wind-blown sand area, north soil and rock mountain area, northwest loess Plateau area, south red soil area, southwest purple soil area, southwest Karst area and Qinghai-Tibet Plateau area
<b>Relevant local regulations in Gansu Province and Ministerial regulations and normative documents</b>	or	In addition, there are other national and local guidelines such as the “Water and Soil Conservation - General Guidelines on Planning” (GB or T15772-2008), the “Technical Guidelines on Comprehensive Management of Water and Soil Conservation” (SL534-2013), the “Technical Guidelines on Ecological and Clean Small River Basins Development” (SL534-2013), the “Guidelines on Water and Soil Conservation Monitoring for Construction Projects” (trial, 2015). Gansu Province has also formulated the “Gansu Provincial Regulations on Soil and Water Conservation” (enforced in 2012 and amended in 2023), and the “Gansu Provincial Water Resources Department on the issuance of the "Strengthening of Supervision in the Aftermath of the Event to Regulate the Implementation of the Autonomous Acceptance of Soil and Water Conservation Facilities in Production and Construction Projects" (2017)”, which will further prevent and manage soil and water erosion, strengthen the follow-up management system and safeguard the sustainable development of the economy and society.

**4.4.2.2 Implementation mechanisms and procedures**

**Table 4-14: Implementation Mechanism and Procedures for WSC**

<b>Implementation Mechanisms or Procedures</b>	<b>Description</b>
<b>Classified management</b>	In accordance with the "Law on Water and Soil Conservation" and other relevant provisions, in mountainous areas, hilly areas, sandstorms and other areas prone to water and soil erosion, or production and construction projects that may cause water and soil erosion <sup>24</sup> as defined in the water and soil conservation plans approved by the people's governments at or above the county level or the departments authorized by them, the PIUs of production and construction projects shall go through following procedures to compete WSC scheme preparation, submission and approval before the commencement of production and construction projects: (i) a project with land acquisition or occupation over 5 ha, or earthwork or stonework over 50,000 m <sup>3</sup> is subject to preparation of a WSC report; (ii) a project with land acquisition or occupation below 5 ha but over 0.5 ha, or earthwork or stonework below 50,000 m <sup>3</sup> but over 1,000 m <sup>3</sup> is subject to preparation of a WSC form; and (iii) a project with land acquisition or occupation below 0.5 ha, or earthwork or stonework below 1,000 m <sup>3</sup> is exempted from preparation of WSC schemes, but the responsible entity or individual should take measures to prevent soil erosion to meet relevant technical standards.
<b>Approval</b>	For a project that is approved, ratified or filed by SC or relevant departments of SC, the WSC reports should be approved by the Ministry of Water Resources. For a project that is approved, ratified or filed by local governments at the county level or above and the relevant departments, the WSC reports should be approved by the competent department

<sup>24</sup> Production and construction projects that may cause water and soil erosion refer to projects that will disturb land surface, involving excavation and backfilling of earthwork or stonework during production and construction, and which need to go through the procedures of examination, or approval, or record for endorsement pursuant to law

	of water administration of the people's government at the same level. For projects in cross-administrative areas, the WSC reports should be approved by the common water conservancy administrative department at the higher level.
<b>Check for acceptance</b>	For large and medium-sized projects that may cause serious soil erosion, PIUs should monitor the soil erosion caused by construction activities, timely and quantitatively grasp soil erosion and its prevention and control of the situation, evaluate scientifically the effectiveness of prevention and control, and report the monitoring situation to the water conservancy administrative department according to the relevant provisions. WSC supervision should be in accordance with the provisions of the water conservancy project construction supervision and soil and water conservation supervision specifications.
<b>Monitoring</b>	Before the production and construction projects are put into operation and used, the production and construction units shall, in accordance with the standards and requirements stipulated by the Ministry of Water Resources, carry out independent acceptance of soil and water conservation facilities, and the results of the acceptance shall be disclosed to the public and reported to the competent administrative department of water for approval of the soil and water conservation program for the record. The competent water administration department shall issue an acknowledgement of the record.
<b>Supervision and inspection</b>	WRBs are responsible for strengthening the supervision of the whole process of the WSC plans, fully utilizing satellite remote sensing, drones, big data, "Internet & supervision" and other means to supervise and inspect the implementation, monitoring, supervision of the WSC and acceptance of the WSC facilities. The problems found should be handled in accordance with the law. Random sampling of inspection targets at the annual rate of at least 10%, random selection of inspectors shall be implemented and the regulatory information shall be disclosed in a timely manner.

**4.4.2.3 Institutional organization and performance**

107. **WRBs** at all levels are the competent authorities involved in WSC plans’ approval and supervision. The interviews with the example districts or counties reveal that county level WRBs have WSC & water resources sections (3-5 staff) responsible for approving WSC schemes for construction projects that are subject to approval by local governments, and generally completing the application and approval process through the local administrative approval halls. Before the preliminary design documents of regional development and land levelling construction projects are submitted from the county to the municipal level for approval, they should be involved in the pre-approval at the county level for the soil and water conservation measures in the design documents at the county level of pre-approval.

108. It was found during the field visits that Lanzhou New District is a typical administrative area for the development of large-scale modernized farming and animal husbandry cycle ecological farming in agricultural areas through the development of unused state-owned hilly loess gully land for planting artificial forage in the vicinity of new urban areas. In the process of development and construction of unutilized state-owned land, high priority is given to ecology in principle, 50% of the developed land are used as ecological land, 30% as forage cultivation bases, and 20% as public utilities. Before land development, feasibility studies on the land development were prepared and authoritative scientific research institutions were invited to justify repeatedly the approaches to be used with tremendous scientific calculations on reduced wind erosion, soil erosion, ecosystem service value, etc., and mitigation measures were proposed against potential soil erosion. During the development activities that involve large volume of land levelling and earth excavation and backfilling, the WSC scheme has been compiled in strict accordance with the requirements of the Regulations on Preparation and Approval of Water and Soil Conservation Schemes and other laws and regulations, effective measures has been taken to prevent and control water and soil erosion during the construction, the self-check for WSC acceptance has been carried out at the completion of the project and then subject to follow-up management by Agricultural, Forestry and Water Bureau of Lanzhou New District. In recent years, the new land use areas were developed

comprehensively from unused land to minimize the occupation of arable land. Through such development approaches over the past 10 year, Lanzhou New District increased its new arable land by 100,000 mu, accounting for 15% of the total area of unused land. There are 21 million square meters of green land, accounting for 35.8% the constructed urban area in Lanzhou New District. At present, Lanzhou New District has accumulated more than 120,000 mu of ecological restoration land, afforestation and greening of more than 200,000 mu, the natural environment and ecological status quo of the region has significantly improved, which has a great positive effect on the prevention and control of soil erosion. These activities have increased the vegetation cover of the region, improved the effectiveness of wind and soil protection in hilly loess gullies and gullies, and improved the originally arid and salinized soil through forage cultivation, effectively increased the organic matter content of the soil. Livestock manure from large and medium scale farms were properly treated sanitarly and returned to the forage cultivation land, contributing to the increased soil carbon sequestration capacity.

#### 4.4.2.4 Brief Summary

109. China and Gansu Province have established an effective WSC management system. The system is operated under a well-staffed operationable mechanism what is qualified to manage the WSC work and help improve ecological environment under the PforR. It follows WBGs' EHS Guidelines and the core principles of the Bank. Reference can be made to Appendix 8 of this report that provide generic mitigation measures for addressing potential adverse environmental impacts of main activities under the PforR program. These mitigation measures with estimated cost shall be included into the bidding documents for contractors to take specific actions.

### 4.5 Health and Safety Management System

110. In the process of livestock production and value chain extension may involve following public health and occupational safety and health risks:

- **Biological hazard:** firstly, the health of the animal itself directly affects the production capacity and efficiency of animal husbandry; The second is the occupational health and safety (OHS) impact to operators working in veterinary service labs, the impacts of biosafety of veterinary service lab, quality of agro-food on health and safety of publics; the third is impact of zoonotic diseases on animals, livestock farming operators, staff engaged in providing service for prevention and control of infectious diseases, communities in the vicinity of the farm & public's health and safety; in addition, livestock farming operators, staff engaged in providing service for prevention and control of animal diseases may be injured or bitten by stinging, poisonous animals or vector mosquitoes;
- **Food safety impact:** Routine treatment of animals with antibiotics may result in antibiotic-resistant microorganisms in the intestinal tract of treated animals. Potential routes for infection of humans are the consumption of contaminated meat or water or of food contaminated by manure. People living near the farm may also be at risk of infection. Residues of feed additives and contaminants may also be present in meat and dairy products
- **Physical hazard:** workers engaged such activities of construction, forage cultivation, livestock farming, agro-food processing, veterinary service etc. may exposure to fallen hazards, and lifting heavy weights, or repetitive movements; sharp and moving objects in the workplace; and over-exposure to noise, vibration, and extreme or adverse weather conditions, injured by working in confined spaces. Farmers or workers may be exposed to harmful organic dust that may be generated during forage harvesting, storage and transportation and animal feed processing.
- **Chemical hazard:** In the process of cultivation of artificial forage, practitioners are exposed to pesticides, herbicides and other chemical harmful pesticides, and chemical waste of animals' disease prevention and control laboratories.

111. The risk management of animal health & animal infectious diseases of zoonotic diseases and some quality management of animal products associated with livestock production and value chain extension are assessed in this section of Chapter 4; The OHS risk management of human infectious diseases of zoonotic diseases and the quality management of some animal products are assessed in Chapter 5.

## 4.5.1 Animal Health, Agro-foods Quality and Public Health Management System

### 4.5.1.1 Applicable Legal Framework

112. The National and Gansu Provincial applicable laws and regulations on animal health, agro-food quality and public health and safety are listed in Table 4-15 below.

**Table 4-15: A List of Applicable Laws and Regulations on Animal Health, Agro-foods Quality and Public Health**

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<b>1. Animal health and diseases prevention &amp; control</b>		
<i>Law of the PRC on Animal Husbandry</i>	NPC issued in 2005, amended in 2022	The <i>Law</i> stipulates that the ARABs shall be responsible for the supervision and control of animal husbandry; Animal husbandry producers and operators shall fulfill their obligations of animal epidemic prevention and ecological environmental protection according to law, and accept the supervision and inspection carried out by relevant competent departments according to law. One of the conditions that livestock and poultry farms shall meet, are livestock and veterinary technicians available to serve them; Livestock and poultry farms shall establish breeding files that shall include the source, name, object of use, time and amount of inputs such as veterinary drugs; Quarantine, immunization and disinfection; and sanitary treatment of dead and diseased livestock and poultry.
<i>Law of the PRC On Animal Epidemic Prevention</i>	NPC issued in 1997, 2 <sup>nd</sup> amended in 2021	The <i>Law</i> was enacted to strengthen the management of animal epidemic prevention activities to prevent, control, purify and eliminate animal epidemics, promote the development of the livestock industry, prevent and control zoonotic infectious diseases, and ensure public health safety and human health. The Law is applicable to the epidemic prevention, supervision and administration of animals (domestic livestock and poultry and other animals raised and captured in captivity) in China. The prevention and control of animal epidemic diseases referred to in this Law refers to the prevention, control, diagnosis and treatment, purification and eradication of epidemic diseases and the quarantine of animals and animal products, as well as the sanitary treatment of dead and diseased animals and diseased animal products. The Law stipulates that "the people's governments at or above the county level shall exercise unified leadership over animal epidemic prevention, and ARABs shall be in charge of animal epidemic prevention within their respective administrative areas." According to the degree of harm to the livestock production and human health, animal epidemics as provided for in this Law shall be divided

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
		<p>into the following three categories:</p> <ul style="list-style-type: none"> <li>✧ Category I epidemics refers to foot-and-mouth disease (FMD), African swine fever, highly pathogenic avian influenza (HPAI) and other diseases that pose particularly serious harm to humans and animals, may cause major economic losses and social impacts, and require urgent and strict compulsory prevention and control measures</li> <li>✧ Class II epidemics refer to babes, brucellosis, hemorrhagic disease of grass carp, etc., that cause serious harm to humans and animals, may cause great economic losses and social impact, and require strict prevention and control measures</li> <li>✧ Class III epidemics refer to colibacillosis, avian tuberculosis, etc., that are common and frequent, such as colibacillosis, avian tuberculosis and turtle mumps, which cause harm to humans and animals, may cause economic losses and social impact to a certain extent, and need to be promptly prevented and controlled</li> </ul> <p>The <b>Law</b> consists of 113 articles under 12 chapters, covering the preventions of animal epidemics, the reporting, notification and publication of animal epidemics, the control of animal epidemics, the quarantine of animals and animal products, the sanitary treatment of dead and diseased animals and diseased animal products, animal diagnosis and treatment, veterinary management, supervision and management, safeguard measures, legal liabilities and others.</p>
<b>Regulation on Emergency Response to Major Animal Epidemics Outbreaks</b>	SC issued in 2005, amended in 2017	<p>The <b>Regulation</b> defines major animal epidemics as "the emergent and rapid spread of animal epidemics with high morbidity or mortality, including HPAI, which pose a serious threat or harm to the production safety of the livestock production, and may cause harm to the health and safety of the public, including particularly serious animal epidemics." The <b>Regulation</b> stipulates that "major animal epidemic emergency response work shall be done in accordance with the principle of localization administration, the implementation of unified government leadership, shared responsibility among governmental bureaus, establishment level by level a responsibility system". These involve ARABs, veterinary, forestry, entry inspection and quarantine authorities and other government departments or bureaus.</p> <p>According to the <b>Regulation</b>, people's governments at or above the county level shall, in accordance with the actual situation of their respective regions, formulate emergency plans for major animal epidemics in their respective administrative regions and report them to the competent governmental veterinary authorities at the higher level for endorsement. The Regulation consists of general provisions, emergency preparedness, monitoring report and distribution, emergency handling, legal liability and other chapters, and the corresponding provisions are formulated.</p>
<b>Law of the PRC on the</b>	NPC issued in 1989, amended	The purpose of this <b>Law</b> is to prevent, control and eliminate the occurrence and prevalence of infectious diseases and to protect human

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>prevention and control of infectious diseases</i>	in 2013	health and public health. The <b>Law</b> classified infectious diseases into three categories: A, B and C according to the outbreak, prevalence and harm degree of infectious diseases. People's governments at all levels shall lead the prevention and treatment of infectious diseases; The health commissions (HCs) under the local people's governments at or above the county level shall be responsible for the prevention and treatment of infectious diseases and their supervision and administration within their respective administrative areas. The ARABs, FGBs and other relevant bureaus of the people's governments at or above the county level shall, according to their respective functions and duties, be responsible for the prevention and control of animal diseases related to zoonotic diseases.
<i>Law of the PRC on Biosecurity</i>	NPC issued in 2020	<p>The <b>Law</b> was formulated to safeguard national security, prevent and respond to biosafety risks, safeguard people's lives and health, protect biological resources and the ecological environment, promote the healthy development of biotechnology, promote the building of a community with a shared future, and realize harmonious coexistence between man and nature. The <b>Law</b> includes provisions related to the prevention and control of major emerging infectious diseases, animal and plant epidemics outbreaks, laboratory biosafety management of pathogenic microorganisms, and prevention of alien species invasion and protection of biodiversity. No individual may set up a PML or engage in pathogenic microorganism experiment activities.</p> <p>Chapter 5 of the <b>Law</b> is on biosafety of PMLs. It is stipulated that pathogenic microorganism experiment activities should be carried out in the laboratory reaching corresponding biosafety level. The lower biosafety-levels PMLs shall not engage in the high pathogenic microorganism experiment activities that should be carried out in the higher biosafety level PMLs as stipulated in the National Pathogenic Microorganism Catalogue.</p>
<i>Regulations on Biosafety Management of Pathogenic Microorganism Laboratories</i>	SC issued in 2004, 2nd amended in 2018	The regulation stipulated that “The State exercises classified management over pathogenic microorganisms and graded management over laboratories, and classifies pathogenic microorganisms into four categories according to their infectivity and degree of harm to individuals or groups after infection. The degree of harm from high to low be Category A, Category B, Category C, and Category D respectively. Of them, Category A and Category B are called highly pathogenic microorganisms.
<i>Classification of Pathogenic Microorganisms in Animals</i>	Ministry of Agriculture issued in 2005	<p>As per the Classification of <b>Pathogenic Microorganisms in Animals</b>, Category A pathogenic microorganisms in animals include 10 species, Category B pathogenic microorganisms in animals include 8 species, Category C pathogenic microorganisms in animals include 105 species, and Category D pathogenic microorganisms in animals include remaining species.</p> <p>The State shall adopt unified laboratory biosafety standards. The</p>

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
		laboratory shall meet the national standards and requirements; The State shall, according to the biosafety protection level of the laboratory against pathogenic microorganisms and in accordance with the provisions of the national standards for laboratory biosafety, divide the laboratory into BSL-1, BSL-2, BSL-3, and BSL-4. BSL-1 and BSL-2 laboratories shall not engage in experiments operations on highly pathogenic microorganisms.
<i>Veterinary laboratory biosafety management code</i>	Ministry of Agriculture issued in 2003	The code specified the basic principles of biosafety protection in veterinary laboratories, the classification of laboratories, the basic requirements and management of laboratories at all levels, and the standard is the minimum requirement
<i>Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste</i>	NPC issued in 1995, 2 <sup>nd</sup> amended in 2020	The provisions in Chapter VI of the <i>Law</i> - Hazardous Waste are applicable to the prevention and control of environmental pollution by hazardous waste. It includes containers and packaging of hazardous waste, as well as facilities, sites and provisions for the collection, storage, transportation, utilization and disposal of hazardous waste.
<i>National Hazardous Waste Catalogue</i>	MEE, NDRC, Ministry of Public Security, Ministry of Transport, National HC edition of 2021	The <i>National Hazardous Waste Catalogue</i> classifies medical waste as hazardous waste. The <i>National Medical Waste Catalogue</i> classifies medical waste into infectious waste, injurious waste and pathological waste. Each of the above two Catalogues has a "List of Hazardous Waste or Medical Waste Exemption Management " that lists the specific waste names, exemption links, exemption conditions and exemption contents.
<i>National Medical Waste Catalogue</i>	MEE, National HC edition of 2021	
<i>Medical Waste Management Regulation</i>	SC issued in 2003, amended in 2011	The <i>Regulation</i> is enacted to strengthen the safe management of medical waste, prevent the spread of diseases, protect the environment and human health, and is applicable to the collection, transportation, storage, disposal and supervision and management of medical waste. The <i>Regulation</i> stipulates that the EEBs and HCs of the government at or above the county level shall, in accordance with the provisions of the Regulation, supervise and inspect the medical and health institutions and medical and health treatment units according to the division of responsibilities.
<i>Management Measures for Sanitary Treatment of</i>	MARA issued in 2022	The <i>Management Measures</i> is enacted to strengthen the sanitary treatment of dead and diseased livestock and poultry and diseased livestock and poultry products, prevent and control animal diseases, promote the high-quality development of animal husbandry, and

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>Dead and diseased Livestock and Poultry and Diseased Livestock and Poultry Products</i>		protect public health safety and human health. It is suitable for the collection, sanitary treatment and supervision and management of sick dead livestock and poultry and diseased livestock and poultry products in the process of livestock production, slaughtering, operation, isolation and transportation. The <b>Management Measures</b> stipulates that ARABs of the local people's governments at or above the county level shall be responsible for the supervision and administration of the sanitary treatment of dead and diseased livestock & poultry and diseased livestock and poultry products in their respective administrative areas.
<i>Regulation on Pollution Prevention and Control of Scaled Livestock and Poultry Production</i>	SC issued in 2013	The <b>Regulation</b> applies to the prevention and control of pollution from livestock farms and farming zones (excluding grazing and breeding in pastoral areas). The EEBs of the people's government at or above the county level shall be responsible for the unified supervision and administration of the prevention and control of pollution from livestock and poultry production.  The <b>Regulation</b> prohibits the construction of livestock farms and farming zones in environmentally sensitive areas such as urban residential areas, cultural, educational and scientific research areas and other populated areas. The construction, reconstruction or expansion of livestock farms and farming zones shall conform to the plans for the development of animal husbandry, the plans for the prevention and control of pollution from livestock and poultry production and meet the conditions for animal epidemic prevention. The corresponding pollution control facilities to be built in livestock and poultry farms and farming zones shall include comprehensive utilization and sanitary treatment facilities such as disposal of livestock and poultry carcasses.
<i>Regulation on the Administration of Veterinary Drugs</i>	SC issued in 2004, 3 <sup>rd</sup> amended in 2020	This is an administrative regulation aimed at strengthening the management & ensuring the quality of veterinary drugs, preventing and controlling animal diseases, promoting the development of the livestock production, and maintaining human health. The <b>Regulation</b> stipulates that "the Animal Husbandry and Veterinary Medicine Bureaus (AHVMBs) of the local people's government at or above the county level shall be responsible for the supervision and administration of veterinary drugs within its administrative area," and make specific provisions on the research, production, marketing, import and export, use, supervision and administration, and legal responsibilities of veterinary drugs.
<i>Measures for the Administration of Animal Immunization Labeling</i>	MARA issued in 2002	The two <b>Measures</b> aim to standardize the work of compulsory animal immunization, effectively control major animal epidemics, standardize the production and operation behaviors of animal husbandry, strengthen the management of livestock and poultry labels and breeding files, establish a traceability system for livestock and poultry products, effectively prevent and control major animal epidemics, and ensure the quality and safety of livestock and poultry products. Among
<i>Measures for</i>	MARA issued	

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>the Management of livestock and Poultry Marking and breeding archives</i>	in 2006	the others, it is stipulated that "the identification of livestock and poultry shall implement one animal and one mark, and the code shall be unique", "livestock and poultry farms shall establish breeding files", and "AHVMBs at the county level shall establish livestock and poultry epidemic prevention archives".
<i>Measures for the Administration of Animal Quarantine</i>	MARA issued in 2022	The <i>Measures</i> is formulated for the purpose of strengthening the management of animal quarantine activities, preventing, controlling, purifying and eliminating animal epidemics, preventing and controlling zoonotic infectious diseases, and ensuring public health safety and human health, in accordance with the <i>Law of the PRC on Animal Epidemic Prevention</i> . There are specific provisions on quarantine declaration, origin quarantine, slaughter quarantine, animal quarantine into areas without provisions for animal epidemic, official veterinarian, animal quarantine certificate mark management, supervision and management, legal responsibility etc.
<i>Measures for Reviewing Conditions for Animal Epidemic Prevention</i>	MARA issued in 2010, amended in 2022	The <i>Measures</i> aimed at standardizing the review of animal epidemic prevention conditions, effectively preventing, controlling, purifying and eliminating animal epidemics, preventing and controlling zoonotic infectious diseases, and ensuring public health safety and human health. It is stipulated that: livestock farms, animal isolation places, animal slaughtering and processing places and sanitary treatment places of animals and animal products shall meet the conditions for animal epidemic prevention as provided for in the <i>Measures</i> and obtain the certificate of animal epidemic prevention conditions. Markets dealing in livestock and animal products shall meet the conditions for animal epidemic prevention as provided for in the <i>Measures</i> . The <i>Measures</i> also stipulates that "AHVMBs of the local people's governments at or above the county level shall be responsible for the examination, supervision and administration of animal epidemic prevention conditions within their respective administrative areas."
<i>Rules for the Registration of Fine Breeding Stock</i>	MARA issued in 2006	The <i>Rules</i> is formulated to cultivate fine breeding stock, improve the genetic quality of breeding stock, and recommend fine breeding stock to the society.
<b>2. Agro-food Quality Safety Management</b>		
<i>Law of the PRC on Agro-food Quality and Safety</i>	NPC issued in 2018, amended in 2022	The <i>Law</i> is enacted to ensure the quality and safety <sup>25</sup> of agro-food <sup>26</sup> , safeguard public health, and promote agricultural and rural economic development. The <i>Law</i> has a total of 81 articles, covering six chapters, i.e., general provisions, agricultural product quality and safety risk management and standard formulation, agricultural product origin,

<sup>25</sup> Agro-food quality safety means that the quality of agricultural products meets the quality and safety standards of agricultural products and meets the requirements for protecting human health and safety

<sup>26</sup> Agro-food refers to primary products derived from farming, forestry, animal husbandry and fishery, that is, plants, animals, microorganisms and their products obtained in agricultural activities

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
		agricultural product production, agricultural product sales, supervision and management.
<i>Feed and Feed Additives Regulation</i>	SC issued in 1999, 4 <sup>th</sup> amended in 2017	The <b>Regulation</b> is formulated to strengthen the management of feed and feed additives, improve the quality of feed and feed additives, ensure the safety and quality of animal products, and maintain public health. The <b>Regulation</b> stipulates the supervision of feed and feed additives in the agricultural and rural sectors. Specific provisions have been made on the registration, production, operation and use, and legal liability of feed and feed additives.
<i>Measures for the Administration of Pollution-free Agro-food</i>	General Administration of Quality Supervision, Inspection and Quarantine, Ministry of Agriculture issued in 2002, amended by MARA IN 2007	The <b>Administrative Measures</b> aims to strengthen the management of pollution-free agro-food, safeguard the rights and interests of consumers, improve the quality of agro-food, protect the agricultural eco-environment, and promote sustainable agricultural development. The <b>Administrative Measures</b> defined that "pollution-free agro-food refers to the environment of origin, production process and product quality meet the requirements of the relevant standards and norms of the State, through the certification of the certification of raw or pre-processed edible agricultural products permitted in the certificate to be marked as pollution-free agro-food. The <b>Administrative Measures</b> have made specific provisions on the conditions of certification on origin and production management, place of origin.
<b>3. Animal welfare</b>		
<b>Laws and Regulations with provisions on animal welfare</b>		<ul style="list-style-type: none"> <li>• <b>Wildlife Protection Law of the PRC:</b> Acts endangering wildlife such as illegal killing, trafficking, consumption and abuse shall be prohibited, and violators shall be punished and accountability be held</li> <li>• <b>Animal Husbandry Law of the PRC</b> stipulated: The competent MARA under The State Council shall guide animal husbandry producers and operators to improve the conditions and environment for breeding, farming, feeding, transportation and slaughtering of livestock and poultry; Livestock producers are required to comply with livestock technical specifications, ensure the health and safety of livestock and poultry, and improve the quality and safety of livestock products; The <b>Law</b> prohibits ill-treatment, abandonment, abuse and other acts that endanger livestock and poultry, and imposes penalties and accountability on violators</li> <li>• <b>Law of the PRC on Animal Epidemic Prevention:</b> Animal breeders and veterinary practitioners are required to abide by the regulations on animal epidemic prevention, report and handle animal outbreaks in a timely manner, and prevent the spread and spread of the disease.</li> <li>• <b>Veterinary Medicine Law of PRC:</b> It is required that veterinary practitioners to have appropriate qualifications and capabilities, abide by professional ethics and norms, and provide reasonable</li> </ul>

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
		<p>and effective diagnosis and treatment services for animals</p> <ul style="list-style-type: none"> <li>The <i>Law on the Quality and Safety of Agricultural Products</i> and the relevant <i>sectoral standards</i> for ensuring quality and safety of agro-food products also imply that behaviors of livestock stockman and slaughterhouse employees are regulated not to mistreat or frighten animals or feed prohibited feed additives and antibiotics, and are subject to the strict supervision and management of the local AHVMBs and MSBs.</li> </ul>
Relevant standards or codes	National Standard	<p><b><i>Welfare Criteria for Animals to Be Slaughtered</i></b> (BG or T42304-2023) specified the animal welfare requirements of the slaughtering process of pigs, cattle, sheep, chickens and ducks, and applies to the animal welfare management of the slaughtering process of pigs, cattle, sheep, chickens and ducks</p> <p><b><i>Welfare on Killing Animals for Disease control Purpose</i></b> (GB or T42071-2022) The standard regulates the options, personnel requirements, options selection, safety measures and supervision of livestock and poultry culling under different factors. At the same time, to facilitate the operation and implementation, the specific requirements for the culling methods, culling equipment, culling preparation, and post-culling treatment of pigs, poultry, cattle and sheep are detailed, so as to minimize the suffering of the above-mentioned animals when they are culled</p>
	Sectoral Standards	<ul style="list-style-type: none"> <li>SN or T 3774-2014 Animal Welfare Code for Feeding, Transportation and Slaughtering of Cattle</li> <li>SN or T4102-2015 Animal Welfare Code for Feeding, Transportation and Slaughtering of Horse</li> <li>SN or T5485-2022 Animal Welfare Code for Feeding, Transportation and Slaughtering of Donkey</li> </ul>
	Group or Association Standards	<ul style="list-style-type: none"> <li>T or CAS 235-2014 Farm Animal Welfare Requirement for Pigs</li> <li>T or CAI 001-2019 Farm Animal Welfare Requirement for waterfowl</li> <li>T or CAS 269-2017 Farm Animal Welfare Requirement for hens</li> <li>T or CAI 004-2021 Farm Animal Welfare Requirement for Dairy Cattle</li> <li>T or CAS 238-2014 Farm Animal Welfare Requirement for Beef Cattle</li> <li>T or CAS 267-2017 Farm Animal Welfare Requirement for Meet-type Chicken</li> <li>T or CAI 003-2019 Farm Animal Welfare Requirement for Cashmere Goat</li> <li>T or CAS 242-2015 Farm Animal Welfare Requirement for Sheep raised for Mutton</li> <li>T or ZJMEAT 002-2022 Code of Practice for Animal Welfare During Transport and Slaughtering of Live Pigs</li> </ul>

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<b>4. Relevant Gansu Provincial Regulations and Administrative Measures</b>		
<i>Regulation of Gansu Province on Animal Epidemic Prevention</i>	GPPC issued in 2013, amended in 2021	<p>The Regulation is formulated in accordance with the <i>Law of the PRC on Animal Epidemic Prevention</i> and the <i>Emergency Regulations on Major Animal Epidemics</i> of The State Council, and in combination with the actual conditions of Gansu Province, aiming to strengthen the management of animal epidemic prevention activities, prevent, control, purify and eliminate animal epidemics, promote the development of livestock production, prevent and control zoonotic infectious diseases, and ensure public health safety and human health.</p> <p>The <b>Regulations</b> stipulates that "Units and individuals engaged in livestock production, feeding, slaughtering, operation, isolation, transportation, as well as the production, operation, processing, storage and other activities of animal products shall, in accordance with the provisions of the State, shall work well on immunization, disinfection, testing, isolation, purification, elimination, sanitary treatment and other animal epidemic prevention tasks, and bear the relevant responsibilities for animal epidemic prevention."</p>
<i>Measures for the Administration of Livestock Slaughtering in Gansu Province</i>	Gansu Provincial Government issued in 2005	<p>The <i>Administrative Measures</i> is formulated in accordance with the Regulations on the Administration of Pig Slaughter of The State Council, applicable to livestock (pigs, cattle, and sheep) and their unprocessed carcasses, meat, fat, organs, blood, bones, heads, hooves, skins, etc., after slaughter in Gansu Province. The <i>Administrative Measures</i> stipulates that "slaughtering livestock must be carried out in approved designated slaughterhouses." No unit or individual may slaughter livestock without being designated by the people's governments of municipalities, prefectures, counties, districts. The conditions for setting up the designated slaughterhouse of domestic animals are specified. Meat production and processing enterprises that need to slaughter domestic animals by themselves shall apply for the qualification of designated slaughter in accordance with the conditions and procedures stipulated in the <i>Administrative Measures</i>. The <i>Administrative Measures</i> also make specific provisions on quality control such as pre-slaughter and post-slaughter quarantine, meat quality inspection, freezing and refrigeration storage, transportation and marketing.</p>
<i>Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management</i>	Gansu Provincial Government issued in 2007	<p>The <i>Regulation &amp; Measures</i> put forward specific requirements for epidemic prevention, waste sanitary treatment facilities and on the site selection, layout, introduction of breeding stock, animal immunization, required veterinary drugs, and sanitary treatment of dead and diseased livestock, as well as the requirements on the rules and regulation to be established by enterprises or rural collectives or households who runs the livestock farms or farming zones.</p> <p>The <i>Regulation &amp; Measures</i> stipulates that the built and new livestock and poultry farms and farming zones in the Province shall carry out registration for endorsement and the county level AHVMBs are responsible for the registration. The <i>Regulation &amp; Measures</i> also</p>

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
		make specific provisions on the use of veterinary drugs and feed additives. For example, "The use of homologous animal source feed for ruminants such as cattle and sheep is prohibited."
<i>Measures for Supervision &amp; Examination of the Prevention and Control of Major Animal Epidemics in Gansu Province</i>	Gansu Provincial AHVMB issued in 2023	The <i>Measures</i> clarify the division of responsibilities, content and methods of supervision, frequency and coverage of supervision & examination procedures and results of supervision in major animal disease prevention and control from provincial to municipal and county veterinary authorities (including animal husbandry and veterinary bureaus or sections or units and animal disease prevention and control agencies and animal health supervision agencies). The purpose is to standardize the behavior of animal epidemic prevention supervision, improve administrative efficiency and work efficiency, promote the implementation of the responsibility and measures for animal epidemic prevention of major animal diseases in the province, and promote the high-quality development of animal husbandry.
<i>Plan for Prevention and Control of Zoonotic Diseases among Animals in Gansu Province (2023-2030)</i>	Gansu Provincial AHVMB issued in Feb. 2023	In this <i>Plan</i> , the main zoonotic diseases related to herbivorous livestock that need to be controlled and prevented are classified as: <ul style="list-style-type: none"> <li>• Focused prevention: brucellosis, cattle disease, combined cattle disease, anthrax, echinococcosis, malleosis of horse</li> <li>• Routine prevention: melioidosis</li> <li>• External precautions: bovine spongy encephalopathy</li> </ul>
<i>Implementation Plan on Further Strengthening the construction of Two "Three Goods and One standard" to build a well-known brand of "Gansu-Flavor" agricultural products (2019-2023)</i>	Gansu Provincial Government issued in 2019	One of the objectives of the <i>Implementation Plan</i> is to reduce pollution and carbon emission in animal husbandry and improve the quality of agro-foods with characteristics of Gansu Province. The so called "Two Three Goods and One standard" refer to agro-foods produced to be "pollution-free agricultural products, green food, organic agricultural products, geographical indication agricultural products" deemed as the "good variety, good quality, good brands meeting standards".
<b>Local emergency plans for major animal epidemic prevention</b>		In accordance with the relevant laws and regulations on animal epidemic prevention, special emergency plans prepared by ARABs at provincial, municipal and county levels, issued by the Emergency plans issued by governments at the same level. For example, Gansu Province Emergency Plan for Major Animal Epidemic Outbreak, Gansu Province Emergency Plan for Major Animal Epidemics 2022, and each county's Emergency Plan for Major Animal Epidemics 2022, etc.
<b>5. Sectoral Standards and Technical Codes</b>		

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
Animal health and epidemic prevention & control		<i>Technical Specification for Sanitary treatment of Dead and Diseased Animals, Technical Specification for Prevention and Control of FMD, Technical Specification for Anthrax Control, Technical Specification for Prevention and Treatment of Sheep Pox, Technical Specification for Bovine Tuberculosis Control, Brucellosis Control Techniques, Technical Specification for the Prevention and Treatment of HPAI, Generals for Biosafety in Veterinary Laboratories-NY or T1948-2010, Quality and Technical Requirements for Veterinary Laboratories, etc.</i>
Sectoral standards for safeguard healthy and quality of agro-foods	MARA	The " <i>Feed raw materials Catalogue</i> " was issued by the Ministry of Agriculture on June 1, 2012, and implemented on January 1, 2012, and then revised by the Ministry of Agriculture and Rural Affairs several times, and the current revision announcement is up to July 2023; <i>Catalog of Feed Additives (2013); Feed Quality and Safety Management Code (2014); Code for Safe Use of Feed Additives (2018); List of allowable feed additive Varieties; Code for the Use of Feed Drug Additives; Guidelines for the Management of Pollution-free Feed for Pigs (NY or T5033-2001); Guidelines for the Breeding and Management of pollution-free Meat Sheep (NY or T5151-2002); Guidelines for the Feeding and Management of pollution-free Beef Cattle (NY or T5033-2001) Guidelines for the feeding and Management of pollution-free Dairy Cattle (NY or T5049-2001); And so on</i>
Laboratory biosafety	National standards or codes	General Requirements for Laboratory Biosafety (GB19489-2008), Technical Code for Biosafety Laboratory Construction (GB50346-2011)
	Sectoral standards or codes	General Biosafety Requirements for Veterinary Laboratories (NY or T 1948-2010), Quality and Technical Requirements for Veterinary Laboratories (NY or T 2961-2016) Technical Specification for Collection, Preservation and Transportation of Veterinary Diagnostic Samples (NY or T541-2016)

#### 4.4.1.2 Implementation Mechanisms and Procedures

113. In order to implement the above-mentioned laws and regulations on animal health, disease prevention and control, and the quality and safety of livestock products, China has established and is gradually improving the relevant implementation mechanisms, which are summarized in Table 4-16 below.

**Table 4-16: Table 4-2 Implementation mechanism for animal health and disease prevention and control, and quality and safety management of livestock products**

Implementation Mechanisms or Procedures	Description
<b>1. Animal Health and Epidemic Prevention &amp; Control</b>	
<b>Mechanism of</b>	The competent departments of ARABs shall, in accordance with the animal epidemic

<b>animal disease risk assessment</b>	<p>situation at home and abroad and the need for the protection of livestock production and human health, conduct risk assessment of animal epidemics in a timely manner together with the health and other relevant departments under The State Council, and formulate and publish measures and technical specifications for the prevention, control, purification and elimination of animal epidemics. Compulsory immunization shall be carried out against animal epidemics that seriously endanger livestock production and human health.</p> <p>In Gansu Province, the provincial DARA has established a risk assessment and early warning system for animal epidemics, carried out the provincial-wide risk assessment of animal epidemics in conjunction with the relevant departments and bureaus of health at the same level, issued early warnings of animal epidemics in a timely manner according to the prediction of the occurrence and epidemic trend of animal epidemics. The early warnings specified disease, zones, stages for prevention &amp; control, purification, elimination of animal epidemics.</p>
<b>Mechanism of animal epidemics monitoring and early warning</b>	<p>The State implements an animal epidemic monitoring and early warning mechanism. People's governments at or above the county level shall establish and improve animal epidemic disease monitoring networks and strengthen animal epidemic disease monitoring. The ARABs at various levels shall formulate animal epidemic disease monitoring plans for their respective administrative areas to forecast the occurrence and epidemic trend of animal epidemics, and issue timely early warnings of animal epidemics. After receiving early warnings of animal epidemics, local people's governments at various levels shall take timely preventive and control measures;</p>
<b>Mechanism of examine animal epidemic prevention conditions</b>	<p>The State implements animal epidemic prevention condition examine mechanism. Entities who plan to establish animal farms and isolation sites, animal slaughtering and processing sites and sanitary treatment sites for animals and animal products shall submit to ARABs of the local people's government at or above the county level, attached with relevant materials. The ARABs accepting applications shall examine them in accordance with this Law and the Administrative Licensing Law of the PRC. A certificate of the conditions for animal epidemic prevention shall be issued to those who pass the examination; If the applicant is not qualified, it shall notify the applicant and explain the reasons.</p>
<b>Compulsory immunization mechanism</b>	<p>The State implements compulsory immunization against animal epidemics that seriously endanger livestock production and human health. Units and individuals that raise animals shall fulfill the obligation of compulsory immunization against animal epidemics, vaccinate animals against animal epidemics in accordance with the compulsory immunization plan and technical norms, and establish immunization files and label livestock and poultry in accordance with the relevant provisions of the State to ensure traceability. Vaccines used for preventive vaccination shall conform to the quality standards of the State.</p> <p>In Gansu, the provincial DARA, together with relevant departments, formulated the provincial compulsory immunization plan for animal diseases in accordance with the national compulsory immunization plan, and submitted it to the MARA for the record with the approval of the provincial government. The municipal and county-level ARABs or AHVMBs shall, in accordance with the provincial compulsory immunization plan against animal epidemics, organize the implementation of compulsory immunization against animal epidemics in their respective administrative areas.</p>
<b>Animal epidemic notification mechanism</b>	<p>The State practices an animal epidemic notification mechanism. The ARABs notify the occurrence and handling of major animal epidemics.</p>
<b>Inter-department</b>	<p>First, establish a cooperation mechanism for the prevention and treatment of zoonotic diseases covering the national, provincial, municipal and county levels of health,</p>

<b>cooperation mechanism</b>	agriculture, rural areas, wildlife protection and other competent departments. Second, establish a cooperation mechanism at the national level between MARA and the General Administration of Customs and other departments to prevent the import of animal diseases from overseas. When the epidemic of zoonotic infectious diseases occurs, the ARABs, HCs, FGBs, AHVMBs of the people's governments at or above the county level shall strengthen information communication and establish a cooperative mechanism for the prevention and treatment of zoonotic infectious diseases. In the event of an animal epidemic, air, railway, road and waterway transport enterprises shall give priority to organizing the transport of epidemic prevention personnel and materials; The local people's government at or above the county level shall, in accordance with the emergency plan for major animal epidemics at the higher level and the actual situation of the region, formulate the emergency plan for major animal epidemics in its administrative region, report it to the ARABs of the people's government at the higher level for the record, and send a copy to the emergency management department of the people's government at the higher level. The ARABs of the local people's governments at or above the county level shall, in accordance with the different types of animal epidemics, their epidemic characteristics and the degree of harm, formulate implementation plans respectively
<b>Quarantine of animals and animal products</b>	Animal health supervision agencies shall quarantine animals and animal products in accordance with the relevant law and regulations and MARA's provisions. Official veterinarians of animal health supervision institutions shall conduct quarantine of animals and animal products. In addition, there are corresponding administrative measures and regulations on quarantine declaration, official quarantine, issuance of quarantine certificates, quarantine signs and other aspects for quarantine animals from live, slaughter, product processing, transportation and distribution, and marketing.
<b>Official veterinarian appointment mechanism</b>	Veterinarian, that is, the official veterinarian of the animal health regulatory institution, shall have the conditions prescribed by the MARA, be confirmed by the ARABs of the governments of provinces, autonomous regions and municipalities directly under the Central government in accordance with the procedures, and be appointed by ARABs of the governments at or above the county level. The State implements a qualification examination system for practicing veterinarians. Rural veterinarians who have professional education or meet the conditions and pass the qualification examination for practicing veterinarians shall be issued a qualification certificate for practicing veterinarians by ARABs of the people's government of a province, autonomous region or municipality directly under the Central Government.
<b>Mechanism of sites certificate and institution license</b>	Livestock farms, farming zones, animal isolation sites, animal slaughtering and processing sites and sanitary treatment sites of animals and animal products shall meet the conditions for animal epidemic prevention as provided for in relevant laws & regulations, and obtain the certificate of meeting animal epidemic prevention conditions.  Institutions and units engaged in animal diagnosis and treatment, veterinary drug production, veterinary drug marketing, and the establishment of livestock and poultry farms or farming zones need to apply for, and shall be reviewed by the competent authorities to comply with the conditions prescribed by laws and regulations, and shall be issued with the corresponding production or business license after being deemed qualified.
<b>Mechanism of designated site for slaughtering pigs, cattle and sheep</b>	With reference to the national <i>Conditions for the Management of Pig Slaughter</i> , combined with the actual situation of Gansu, an animal husbandry province, the <i>Measures for the Management of Livestock Slaughter in Gansu Province</i> stipulates that "within the administrative area of the province, designated slaughtering and centralized quarantine of pigs, cattle and sheep shall be implemented, and designated slaughtering and centralized quarantine of poultry shall be gradually implemented. No unit or individual may engage in slaughtering activities outside designated places, except for individuals in rural areas who slaughter and eat themselves."

<p><b>Centralized and harmless disposal of medical waste</b></p>	<p>The State promotes the centralized and harmless disposal of medical waste. Governments at or above the county level shall be responsible for organizing the construction of centralized medical waste disposal facilities</p> <p>Medical and health institutions and centralized disposal units of medical waste shall register medical waste and implement hazardous waste transferring unified bill mechanism.</p>
<p><b>Implementation the target management responsibility mechanism for animal epidemic prevention in Gansu</b></p>	<p>Gansu Province has formulated the <i>Responsibility System for the Prevention and Control of Major Animal Epidemics</i> and the <i>Measures for Accountability</i>, clarifying the responsibility in places within jurisdiction of county, and the main responsibilities of regulatory agencies, principle responsibility of management counterpart.</p>
<p><b>Mechanism of linking insurance with sanitary treatment of dead and diseased livestock</b></p>	<p>Through government subsidies, livestock farmers or cooperatives are encouraged to actively participate in the sanitary treatment of dead and diseased livestock, reduce environmental pollution and animal disease prevention and control risks, protect the economic interests of farmers, and safeguard the ecological environment and public health safety. It involves the linkage or interaction of four departments: AHVMBs are responsible for coordinating and organizing the sanitary treatment of dead and diseased animals, formulating relevant subsidy policies and standards, and carrying out information release and publicity work; professional insurance companies are responsible for providing insurance products for the sanitary treatment of dead and diseased animals to protect the economic interests of farmers; The Centre for the Safe Disposal of Dead and diseased Animals is responsible for the transport and safe disposal of dead and diseased animals; The supervision department is responsible for supervising and inspecting the implementation of the sanitary treatment of dead and diseased animals.</p>
<p>Classified management on PML with unified biosafety standard:</p>	<p>The Stage classify PMLs (including veterinary laboratories) into 4 categories according to the infectivity of pathogenic microorganisms and the degree of harm to individuals or groups after infection; The State divide PMLs into BSL-1, BSL-2, BSL-3 and BSL-3 based on according to the biosafety protection level of the laboratory against pathogenic microorganisms, and in accordance with the provisions of the national standards for laboratory biosafety. BSL-1 &amp; BSL-2 labs shall not engage in experiments operations on highly pathogenic microorganisms.</p> <p><b>Requirement of biosafety level of veterinary labs:</b></p> <p>Animal Lab Biosafety Level-1 (ABSL-1): the biosafety level that can safely carry out work in animals infected with clearly defined pathogenic microorganisms that are not found to definitely cause disease in healthy adults, and that pose minimal risk to laboratory workers, animals, and the environment</p> <p>ABSL-2: the biosafety level that can safely carry out work in animals infected with pathogenic microorganisms that pose minimal risk to laboratory workers, animals, and the environment. And these pathogenic microorganisms cause harm through exposure to the digestive tract and skin and mucous membranes.</p> <p>ABSL-3: The biosafety level at which it is safe to work in animals, both domestic and foreign, that may be infected by pathogenic microorganisms that cause severe or fatal diseases through respiratory infections</p> <p>ABSL-4: The biosafety level that can safely engage in animals that may be infected by pathogenic microorganisms, domestically and internationally, and the pathogenic microorganisms can transmitted through aerosols, laboratory infection is highly</p>

	dangerous, seriously harmful to human and animal life and the environment without specific prevention and treatment measures					
	A list of floor areas and biosafety levels for veterinary laboratories at different administrative level					
	Administrative level	County	municipality	provincial	Regional	national
	Total floor area (no less than m <sup>2</sup> )	200	300	1500	2000	
Biosafety level (the highest)	BSL-1	BSL-2	BSL-2	BSL-3	BSL-4	

Veterinary laboratory examination system:	The State implements an examination system for veterinary laboratories. Only veterinary laboratories that have passed the examination and obtained the examination certificate may undertake the tasks of diagnosis, monitoring and testing of animal epidemics. If the veterinary laboratory fails to pass the assessment and has not obtained the assessment certificate, the task of diagnosis, monitoring and testing of animal epidemics in the administrative area shall be entrusted to the veterinary laboratory that has obtained the assessment certificate of the veterinary laboratory.
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**2. Agro-foods Quality Safety Management**

<b>Agro-food quality and safety risk monitoring mechanism</b>	<p>Provincial ARAD shall formulate the implementation plan for monitoring the quality and safety risks of agricultural products in their respective administrative areas, and report it to the competent department of agriculture and rural Affairs under The State Council for the record. The competent departments of agriculture and rural affairs under the local people's governments at or above the county level shall be responsible for organizing the implementation of monitoring the quality and safety risks of agricultural products in their respective administrative areas</p> <p>Provincial DADA shall formulate the implementation plan for monitoring the quality and safety risks of agro-food, and report it to MARA for record. The ARABs under the local people's governments at or above the county level shall be responsible for organizing the implementation of monitoring the quality and safety risks of agro-foods in their respective administrative areas.</p>
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<b>Agro-food quality and safety risk assessment mechanism</b>	MARA shall set up an expert committee on agro-food quality and safety risk assessment to conduct risk analysis and assessment of potential hazards that may affect the quality and safety of agro-food, and timely report the results of monitoring and risk assessment of agro-food quality and safety risk to the market supervision and administration, health and other departments under The State Council, and ARABs of the people's governments of provinces, autonomous regions and municipalities.
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<b>Establishment and improvement of a system for agro-food quality and safety standards</b>	The State establishes and improves a system of quality and safety standards for agro-food to ensure their strict implementation. The quality and safety standards of agro-food are mandatory standards.
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<b>Mechanism of origin monitoring on agro-food</b>	ARABs at or above the county level shall, together with the EEBs and NRBs at the same level, formulate monitoring plans for the production areas of ago-food, and strengthen the investigation, monitoring and evaluation of the safety of agricultural products. It mainly involves crop and soil pollution control.
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<p><b>Standard system for feed and feed additives</b></p>	<p>The State regulates feeding management and ensures the quality and safety of livestock products by establishing a standard system for feed and feed additives directly related to livestock production. According to the provisions of the <i>Regulation on the Administration of Feed and Feed Additives</i> on "prohibiting the addition of animal-derived ingredients other than milk and dairy products in ruminant feed", the standard system for feed and feed additives related to herbivorous animals are established to avoid the production of special hazards (SRM) during cattle and sheep feeding: tissues that transmit vectors such as bovine spongiform encephalopathy (BSE), hereditary spongiform encephalopathy (TSE) or Scrapie in cattle after processing into animal feed. People consuming animal products infected with bovine spongiform encephalopathy may suffer from variant Creutzfeldt-Jakob disease, that is, mad cow disease, etc., The said system helped to avoid cattle and sheep farming falling into the "sick cow disease" abyss.</p>
<p><b>Mechanism of commitment certificate compliance with standard</b></p>	<p>Commitment certificated compliance with standard is certificate of commitment issued by edible agro-food producers, buyers voluntarily that the quality of their agro-food produced or sold are safety in accordance with national laws and regulations, and mandatory standards for agro-food quality and safety and in strict implementation of the existing agro-food quality and safety control requirement.</p> <p>Requirements for pledging commitment to meet standard certificate include: agro-food production enterprises and farmers' specialized cooperatives shall implement the provisions of laws and regulations and the relevant mandatory standards of the State, ensure that the agro-food they sell meet the quality and safety standards of agro-food, and issue a certificate of compliance according to the quality and safety control and testing results, promising not to use prohibited pesticides, veterinary drugs and other compounds, and the residues of conventional pesticides and veterinary drugs used will not exceed the standard, etc. The commitment certificate is a promise identifier, traceability certificate, reputation proof and a powerful tool for supervision.</p>

**4.5.1.3 Institutional Organization and Performance**

114. The above laws and regulations related to animal health and epidemic prevention and control, and the quality and safety of livestock products empowered the following levels of governments and competent departments or bureaus with the responsibility to implement and enforce the relevant laws, regulations and mechanisms. Their respective responsibilities, procedures and means for performing their duties, and the management performance found by environmental and social group of the PforR are analyzed as follows.

115. **ARABs:** are the most important government supervision authorities for animal health and epidemics prevention and control. They play the most important role in animal health and epidemic prevention & control, ensuring the quality of livestock products and public safety, especially in all important links or points before the slaughter and finishing processing of livestock. There are AHVMBs or workstations (subordinated to ARAB) at provincial, municipal and county levels. At the county level, there are AHVMBs or workstation (1~14 staff), or or and Law enforcement Supervision and Quarantine section (4~16 staff), technical service agencies providing laboratory services for animal epidemic prevention & control and for agro-food quality tests (e.g., county animal disease prevention & control center, or or and agricultural (animal husbandry) technical service center, or or and animal health surveillance office (3~19 staff) , plus livestock stations at town or township level, and grass-root animal quarantine intendants (2~4 staff or village in average) at village level. Among them, the AHVMB of the second bureau of Jingchuan County ARAB has relatively complete institutional Settings and technical service institutions from the county bureau to the township level, with more than 130 personnel, including more than 100 professional and technical personnel. These AHVMBs are responsible for the prevention & treatment of animal epidemics, epidemiological investigation diagnosis and treatment, and veterinary medical administration in

the county, responsible for quarantine, supervision and other work of animals and animal products in the county. To be specific, there daily duties include:

- **Serving animal health and epidemic prevention & control at grassroots level:** The above-mentioned AHVMBs under ARABs at all levels have the institutions and personnel holding the quarantine certificate go deep into the farms, farming communities or cooperatives, and households in the agricultural and pastoral areas, widely publicize the animal epidemic prevention & control policies and relevant knowledge, and provide necessary skills training, and inspect the conditions of animal epidemic prevention in their breeding facilities and issue Animal Epidemic Prevention Certificates when the inspected conditions deemed satisfactory (See Figure 4-5-1 inspecting livestock farming facilities and issuing animal epidemic prevention certificate of Appendix 7 of this report). In accordance with the annual immunization plan, they provide livestock farms, farming zones or cooperatives and farming households with regular national compulsory immunization services and disease-related immunization services, focusing on FMD disease, avian influenza, swine fever, *Peste petit ruminant*, etc., in order to achieve the planned targets of animal immune density and herd immune antibody qualification rate, as well as service on cleaning and disinfecting the breeding facilities. Take Minle County as an example, in 2022, the immune density of all kinds of livestock and poultry reached more than 98%, and the qualification rate of herd immune antibodies reached more than 80%. A total of 2.7686 million livestock and poultry were immunized against diseases. Focusing on livestock and poultry farms and intensive farming zones, they carried out four special actions of "big cleaning and disinfection", using a total of 6.9 tons of disinfection drugs covering 7.422 million square meters. In addition, large-scale livestock farms have also supplement immunization items according to the requirements of livestock varieties, populations and enterprise production. Breeding stock farms (such as sheep breeding farms, to prevent and control the transmission of brucellosis), adopt purification measures to prevent and control animal epidemics.
- **Handling administrative licenses for employees or institutions and sites, and formulate emergency plans for major animal epidemics outbreak:** In order to implement the official veterinary mechanism, animal and animal product quarantine mechanism, site and practitioner certification mechanism, and in responding to the applications of individuals institutions engaged in livestock production or or and slaughtering and processing, veterinary service, animal quarantine service, veterinary drug business, they inspect, examine the conditions of the sites and handle administrative licenses. Taking Jingchuan County as an example, the administrative licensing power operation flowchart of the county AHVMB is displayed in detail in the administrative publicity column of the county AHVMB (see Figure. 4-5-2 Administrative licensing power operation flowchart of AHVMB in Annex 7 of this report and Figure. 4-5-3 Animal quarantine personnel training, assessment and quarantine certification management). In accordance with the provision of relevant national and provincial laws & regulations on emergency plan for major animal epidemics outbreaks, ARABs at provincial, municipal and county levels, formulated their respective Emergency Plans for Major Animal Epidemics Outbreaks, and regularly update them with the latest editions in 2022. In line with the said emergency plans, some counties have drawn a working flow chart for the disposal of local major animal epidemics (see Figure 4-5-4 in Appendix 7 of this report).
- **Conducting animal epidemiological serving and clinical diagnosis:** through monitoring, survey and analysis, and in combination with the practice of animal health and disease prevention & control at the grassroots level, they conduct animal epidemiological survey and clinical diagnosis, and animal epidemic prediction to provide decision-making basis for the formulation of the animal disease prevention & control plan and immunization plan in the county, and the adoption of isolation, culling and disinfection measures. These efforts laid a foundation for AHVMBs to carry out law enforcement and supervision of various animal disease policies.

- **Risk assessment-based domestic<sup>27</sup> animal quarantine testing** as an important means to prevent the spread of animal infectious diseases and protect animal husbandry production and people's health, the above AHVMBs under the ARABs at all levels have their certified agencies and practitioners holding quarantine certificates to carry out domestic animal quarantine testing at key sites or links of animal production (from breeding, farming up to slaughter and segmentation) in accordance with statutory quarantine items, standards and methods. The key sites or links of animal production for quarantine testing or inspection include: livestock breeding sites, farming sites, site transition (e.g., testing before transferring of newborn animal from breeding stock to fattening farm and fattened stock), the main transportation channel for the transfer of livestock across the administrative region, slaughter houses (live animal at bye-kill zone and rough-processed products after slaughter). The quarantine inspection methods are the combination of field rapid detection and laboratory testing. For those who pass the quarantine test, issue the official "animal quarantine certificate", sign the animal quarantine seal, issue the animal quarantine mark and a unified bill, and enter the next step (as an important voucher for the regulatory of the relay downstream link of the Market Supervision Administration). In case of failure, the "quarantine treatment notice" will be issued to require the operation to be quarantined and observed until the quarantine passes, otherwise sanitary treatment shall be carried out under the supervision of the ARABs in accordance with the relevant provisions of the State.
- **Technical supporting - veterinary laboratory and agricultural product quality and safety testing laboratory:** the said laboratories are important technical support for animal quarantine, diagnosis and treatment, scientific animal disease prevention and control, and ensuring the quality and safety of animal products and public health. Laboratories to be supported under the PforR are at county level, a few of them (such as the ones in Jingchuan and Lanzhou New District) will play roles as municipal ones) with biosafety levels of BSL-1 and BSL-2. The construction or upgrading of these types of labs require the preparation of EIA-form as per *Construction Project EIA Classified Management Catalogue*, and these biosafety levels of labs will first be certified by passing examination before operation and not be engage in high pathogenic microorganism experiment activities that should be carried out in the higher biosafety level PMLs as stipulated in the National Pathogenic Microorganism Catalogue. The environment and social team of the PforR found through its due diligence that, AHVMBs or stations in some counties have only very simple laboratory facilities and limited technical personnel to undertake the sampling work of disease surveillance and submit it to qualified professional laboratories in the provinces and municipalities for testing; Some counties are equipped with laboratories that meet the requirements of BSL-1 laboratories in site selection, layout, internal facilities and internal environment, and can undertake tasks such as anatomy, sampling, sample storage, serological testing, and e pathological testing; Some counties (such as Jingchuan County, Lanzhou New District) are equipped with their location, layout, internal facilities and internal environment in line with the requirements of BSL-2 laboratory laboratories, in addition to the general county veterinary laboratory testing tasks, can also undertake molecular biology testing tasks, layout of PCR laboratories and corresponding instruments, close to the level of municipal veterinary laboratories. For example, the agricultural technology service center of Lanzhou New District has Laboratory facilities, instruments and staff, a CAM certified Lab. This Lab, is equipped with facilities meet the requirements of BSL-2 laboratory, and is also equipped with a quality testing for agricultural and livestock products, which can undertake the tasks of crop pesticide residue detection, plants disease and pest detection, pest and weed detection, and veterinary drug residue detection of livestock products. These laboratory

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<sup>27</sup> Since this report is based the fact that large-scale intensive livestock production activities with high environmental and social risks have been excluded, only the existing small and medium-sized livestock production and animal health disease prevention and control management system in the county are assessed. The ESSA only focuses on the domestic animal disease detection part, The import and export quarantine of animals and livestock products that may be brought about by large-scale livestock production activities and those related to the customs quarantine management system are not included in the scope of this assessment.

operators have developed sound management systems, biosafety management manuals, standard operating procedures (SOPs), and careful laboratory records. In accordance with the Quality and Technical Requirements for Veterinary Laboratories formulated by the Ministry of Agriculture NY or T2961-2016 (Normative Appendix B- Waste Management for veterinary laboratories), indoor wastes are collected separately with buckets marked with different colors and labels. Among them, buckets marked with “medical waste” are used for collection of laboratory viruses, bacterial culture medium, wasted bacterial strains, residual or expired positive samples and other hazardous waste. These medical wastes are sterilized by autoclaving and temporally stored in the designated place of the Lab before being handed over to county medical waste disposal center, who transport the waste by using unified transfer bill to the harmless medical waste treatment facility of the center for final disposal (see Figure 4-5-5 and Figure 4-5-6 In Appendix 7 of this report). Medical waste transfer and harmless disposal facilities is identified to be related facilities under this PforR, the environmental and social risk assessment of it is in Section 3.4.2.

- **Managing dead and diseased animals:** as described in sub-section 4.3.3.3 of the findings of E&S team of the PforR, the Plan of the provincial-wide regional centralized harmless disposal center for dead and diseased animals has been developed by Gansu DADA in accordance with national and provincial orientation for controlling pollution of dead and diseased animal and safe, hygienic and harmless disposal. The disposal of dead and diseased animals from each county’s livestock production is now in transition from distributed deep-burial mode towards safer & healthier centralized harmless disposal mode. The subsidy + insurance linkage mechanism has also been introduced for sanitary treatment of dead and diseased animals. With the insurance MARA's *Measures for the Management of the Sanitary treatment of Dead and diseased Livestock and Diseased Livestock and Poultry Products* in May 2022, and the gradual completion and operation of the regional centralized sanitary treatment center for dead and diseased animals in Gansu Province, not only sick and dead animals, but also sick and dead animals, moreover, livestock and poultry and livestock and poultry products<sup>28</sup> defined by the *Measures* to be subject to sanitary treatment" will be further harmlessly treated in a standardized manner.
- **Risks management and control in “off-site grazing”:** In view of the risks of animal diseases and zoonotic diseases, potential risk of additional crops’ pest caused by caused by direct returning of untreated animal feces to the cropland under the "off-site grazing" mode, attention has been paid by AHVMBs under ARABs of local governments and following measures are being taken: First, before cattle and sheep are transferred from the pastoral area to the straw land in the agricultural area for grazing, the AHVMBs will conduct quarantine inspection on the animals, and only the animals with quarantine certificate are allowed to enter the agricultural area; *Vice versa*, before leaving the “off-site grazing” land, animals were subject to another quarantine inspection. The double quarantine inspections helped to avoid the transfer of infected animals between the pastoral area and the agricultural area. Second, the “off-site grazing” area were provided with special breeding rooms for female animals. Livestock farming workers or operators from pastoral area are long experienced in delivering female animals and preventing diseases, especially brucellosis, who wear PPE during the breeding of female animals in the winter in agricultural areas. Childbirth waste was promptly incinerated by individual households on the spot, and the heat generated by the incineration was used for winter heating. Sunan County AHVMB plans to procure mobile female breeding service facilities to be supported under the PforR for further strengthening the service capacity of “off-site grazing” management and ability to control animal disease and zoonotic diseases. Third, the Agricultural machinery services center under ARAB who are responsible for crops protection have set up crop pests monitoring points in the “off-site grazing” area for

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<sup>28</sup> Livestock and poultry and livestock and poultry products that should be treated harmlessly include: those that died of epidemic disease or suspected epidemic disease, died of disease or the cause of death is unknown; those subject to quarantine or inspection may be harmful to human or animal health; death due to natural disasters, stress reactions, physical extrusion and other factors; the meat confirmed to be inedible by inspection of its quality during slaughter; stillbirth, mummy fetus, etc.; those being culled or destroyed for the prevention and control of animal epidemics; and other items that shall be treated harmlessly.

monitoring, warning and forecasting pests. Once there are any signs of potential crop pests and diseases, specialized service organization will be notified in time for crop pest prevention & control. In the past 7-8 years of off-site grazing practice, only some weeds in the grazing area were observed during the grazing process, and no significant increase in the incidence of crop diseases and pests was observed.

- **Implementing measures to reduce the use of veterinary drugs:** in order to effectively strengthen the comprehensive treatment of antimicrobial drugs for veterinary use, effectively curb the resistance of animal-derived bacteria, correct the excessive residues of veterinary drugs, comprehensively improve the level of green and healthy livestock and poultry farming, promote the high-quality development of animal husbandry, and effectively safeguard the production safety of livestock, food safety of animal origin, public health security and biosecurity, The MARA formulated the National Action Plan for Reducing the Use of Veterinary Antimicrobials (2021-2025), and the DARA of Gansu Province formulated the Implementation Plan for Reducing the use of veterinary Antimicrobials (2021-2025). At the municipal level, Implementation Plan for Reducing the Use of Antimicrobial Drugs for Veterinary Use were developed. At county level, actions are taken to implement the plans, including, mobilization meetings, provision of relevant trainings, “conducting resistance reduction actions” in farms, breeding communities or cooperatives, conducting self-assessment of reduction, and identify those farms or cooperatives that have met the requirements of county-level resistance reduction actions, etc.
- **Regulatory and law enforcement management:** in accordance with the provisions of relevant laws and regulations on animal health and disease prevention and control, AHVMB under the DARA of Gansu Province formulated the *Measures for Supervision & Examination of the Prevention and Control of Major Animal Epidemics in Gansu Province* in 2013, revised again in August 2023. The *Measures* standardize the supervision and inspection of animal epidemic prevention, and improve the administrative efficiency and work efficiency. The law enforcement teams of AHVMBs are responsible for supervision and examination of animal epidemic prevention conditions certificated to the livestock farms, farming zones, households, and animal slaughter houses, dead and diseased animal sanitary disposal sites, veterinary drugs business outlets, animal feeds outlets. At the meantime, they worked jointly with Market Supervision and Administrations (MSAs) at or above the same levels to supervise and administer animal and animal product trading markets and animal product storage sites. For example, Animal health surveillance Office of Jingchuan County, to perform its animal health supervision and law enforcement duties in a standardized and transparent manner, the Office drew a clear regulatory inspection flow chart for specific law enforcement management work; the Office carried out regular and irregular random sampling supervision and inspection, kept recording quarantine inspection list for the key links or points of livestock production. Supervision and management of animal disease prevention and control and animal production safety were conducted through the establishment of animal epidemic prevention and key work guidance ledger, and the establishment of production safety and fire safety supervision and inspection records (see Figure 4-5-7 Animal Health Safety and Disease prevention and Control supervision and management in Appendix 7 of this report).

116. **EEBs:** are important authorities for controlling the pollution from various in all important links of livestock production (such as livestock farms and farming zones, slaughter and processing, forage planting and feed processing, animal health and disease prevention and control, disposal of sick and dead animals, deep processing, storage, transportation and distribution of livestock products, sanitary treatment of medical waste as related facilities, etc.). EEBs participate in the relevant departments or bureaus to formulate the reduced uses of agricultural and rural fertilizers, pesticides, veterinary drugs, the agro-food production site purification action plans, agricultural and rural carbon sequestration and emission reduction plans, so as to safeguard animal health, animal product quality and public health and safety. There are EIA divisions or sections or administrative approval sections (2~3 staff), environmental law enforcement teams (about 10

staff at county level) under EEBs at provincial, municipal and county levels. Specifically in the protection of animal health, quality and safety of livestock products and public health management, they have the following responsibilities:

- **Implementing EIA system to prevent pollution in livestock production:** in accordance with local national laws and regulations on pollution prevention and control and EIA, they conduct review and approval of EIA document (the said documents cover detailed analysis and assessment of wastes and sanitary treatment) for construction projects of large-scale livestock farms and farming zone, slaughtering and processing plants, veterinary laboratories and or animal product quality and safety testing labs, sick and dead animal disposal centers, livestock product deep processing, storage, transportation and distribution facilities, and related medical waste treatment centers, and registration for endorsement, and follow-up activities (see Section 4.2 of this report for details)
- **Controlling pollution from livestock production through implementation of pollution discharge permit mechanism:** livestock farms, farming zones, animals slaughter houses and processing plants, veterinary laboratories and or animal product quality and safety testing labs, sick and dead animal disposal centers, livestock product deep processing, storage, transportation and distribution facilities, and the related medical waste treatment centers shall have pollution discharge or emission permits (certificates allowing pollutant discharge units to discharge a certain amount of pollutants) issued by EEBs. EEBs' law enforcement teams carry out focused management, simplified management or registration management on the above-said pollution discharge or emission units by means of regular or irregular and random sampling. These activities are often done in collaboration with integrated agricultural Law enforcement or animal and veterinary law enforcement teams of ARABs (see section 4.3 of the present report for details).
- **Participating in the formulation of rural non-point source pollution control, emission reduction and carbon sequestration action plans with relevant departments or bureaus:** EEBs participate in the formulation of action plans for reduced use of chemical fertilizers, pesticides, veterinary drugs, production sites environmental purification action plans, agricultural and rural carbon sequestration and emission reduction plans with relevant departments, and guide the implementation of these action plans (for details, see section 4.5.2 of this report).

117. **MSAs:** are responsible for managing and supervision of agro-food safety and quality at the key links or points of livestock value chains, the downstream after slaughtering, such as deep processing of livestock products, cold storage, distribution and market, to ensure public health and safety (see Chapter 5 for details).

118. **HCs:** are responsible for the safeguard human health and safety through prevention and control of human diseases related to zoonotic diseases, (see Chapter 5 for details).

119. **Emergency Management Bureaus (EMBs):** are responsible for emergency management, guiding relevant sectors to respond to production safety, emergencies, and comprehensive supervision of production safety. In the event of a major animal epidemic situation, EMBs take the initiative to organize relevant ARABs, AHVMBs to plan emergency plans for major animal epidemics, organize and coordinate livestock production safety production and emergency rescue for animal epidemics, establish an emergency reporting system and reserve and uniformly dispatch materials. They actively organize the handling, investigation and accountability of accidents and disasters (see Chapter 5 for details).

120. In addition, some enterprises engaged in livestock production and product processing, under the incentive of the certification system, create an internal quality management system of the enterprise, and pass the GB or T19001-2008 or ISO9001 international quality certification, food safety management system of Hazard Analysis and Critical Control Point (HACCP) certification, and green food certification of animal products; Through the industrialization development model of "company + cooperative + farmers and

herdsmen", the enterprises drive the surrounding communities and farmers and herdsmen to implement the provincial government's implementation Plan on Further strengthening the establishment of two "Three goods and one standard" to build a well-known brand of "Gansu Flavor" agricultural products (2019-2023), to response positively the calls for improving the quality of livestock products and ensuring public health and safety.

121. **Animal welfare practice in China and Gansu livestock operation:** Although, compared with developed country, China's legislation and standard system for improved animal welfare lags behind, with the development of China's economy with consumers' demand change, animal welfare is on the rise, China is gradually attaching importance to the formulation of animal welfare standards. In May 2014, China's first farm animal welfare standard Farm animal welfare Requirements for Pigs was enacted, filling the gap in China's animal welfare standards, followed by a series of farm animal welfare requirements for other types of livestock. Some agribusiness enterprises, engaged in livestock sector are exploring and practicing animal welfare measure suitable for local conditions by collaboration with international counterpart and referring to international animal welfare standards. During the field visit, the E&S team observe following animal welfare practices: 1) livestock housing condition favorable to animal welfare: the newly built livestock farms or farming zones that EIA were cleared, were designed to comply with Technical Specification for Design of Livestock Farm with a certain activity space for animals to stand, stretch, turn around, sit and interact with herd or flock mates. Walls are built to protect animals from predators, pests and excessive noise. There are special feed channels and drinking tanks, equipped with harmless disposal of manure, effluent drainage, ventilation, lighting facilities or equipment. Special open ground for animal sports are provided. In the cold and highland area of Sunan County, warm animal housing were provided, and special warm "clothes" were designed for lamb to wear during winter. Some companies certified with green, organic animal products certificates play music during cow rearing and milking; 2) In keeping animal health, regular disinfection, animal quarantine, and timely diagnosis and treatment of sick animals are provided by official veterinarians from local animal husbandry and veterinary stations to livestock farming zones run or by smallholders, cooperatives, or veterinary professionals employed by agribusiness enterprise engaged in livestock sector themselves, so to ensure animals are not suffering from pain, injury and illness; 3) Animal welfare in slaughtering, Gansu Province implements the fixed-point slaughter system for live pigs, cattle and sheep, which generally relies on the slaughter facilities built by large enterprises engaged in animal husbandry as officially recognized fixed-point slaughterhouses. The slaughterhouses are designed with lairage for reception of animals delivered, where water and feed are provided. The slaughter workshop is highly automatically controlled mechanical equipment, the first process is to stunning, sticking, then bleeding, to avoid the animal sentient situation of slaughtering; 4) In agro-food quality management, one of the tasks of the law enforcement teams under county AHVMBs include the inspection or supervision of whether the animal feed constrains banned antibiotics, "the clenbuterol" and feed additives. The main task of local MSAs in their regular inspection and supervision on marketable animal food is to sampling and testing the illegal waterlogged meat, residual antibiotics. With such enforcement inspections also force enterprises, cooperatives and farmers engaged in animal breeding and slaughtering to refrain from ill-treating and frightening animals. With the newly established standards application, these practices is to be further improved to approach to the rang of good practice described in IFC's Good Practice Note on Improving Animal Welfare in Livestock Operation (Dec. 2014) and Good Practice Note on Animal Health and Related Risk. It is noted however, due to at the initial stage, the awareness-raising of animal welfare to the Chinese public and relevant enterprises is yet to be improved through strengthened publicity and education and training.

#### 4.5.1.4 Brief Summary

122. The typical physical activities of the PforR will be carried out in a wide range of areas within the 7 Program counties (district) in Gansu Province. Among them, livestock production methods and scales differ from county to county (such as grazing, shed-feeding and semi-shed feeding, animal immunization

density, and potential disease transmission modes vary in the pastoral areas or agro-pastoral mixed areas, and agricultural areas, which put forward high requirements for animals' health and epidemic prevention & control. As one of the largest livestock production provinces in China, Gansu has established a set of relevant institutional systems, technical support measures and law enforcement supervision measures under the framework of national and local laws and regulations to improve the protection of animal health and epidemic prevention & control. Measures such as publicity and education, monitoring, immunization, and quarantine of all livestock production links or points have been taken at the grass-roots level, standardized livestock production facilities and technologies, including pollution control and safety isolation, have been gradually equipped and popularized, and corresponding management measures have been formulated, and centers for the sanitary treatment of sick and dead animals have been standardized and built, and actions to reduce the use of veterinary drugs have been implemented. These measures and tools are generally in line with the World Bank Group's EHS Guidelines for Mammalian Livestock Production and the Office of International Epizootic (OIE)'s Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual), covering agro-food quality and safety practices in good international industry practice, as well as the Bank's Core Principles on Health and Safety. The animal health, agro-food quality and public health management system can effectively control the potential risks of animal diseases and agro-food quality. The county-level veterinary laboratories to be supported by the PforR will not engage in experiments of highly pathogenic microorganisms according to the requirements of relevant national laws and regulations. The construction and operation of the labs will be carried out in strict accordance with relevant national and sectoral standards or code, and their biosafety will be fully manageable. The E&S team found during its due diligence that some small to medium scale livestock farming zones have inadequate health and safety management measures, disease (including zoonotic diseases) prevention and control measures and supporting facilities, some workers or operators were not wearing personal protective equipment (PPE), as well as inadequate operational procedures and internal management systems. This gap is yet to be improved to comply with the Regulation for the Construction of Livestock and Poultry Farms and farming Zones in Gansu Province and Measures for Filing Management. The awareness-raising of animal welfare among the Chinese public and relevant enterprises is yet to be improved through strengthened publicity and education and training. It is recommended to document cases of good practices and experience various counties in preventing and controlling animal diseases and zoonotic diseases and animal welfare and share with small-medium livestock farming facilities operators for them to prepare safety measures to be included into the Environmental and Safety Code of Procedures (ESCOP).

## 4.5.2 Health and Safety Management System on the Use of Pesticide for Artificial Forage Pests Control

### 4.5.2.1 Applicable Legal Framework

**Table 4-17: A List of Applicable Laws and Regulations on Use of Pesticides for Forage Pests Control**

Names of laws, regulations, policy standards and specifications	Issuing authority or time	Relevant Main Provisions
<i>Phytosanitary ordinance</i>	SC issued in 1983, amended in 2017	The <b>Ordinance</b> is formulated to prevent the spread of dangerous venereal diseases, insects and weeds that harm plants and to protect the safety of agricultural and forestry production. The MARA and the NFGA under The State Council shall oversee the work of plant quarantine throughout the country, and the ARABs and FGBs provinces, autonomous regions and municipalities shall be in charge of the work of plant quarantine in

		their respective regions. The <b>Ordinance</b> stipulate that "all diseases, insects and weeds that are locally dangerous and can be spread with plants and their products shall be designated as plant quarantine objects."
<b>Biosecurity Law of the PRC</b>	NPC, issued in 2020	For the prevention and control of major new outbreaks of animal and plant diseases, the <b>Law</b> stipulated that the competent departments of ARABs, FGBs under the people's governments at or above the county level shall strengthen the guidance and supervision of rational use of drugs or pesticides in agricultural production; take measures to prevent inappropriate use of antimicrobials and reduce residues in agricultural production environments; The state has strengthened prevention and response to the invasion of alien species to protect biodiversity. The competent MARA under The State Council shall, in conjunction with other relevant departments under The State Council, formulate a list of invasive alien species and measures for their management
<b>Measures for the Management of Invasive Alien Species</b>	MARA, MNR, MEE, General Administration of Customs jointly issued in May 2022	The <b>Measures</b> , formulated in accordance with the <b>Biosafety Law of the PRC</b> , aim to prevent and respond to the harm of invasive alien species, ensure the sustainable development of agriculture, forestry, animal husbandry and fisheries, and protect biodiversity. The <b>Measures</b> make provisions on the prevention, monitoring and early warning, treatment of invasive alien species at the source, further strengthen the prevention and control of invasive alien species from all aspects, and build a whole-chain prevention and control system. It clears responsibilities among authorities: the MARA, together with relevant departments shall established an inter-ministerial coordination mechanism for the prevention and control of alien invasive species. Local people's governments at or above the county level are responsible for the prevention and control of alien invasive species in their respective administrative areas according to law, and relevant departments of local people's governments at or above the county level are responsible for the prevention and control work according to their respective responsibilities. The <b>Measures</b> encourage public participation, call for strengthened publicity, education and scientific popularization, encourage and guide the public to participate in prevention and control work according to law, and no unit or individual shall introduce, release or discard alien species without approval.
<b>Pesticide Management Regulations</b>	SC issued in 1997, 2nd amended in 2022	Pesticide producers and sellers have responsibility for the safety and quality of their pesticide products and should accept government and public supervision. Government should encourage and support the research, production and use of safe, efficient and economical pesticides, promotes the specialized use of pesticides, and promotes the upgrading of the pesticide industry. Government should promote biological and physical approaches in pest control and encourage to use advanced spray equipment to reduce pesticide use. Pesticide producers and sellers are subject to pesticide registration and permitting requirements. Pesticide users are asked to follow specifications when applying pesticides. ARABs should regularly oversee pesticide production, sale, and use. Pesticide users shall protect the environment, beneficial organisms and rare species, and shall not discard pesticides, pesticide packages or clean application instruments in drinking water source protection areas or river courses.
<b>Technical program for</b>		The technical program advocates vigorously promoting the green prevention and control technology of diseases and insects, in-depth

<i>the Annual prevention and control of major crop diseases and pests in Gansu Province</i>		implementation of pesticide zero growth action, and protection of agricultural production, agro-food quality and agricultural ecological environment safety in the province
<b>Others</b>		Laws and regulations, guidelines related to pollution control from the prevention and control forage crops pest, such as the <i>Regulations on Pest Control of Crops</i> , the <i>Measures for the Management of Specialized Pest Control Services of Crops</i> , the <i>Technical Guidelines for Green Agricultural Development (2018-2030)</i> , and the <i>Action Plan for Zero Growth of Pesticide Use by 2020</i> , etc. (see section 4.3.2 of this report).

**4.5.2.2 Implementation Mechanism and Procedures**

123. In order to implement the above-mentioned laws and regulations on the health and safety management of pest and the prevention and control of diseases and pests in artificial forage planting, China and Gansu Province are establishing and gradually improving the relevant implementation mechanisms, which are listed in Table 4-18 below.

**Table 4-18: Implementation Mechanism for Health & Safety Use of Pesticides**

<b>Implementation Mechanisms or Procedures</b>	<b>Description</b>
Licensing pesticides producers and sellers	In the production and marketing links: pesticide producers and sellers implement the registration certificate system, consciously accept government supervision and social supervision, to ensure the safety and effectiveness of pesticides, so as to supervise pesticide producers and operators.
Integrated and specialized pest control mechanism	Management of pesticide users in the use of pesticides: the government provides unified control and control services for diseases and pests, including forage grass, through the purchase of specialized service agencies. Compared with small farmers, specialized service agencies have the following advantages that are conducive to the safety of pesticide use: <ul style="list-style-type: none"> <li>• Providing integrated pest control technologies to support the implementation of the Government's pesticide use reduction initiatives;</li> <li>• There are more stringent safety regulations and preventive equipment to minimize the safety risks of contact and exposure to pesticides;</li> <li>• With relevant professional knowledge, means and equipment, the specialized service agencies are capable of use environmental-friendly and efficient fertilizers &amp; pesticides and biological agents, and application of agricultural NPS control technology, reduced use of fertilizer &amp; pesticide with efficiency improvement technology, agricultural waste recycling technology; etc.</li> </ul>

**4.5.2.3 Institutional Organization and Performance**

124. **ARABs:** are the main management and supervision competent departments or bureaus for forage crops' pest control and health and safety use of pesticides. From Gansu Province to the municipalities and counties, there are crop plant protection institutions and technical teams, and the governments provide specialized services for crop disease and pest control through the purchase of specialized service agencies. In terms of measures, such measures as dynamic monitoring of crop diseases and insect pests, and

preparation of the annual major crop disease prevention and control technical program were taken. In terms of technical means, priority is given to adopting more environmental-friendly and IPM methods, such as physical or biological technologies, to replace the use of chemical pesticides. Low toxicity and high efficiency pesticides are recommended. Pesticide producers must register their pesticide products and obtain a production license. Sellers of pesticides must obtain a marketing license. Pesticide users should follow the regulations for the safe use and storage of pesticides and use the necessary personal protective equipment (masks, goggles, gloves, etc.) to avoid accidents while applying pesticides.

125. **Inter-departmental action for integrated safety guarantee:** In principle, EMBs and HCs at all levels are responsible for the extensive coordination and guidance of health and safety management involved in production and construction activities. FGBs and ARABs will guide professional service agencies for pest control in grasslands and in forage plantation to safely store, apply pesticides, and wear personal protective equipment to avoid poisoning the public or application operators, and ensure the quality and safety of agricultural and livestock products.

#### 4.5.2.3 Brief Summary

126. China and Gansu Province have the appropriate regulatory framework, institutional organization, staffing and funding for forage crop pest control and pesticides management, and are vigorously promoting green and IPM measures and implementing pesticide use reduction actions in line with the principle of ecological priority. The system is comparable to the World Bank's General Guidelines on EHS and Guidance on EHS for Annual or Perennial Crop Production, and covers GIIP for pest management, pesticide use and management. They have made significant achievements in the past and their experience and abilities have proven to be sufficient to serve the management of this PforR. The system is consistent with the Bank's core principles.

## 4.6 Consistency with the Bank Principles

127. After assessing the four EMSs, namely the EIA and follow-up management system, the pollution control management system, the eco-environmental conservation management system, and the health & safety management system, the consistency with the Bank's core principles and elements is analysed in this section with details presented in Appendix 3.

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

128. China has established a complete legal framework on environmental management. Governed by the Environmental Protection Law, numerous environmental management laws, bylaws, technical guidelines, standards, mechanisms, and procedures on conserving natural ecosystem, EIA and pollution control constitute a comprehensive legal framework. In the field of animal husbandry and crops plantation, the Environmental Protection Law has articles and provisions specifically covering animal husbandry production and agro-ecological environmental protection. In the Agricultural Law, Animal Husbandry Law and Animal Epidemic Prevention Law, there are special chapters and provisions on eco-environmental protection, as well as regulations or management measures related to livestock and poultry pollution control, agricultural NPS pollution control, animal and plant protection, fertilizer disease and pest management, etc., such as the "livestock and poultry large-scale farming pollution control regulations", "crop pest control regulations", "Crop pest control regulations", "pesticides management regulations", " Regulation Gansu Province for the Construction of Livestock and Poultry Farms and Farming zones and Measures for Record Management ", as well as relevant national and local management methods, technical guidelines, sectoral environmental standards, etc. In accordance with these legislations, China and Gansu Province have

established corresponding implementation mechanisms to guide the assessment of the environmental impact of the project activities and the management of environmental risks.

129. The EIA management system requires to conduct environmental screening and classification at the early stage of construction project design and EIA. EIA instruments will include alternatives analysis, impacts (including positive & negative, long-term & short-term, direct & indirect and cumulative impacts) projection and assessment, mitigation measures, management responsibilities and budgets, environmental monitoring plan, public consultation, information disclosure, monitoring plans, etc.

130. The Bank E&S team found through its due diligence that activities similar to typical activities to be supported under the PforR strictly implemented the mechanisms of ERL and the list for industrial or sectoral access in key ecological functional zones. Livestock farms were planned, sited by following principles set forth in the technical guidelines for demarcating forbidden areas for livestock and poultry farming. In general, activities or facilities were designed, prepared constructed and operated in compliance with relevant laws & regulations, with appropriate measures meeting the requirements of health and safety management of workers. However, some of farming cooperatives or households who run livestock farming zones with stock capacity reaching the defined scale in the "Gansu Province Livestock and Poultry Farming Zone Construction Standards and Filing Management Measures" (2007)" have inadequate manure treatment and utilization and animals' diseases, zoonotic diseased control facilities. Some of which employ open-air manure stacking sheds with low processing levels. Some operators of small-medium livestock farming facilities or individuals exhibit a lower adoption rate of health and safety management measures, disease prevention and control measures (including zoonotic diseases) and inadequate wear of PPE. Thus, the health of the workers and the surrounding communities are potentially & negatively affected. Some of which lack corresponding operational procedures and internal management systems. It is recommended that those small and medium scale livestock farming zones with poor environment and sanitary conditions be upgraded and equipped with necessary animal safety, animal disease, zoonotic diseases prevention and control facilities, and manure treatment facilities by incorporating such upgrading activities into the Program implementation plan (PIP); Training and education of the awareness of entities operating small to medium scale livestock farming zones on health and safety, environmental protection, necessity & importance of wearing PPE, accidents prevention and emergency responsiveness etc., be strengthened. Cases of good practices and experiences of various counties in controlling pollution from livestock production, and in preventing & controlling animal disease and zoonotic disease be documented, shared with small-medium livestock farming zones operators for them to prepare Environmental & Safety Code of Procedures (ESCOPE).

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

131. The PforR program boundary is 700 livestock entities and associated commercial farming land. This land is already heavily disturbed.

132. China has brought critical or natural habitats into the scope of ERL that are strictly conserved and managed. Ecological factors (including critical habitats and biodiversity) are important sensitive receptors to be identified and assessed in EIA, and ecological impact assessment is one of the important components of EIA. It's compulsory that EIA must strictly follow the requirements of ERL. For new constructive project, site selection must be subject to approval by NRBs, EEBs, FGBs, and other related authorities, so the relationship between project site and natural habitats or other environmental sensitive areas will be identified in the early stage of project preparation. If the construction of facilities related to livestock production involves the experimental zones of nature reserves or natural habitats, environmental impact reports or special reports on the ecological impact of the proposed facilities on nature reserves must be prepared and approved after strict expert assessment and departmental review.

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

133. China has basically established a sound management system for animal health, epidemic prevention and control, and the quality and safety of livestock products. Based on a sound environmental protection system and a sound human health prevention and control system, China is building and improving the "one health" management system for the health of animals, environment and human. Under a set of laws, regulations, standards and guidelines, there are similar or more complex than environmental protection and pollution control systems. In terms of animal husbandry, there are the Animal Husbandry Law, the Animal Epidemic Prevention Law, the Regulation on Emergency Response to Major Animal Epidemic Outbreaks, the Regulations on the Management of Veterinary Drugs, and the relevant regulations concerning various animal quarantine, animal husbandry safety production, sick and dead animals, pollution prevention and control (including medical waste prevention and control); In the cultivation of feed crops, there are "Regulation on Pesticide Management", "Measures for the Management of pesticide packaging waste recycling and treatment", "Guidelines for the safe use of pesticides", "Classification of Occupational Hazards of Construction Projects", "Classification and Catalogue of Occupational Diseases", etc. In terms of the quality assurance of livestock products, there are "Agricultural product Quality Safety Law", "Feed and feed additives management Regulation" and "pollution-free agricultural products management Measures".

134. ARABs (FGBs), EEBs, HCs, EMBs, MSAs at all levels have the ability and experience to implement environmental, health and safety management under the strict supervision of local governments. Through the promotion and education of animal disease prevention and control knowledge and skills in farms or cooperatives or enterprises, the implementation of animal disease surveillance, early warning and forecasting, animal quarantine, crop disease and pest control, and veterinary drug reduction actions, they vigorously promote measures such as low-toxic and high-efficiency insecticides and supervision of animal husbandry and veterinary law enforcement teams, and build a relatively complete institutional system, technical support measures and law enforcement supervision means to protect animal health disease prevention and control, which can effectively serve the PforR. There are rooms for improvement and upgrading: some small and medium-sized livestock farming zones operated by smallholders or cooperatives, have rooms to improve their management in pollution control, health & hygiene and animal safety, epidemic prevention & control and upgrading their corresponding facilities; the "off-site grazing" model has rooms to improve animal diseases, zoonotic diseases prevention & control. These improvements will be listed in the E&S Action Plans (see Chapter 7 of this report).

135. Conclusion: The comparison concludes that China's EMSs in terms of legal framework, management mechanism, and institutional arrangement are well established, and the implementation performance are demonstrated substantially satisfactory. In general, the EMSs are consistent with the core principles, and the EHS guidelines (including the general guidelines and guidelines for annual or perennial crop production, for mammalian livestock production), and OIE's Manual of Diagnostic Tests and Vaccines for Terrestrial Animals. The EMSs are qualified to manage the environmental issues associated with the PforR typical activities, including, livestock production. A generic E&S mitigation measures for managing potential E&S risks related to the PforR activities is also attached in Appendix 8 for reference of relevant agencies of Gansu Province. The environmental action plans have been recommended in the ESSA (as presented in Chapter 7) to fill the gaps identified in the due diligence investigation, and the EMSs are expected to be improved through the implementation of the PforR.

## 5. Social Management System Assessment

136. The Bank’s PforR ESSA Guidance establishes a set of principles and elements for assessing the Borrower’s E&S systems systematically. This chapter identifies and analyzes China’s corresponding social management systems, and assesses the relevant social management regulations, management mechanisms and capacity, and implementation performance based on the types of social risks and impacts based on Bank Guidance. It also proposes recommendations and an action plan for the identified gaps. In relation to social aspects, this guidance includes three specific Principles (in addition to Principles 1,2 and 3 relating primarily to environmental issues outlined in Section 4 above. These social Core-principles are as follows:

**Core-principle 4: Involuntary resettlement management system**, which established the system parameters for the acquisition of land, restrictions to land uses and resettlement 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.

**Core-principle 5: Management System for ethnic minorities and vulnerable groups** which established the system parameters which 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, ethnic minorities and vulnerable groups.

**Core-principle 6: Social conflict management systems:** Program E&S systems avoid exacerbating social conflict.

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

138. 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. Social management systems consist of laws and regulations, management agencies and mechanisms, and management practices. In China’s social management systems, different social risks and impacts are managed by different government agencies (see Table 5-1).

### 5.1 Correlation Analysis with the Bank’s Principles

139. Table 5-1 shows the correlation between China’s social management systems and World Bank policy.

**Table 5-1: 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	<b>Principle #1:</b> social impacts and risks assessment and management system  <b>Principle #6:</b> social	Notice of the National Development and Reform Commission on Issuing the Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (2021 Amendment)	<b>State:</b> National Development and Reform Commission (NDRC); <b>Gansu Province:</b> • <b>Leading authorities:</b> provincial DRC, provincial, municipal and county political and legal affairs committees (PLAC), public complaints and
		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 Assessment of Major Fixed Asset Investment Projects and Assessment Report (Interim) (NDRCOI [2013]	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
	conflict	<p>No.428)</p> <p>Opinions on Strengthening the Mechanism of Social Stability Risk Assessment for Major Decisions in the New Situation (ZBF [2021] No.11)</p> <p>Notice on Issuing Implementation Measures for Social Stability Risk Assessment for Major Decisions of Gansu Provincial Water Resources Department (GWBFB [2013] No.170)</p> <p>Notice of Gansu Provincial Committee and Government on Issuing Several Implementation Measures for Strengthening the Mechanism of Social Stability Risk Assessment for Major Decisions under New Circumstances (GBF [2021] No.33)</p> <p>Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1)</p> <p>Regulations on Letters and Visits (2022.2.25)</p> <p>Regulation on Guaranteeing Wage Payment for Migrant Workers (2020.1.7)</p> <p>Notice of the Ministry of Agriculture and Rural Affairs General Office on the Training of High-quality Farmers in 2022 (2022.4.15)</p> <p>Notice of Gansu Provincial DARA on Implementation Plan for Training of High-quality Farmers in 2022 (GNCF [2022] No.33)</p>	<p>proposals bureaus (PCPB);</p> <ul style="list-style-type: none"> <li>• <b>Assessors:</b> municipal and county competent authorities and appointed third parties</li> <li>• <b>Registration authorities:</b> provincial (cross-regional or cross-departmental projects), or municipal and county PLACs</li> <li>• <b>Decision-making authorities:</b> municipal and county executive meetings of CPC and government leaders</li> <li>• <b>Implementing agencies:</b> assessors and entrusted operating units</li> <li>• <b>Supervising agencies:</b> municipal and county governments and their grass-root agencies (e.g., township governments)</li> </ul>
Tangible cultural heritage	<b>Principle #2:</b> cultural heritage conservation	<p>Cultural Relics Protection Law (2017 Amendment)</p> <p>Regulations for the Implementation of the Cultural Relics Protection Law (2017)</p> <p>Regulations on the Protection of Cultural Relics in Gansu Province (Sept. 23, 2005)</p>	<p><b>State:</b> National Cultural Heritage Administration</p> <p><b>Gansu:</b> provincial, municipal and county cultural relic protection authorities</p>
Public and worker safety	<b>Principle #3:</b> labor and occupational health	<p>Civil Code of the People's Republic of China (2021.1)</p> <p>The Labor Law of the People's Republic of China (2018.12.29)</p> <p>Work Safety Law of the People's Republic of China (2021.6)</p> <p>Law of the People's Republic of China on the Prevention and Control of Occupational Diseases (2018.12)</p> <p>Guidelines on the Prevention and Control of Occupational Diseases for Employers (2010.8)</p> <p>Occupational Health and Safety Management Systems—Requirements with Guidance for Use</p>	<p><b>Public and workers' security</b></p> <p><b>State:</b> Ministry of Emergency Management</p> <p><b>Gansu:</b> emergency management department and competent authorities at provincial, municipal and county level, production and operation entities, associations, work safety technical supporting agencies</p>

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		(2018.3)	<p><b>Health of the public and occupational groups</b>  <b>State:</b> National Health Commission (HC)  <b>Gansu:</b> provincial, municipal and county HCs, ARABs, AHVMBs, MSAs, occupational diseases prevention and treatment agencies, occupational health technical service agencies, occupational health inspection and diagnosis agencies</p> <p><b>Labor management</b>  <b>State:</b> Ministry of Human Resources and Social Security (MHRSS), All-China Federation of Trade Unions  <b>Gansu:</b> provincial, municipal and county federations of trade unions, and industrial unions; trade unions of enterprises and public institutions</p>
		Classification and Catalogue of Occupational Diseases (2013)	
		Catalogue for the Classified Management of Occupational Disease Hazards and Risks of Construction Projects (2021.3.12)	
		Law of the People's Republic of China on the Prevention and Control of Infectious Diseases (2013.6.29)	
		Public Security Administration Punishment Law of the People's Republic of China (2012.10.26)	
		Notice on Strengthening AIDS Prevention and Control Work in the Construction Industry (2005.12.14)	
		Special Rules on the Labor Protection of Female Employees (Decree No.619 of the State Council) (2012.5)	
		Notice on the Issuance of the National Plan for Occupational Diseases Prevention and Control (2021-2025) (NHC [2021] No. 39)	
		Regulations on Work-related Injury Insurance (2010.12.20)	
		Implementation Measures for Regulations on Labor Protection of Female Employees of Gansu Province (2002.7.9)	
		Regulations on Prohibition of the Use of Child Labor (2002.12.1)	
		Gansu Province "14th Five-Year Plan for Occupational Diseases Prevention and Control" (GWF [2022] No.36)	
		Stock-breeding Law of the People's Republic of China (2022.10.20)	
		Law of the People's Republic of China on Animal Epidemic Prevention (2021.1.22)	
		Food Safety Law of the People's Republic of China (2021.4.29)	
		Law of the People's Republic of China on Quality and Safety of Agricultural Products (2022.9.2)	
		Law on the Prevention and Treatment of Infectious Diseases (2020)	
		Emergency Response Law of the People's Republic of China (2007.11.1)	
		Regulations on the Prevention and Control of Geological Disasters (2004.3.1)	
		Regulations on the Defense against Meteorological Disasters (1 April 2010.4.1)	
		Regulations of the People's Republic of China	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		on Flood Control (2005.7.15)	
		Law of the People's Republic of China on Protecting against and Mitigating Earthquake Disasters (2009.5.1)	
Land acquisition, restriction on land use and resettlement	<b>Principle #4:</b> land acquisition, livelihood restoration and public participation	Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2017)	<b><u>Land acquisition and temporary land use (TLU)</u></b> <b>State:</b> Ministry of Natural Resources (MNR) <b>Gansu:</b> provincial, municipal and county governments, and natural resources authorities  <b><u>Facility agriculture land use (FALU):</u></b> <b>State:</b> Ministry of Natural Resources (MNR), Ministry of Agricultural and Rural Affairs (MARA) <b>Gansu:</b> NRBs and ARABs at provincial, municipal and county level, and township governments  <b><u>Land use right transfer (LURT):</u></b> <b>State:</b> MARA <b>Gansu:</b> provincial, municipal and county agriculture and rural affairs authorities, township governments  <b><u>Livelihood restoration</u></b> <b>State:</b> MHRSS <b>Gansu:</b> provincial, municipal and county human resources and social security authorities, county and township governments, community committees, village committees
		Land Administration Law (2020.1)	
		Regulations for the Implementation of the Land Administration Law (2021 Amendment)	
		Notice of the Ministry of Natural Resources on Regulating Temporary Land Use Management (MNRP [2021] No.2)	
		Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238)	
		Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SCO [2006] No.29)	
		Notice of the Ministry of Labor and Social Security, and the Ministry of Land and Resources on Doing a Substantially Good Job in Social Security for Land-expropriated Farmers (MLSS [2007] No.14)	
		Guidelines of The General Office of the State Council on Scientific Greening (GBF [2021] No.19)	
		Guiding Opinions of the General Office of the CPC Central Committee and the State Council on the Overall Delineation and Implementation of the Three Control Lines in National Spatial Planning (TZ [2019] No. 48)	
		Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNRP [2021] No.166)	
		Measures for the Administration of the Land Use Right Transfer of Rural Land (Decree 2021 No.1 of MARA)	
		Circular of the MNR and MARA on Issues Related to the Management of Facility Agricultural Land (ZRZG [2019] No. 4)	
		Implementation Opinions of the CPC Gansu Provincial Committee and Provincial Government on Strengthening Protection of Cultivated Land and Improving Occupation and Compensation Balance (GF [2018] No. 5)	
		Notice of Gansu DNR, DARA and FGB on Issues Relating to Strict Use Control of	

Social impacts and risks	Bank policy principle	China's social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		<p>Cultivated Land (GZF [2022] No. 42)</p> <p>Notice of Gansu DARA on Strengthening Management of Rural Land Operation Right Transfer (2021.7.23)</p> <p>Notice of Gansu DNR and DARA on Strengthening the Management of Agricultural Land for Facilities (2020.4.1)</p> <p>Note of the People's Government of Gansu Province on Issuing the Standard of Block Compensation Land Price on Farmland Acquisition (GZF [2023] No.55)</p> <p>Notice on Implementing MNR Requirements on Further Strengthening Temporary Land Use Administration (GZZ [2021] No.81)</p> <p>Implementation Measures for Land-lost Farmers to Participate in Residents' Basic Endowment Insurance in Gansu Province (GZF [2018] No.18)</p>	
Ethnic minorities and vulnerable groups	<b>Principle #5:</b> ethnic minorities and vulnerable groups	Constitution (2018 Amendment)	<p><b><u>Ethnic minorities</u></b>  <b>Gansu:</b> provincial, municipal and county ethnic affairs departments  <b><u>Women</u></b>  <b>State:</b> All-China Women's Federation  <b>Gansu:</b> women's federations at different levels  <b><u>Children</u></b>  Functional authorities of governments at or above the county level, township governments, sub-district offices, community committees, village committees</p>
		Law of the People's Republic of China on Regional National Autonomy (2001 Amendment)	
		Several Provisions of the State Council on the Implementation of the Regional National Autonomy Law (2005.5)	
		Notice of the State Council on Issuing the 13 <sup>th</sup> Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79)	
		Law of the People's Republic of China on the Protection of Women's Rights and Interests (2022.10.30 Amendment)	
		Law of the Peoples Republic of China on the Protection of Minors (2020.10.17)	
		Opinions on Reforming and Improving the Social Assistance System (ZBF [2020] No.18)	
		Several Provisions on the Implementation of Regional Ethnic Autonomy Law in Gansu Province (2006.6.1)	
		Gansu Province "14th Five-Year Plan" and "14th Five-Year Plan" for Progress in National Solidarity (2021)	
		Implementation Measures of Gansu Province for the Law of the People's Republic of China on the Protection of Women's Rights and Interests (2007.9.27)	
		The 14th Five-Year Plan of Gansu Province for the Development of Civil Affairs (2021.10)	

Social impacts and risks	Bank policy principle	China’s social impacts and risks management system	
		Relevant social laws and regulations	Social management agencies
		Plan of Gansu Province for Women’s Development (2021-2030) (GZF [2021] No.91)	
		Plan of Gansu Province for Children’s Development (2021-2030) (GZF [2021] No.91)	
		Notice of Gansu Provincial General Office of the CPC Central Committee and Government on Issuing Measures for the Reform and Improvement of the Social Assistance System (GBF [2021] No.5)	

## 5.2 Assessment of Social Regulations and Policies

140. China’s legal framework consists of the following: 1) laws and regulations promulgated by the National People’s Congress and the State Council; 2) regulations, standards and technical specifications promulgated by ministries and commissions; and 3) regulations promulgated by local people’s congresses and governments. In general, regulations, standards and policies on land acquisition and resettlement (LAR), ethnic minority development, labor rights, public participation and consultation, grievance redress, etc. have been promulgated and implemented at the national, provincial, municipal and county levels to systematically manage potential social risks and impacts in the PforR lifecycle.

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

### 5.2.1 Core Principle #1: Sustainable social risks management system<sup>29</sup>

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

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

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

- National Development and Reform Committee (NDRC) promulgated the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects in 2012, stating that the project organization shall investigate and analyze social stability risks when conducting preparatory work, collect opinions from relevant people, identify risks, risk possibilities and risk impacts, and propose prevention and mitigation measures, and social stability risk ratings after such measures are taken.
- The General Office of the State Council promulgated the Guidelines on Establishing a Sound Social

<sup>29</sup> Chapter 5 of this report quotes the information related to social system analysis in the core principles and elements in the PforR ESSA Guidance for a consistent comparative analysis.

Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) in 2012, requiring that an SSRA shall be conducted on major decisions, projects and policies.

- In April 2019, the State Council issued the Interim Regulations on Procedures for Making Major Administrative Decisions, which require that for the implementation of major administrative decisions that may adversely affect social stability, public security and other aspects, the decision-making contractor or other unit responsible for risk assessment should organize an assessment of the controllability of risks in the draft decision. Major administrative decisions include: 1) the development of public services, market regulation, social management, environmental protection and other aspects of major public policies and measures; 2) the development of economic and social development and other aspects of important planning; 3) the decision to implement in the administrative region of the major public construction projects; 4) the decision on economic and social development has a significant impact on the public interest or the public's immediate interests, and other important matters. etc.
- In February 2021, the General Office of the CPC Central Committee and the General Office of the State Council released the Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances, requiring that an SSRA shall be carried out on major decisions including those on major construction projects. It specifies the contents, methods, procedures and management of SSRA, and application of SSRA results, and underlines that the contents of SSRA are integral to the Program's feasibility study report (FSR) and application reports.
- The Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) promulgated by the General Office of the State Council in 2012 was succeeded by the Notice on Issuing Implementation Measures for Social Stability Risk Assessment for Major Decisions of Gansu Provincial Water Resources Department (GWBF [2013] No.170), specifying requirements for the implementation of SSRA in Gansu Province. In December 2021, it was superseded by the Notice of Gansu Provincial Committee and Government on Issuing Several Implementation Measures for Strengthening the Mechanism of Social Stability Risk Assessment for Major Decisions under New Circumstances (GBF [2021] No.33), which particularly stipulates the contents, methods, procedures, management, application of results and implementation of mitigation measures of SSRA for major decisions in Gansu Province.
- The Land Administration Law (effective from 1 January 2020) requires that an SSRA shall be conducted before land acquisition and house demolition. In the SSRA, the social stability risk status of land acquisition shall be comprehensively studied and judged, risks shall be determined, and risk prevention measures and disposal plans shall be put forward. The SSRA shall be participated in by the rural collective economic organizations and their members, villagers' committees and other interested parties whose land has been acquired, and the assessment result is an important basis of applying for land acquisition.

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

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

145. According to the social risk screening results (Appendix 2), the consistency of social impact

management system at national, provincial level of Gansu and Elements 2 and 5 is analyzed below.

146. **(i) Early screening:** During site selection and feasibility study of related projects, the relevant authorities (e.g., NRB, cultural heritage administration bureau (CHAB)) shall be coordinated to conduct a joint survey, and risks and impacts screening. For example, the Measures for the Administration of the Pre-review on the Use of Land for Construction Projects (2017), and the Land Administration Law (effective from January 1, 2020) require that screening be conducted so that the construction project complies with the overall spatial planning of national land and avoids any acquisition of basic farmland. The Cultural Relics Protection Law (2017 Revision) requires that a cultural relic survey shall be conducted before project site selection to minimize impacts on cultural relics. The Regulations on the Prevention and Control of Geologic Disasters (2004) require that the project area shall not be selected in disaster areas, and related disaster prevention and control requirements should be defined through a geological disaster assessment to reduce public security risks of any project to be constructed in areas liable to geological disasters. The Opinions on Strengthening the Construction of a Social Stability Risk Assessment Mechanism for Major Decisions under New Circumstances require that social stability risk assessments should be conducted for all major decisions that are directly related to the immediate interests of the people and that are likely to have a greater impact on social stability, public security and other aspects, and that investigations should be conducted into the legitimacy, reasonableness, feasibility and controllability of the implementation of the major decision-making matters; the scope of the investigations should cover the stakeholders of the areas involved; the opinions of the people and the stakeholders should be fully listened to and comprehensively collected and the risk factors that may give rise to social stability should be comprehensively and consistently identified and analyzed.

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

148. **(iii) Developing measures to avoid, minimize or mitigate social impacts:** The Notice on Issuing the Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (2013) requires that plans and 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 that if the assessment report assesses that a high risk is present, a decision of non-implementation shall be made, or a decision be made after the plan is adjusted or the risk level reduced. If an intermediate risk is present, a decision of implementation shall be made after effective risk prevention and mitigation measures are taken. If a low risk is present, a decision of implementation may be made, but actions in terms of explanation and persuasion to the people affected shall be conducted and appeals of relevant people handled properly. SSRA shall also address the legitimacy, rationality, feasibility and controllability of the proposed activities, and require that an appropriate contingency plan be developed.

149. **(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) require that 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.

150. **(v) Public participation, information disclosure and grievance redress mechanism (GRM):** The SSRA policies of Gansu 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 be the responsible party of announcement and implementation. Before land application submission, detailed measurement survey (DMS) and SSRA should be conducted and the key information, e.g., the purpose and boundary of land acquisition, current status, compensation rate, resettlement mode, social security, etc. should be disclosed 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. Upon completion of the relevant preliminary work, local people's governments at or above the county level may apply for land acquisition and make land acquisition announcement and implementation upon approval in accordance with legal procedures. Where 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. Where a construction unit or individual refuses to accept the administrative punishment decisions on dismantling the buildings and other facilities, it may bring the case to the court within 15 days starting from the day when the decision is received. The MNR issued the Standard Guidelines for Grass-root Government Affairs Disclosure in Rural Collective Land Acquisition on June 27, 2019, making detailed provisions on project land acquisition policies, and the scope, time limit and channels of disclosure during preparation, approval and implementation. The Provisional Regulations on Major Administrative Decision-making Procedures require that decision-making contractors should adopt ways to facilitate public participation to fully listen to opinions, such as symposiums, hearings, on-site visits, written solicitations, public solicitations to the community, questionnaires, public opinion surveys, and other methods.

151. **Assessment:** Social impact assessment and planning are carried out by means of SSRA in China and Gansu Province. There are clear mechanisms for early-stage screening of impacts, option comparison, and arrangements for defining measures on social risks (e.g., LAR) management. The regulations also define the responsible agencies to manage specific impacts. The regulatory framework on managing social stability risks and related issues, such as the laws and regulations on land acquisition and house demolition, have provided detailed procedures and requirements on information disclosure, public participation, and grievance redress. Therefore, the social regulations and policies are generally consistent with Element 2.

## 5.2.2 Core Principle #2: Cultural heritage management system

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

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

153. **Cultural relic protection:** The project activities in Gansu will involve civil works, such as construction and upgrading of livestock breeding facilities, livestock and poultry manure treatment and resource utilization facilities, straw forage processing facilities, and construction of disease prevention and

control facilities, etc. According to the social impact screening (**Appendix 2**), the PforR Program is unlikely to affect any tangible culture heritage. China has established and implemented a sound cultural relic protection law to assess and manage potential cultural relic impacts of construction activities. The Cultural Relics Protection Law requires that no construction works or operations such as blasting, drilling and digging is allowed within the area of historical and cultural protection site. At the time of site selection for a construction project, a location where immovable cultural relics are located should be avoided. If a project needs to be implemented, other construction projects within the protection scope should be approved by the people's government which approved and announced the cultural relic protection unit. Construction projects within the construction control zone need to obtain the consent of the cultural relic administrative department, be submitted to the urban-rural development department for approval, and shall not pollute such relic and its environment, and any activities that may affect its safety and environment are not allowed to be conducted. Any such facilities that already exist in the area shall be disposed within a specific time limit. Before launching a large-scale infrastructure construction project, the construction unit shall firstly apply to the provincial cultural relic authority for arranging a unit engaged in archaeological excavations to conduct an archeological investigation at places where cultural relics may be buried underground within the project area.

154. **Assessment:** The Cultural Relics Protection Law and the Regulations for the Implementation of the Cultural Relics Protection Law considers potential impacts on cultural relics to protect cultural relics from construction. The regulations on tangible cultural heritage protection of China and Gansu are consistent with Element 5.

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

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

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

156. **Worker safety management:** Project activities will inevitably involve risks to the health and safety of workers, including the health and safety management of contractors' workers during the construction and upgrading of animal husbandry facilities, livestock and poultry manure treatment and resource utilization facilities, straw forage processing facilities, and disease prevention and control facilities, as well as the management of occupational health of the relevant facilities belonging to operating units and their employees. 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, Article 15 of the Labor Law stipulates that the employer be banned from recruiting juveniles under the age of 16, Special protection shall be given to female and underaged workers (above 16 years old and below 18 years old) and Article 94 regulates that if an employer illegally recruits persons under the age of 16, the labor administrative department in charge shall authorize a correction and a fine. If the case is very serious, the license of the employer shall be revoked. In addition, the Regulations on Prohibition of the Use of Child Labor (issued by the State Council in 2002) stipulates that (i) Article 2: no employer, including state organs, social organizations, enterprises, institutions, private non-enterprise units, or individual industrial and commercial households shall hire individuals under the age of 16. It is forbidden for any entity or individual to introduce employment opportunities to individuals under the age of 16. Individuals under the age of 16 are prohibited from starting individual business operations; (ii) Article 6: if an employer uses child labor, the labor administrative authorities shall

impose a penalty according to a standard of 5,000 yuan per month for each employed child laborer. The MHRSS categorizes the use of child labor as illegal employment in the Regulations on One-time Compensation for Injury or Death of Employees Due to Illegal Employment (2011). The Labor Law also stipulates that workers shall not be discriminated against based on ethnic group, race, gender or religion and that women shall enjoy the same employment rights as men. Forced labor is 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 scrutiny.
- The Civil Code requires that work safety and health facilities of construction, reconstruction and expansion works shall be designed, constructed and put into operation along with these works.
- The Regulations on Work-related Injury Insurance (2010 Amendment) requires that enterprises, public institutions, social organizations, private non enterprise units, foundations, law firms, accounting firms, and other organizations, as well as individual industrial and commercial households with employed workers (hereinafter referred to as employers) within the territory of the People's Republic of China shall participate in work-related injury insurance in accordance with the provisions of the Regulations and pay work-related injury insurance premiums for all employees or employees of the unit.
- The Occupational Health and Safety Management Systems—Requirements with Guidance for Use promulgated in 2020 require that enterprises shall identify and control potential occupational health and safety hazards systematically, and eliminate safety accidents at the beginning, thereby protecting worker's health and safety. Enterprises may apply for "occupational health and safety management system" certification, and establish a normative management system, realizing the source identification and whole-process control of hazards, and continual improvement. However, the occupational health and safety management system is not a mandatory requirement.

157. **Community and public health and safety management:** In addition to the general occupational health and safety regulations applicable to all construction and production activities, specific management policies have been established in China for community health and safety management during the construction and operation of livestock farming facilities. For example, the revised Stock-breeding Law of the People's Republic of China in October 2022 stipulates that the site selection of stock-breeding farms should comply with national regulations, keeping a considerable distance from drinking water sources, animal slaughter and processing facilities, and animal and animal product markets, with a minimum distance of at least 500 meters from other livestock farms or villages. The amended Law of the People's Republic of China on Animal Epidemic Prevention in January 2021 mandates that livestock farms, quarantine facilities, slaughter and processing plants (yards), harmless treatment plants, and places for isolating infected animals must meet the animal epidemic prevention conditions specified by the administrative authorities of agricultural and rural affairs under the State Council. Regarding the potential spread of infectious diseases, security risks and sexual exploitation and abuse and sexual harassment (SEA or SH) risks emanating from significant foreign or outside labor force deployment for physical activities, China has set up a set of regulations and policies, including the Law of the People's Republic of China on the Prevention and Control of Infectious Diseases. This law requires that for external migrant workers who may pose a risk of infectious disease transmission, health checks and registration are required. Necessary preventive measures, such as vaccination and isolation treatment, should be implemented to prevent the spread of infectious diseases. The Notice on Strengthening AIDS Prevention and Control Work in the Construction Industry (2005) requires construction administrative authorities across regions to widely conduct AIDS prevention and control knowledge training for migrant workers. It emphasizes the improvement of the working environment and living conditions of on-site construction workers and the

implementation of preventive immunization measures for AIDS and other infectious diseases. The notice further calls for organizing pre-employment and routine health examinations for migrant workers. The Public Security Administration Punishment Law of the People's Republic of China requires that the construction unit shall establish identity registration of migrant workers at local government and implement stringent measures against illegal activities and crimes to ensure social stability. Article 1010 of the Civil Code of PRC stipulates that a person who has been sexually harassed by another person through oral words, written language, images, physical acts, or the like, has the right to request the actor to bear civil liability in accordance with law. Article 40 of the Law of the People's Republic of China on the Protection of Women's Rights and Interests stipulates that sexual harassment against women is prohibited and victims have the right to file complaints with relevant units. Article 11 of the "Special Rules on the Labor Protection of Female Employees stipulates that employers in the workplace must prevent and stop sexual harassment against female workers. Furthermore, a series of departmental and local regulations, such as the Provisions on the Site Management of Construction Projects, have further refined the requirements for safety, environmental protection and social security at construction sites, as well as the corresponding legal responsibilities.

158. In terms of the slaughter and animal products processing phases, the revised "Food Safety Law of the People's Republic of China" in April 2021 requires that food producers and operators must establish and implement a health management system for employees. Individuals suffering from diseases that jeopardize food safety, as specified by the health administrative department of the State Council, are prohibited from engaging in work involving direct contact with food intended for human consumption. Personnel involved in work directly related to food for human consumption must undergo an annual health check. They are allowed to work only after obtaining a health certificate. Additionally, the law also establishes fundamental principles and systems for the quality and safety of agricultural products, including standards, monitoring, and traceability. Among which, specific requirements and management measures for the use of feed and veterinary drugs and agricultural product quality and safety in the livestock farming industry chain are outlined. Furthermore, the amended Law of the People's Republic of China on Quality and Safety of Agricultural Products in September 2022, regulates that agricultural product enterprises and cooperatives should issue a commitment certificate for the quality of their agricultural products and those entities or individual who sell these edible agricultural products must be responsible for the content of the commitment certificate. Entities engaged in the testing of agricultural product quality and safety must obtain a qualification certificate issued through assessment before conducting such testing activities.

159. **Labor GRM:** As documented in Paragraph 153 above, China has a number of established laws and regulation related to child labor, discrimination, forced labor. These also specify provisions on labor GRM. It is stipulated that when labor disputes arise between the employers and workers, the parties concerned may, according to law, apply for mediation or arbitration or bring the case before the people's court or may settle them through consultation. When a labor dispute arises, the parties concerned may apply with the labor dispute mediation committee of their own unit for mediation. Should the mediation fail and one of the parties concerned demands arbitration, they may apply to the labor disputes arbitration committee for arbitration. One of the parties concerned may also file an application directly with the labor disputes arbitration committee for arbitration. If the arbitration ruling is not accepted, the case may be brought before the people's court. A labor disputes mediation committee may be set up in an employer's unit. The labor disputes mediation committee shall be made up of representatives of workers, the employer and the trade union. One of the parties to a dispute demanding arbitration should file a written application with the labor disputes arbitration committee within 60 days starting from the date when the dispute arises. The arbitration ruling should usually be awarded within 60days starting from the date when the application for arbitration is received. If no exception is taken with the arbitration ruling, the parties concerned shall comply. If a party to a labor dispute refuses to accept the ruling, the party may bring the case before the people's court within 15 days starting from the date when the arbitration award is received. If a party refuses to bring the case before the people's court and refuses to implement the arbitration ruling within the time prescribed by law, the other party may apply with the people's court for compulsory implementation. If a dispute arises from

the conclusion of a collective contract and the parties concerned fail to settle the disputes through consultation, the labor administrative department of the local people's government may organize all quarters for settlement. If a dispute arises from the performance of a collective contract and yet the parties concerned fail to settle it through consultation, they may apply for arbitration with the labor disputes arbitration committee. If the arbitration ruling is not accepted, the case may be brought before the people's court within 15 days starting from the date when the arbitration award is received.

160. **Assessment:** A comprehensive set of regulations and systems exist to protect workers in livestock farming industry and the public's health and safety has been established in China and Gansu to fully protect worker and public rights. The regulations also require that appropriate safety measures, inspections or remedial works should be taken during design, construction and operation to ensure community, individual and worker safety. The regulations on public and labor safety are 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 in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or affected by climate events.

161. **Disaster safety management mechanisms:** The PforR is in Gansu, and may involve areas prone to natural disasters, such as snowstorms, floods, lightning and landslides. During implementation, the flow of migrant workers may lead to the spread of disease. 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 Geological Disasters make systematic arrangements for the investigation, prevention, and management of geologic disasters, such as prevention, emergency response, governance and legal liabilities. It is required that geological disaster risk assessment be carried out at the feasibility study stage for construction projects in areas prone to geological disasters, and the assessment results shall be an integral part of the feasibility study report. Without this assessment, the feasibility study report shall not be approved. 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 make 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.

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

## 5.2.4 Core Principle #4: Involuntary resettlement management system

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

164. **(i) Minimizing negative impacts related to land acquisition:** The analysis of "early-stage impact screening" under Element 2, the Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2017), the Land Administration Law (effective from January 1, 2020), and the regulations on SSRA require that projects and enterprises shall utilize existing construction land, and

avoid any occupation of farmland (especially permanent basic farmland) where possible. It also requires a reduction of LAR impacts through design optimization, thereby reducing social stability risks. At the preparation stage, natural resources authorities will participate in the survey to confirm the land to be used for the project, and the feasibility study compares different options for LAR impacts. The government authorities will check if the land use plan is rational during land use review and feasibility study.

165. For TLU during the project construction, it is stipulated in the Notice of the Ministry of Natural Resources on Regulating Temporary Land Use Management (MNRP [2021] No.2) not to occupy cultivated land or to occupy it as little as possible. It also requires strict control of the occupation of cultivated land if it is difficult to restore after use and the original planting conditions shall be restored after the completion of works.

166. For the transferring of land management rights, the Measures for the Administration of the Transfer of Rural Land Management Rights (MARA, Decree No. 1, 2021) require that the transferee submit an application, and that the local people's government at or above the county level or the people's government of the township or township shall, in accordance with the law, organize a review and examination of the relevant functional departments, the representatives of the rural collective economic organizations, the representatives of the farmers, and the experts, etc. regarding the use of the land, the ability of the transferee subject to agricultural business, and whether the business project is in line with the food production and other industrial plans. It also requires that the transfer of the right to manage land may not be carried out without the submission of the application for review and examination in accordance with the regulations, or if the review and examination fails.

167. In response to the situation of facility-based agricultural land use, in 2019, the MNR issued the Notice on Issues Related to the Management of Facility-based Agricultural Land Use (ZRZG [2019] No. 4), which strictly defines the scope of facility-based agricultural land use, and clarifies the policies for supporting and regulating the land use of facilities directly used for crop cultivation and livestock, poultry, and aquaculture in agricultural production. On this basis, Gansu DNR and DARA issued the Notice on Strengthening the Management of Facility Agricultural Land Use in 2020, which requires that the land used for facility agriculture should be in line with the territorial spatial planning or the overall land use planning, the village planning and the agricultural development planning. It further requires that, on the premise of protecting cultivated land and rationally utilizing the land, it should maximize the use of unutilized land and inefficient and idle land, and the land should be utilized as much as possible on the premise of protecting cultivated land and rationally utilizing land. If it is necessary to occupy cultivated land, effort must be made to occupy poor quality cultivated land and avoid indiscriminate occupation of high-quality cultivated land, and at the same time minimize the destruction of the tillage layer through engineering, technology and other measures. The Measures for the Implementation of the Land Management Law of the People's Republic of China in Gansu Province, which came into effect on January 1, 2022, clearly state that "the people's governments of counties (municipalities and districts) shall implement the national strategy of rural revitalization, and shall guarantee the demand for land for the development of rural industries, rural public facilities and public welfare undertakings in accordance with the law, and reserve relevant land for construction in accordance with national regulations. On the premise of conforming to the scope and scale standards for land use stipulated by the State and the province, priority may be given to arranging land for agricultural facilities directly used for crop cultivation and livestock and poultry aquaculture".

168. The MNR published the Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNRP [2021] No.166) in 2021, requiring that permanent basic farmland shall not be converted into forest land, grassland, garden land and other agricultural land or agricultural facilities construction land. The annual "balance in and out" shall be carried out for any conversion of cultivated land to other agricultural land and agricultural facilities construction land, and the same amount and quality of cultivated land shall be made up by means of the consolidation of forest land, grassland, garden land, other agricultural land and agricultural facilities construction land into cultivated land. Gansu Province has been working out its own "balance in and out" plan for cultivated land occupation. For example, the Notice of

the General Office of the People's Government of Gansu Province on the Issuance of Administrative Measures for Balancing the Occupancy and Compensation of Cultivated Land in Gansu Province (GZBF [2019] No. 11), and the Notice of the Gansu DNR, DARA and FGB on the Issues Relating to the Strict Control of Cultivated Land Usage (GZF [2022] No. 42), include the detailed implementation details of the "in and out balancing" of cultivated land.

169. **(ii) Identifying and addressing economic and social impacts arising from land acquisition or loss of access to natural resources:** The Land Administration Law (effective from January 1, 2020) stipulates that "Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go to fill the compensation registration form with holding its assets ownership certificate. The people's government at or above the county level shall organize the department concerned to estimate the relevant costs and make them fully available." The land acquisition compensation measures of Gansu 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 DMS, and the land acquisition agency shall enter into compensation and resettlement agreements with landowners and users before submitting application for project approval. In terms of TLU, Gansu Province requires applicants to sign contracts for the TLU with the county (city) NRB or rural collective economic organizations or villagers' committees according to the land ownership. Where LURT is involved, the Measures for the Administration of the Land Use Right Transfer of Rural Land (Decree 2021 No.1 of MARA) requires that the LURT shall follow the principle of compliance, voluntariness and compensation, a LURT contract shall be signed, and the transfer income shall be paid to the land contractor. Regarding the use of agricultural land for facilities, Gansu Province requires that "before the use of agricultural land for facilities, the operator shall draw up a program for the construction of facilities, which includes the name of the project, the location of the construction, the type and use of the facilities, the number, the standard and the size of the land, etc.". 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, or to the county level or above. If any affected person is dissatisfied with the DMS result, or the compensation or resettlement, he or she may file a grievance with the village head or village committee, or with the township or county or municipal government. According to the Regulations on Letters and Visits (2022), Party committees and relevant departments of the government at or above the county level shall perform such duties as acceptance, transmitting, assigning, coordination, handling, supervision and inspection. If a complainant is dissatisfied with the results of settlement, he or she may settle the dispute through litigation to protect his or her lawful rights and interests.

170. **(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 in a timely manner and fully according to the law, and social security costs for the affected farmers should be disbursed accordingly. The rates of land compensation fees and resettlement subsidy for acquired agricultural land is determined based on the block comprehensive land price formulated and disclosed by provinces, autonomous regions and municipalities, which shall be adjusted or reissued at least every three years. Compensation rates for acquired land other than agricultural land, ground attachments, young crops, etc. shall be developed by provinces, autonomous regions and municipalities. For rural residential houses, fair and reasonable compensation shall be provided on the principle of compensation before relocation and residential condition improvement by such means as reallocating housing land for house construction, offering resettlement houses, or granting cash compensation, and relocation, temporary resettlement and other costs resulting from acquisition shall be compensated for to protect the lawful residential and property rights of rural residents.

171. 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, Gansu promulgated the Notice of the People's Government of Gansu Province on Issuing the Standard of Block Compensation Land Price on Farmland Acquisition (GZF [2023] No.55) on 3 September 2023, clarified that 60% of the block comprehensive land price is the resettlement subsidy and 40% is the land compensation fee, excluding the social security insurance subsidies for land-lost farmers as stipulated by law. For other farm land and construction land, one time of the standard shall be applied; for unused land acquired, .0.1 times of the standard shall be applied, In addition to the explicit price of grassland in pastoral areas, 0.4 times of the standard shall be applied for grassland in other non-pastoral agricultural land acquired; for state-owned farmland and construction land, reference should be made to the compensation standard of collective land within the region. For state-owned unused land, no compensation is required. In terms of young crops and ground attachments on collective land, specific compensation standards have been promulgated in Gansu based on their own conditions. In addition, the new Land Administration Law requires that compensation should be paid before land occupation or land use.

172. The compensation for young crops and ground attachments affected by TLU is determined through mutual negotiation and shall be paid before construction. For LURT, both parties shall reach an agreement through equal negotiation. For any project involving extensive transfer, many households and high operating risks, a risk security fund may be established. For projects involving the transfer of land use right of the whole village (group) with a large area, a large number of rural households and higher operational risks, risk security funds may be established, and the specific extent of the fund shall be negotiated by both parties. The land rent for agricultural facilities shall be determined through negotiation between the place of supply and the place of use.

173. **(iv) Policy arrangements for livelihood restoration:** The Land Administration Law (2020) requires that the living standard of the affected farmers shall not be reduced, and their long-term livelihoods shall be secured. In general, five main resettlement modes are available to land-expropriated farmers: agricultural production, reemployment, equity participation, non-local resettlement (Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238)), and endowment insurance (Article 48 of the Land Administration Law (2020), etc.). In addition to the above five modes, state policies, such as the Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29), also requires that local government shall establish a social security system suited to the characteristics and needs of land-expropriated farmers, secure employment training and social security funds, promote land-expropriated farmers to get employed and be incorporated into urban society, and ensure that the living standard of land-expropriated farmers is not reduced due to land acquisition, and their long-term livelihoods are secured. For eligible land-expropriated farmers, employment and startup supporting policies shall be implemented, occupational training should be further strengthened, and public employment services should be improved to promote their employment and startup. For example, according to the Notice on Implementing MNR Requirements on Further Strengthening Temporary Land Use Administration (GZZ [2021] No.81), farmers, who lost their contracted land due to unified land acquisition by the government, shall be covered by the social security system. The application shall be prepared by the land expropriated individuals, discussed by the rural collective economic organization or villagers' committee, primarily checked by the township (sub-district) government, reviewed by county or municipal or district level ARAB or NRB and confirmed by HRSSB. After that, the township (sub-district) government shall disclose the information within the affected rural collective economic organizations or village committees for no less than 10 days, and then submit to county or municipal or district level government for approval and HRSSB for registration. Land-expropriated farmers who meet the conditions can choose to participate in the basic endowment insurance for urban workers or social endowment insurance for urban and rural residents on their own will, and the government will provide corresponding subsidies to land-expropriated farmers. The standard of subsidy funds for land expropriation insurance is the provincial average annual salary of workers of the previous year multiplied by the proportion of land expropriated.

174. **(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 that after the land acquisition plan is approved and announced, the county government shall organize a land details measurement survey within the range of land acquisition and disclose the results to the public for at least 30 days. Article 48 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.”

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

- During option assessment 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 Detailed Measurement Survey (DMS) stage includes land acquisition announcement, DMS publicity, participation in the DMS, 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.

176. If TLU is involved, the TLU approval should be disclosed to the public as requested according to the Notice of the Ministry of Natural Resources on Regulating Temporary Land Use Management (MNRP [2021] No.2). On such basis, it is requested in Gansu province that the county (district) level NRB shall disclose the TLU information through relevant government websites. If LURT is involved, the LURT agreement shall be reached based on equality and voluntariness. If TLU of land for agricultural facilities is involved, after consensus is reached on the construction plan and land-use conditions, announcements will be made to the public through the village and group public affairs and other forms of publicity for a period of not less than 10 days. If there are no objections at the end of the period of notification, the rural collective economic organizations and operators will sign a land-use agreement.

177. **Assessment:** China has established a complete legal framework and policy system on land acquisition, TLU, LURT, house demolition, resettlement, and compensation. The implementation of rural land acquisition and house demolition is based mainly on the Land Administration Law (2020), the measures for the implementation of the Land Administration Law of Gansu, and relevant compensation rates. Urban house demolition is based mainly on the Regulations on the Expropriation of Houses on State-owned Land and Compensation (2011). The Land Administration Law that was amended on August 26, 2019, and came into effect on January 1, 2020, has substantively coordinated the practices of land acquisition and house demolition in rural and urban areas. The new Land Administration Law defines the

scope of land acquisition for public interests, strengthens preparatory risk management for land acquisition, and emphasizes information disclosure and public participation (including public hearings) in land acquisition and house demolition, and requires that an agreement shall be signed with the landowner and user before application for land approval. It also requires that compensation and resettlement funds should be arranged in advance. The new law requires that land acquisition compensation rates shall be determined based on block comprehensive land prices, and adjusted or reissued at least every three years, and that fair and reasonable compensation shall be granted for land acquisition to ensure that the living standard of the affected farmers is not reduced. Therefore, the new Land Administration Law will protect the rights and interests of affected persons, ensure sustainable livelihoods and improve living conditions more effectively. In general, the LAR regulations are consistent with the requirements of Core Principle #4 and Element 9.

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

178. The three elements under Core Principle #5 are related to the social regulations system of the PforR Program. Ethnicity did not play a role in project design, nor is it anticipated to be relevant during implementation. However, consistency against this principle is analyzed below as it relates to consultations.

**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.

179. **Policy requirements for ethnic minority consultation:** Gansu is a province with a sizeable population of ethnic minorities. There are 55 ethnic minorities in Gansu Province. According to the seventh national census in 2020, there were 2.6564 million ethnic minority people in Gansu Province, accounting for 10.62% of the total population. These include 10 long dwelling ethnic minorities like Hui, Tibetan, Dongxiang, Bao'an, Yugu, etc. The project area involves one ethnic autonomous county, the Sunan Yugur Autonomous County, 8 ethnic minority-concentrated townships and 137 ethnic minority-concentrated villages, with a total ethnic minority population of 77,079. 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 that the organ of self-government of a national autonomous area must conduct full consultation with their representatives and respect their opinions.

180. Table 5-1 above details the key legal framework parameters related to management of risks associated with ethnic minorities and vulnerable people. Furthermore, according to the regulations on SSRA (which is an important part of the system), at the feasibility study stage of a project, the PIU (or through an entrusted specialized agency) shall conduct a SSRA to identify impacts, propose mitigation measures, and prepare a SSRA report. If a government at or above the county level applies for land acquisition, a current status survey and a SSRA should be conducted. Each municipal or county government in Gansu has formulated local policies according to the applicable regulations, such as the Notice of Gansu Provincial Committee and Government on Issuing Several Implementation Measures for Strengthening the Mechanism of Social Stability Risk Assessment for Major Decisions under New Circumstances (GBF [2021] No.33) promulgated by Gansu Province in December 2021.

181. **Assessment:** Policies have been established in China and Gansu to respect minority opinions, ensure ethnic equality, and respect minority customs and institutional arrangements are in place for effective implementation of these policies..

**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.

182. **Policy basis for ethnic minority development:** The Law of the People's Republic of China on Regional National Autonomy stipulates that 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 the livelihoods of local minority residents. Further, it will 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 stipulates that when developing major economic and social development plans, and determining major local infrastructure projects, prior public participation shall be conducted, and also makes systematic provisions on the schedule, form, process, recording, etc. of public participation.

183. **Assessment:** Public consultation is required under Government systems for relevant plans and projects in accordance with the Interim Regulations on Major Administrative Decision-making Procedures. This system is well resourced and a clear system of Governance from village level, up through municipal/county governments to the Provincial government and higher exists to allow input to project and program designs. **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.

184. **Poverty and poverty reduction systems:** Currently, the country's main focus is on those groups who are at risk of returning to poverty due to various reasons, like households who just have been out of poverty, general farmers, and those in difficulties due to sudden increase of rigid expenditure or reduced income caused by emergencies. Correspondingly, the General Office of the CPC Central Committee and the State Council issued the Opinions on Reforming and Improving the Social Assistance System (ZBF [2020] No. 18) in August 2020, requiring to develop the social assistance system in a coordinated manner to consolidate achievements in poverty alleviation, and safeguarding the bottom line of people's basic livelihood. A minimum living subsidy is provided to the family whose per capita income of family members living together is lower than the local minimum standard of living security and conforms to the provisions of property status. Gansu Province issued "Several Measures on Reforming and Improving the Social Assistance System" (GBF (2021) No. 5). Gansu Province annually publishes urban and rural minimum living subsidies (MLS) and special hardship support standards and policies, which are uniformly formulated by the local governments at or above the county level, with standards varying from place to place. In 2023, the average urban MLS standard is CNY 8,400 yuan per year per person, and the average rural MLS standard is CNY 5,580 yuan per year per person, the subsidy for people in extreme hardship in urban and rural area is CNY 10,920 and 7,260 yuan respectively.

185. The 14th Five-Year Plan of Civil Affairs of Gansu Province (2021.10.15) set 15 key development targets, 12 specified fields, 24 engineering projects and 89 key tasks in the aspects of basic livelihood guarantee, basic social services, elderly care services, etc., covering social assistance, elderly care services, children's welfare, grassroots social governance, basic social services, social organization development, philanthropy and social work, regional name management services, and so on.

186. **Protection of women's rights and interests:** In terms of 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 Revision) requires that women's lawful rights and interests shall be protected, and gender equality promoted. It defines the state shall ensure that women enjoy the same labor and social security rights as men. In September 2021, the State Council promulgated the Outline for Women's Development in China (2021-2030) that specifies comprehensive goals related to gender equality across multiple sectors. It also recommends that a sounder legal framework is established to effectively protect women's legitimate rights and interests; and women's sense of gain, happiness and security is increased significantly.

187. The Plan of Gansu Province for Women's Development (2021-2030) (2021.12.30) sets 75 targets and 93 strategical methods in eight aspects, including health, education, economy, participation in decision making and administration, social security, family development, environment, and law.

188. **Child protection:** The Law of the Peoples Republic of China on the Protection of Minors (2020 Amendment) stipulates that minors shall enjoy all rights equally in accordance with the law, regardless of the nationality, race, gender, household registration, occupation, religious belief, education level, family status, physical and mental health of themselves or their parents or other guardians. The law makes detailed provisions on family, school, social, network, government and judicial protection for the minors. The Plan of Gansu Province for Children’s Development (2021-2030) (2021.12.30) sets 70 targets and 89 strategical methods in seven aspects, including health, safety, education, welfare, family, environment, and legal protection.

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

## 5.2.6 Core Principle #6: Social conflict management system

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

## 5.3 Assessment of Social Management Mechanism and Capacity

191. As shown in **Table 5-1**, the provincial, municipal, and county (district) authorities in Gansu have established clear management agencies for different social risks, which have been equipped with qualified staff. This section analyzes the organizational setup of the social management system of agencies which influence social management systems with a direct linkage to the P4R operation. It assesses if the organizational settings are adequately functional and if there is a need for improvement or systems strengthening. The assessment has been prepared based on information gathered through consultation and research during ESSA preparation. It is observed that the number of staffing is tens of staff for each provincial and county (district) level department. The staff number of departments are not the same in different agencies as human and other resources are managed to meet changing demands from time to time. For different social risks, the corresponding organizations or organizational groups are assessed and analyzed in this section. **Table 4-1 in Appendix 4** sets out detailed stakeholder analysis conclusions, including the responsibilities of different government authorities involved in different types of activities, and results of authority interviews under the social management system.

### 5.3.1 Social risk assessment management agencies<sup>30</sup>

- **Provincial DRC:** approving major fixed asset investment projects based on social stability risks and other documents relevant (attaching the SSRA report and review comments when applying for

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<sup>30</sup>This section summarizes the responsibilities of the relevant agencies related to program social risk management, which may not be all responsibilities of the government authorities concerned.

FSR approval).

- **Provincial PLAC:** coordinating, supervising, and directing SSRA. Instructing the subjects of decision making and assessment to convene different political and legal affairs committees, and authorities for cross-regional or departmental projects.
- **Municipal or county (district) government:** conducting county-wide social stability risk assessment, decision-making, implementation, and supervision, and it is where the SSRA report is discussed and approved in the meeting of the standing committee of the municipal or county CPC, the meeting of government executive committee, or the meeting of the Party and the government leadership team.
- **Municipal or county (district) PLACs:** reviewing and registering the SSRA report and supervising the work of the subjects of assessment.
- **Assessor:** conducting or appointing an independent appraisal agency to conduct SSRA and implementing SSRA measures.
- **Independent appraisal agency:** attending SSRA training and reviews organized by NDRC and getting registered at the provincial PLAC in advance.

192. As an example, the **PLAC of Minle County** has established a social stability maintenance office (2 staff), responsible for directing subjects of assessment to conduct SSRA on major decisions and construction projects, providing policy advice and guidance, and supervising subjects of assessment to implement risk mitigation measures which are presented in the SSRA reports, coordinating and handling of major issues which may affect social stability, preventing and resolving social conflicts and incidents with potential social stability risks, investigating contradictions, regularly analyzing social stability situations and stability maintenance evaluation mechanism, studying and putting forward countermeasures. After reviewing the content of SSRA, the Municipal Political and Legal Committee make a record and issue a letter of confirmation. Staff of the Municipal Political and Legal Committee participate in at least 2 capacity trainings per year organized by the municipal or provincial government.

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

### 5.3.2 Cultural relics protection agencies

- **CHAB under the provincial culture and tourism department:** coordinating and directing cultural relics investigation, protection and utilization, archeology, and major project implementation through the cultural relics protection division.
- **Municipal or county (district) government:** responsible for the territorial management of cultural relic safety.
- **Municipal or county (district) cultural relics authority under the culture and tourism bureau (CTB):** coordinating and directing cultural relic protection, conducting administrative law enforcement for cultural relics, assisting the competent authority in reviewing projects involving cultural relic protection, supporting the superior cultural relic and archeological authority in

conducting cultural relic investigation and exploration, and archeological excavation. where any cultural relic burial area cannot be avoided in site selection, the provincial CHAB shall organize the archeological excavation agency to conduct cultural relic investigation and exploration at the expense of the project owner.

- **Municipal or county (district) DRC:** 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.

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

### 5.3.3 Land use management agencies

195. **Land use approval agencies:**

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

#### Land acquisition

- **County (District) or above NRBs or land acquisition and house demolition authority:** implementing the applicable laws and regulations, drafting the local overall spatial planning of national land, directing land users to submit land use application materials, and reviewing and submitting such materials to the higher level authority; establishing a leading group for land acquisition and house demolition compensation and resettlement; entrusting the land and house expropriation department to take the lead, and local township people's governments and communities to cooperate with the third party to carry out SSRA and survey and mapping, especially land status survey, household visits, policy publicity, resettlement measures discussion, grievance handling, etc.; disclosing relevant land acquisition pre-announcement; drafting a compensation and resettlement plan at the municipal or county level; organizing public hearings on land acquisition and house demolition; signing land acquisition agreements with affected persons or entities, and disclosing land acquisition announcement, conducting land acquisition, compensation and resettlement after obtaining approval.
- **Township government and village committee:** participating in and supporting land acquisition and house demolition, especially DMS, door-to-door visit, policies publicity and communication, resettlement measure discussion, grievance redress, etc.
- **County (District)-level HRSSBs:** calculating of subsidy funds for the social insurance of land lost to farmers, processing the payment of insurance premiums, approving, and disbursing the pension, and managing the subsidy funds for farmers who lose land.

- **Third-party appraisal agency:** Where house demolishing involved, a qualified real estate appraisal agency is appointed by the affected village or community under the direction of the natural resources authority to appraise house compensation rates, where relevant.
- **Financial bureau:** preparing necessary budgetary funds according to the resettlement budget submitted by the NRBs and land user.
- **Auditing bureau:** auditing resettlement costs regularly according to the statutory process and giving opinions.

#### Temporary land use

- **National and provincial DNRs, and DARAs:** studying and formulating TLU management policies, deploying TLU supervision and random inspection.
- **Municipal NRBs, and ARABs:** examining, approving, and managing the TLU when cultivated land and permanent basic farmland involved.
- **County (District) NRBs, and ARABs:** responsible for the approval and routine supervision of other TLU without cultivated land and permanent basic farmland being involved, supervising the land users to perform land restoration according to law, uploading TLU related information and documents like approvals, agreements, location, photos of current land status onto the TLU data system, disclosing the TLU information to the public and timely updating the TLU restoration information in the system.
- **Rural collective economic organization:** supervise whether the TLU applicants use the land and fulfill the responsibility of land restoration in accordance with the agreement.

#### Land use right transfer

- **MARA:** directing nationwide LURT and contract management.
- **ARABs at or above the county (district) level:** play a role in LURT by establishing operating rules, conducting policy assessments, undertaking information disclosure, equity appraisal and other key aspects of the LURT process. They also play a role in setting technical specifications, improving the management level of LURT, directing the work of township rural land contracting management authorities, encouraging transferees to develop crop production and guiding enterprises to develop modern cultivation and stockbreeding suitable for large-scale operation.
- **Township governments:** responsible for LURT and contract management, including providing a sample contract to both parties and directing them to sign the contract, correcting violations in the contract, establishing LURT ledger to timely and accurately record the transfer status and keeping LURT records and documents properly.

196. **For example, in Jingchuan County,** land transfer supervision and management are handled by the county-level Agricultural Operation Service Center (with a total of 18 staff members) and the townships that have set up land transfer workstations (1-2 staff members); and in Sunan County, land transfer supervision and management is handled by the county-level Rural Property Rights Trading Center's Rural Operation Guidance Station (6 staff members). Other programs are similar in land transfer supervision and management institutions. Land transfer area of less than 100mu is filed by the village level, between 100-500mu is filed by the township agricultural economic station or agricultural service center, and more than 500mu is filed by the county-level land transfer center or agricultural business service center. Personnel of land transfer management organizations in each county will participate in at least three trainings on capacity building each year, including at least one each in the province, city and county, and the main trainings will include land rights confirmation, arbitration and mediation of conflicts and disputes related to land ownership or compensation.

## Agricultural facility land use

- **MNR and provincial DNR, MARA and provincial DARA:** responsible for the supervision of agricultural land for facilities through various technical means;
- **Municipal NRB and ARABs:** responsible for the supervision and guidance for the management of facility agricultural land, establish and improve the inspection system, fully implement the supervision of facility agricultural land, and report the information on the filing of facility agricultural land to the provincial-level competent departments on an annual basis;
- **County (District) NRBs and ARABs:** responsible for the daily supervision of agricultural land for facilities, scientifically guiding the siting of facility construction in accordance with the requirements of the economical and intensive use of land, determining whether to destroy the tillage layer, accepting land reclamation, and submitting the filing information to the state (municipal) competent departments on a quarterly basis. Among them, the competent department of natural resources will promptly review and carry out the uploading of maps into the database on the regulatory platform for agricultural land for facilities after receiving the approval documents for agricultural land for facilities and related filing information provided by the townships. The annual change survey of land for facility agricultural land shall be done in accordance with the regulations; the county-level departments in charge of agriculture and rural areas shall strengthen the guidance on the standards of facility agricultural land. If it is necessary to occupy general farmland for facility agricultural land, it should be included in the county-level annual farmland "in and out of balance" overall program approved in accordance with the regulations and then implemented.
- **Township government:** organize for village collective economic organizations and operators, under the guidance of county-level departments in charge of natural resources and departments in charge of agriculture and rural areas, and based on the overall spatial planning of national land, agricultural development planning and village planning, under the premise of protecting cultivated land and rationally utilizing the land, make good use of all kinds of policies on natural resources, agriculture and forestry, and in accordance with the facility construction plan, apply comprehensive measures to reasonably determine the location and scope of land for facility construction. Organize rural collective economic organizations and operators to select sites for facility agricultural land and guide the completion of the transfer of land contract management rights and the signing of land use agreements, track the entire process of facility agricultural land construction, supervise the implementation of land reclamation, and return and disclose information on facility agricultural land. Where contracted cultivated land is converted to other land types such as forest land, the township people's government puts forward opinions on the implementation of cultivated land "in and out of balance"; upon approval, the contracting party is guided to re-sign or change the certificate of ownership of the contracted land with the contracted farmers in accordance with the law.
- **Rural collective economic organization:** supervise whether the applicants use the land and fulfill the responsibility of land restoration in accordance with the agreement and disclose land use information in the village.

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

198. **Livelihood restoration**

- Livelihood restoration measures are flexible, including agricultural resettlement, reemployment, resettlement with assets, relocation, social security, etc., which involve different management agencies. Specifically, **agricultural resettlement** is usually conducted by the village collective economic organization based on the land status and villagers opinions, which may decide to allocate undistributed collective land to households affected by land acquisition, or conduct land reallocation if no undistributed collective land is available; **reemployment** is chosen by affected households based on their own needs, where free training and employment support are provided by the county labor and employment authority; or local government coordinate employment positions, such as forest rangers, cleaners and other public welfare positions, according to the degree of impact on the farmers; or the land use applicants give priority to the affected people who are willing to be employed when they need to use labor during the construction and operation of the project; **shares resettlement** is determined by the PIU in consultation with affected households; **relocation** is requested by the affected households for new land farming at other areas, and decided by local governments after assess and consult with the host village collective economic organizations; **social security for land-expropriated farmers** is implemented by the county HRSSB with the support of the land acquisition affected township government and village or community committee. Livelihood restoration will be discussed in detail in Section 5.4.4, including case sharing, based on field visit and consultation results.

199. **Assessment:** Livelihood restoration is part of LAR. Different livelihood restoration measures involve different implementing agencies, such as village collectives, social security authorities, employment authorities, and enterprises, which have clearly defined responsibilities. Public finance supports the implementation of these measures. In addition, different livelihood restoration measures have different funding sources. Livelihood restoration measures can be well implemented in practice due to rich experience and sound regulations on measures, organizational structures and fund arrangements, consistent with Element 9 under Core Principle #4.

### 5.3.4 Public and worker health and safety, and emergency management agencies

#### 200. **Worker health and safety (at the project construction and operation phase)**

- **National Health Commission and Disease Control and Prevention Center (DCPC):** preparing, adjusting, and disclosing classes and catalogs of occupational diseases, and supervising national occupational disease prevention and treatment.
- **Provincial Health Commission:** formulating and implementing policies and standards related to occupational health and radiological health, carrying out monitoring of key occupational diseases, special investigations, occupational health risk assessment and health management of occupational populations, and coordinating the prevention and control of occupational diseases.
- **Provincial Prevention and Treatment Institute for Occupational Diseases or DCPC:** providing technical guidance, training and quality control for the province's prevention and control work.
- **Provincial AHVMB:** responsible for the management of key zoonotic diseases; coordinating the work of safe production in the animal husbandry and veterinary medicine industry.
- **Municipal or County (District) HCs:** supervising, managing, and implementing the work related to local occupational health prevention and treatment, and ensuring that workers receive occupational health and safety rights according to law.
- **Municipal or County (District) animal husbandry and veterinary institutions:** responsible

for the arrangement and implementation of matters relating to the physical health examination of animal husbandry and farming practitioners within their jurisdiction.

- **Municipal or County (District) HRSSBs:** managing work-related injury insurance, establishing a tripartite mechanism in labor relations with trade unions and enterprises to solve relevant major issues.
- **Occupational health examination agency:** obtaining a practicing license and registering in the provincial health commission, where medical practitioner and nurses for registered types and items of occupational health review should be equipped and at least one licensed physician with occupational disease diagnosis qualification is required.
- **Women's federation:** protecting the legal rights and interests of women and children and providing assistance to aggrieved women and children.

201. HCs of different counties have a similar organizational structure. For example, in Jingchuan County, three organizations under the county HC are responsible for health management: 1) health and wellness affairs center of HC; 2) integrated health law enforcement brigade; 3) disease prevention and control center. At the same time, public medical institutions qualified for occupational health examination are set up in Jingchuan County, including County Hospital. The county DCPC, township hospital and community health service centers provide support.

- **Health and Wellness Affairs Center (5 staff):** formulating and implementing policies and standards related to occupational health and radiation health in the county; carrying out key occupational disease monitoring, special investigation, occupational health risk assessment and working groups health management; coordinating and carrying out the prevention and control of occupational diseases; coordinating with the County ARAB in arranging for staff of livestock stations in townships, countywide rural animal vaccinators and large farming households to participate in blood tests for brucellosis.
- **Integrated health law enforcement brigade (4 staff members):** supervising and inspecting the implementation of management measures by the employer where occupational-disease-inductive factors exist; supervising and managing the occupational-health inspection institutions, occupational-disease-diagnosis institutions and occupational-health technical service institutions within the jurisdiction; investigating and handling occupational-disease-inductive accidents and occupational health violations; and publicizing laws and regulations on occupational health management.
- **DCPC (5 staff):** classifying corporate hazards into five categories (pneumoconiosis, chemical, biological, physical, and radioactive factors), and providing necessary technical support to enterprises annually. Responsible for operational training in animal husbandry as well as technical guidance, serological testing, data collection, data analysis and summary writing for project work.
- **Hospitals:** For example Jingchuan County People's Hospital provides pre-job, on-the-job and post-job occupational health examinations for relevant workers of enterprises with toxic and hazardous factors and takes measures accordingly. **Township (central) health centers and community health service centers:** responsible for serum collection, business training and publicity and health education for the key populations of brucellosis under their jurisdiction.

202. **Public health and safety (food safety)**

- **Provincial, municipal and county (district) AHVMBs:** supervision and management of breeding livestock and poultry production, slaughter and other aspects of quality and safety.
- **Provincial, municipal and county (district) MSAs:** regular research and deployment of food

safety supervision of food safety of edible agricultural products, to carry out publicity on food safety laws and regulations, popularize the basic knowledge of food safety, law enforcement and supervision of agricultural and livestock products production, processing, circulation, and to carry out sampling and testing of food safety.

- **County (district) inspection and quarantine centers:** the quality and safety of agricultural and livestock products for testing.

203. For brucellosis, anthrax and other zoonotic diseases involved in the livestock breeding industry under the project, a joint prevention and control mechanism among the departments of health, animal husbandry and veterinary medicine has been established at the provincial level, which exchanges information on brucellosis on a monthly basis, analyzes and studies the form of epidemic regularly, and carries out surveys and analyses jointly in key prevalent areas, etc.

#### 204. **Safe production management**

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

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

206. **Assessment:** For occupational health and safety of workers, public health and safety, management of work safety during project construction and operation, Gansu Province has defined departmental responsibilities consistent with Element 8 under Core Principle #3.

### 5.3.5 Ethnic affairs management agencies

- **Provincial ethnic affair commission (EAC):** Responsible for the coordination supervision and implementation of the decisions and arrangements of the central and provincial government on ethnic work, as well as the implementation of ethnic laws and regulations by various regions and departments.

207. **Assessment:** Ethnicity did not play a role in project design, nor is it anticipated to be relevant during implementation as EAC does not have mandate over the 700 LPE. Consultations will be carried in an open and transparent manner with ethnic minority people within the Program boundaries.

### 5.3.5 Vulnerable group protection agencies

208. Rural revitalization bureau (RRB)s, women's federations, civil affairs bureau (CAB)s and federations for people with disabilities have been established, and poverty reduction and vulnerable groups support policies and plans exist at the national, provincial and county levels to plan and manage low-income people assistance, women and children's development, the disabled, left-behind old people and minors, etc.

All authorities have appropriate staff and budgets, and evaluation mechanism for their performance..

- **Civil Affairs Bureau:** managing affairs related to old people and left-behind (distressed) minors needing assistance, including conducting survey, statistics, filing and recording, establishing a local management mechanism for left-behind (distressed) minors and a local old-age care mechanism, and securing funds.
- **Women's federation:** uniting and mobilizing women to play a unique role in society and family, and protecting the lawful rights and interests of women and children, providing assistance to aggrieved women and children, promoting the implementation of gender equality policies, etc.
- **Federation for People with Disabilities:** protecting the civil rights of the disabled, collecting their opinions and needs, mobilizing the public to understand, respect, care for and support them, and eliminate discrimination and obstacles, assisting the government in developing outlines for disabled persons' programs, promoting their rehabilitation, education, employment, rights protection, culture, sports, social security, information technology application, disability prevention, etc. and improving the environment and conditions for their accessing to social life.
- **Rural Revitalization Bureau:** strengthening poverty alleviation outcomes and preventing re-improvement or additional impoverishment.
- **Township government and village or community committee:** A supervisor of left-behind (distressed) minors is appointed at the township level and a director for minor's affairs is assigned at the village or community committee level, and a regional old age care service center and a women's federation office established at the township level, and a children's director appointed, and an old age care service station and women's federation chairman mechanism established in each village or community.

209. The work on the elderly and minors left behind is carried out by the "Elderly Affairs Section", "Children Section" or "Social Affairs and Social Welfare Unit" in each county, which is staffed with 2-6 employees.

210. The work of consolidating and expanding the achievements of poverty eradication and rural revitalization in all counties is usually carried out by RRB, which has in general 15 to 30 staff. All counties have set up coordinating bodies such as "rural revitalization strategy commands" at the county and municipal governments, consisting of key leaders of the county government and various government departments, and from time to time organize and convene industry sectoral consultation meetings according to the needs of the work and the situation of the advancement of the work.

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

## 5.4 Assessment of the Social Effects of Implementation

212. The assessment of social effects of implementation is mainly based on the information obtained from sample cities or counties and the investigation and understanding of the social risk management process and effects of previous similar typical activities. During the site survey, interviews were conducted with key stakeholders in all the counties visited to cross-examine their attitudes toward and satisfaction with the implementation of related activities. Special attention was paid to analyzing the implementation of policies consistent with the World Bank's principles to assess whether the objectives set out in the core

principles and elements can be met. Therefore, this section provides analysis and assessment against the six core principles and elements of social relevance.

### 5.4.1 Core Principle #1: Sustainable social risks management system

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

213. As presented in **Chapter 2**, the activities supported by this PforR encompass both physical projects, such as the construction of livestock farming production and affiliated facilities, as well as improvement and upgrading initiatives. Additionally, it includes non-physical activities, such as applying livestock product certificates with green and organic or low-emission indications, the formulation and implementation of policies, mechanisms, and technical standards related to low-carbon livestock development, and relevant skill and technology promotion and training.

214. To ensure the quality and effectiveness of the SSRA, each project county has established a pool of experts for SSRA. For example, in Jingchuan County, the social stability maintenance office selected 57 experts through invitation, experts' applications, and recommendations. Experts in the pool mainly consist of personnel with strong professional knowledge and extensive practical experience from 45 government authorities. The stability maintenance office of the county has also issued the Management Measures for the Expert Pool for Social Stability Risk Assessment in Jingchuan County (trial), outlining the responsibilities of each expert. The establishment of the expert pool effectively promotes the in-depth implementation of SSRA. In Sunan Yugur Autonomous County, a leading group for the SSRA of major decisions has been established to guide the county-wide SSRA work. Guazhou County considers SSRA as a crucial prelude to decision-making, policy formulation, reform, and project initiation. It covers various fields, gradually forming a pattern of "unified leadership by the Party committee and government, organizational promotion by competent departments, specific implementation by responsible entities, and guidance and supervision by the PLAC" in SSRA. The responsibility for SSRA has been incorporated into the annual key performance indicator assessment of leadership teams in townships and departments involved. It's required to conduct SSRAs for major matters related to the vital interests of the public in advance and strictly implement rigid preconditions, ensuring thorough assessments before decision-making, discussion in meetings, project listing and implementation. In this regard, the PLAC of Guazhou County, Sunan County, and other counties notify townships and government departments to comprehensively review major decisions, policies, reform matters, projects, and events on an annual or semi-annual basis and conduct SSRA in advance (see **Error! Reference source not found.**).

215. According to information provided by the PLAC of the sample counties, SSRAs are usually undertaken by the specific project implementation units. When these units apply for project approval or filing with the DRC, the DRC would provide a checklist of required documentation, which includes the necessity of conducting a SSRA. Based on the potential social impacts of the project, the procedures for filing SSRA can be categorized into two types: simplified procedures and general procedures. The project implementation units usually hire qualified consulting firms to conduct SSRA and invite industrial experts to review the reports. For projects eligible for simplified procedures, once the SSRA report is completed, it can be directly filed with the PLAC of the county. In the case of projects subject to general procedures, only SSRA reports have passed expert reviews can be filed. Additionally, the SSRA can be an independent document or a specialized chapter within the project FSR or design documents. The SSRA workflows in the sample counties are generally consistent, as shown in Figure0-2.

216. Through the site survey of sample counties, it was found that various types of projects have conducted SSRA in accordance with policy requirements. For example, in 2022, all 62 major decision-making items of Guazhou County underwent SSRA and filing procedures; Minle County conducted a total of 97 SSRAs and filings for major decisions; Lingtai County conducted 67 SSRAs and filings for major items from January to October 2023, including projects related to ecological rehabilitation, infrastructure

improvement and renovation, and the construction of agricultural and livestock product processing bases, etc.

217. Regarding skills and technology promotion and training activities related to low carbon livestock development, it will not directly cause losses to farmers. Instead, it aims to improve their environmental awareness and gradually change their livestock farming practices. Such a change requires farmers to acquire certain skills and technologies to improve their capabilities. To address such impacts, a farmer training system has been established from the MARA to the provincial and county levels. This is accompanied by a series of technical support, policy guidance, and other measures to assist farmers in accelerating their improvement and transformation.

#### 218. **Education and Training:**

- **Training mechanism to Farmers:** i) Overall Planning, it is a long-term strategy for the Chinese national and local governments for training the farmers on economic growth, technique improvement, environment protection, health and safety. It is under the uniform deployment and arrangement of the MARA to all provinces, cities and counties, and is carried out in all counties and cities every year, which is part of the annual performance assessment of the agriculture and rural affairs departments. For example, in April 2022, MARA issued the Notice on Training of the High-Quality Farmers in 2022, putting forward the work ideas, main tasks, special actions and work requirements for the training of high-quality farmers nationwide in 2022. Accordingly, the annual work plans were developed by integrating the requirements of MARA and local situation. For example, in 2022, Gansu Province modified the Regulations on Trainings to Farmers in Gansu Province and published the Notice of Gansu ARAB on Issuing the Implementation Plan of High-quality Farmers in 2022. ii) Institution, the county or district ARABs are responsible for implementation of trainings to the farms through dedicated organization and agencies, such as the General Administration Office of Farmer Education and Training, Agricultural Radio and Television Schools at Provincial, Municipal and County Levels, etc. iii) Budget, the training is free for farmers, including the cost on meals and dormitory during the training. The budget of training is mainly covered by the special finance support of the central and provincial governments, for example, the budget of Gansu Province was CNY 84.6 million yuan in 2022, among which, CNY 400, 000 yuan for Guazhou, Minle and Sunan respectively, CNY 1 million yuan for Zhengning and Lingtai, and CNY 1.2 million yuan for Jingzhuan County. Most of the budget are spent on training courses, experiments and in-field observation, and the rest are normally spent others, e.g., training promotion, enrollment work. iv) Application, farmers who intend to join the training can apply through the village committees or community offices, or through the official website or APPs of local ARABs. For example, people can join the training through the website of China Rural Remote Education ([www.ngx.net.cn](http://www.ngx.net.cn)) or APPs on the cloud platforms established. v) Teachers, all the teachers must be selected from the list of teachers issued by the MARA. Priority will be given to those who are recommended by levels of government departments. All teachers should be those with required certificates, i.e., teacher qualification certificate, or valid certificates approved by qualified official units. More than half of teachers in a class should be certificated as provincial or higher level.
- **Context:** the training contents are suiting the development level of agriculture and rural, times improvement, changes of society, economics and ecological environment. For example, the Skills Training for Leaders of Getting Rich in Rural Areas in 2003 was focusing on economic increase, while the focus in the new period is more on high quality development with the improvement of production and living levels of the people and their increasing awareness on environment protection. According to the Notice of Jinghua Gansu ARAB on Issuing the Implementation Plan of High-quality Farmers in 2023, a total of 29,670 farmers will be trained. The training Jinghua courses include three types: business management (such as leaders of new agricultural management, leaders of industry development, masters in crops planting, livestock raising and product processing, etc.),

professional production (such as cattle and sheep farming, dairy farmer training, corn planting), technical services (such as agricultural mechanic, animal epidemic prevention, rural electricity business, etc.)

- **Performance Effect:** 17300 persons were trained in 2022, among which, 104 persons of Jingchuan County were trained with a pass rate of 100% and satisfaction rate of 95.15%.

#### 219. **Technical Support:**

- **Technical Support by the Government:** investigation in the 4 demonstration counties of Gansu Province indicated that dedicated offices are established in each county, responsible for training and guidance. Offices providing these types of supports include animal husbandry and veterinary stations, soil and fertilizer stations, cultivation and protection station, in addition, each township government also arranged 1-2 representatives from its agriculture affairs service center and animal husbandry and veterinary stations to provide technical guidance and support during the animal husbandry and vaccination in Spring and Autumn, sowing and field management of corn, wheat and other crops. The supports include not only agriculture and livestock farming technologies, but also environment protection during farming, reduction of pesticides and chemical fertilizers, recycling of agro-wastes. All the crops planting, and livestock farming entities or individuals are the target groups.
- **Leading by the Agriculture Cooperatives:** the site investigation found that the agricultural mode of “cooperative plus smallholders” are broadly developing in Gansu, which means a cooperative operates hundreds or thousands of mu of land in an area with planting or livestock farming through LURT, in parallel, it also leads tens or dozens of family farms to plant or breed by using the unified plan and standard. In order to improve the quality, reputation and price of the products, the cooperative always leads the family farms to operate in green and environment protective ways. For example, the county's Animal Husbandry and Veterinary Center assigned professional technical personnel to Shengtong Livestock Farming Cooperatives in Yudu Town, Jingchuan County, to organize training sessions on beef cattle farming knowledge regularly, providing training on aspects such as beef cattle farming and disease prevention, and provide timely technical services to members of the cooperatives and other livestock family farms. Additionally, the cooperatives purchased disinfection equipment and conducted regular disinfection for other members. The cooperatives also alleviated financial pressure on members and other livestock family farms by centrally procuring feed and veterinary drugs at favorable prices from manufacturers and professional markets.
- **Technique Application:** Scientific and technological support has created favorable conditions for farmers to transform and improve their business methods. For example, Gansu Province has established the "Gannongyun" APP that farmers can learn planting and livestock farming knowledge online.

#### 220. **Policy Guidance and Demonstration:**

- **Straw utilization:** In 2021 and 2022, the MARA successively issued the Notice on Comprehensive Utilization of Crop Straw, implemented the action of comprehensive utilization of crop straw, and insisted on the strategy of fertilization, feeding and energization. 300 counties and 600 demonstration bases for comprehensive utilization of crop straw has been established in nationwide. The objective is to ensure that the comprehensive utilization rate of straw across the country remains above 86%. In 2023, Gansu Province carried out comprehensive straw utilization pilot projects in 14 counties and cities across the province, including the project counties Jingchuan and Lingtai. The initiative involves the establishment of over 56 comprehensive straw utilization demonstration bases, focusing on improving the automation level of straw feed processing and the research and development of new technologies and processes, supporting the enhancement of

storage capacity for haylage (silage) through equipping with facilities for crushing, compacting, and pelleting, to promote the transformation and added value of straw.

221. **Assessment:** The field survey and consultation on sample counties in Gansu Province showed that the overall social impact of the PforR related activities was not significant. For potential social impacts, Gansu and each county have formulated implementation plans or rules in accordance with related laws and regulations issued by the national and local relevant departments, including SSRA and land use management system, institutionalized training arrangement, and specific management authorities and personnel with the objective of effectively controlling corresponding risks.

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

222. **(i) Early screening.** According to the documents provided by the provincial and county-level natural resources departments of Gansu as well as the site survey, it is confirmed that investigation and verification are implemented jointly at pre-construction stages. Site selection approval is required for those projects that involve FALU and access control procedures are mandatory for large-scale LURT. The feasibility study reports are required to be appraised through the panels of related professionals under the organization of local DRC, and the result of site selection that must be compliance with local overall spatial planning of national land.

223. The NRBs of sample counties (district) introduced about the project site selection process. Through comparison, the management process of sample counties is basically the same. For construction projects involving FALU, such as the Guziwen Livestock Farm in Tianshengchang Community, Qifeng Tibetan Township, Sunan County, the project site selection process followed the land management requirements for FALU in Gansu Province, signed a land use agreement with the township and community and filed records with the county's NRB and ARAB. During discussions with the NRBs of the 4 sample counties, it was confirmed that the FALU filing process typically involves obtaining approval from the relevant village or community committee (confirming awareness and consent), review by the natural resources department of the township government (confirming awareness and consent, aligning with local overall spatial planning of national land), and review by the county's NRB (examining whether it is line with the planning, determining whether it involves permanent basic farmland and adheres to ecological protection redlines). Figure0-3 shows the FALU filing form of the Guziwen Livestock Farm. For projects invested by social capitals and involving large-scale LURT, the sample counties have formulated and implemented systems for the entry supervision and risk control, including review of qualifications of such enterprises, e.g., legal status, registered address, qualification and credit, technical expertise, production and operation management capability, land restoration capability, and performance, control of the duration and area of LURT, and the payment of performance bonds for one-time LURT exceeding 500 mu. For example, Shunyue Agricultural Machinery Service Farmers Professional Cooperative in Guazhou County leased 628 mu of farmland in group 7 of Nancha Village through LURT, the village committee and township government reviewed the cooperative's qualifications, the location of the leased land, involved farmers, purpose, LURT price, etc. during the filing stage (as shown in Figure0-4). In addition, the competent departments are invited to participate in the review and evaluation of the project documents like FSR and project design, including the screening and identification of project impacts and risks, and the development of management plans. For example, the WRB provides opinions on soil and water conservation and water source protection for the project, the EEB's requirements on environmental protection and management during construction, and the cultural relics management department's opinions on whether to protect and manage cultural relics.

224. By reviewing the sample project documents provided by each county, it was observed that projects that prepared a specific SSRA had more comprehensive screening and analysis of social risks, developed corresponding mitigation measures, and incorporated into the project design and supervision during implementation, demonstrating good performance. For example, factors such as environmental impact, labor use, and other risks during the construction phase of projects were identified and analyzed in SSRA.

Corresponding measures for risk mitigation and control were formulated and incorporated into design, reflected in project construction and supervision contracts. On the other hand, for some small sized facilities, such as livestock farming zone, although existing management systems and measures were effective, the identification and mitigation measures of social risks and impacts were not sufficiently reflected in the design and implementation management documents (e.g., project proposals, FSR, design documents), or the records of public consultations and information disclosure processes were not complete.

225. **(ii) Alternatives.** During the project preparation stage, relevant project assessment reports, such as the project FSR, should propose several principles for site selection, and compare them among different alternatives, including compliance with land use policies, economic analysis, and environmental and social impact analysis, and recommend a certain option based on this. For example, in the 2023 Cultivated land In and Out Balance Plan of Sunan County, specific requirements were outlined for the rationality of site selection for eight construction projects, including the Minghua Township Minghua Logistics Industry Road Construction Project and the construction of livestock farming zones in Longfeng Village, Kangle Town. These requirements include land conditions, degree of concentration, village and farmer preferences, project implementation challenges, transportation conditions, and industrial clusters, etc.

226. **(iii) Avoidance, Minimum and Reduction of Impacts and Risks.** The SSRAs and FSRs of previous projects in 4 sample counties were reviewed. The results showed that the SSRAs all referred to the requirements of the Notice of the General Office of the National Development and Reform Commission on Printing and Distributing the Social Stability Risk Analysis Chapter and the Outline for the Preparation of the Assessment Report (Trial) of Major Fixed Assets Investment Projects (FGBTZ [2013] No. 428), and included a basic framework of social risks identification, analysis, prevention and mitigation. For example, in the SSRA report of the 2023 Ecological Rehabilitation Project at the Eastern Entrance of Guazhou County, detailed preventive and mitigative measures were proposed for risks related to project policies, planning and approval, technical and economic, ecological and environmental impacts, economic and social impacts, as well as risks during project implementation and operation. In the SSRA report of the construction of the cattle shed project in Niujiayu Village, Gaoping Town, Jingchuan County (see Figure0-5), specific measures were outlined to address identified safety risks during construction and the risk of wage arrears for migrant workers. These measures include: 1) Strict adherence to construction procedures to promote project quality; 2) Intensifying project publicity efforts to maximize community support; 3) Rigorous implementation of safety measures during construction; and 4) Strict enforcement of the wage guarantee deposit system for migrant workers to protect their legitimate rights. As shown in Figure0-6, concerning the LURT of Shunyue Agricultural Machinery Service Farmers Professional Cooperative in Guazhou County, preventive measures were implemented by the Nancha Town government to mitigate the economic losses to farmers caused by the cooperative's operational risks. The preventive measures include paying leasing fee first before planting and paying a land leasing deposit of 62,800 yuan at a rate of 100 yuan or mu, ensuring farmers' rights.

227. **(iv) Institution and Budget.** In Gansu Province, the government responsibilities for livestock farming-related projects in various counties are generally similar. The ARAB and AHVMB oversee projects related to livestock farming. Once specific projects are included in the national or local investment plans, it's required to undergo a comprehensive evaluation process, including overall project assessments (such as approval of FSR) and specific assessments (such as site selection approval, land use approval, SSRA, etc.). In addition, the project investment budget and funding plan must be approved through joint reviews by the financial department and other relevant authorities so that the project has a clear and sufficient budget source, organizational structure, and management plan. At the provincial level, departments work under the unified coordination of the provincial government, with specific representatives assigned for coordination. For example, the coordination of this PforR is assigned to the provincial DARA. The arrangements at the county level are generally consistent with that at the provincial level. Project preparation, construction, and operation by project implementation units are subject to routine guidance and supervision from departments such as EEB, NRB, HRSSB, HC, FB, Audit Bureau, etc., ensuring the implementation of E&S management

measures.

228. **(v) Public Participation, Information Disclosure and GRM.** According to the site survey in 4 sample counties and the analysis of SSRA reports of sample projects, such as SSAR report of the 2023 Ecological Rehabilitation Project at the East Entrance of Guazhou County and the Cattle Shed Construction Project in Niujiayu Village, Gaoping Town, all projects conducted public consultations as required during the SSRA process. For example, the SSRA report of the Cattle Shed Construction Project in Niujiayu Village, Gaoping Town indicates that the project conducted public consultations and comments collection from relevant departments and surrounding residents by on-site visits and information disclosures, organized stakeholder engagement and expert review meetings to form the final report. The SSRAs for projects in various counties all underwent expert reviews and were officially filed by the government.

229. The NRB of each county introduced the management procedures, information disclosure and public participation mechanisms of FALU during the site survey. The details include: first, the land user is required to consult with the village community and township government at the initiation stage. Second, after reaching a preliminary agreement, the land user must seek opinions from various departments such as the county WRB, FGB, Transportation Bureau, NRB, cultural relics management department, etc. Third, once all approvals are obtained, a public announcement should be made in the village community, with a period not less than 10 days. Last, if there are no objections received at the end of the public notice period, the village community organization can sign the LURT agreement with the land user. According to the introduction from the Agricultural Service Center of the ARAB, for LURT, the land use party needs to undergo qualification review by the village community and township government during the application stage. For those above a certain scale, county ARAB review is also required. After passing the review, while negotiating the LURT agreement between relevant parties, the land user must ensure that the relevant project information is freely and unconditionally open to the township government, collective economic organizations, and affected households. The land-using parties can only sign the LURT agreement after reaching an agreement on various terms such as boundaries, area, duration, price, etc.). Therefore, LURT is a result mutually recognized by both parties. At the specific project level, in addition to the above procedures, requirements for information disclosure, public participation, and GRMs are also included in the project assessment documents, such as EIA, with specialized monitoring and supervision mechanisms in place.

230. The focus group discussion (FGD)s with 167 representatives of 8 ethnic minority-concentrated communities in Guazhou County and Sunan County and 43 sample farms in 7 program counties revealed that each village has established a WeChat group with all villagers joined in. Daily notifications and information are primarily disseminated to villagers through such WeChat group. In matters affecting a large number of villagers, the village committee organizes village meetings to solicit opinions. Representatives from ethnic minority-concentrated communities in Sunan County indicated that their villages had previously implemented projects similar to infrastructure construction and renovation for livestock farming, etc. Before implementing these projects, villagers were informed through public notices and village meetings, and feedback from villagers was generally considered and accepted. Regarding the proposed activities under the PforR, representatives who participated in FGDs expressed support, but they also voiced concerns about whether project activities might increase the cost of livestock farming. To address these concerns, it is recommended to conduct effective information disclosure and public consultation during the preparation and implementation stages of each activity to gain the support and understanding of farmers.

231. The site survey in sample counties of Gansu confirmed that local government departments implemented the Regulation on Letters and Visits, and there was a complete set of GRMs. Taking Sunan County as an example, the village (community)-level GRM includes three levels: first, directly report the situation to the relevant implementation units and seek solutions; The second is to reflect and seek solutions through village committees or community committees to report to and coordinate by township governments or sub-district offices; The third is to handle complaints through the PCPB of the county government or the county head's hotline or mailbox. The process includes the mechanism of collection, starting within 7 days,

and processing and feedback within 2 months. In addition, residents can also resolve major disputes through civil litigation in the court. Overall, the grievance redress mechanism is sound and effective.

232. **Assessment:** The site survey to Gansu Province and relevant project counties shows that relevant assessments have been implemented and approved as required in the early stage of the project like livestock farms construction, etc. The screening process of social risks like SSRA, FSR and alternatives comparison and selection were also conducted. Public consultation and information disclosure were carried out during the relevant assessments. The review opinions of relevant departments and reasonable suggestions from public participation were fully considered in the project design. For some small sized facilities, although existing management systems and measures were effective, the identification and mitigation measures of social risks and impacts were not sufficiently reflected in the design and implementation management documents (e.g., project proposals, FSR, design documents), or the records of public consultations and information disclosure processes were not complete. Regarding the proposed activities under the PforR, representatives who participated in FGDs also voiced concerns about whether project activities might increase the cost of livestock farming. There is also a call for improving and diversifying information delivery channels from farmers, such as written manuals, electronic versions, online platforms, specific promotion and awareness raising to different target groups like women, ethnic minorities, older people, etc. To address these concerns, it is recommended to strengthen the engagement and grievance management, conduct effective information disclosure and public consultation during the preparation and implementation stages of each activity so that all beneficiaries are aware whether and how to engage with the Program.

233. **Recommendation:** Strengthen the engagement and grievance management so that all beneficiaries are well informed and engaged with the Program, particularly women, ethnic minorities and older people. Clearly document aspects of E&S risks management process and measures in project FSR, design documents, etc., including risk identification analysis and mitigation measures, budgets, and meaningful stakeholder consultations.

## 5.4.2 Core Principle #2: Cultural heritage management system

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

234. During the communication with the NRBs and CHABs of Gansu Province and sample counties, it was learned that the planning department consulted and listened to the opinions of the CHAB when formulating and updating the local spatial planning of national land, including obtaining the regional cultural relics distribution data, and integrating the cultural relics census results into the local land use planning. As introduced by the CHAB of Lanzhou New District, Guazhou, Sunan and Jingchuan County, when a project involves occupation of state-owned land that i) within the underground cultural relics protection area; ii) covering an area of over 20,000 square meters; iii) within the scope of a famous historical and cultural city; iv) involves the protection scope and construction control zone of cultural relics protection units. Archaeological surveys and exploration of cultural relics should be conducted before land supply. For Category i) within underground cultural relics protection area, the land that may contain historical and cultural relics is usually approved by the local CHAB and designated as an underground cultural relic protection distribution area. The specific scope is agreed with the local NRB and reported to the local people's government for approval before being announced to the public; The protection scope and construction control zone of historical cities and other areas, and immovable cultural relics protection units in Category i) and Item iv), shall be approved by the local CHAB, and reported to the local people's government for approval before being announced to the public. For example, Figure0-7 is the Notice on the Protection Scope of County-level Cultural Relics Protection Units and Construction Control Zone published by the People's Government of Minle County. According to the introduction of Jingchuan County, 319 cultural relics protection areas within the county has been included in the land space planning, including 3 national key cultural relics protection unit, 9 provincial cultural relics protection units, 35 county-level

cultural relics protection units, and 269 general cultural relics sites. At the preliminary examination and site selection stage of the project, the project site selection shall comply with the local overall spatial planning of national land, so that no other construction activities, e.g., blasting, drilling, excavation, and other operations, are allowed within the protection scope of the cultural relic protection units required by the Law on the Protection of Cultural Relics.

235. During the preparation phase of construction projects, the PIU is required to submit relevant documents such as site selection, designs, drawings, and implementation plans to the CHAB for verification. Following approval from the CHAB, the submission proceeds to the urban and rural construction planning department for final approval. At the project review stage, the local DRC would invite experts from the CHAB to participate in the project FSR review. If the selected site of the relevant construction project is within the specified scope of cultural relics protection units, a hierarchical reporting process is initiated according to the level of the cultural heritage protection unit, and it is necessary for the CHAB to entrust qualified cultural relics exploration institutions to implement cultural relics protection measures. For example, when the Jingchuan County Industrial Concentration Zone Administration Committee was preparing the Jingchuan County Red Bull Industry Park Infrastructure Construction Project, it initially submitted a letter to the county museum titled "Regarding the Application for Verification of Whether the Preliminary Site Selection for the Jingchuan County Red Bull Industry Park Infrastructure Construction Project Falls within a Cultural Relics Protection Area". Following the review, the county museum issued an "Examination Opinion on the Cultural Relics Protection Area within the Preliminary Site Selection of the Jingchuan County Red Bull Industry Park Infrastructure Construction Project" to the county CTB. After further verification, the CTB issued an "Examination Opinion on the Cultural Relics Protection Area within the Preliminary Site Selection of the Jingchuan County Red Bull Industry Park Infrastructure Construction Project" to the Jingchuan Industrial Concentration Zone Administration Committee (see Figure0-8), which confirmed that the project site selection did not involve national, provincial, or county-level cultural relics protection units, nor general cultural relics sites.

236. In terms of reconstruction of existing underground pipelines, roads, squares, green spaces, plant areas, and other construction projects which does not exceed the original area and depth, or the original depth has been excavated to the raw soil layer, archaeological exploration may not be conducted after investigation and confirmation by a qualified unit for archaeological investigation and exploration and approval by the municipal administrative department of cultural relics. For example, construction projects implemented within the Lanzhou New District, with a land area of less than 100,000 square meters and explicitly not involving cultural relics protection units, do not require verification by the CTB.

For construction projects in other areas with unknown cultural relics, it is necessary to conduct cultural relics exploration first, confirm by qualified units for archaeological investigation and exploration, and report to the municipal cultural relics administrative department for approval; If cultural relics are not discovered before project construction but found during excavation, the cultural relics administrative department shall entrust a qualified cultural relics exploration institution to implement cultural relics protection measures. Once discovering cultural relics, the construction unit will promptly report to the county level cultural relics administrative department in accordance with the provisions of the Cultural Relics Protection Law, then the county level cultural relics administrative department will report to the provincial cultural relics administrative department level by level to organize archaeological excavation units to conduct archaeological investigation and exploration of the places where cultural relics are buried within the project area. When encountering national key cultural relics protection units, provincial cultural relics protection units, municipal and county level protection units, and immovable cultural relics during the project site selection, it is necessary to change the project site. Following confirmation with the provincial and local cultural relics administrative departments, it is affirmed that approval from cultural relics administrative department is required for all construction projects related to facility agriculture under the PforR, including livestock farms, zones, and cooperatives, as well as other soil-disturbing civil works. For example, Figure0-9 (Appendix 7) presents an official document issued by the CTB of Sunan Yugur

Autonomous County regarding the verification of whether any tourism zones and natural and cultural heritage sites involved by the construction of cattle sheds for the Huashulin Livestock Farming Farmers' Professional Cooperative. Meanwhile, Figure0-10 presents a Reply on the site selection of livestock farming zones of Taoyan village and Zhuoni village in Guangzhi Township issued by the CTB of Guazhou County, which clearly specifies: (i) there is no registered cultural relics are present in the selected area and approve the project site selection; (ii) incorporate cultural relics protection fund into the project budget due to the potential discovery of relics or buried artifacts; (iii) an immediate halt to construction and prompt reporting to the county CTB upon identifying new relics or buried artifacts during construction; (iv) meticulous minimization of disturbance to the original soil layers surrounding the selected site, given its adjacency to the construction control zone of the Guangzhi Northern Tomb Cluster; and (v) prohibition of arbitrary alterations to the project site. A Reply of the CTB of Guazhou County on the comprehensive survey of gold and polymetallic minerals in the Laoshitu area of Guazhou County, Gansu Province explicitly stated that the scope of the project site involves cultural relics protection and construction control zone and recommended the project owner to change the site selection.

237. The CHABs of 4 sample counties confirmed that there is no need to conduct cultural relics exploration for projects that do not break ground. The system of cultural relics administration in each county of Gansu Province are basically the same, including the management of site selection in the early stage of the project and the protection and management of cultural relics during the project implementation process. The relevant cultural relics management system can avoid the impact of the project on cultural relics resources.

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

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

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

239. As mentioned in **Chapter 5.2 and 5.3**, a workers and community management system for the whole process from design to construction and operation and maintenance has been established by government at all levels, including related laws and regulations, and corresponding management institutions, such as labor safety management system, occupational health management system, labor contract management system, bidding and procurement system, emergency response mechanism, community and labor grievance mechanism, etc. Field investigations conducted in Lanzhou New District, Guazhou, Sunan and Jingchuan County also showed that previous and ongoing projects in various regions have basically complied with the requirements of laws and regulations.

240. **Worker's health and safety management during the construction and operation of livestock farming facilities.** During the design phase, projects usually carried out EIA, SSRA, safety assessment, and occupational health assessments based on project characteristics, project location, and surrounding natural and living conditions, technical requirements, and legal requirements, and developed various management plans, including emergency response plans, community engagement mechanisms, and employee GRMs, etc. The safety risks of specific project related communities and workers have been identified through these assessments, and corresponding management measures have been developed. For example, in the FSR of the Guazhou County Livestock and Poultry Manure Resource Utilization Promotion Project, it dedicates the analysis of potential safety risks during project implementation and operation and

formulates mitigation measures for occupational health and safety in Chapter 8 Environmental Protection, Labor Safety, and Fire Safety. Similarly, in the FSR for the Guazhou County Thousand-Head Beef Cattle Raising Demonstration Farm and Thousand Mu of High-Quality Forage Planting Demonstration Base Project, the Chapter 11, focusing on organization and management, includes a dedicated section on labor protection and occupational health and safety. Furthermore, in the SSRA report of the 2023 Ecological Rehabilitation Project at the Eastern Entrance of Guazhou County, specific preventive and mitigation measures are outlined for identified construction safety risks. During the project construction phase, various safety measures were implemented together with the main works, and usually equipped with environmental monitoring and engineering supervision to promote the effective implementation of the measures. Taking the example of the Beef Cattle Farming Zone Affiliated Infrastructure Construction Project in Hedong Town, Guazhou County, during the tendering phase, specific requirements were imposed on the construction unit concerning safety management. These requirements encompass adherence to safety production regulations, provision of safety training, installation of safety facilities, arrangement of work-related injury insurance, and strict adherence to safety operating procedures. These stipulations were explicitly incorporated into the construction contract (see Figure0-11) in Appendix 7. During the construction phase, a supervision unit was hired to conduct overall oversight of the implementation of safety measures, management practices, on-site civilized construction, and safety maintenance throughout the entire construction process. Upon the completion of project construction, the project implementation unit, relevant government departments, and experts conducted inspections and issued a completion acceptance report for safety facilities, as shown in Figure0-12. During the operational phase, potential occupational health hazards related to the low-emission livestock farming activities supported by the PforR are primarily Brucellosis and Anthrax, which are zoonotic diseases. On one hand, competent government authorities such as the county-level AHVMBs and DCPCs of HC organize regular free testing for Brucellosis among practitioners and conduct disease prevention and control technical promotion and training. For example, Sunan County has formulated the 2023 Brucellosis Prevention and Control Project Implementation Plan, allocating CNY 30,000 yuan, mandates the county DCPC to conduct high-risk population screening before 30 July, targeting individuals with an 80% history of exposure to Brucellosis, including those involved in farming, slaughter, sale of cattle and sheep, processing of milk, beef and fur, veterinarians, and laboratory personnel. On the other hand, relevant facilities have established corresponding health and safety management systems and provided employees with health examinations, personal protective equipment, and occupational health and safety trainings. For example, the Agriculture Investment Group of Lanzhou New District has formulated specific safety regulations for the Ecological Livestock Farming Project in the Rural Revitalization Industry Park.

241. This includes safety production goals and assessment methods, establishment of safety organizations and personnel, identification, assessment, monitoring, and management of hazards, occupational health management, labor protection supplies management, emergency rescue, accident reporting, investigation, and handling. Regular safety inspection meetings were organized, and corrective measures were proposed and tracked for identified safety hazards. Safety operation procedures and safety warning signs were also displayed in the workplace of relevant facilities. The labor contracts between the relevant facilities and their employees include provisions specifying that the enterprise must provide necessary working conditions and tools for employees, establish work norms, labor safety and health systems, and standards, as well as offer essential labor protection and protective equipment, ensuring the safety and health of the employees. The contracts also require the employer to truthfully inform employees about potential occupational health hazards and consequences, preventive measures, and benefits during the work process, as depicted in Figure0-13. Moreover, the ARABs, EMBs, HCs, etc., periodically conducted safety inspections on relevant facilities, as illustrated in Figure0-14.

242. These inspections assess whether occupational health and safety measures in related enterprises are in place, the implementation status of the "three simultaneities," and the monitoring of occupational health hazards by these facilities. In cases where issues were identified during inspections, enterprises were urged to address and rectify them. Through site visits and FGDs with community representatives, it was observed that standardized and large-scale livestock farming facilities typically have more comprehensive health and

safety management systems, with good implementation practices. For example, they require employees to undergo pre-employment, on-position and exit health examinations. However, some cooperatives and family farms exhibit a lower adoption of health and safety protective measures, incomplete disease prevention and control measures (including zoonotic diseases) inadequate use of personal protective equipment, and poor management systems. Furthermore, the frequency of routine supervision and inspections by health departments on such non-enterprise nature facilities is relatively low. Few positive cases were detected and reported during the annual screening of practitioners for brucellosis.

243. **Community and public safety management:** Regarding potential health and safety risks to consumers and the public from the circulation of livestock products in the market, it's learnt from the site survey on ARABs, MSABs and selected enterprises in sample counties that management is primarily implemented across three stages: (i) Livestock raising stage: livestock raising enterprises and the AHVMBs undertake disease prevention and control measures. (ii) Production and processing stage: livestock product processing enterprises execute food safety production management. For example, the Guazhou County Caoyuan Huicheng Food Co., Ltd. has established a system for the health management and examination of food processing personnel, which mandates pre-employment health checks for employees, daily health checks, and annual health examinations and requires employees to wear clean work clothes and hats, maintaining hand hygiene on position. Detailed records, including employee health certificates, health examinations and interventions, as well as routine sanitary inspections, are maintained and documented. (iii) Market circulation stage: the MSABs conduct random inspections on livestock product quality, including checks for residues of drugs, as illustrated in Figure0-15.

244. There were no issues about forced labor or child labor, or SEA or SH cases identified during the site survey. There will be no large-scale construction activities expected under the PforR, so the potential risks related to significant labor influx will be low.

245. **Labor GRM.** Labor dispute settlement mechanisms exist at three levels from enterprises to county governments, including the corporate internal settlement mechanism, township labor dispute mediation center, and county labor dispute mediation center. Workers can choose to resolve labor disputes through mediation and arbitration, or lawsuit to the court or negotiation. For example, as introduced by the HRSSB of Zhengning County that there is a labor disputes mediation center in each of the 2 sub-districts and 10 townships. Since 2021, the HRSSB received 102 cases of labor disputes through such mechanism, involving a salary amount of CNY 1.08 million yuan. Among which, 68 cases were resolved through mediation and 34 cases were arbitration, with a resolution rate of 100%. The HRSSB also provided consulting services on labor protection laws and regulation to over 20,000 person-times. In addition, local HRSSBs said that the labor union is also one of the channels to solve labor safety and labor disputes, and the labor union can help employees obtain rights and interests in terms of safety training, health examination, working environment and living needs.

246. The HRSSB of Jingchuan County indescribed the labor dispute settlement mechanisms in detail: when a labor or personnel dispute arises, worker can seek help from the labor inspection and enforcement authorities of the labor authority. The labor inspection and enforcement authorities investigate and determine whether to file a case within 5 days after receiving the complaint and requires the case that meet the acceptance principle (e.g., the violation occurred within two years, etc.) to be closed in 60 working days. It can be extended to 30 working days for complicated cases upon approval of HRSSB. Workers directly submit to labor disputes arbitration for resolution. The application for labor arbitration is valid for a period of one year. The labor arbitration consists of two levels, including mediation and arbitration. Usually, labor mediation is recommended as the priority, and the mediation will be completed within 15 days since receiving the application. If the mediation is successful, the labor and management will sign a mediation agreement, and if not, the worker may apply for labor arbitration. The cases subject to arbitration by an arbitral tribunal shall be ended within 45 days after the arbitration committee accepts the application for arbitration. If an extension is required due to the complexity of the case, it may be extended and notified in writing to the parties upon approval of the chairman of the arbitration committee, but the extension period

shall not exceed 15 days. If the arbitration decision has not been made within the time limit, the worker may bring a lawsuit to the people's court concerning the labor dispute. The results include pre-case mediation, case acceptance, and no acceptance. If not accepted, a written explanation should be provided to the applicant. For example, in a project in Guazhou County, where 17 workers experienced salary arrears, the affected workers filed an arbitration application with the Guazhou County People's Labor Disputes Arbitration Committee on 31 May 2022. The committee issued an acknowledgment notice on 1 June 2022, and conducted a court hearing on 16 June 2022. The arbitration decision was rendered on 24 June 2022, and promptly delivered to both parties. Subsequently, within 15 days of receiving the arbitration decision, neither party lodged an appeal with the court.

247. **Assessment:** Overall, majority of the relevant farms fulfilled the requirements and management measures for workers' health and safety in accordance with national laws and regulations at the stages of project preparation, design, construction and operation. However, some cooperatives and family farms exhibit a lower adoption of health and safety protective measures, incomplete disease prevention and control measures (including zoonotic diseases) inadequate use of personal protective equipment, and poor management systems. Furthermore, the frequency of routine supervision and inspections by health departments on such non-enterprise nature facilities is relatively low. Few positive cases were detected and reported during the annual screening of practitioners for brucellosis.

248. **Recommendation:** Strengthen the publicity, education, supervision and management of the prevention and control of animal diseases, zoonotic diseases, health and safety training and management of the cooperatives and family farms.

**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.

The facilities related to livestock farming, processing, and inspection are primarily located near villages or within urban areas. The project activities mainly involve upgrading and renovating these facilities, resulting in overall low risks of natural disasters during project construction and operation. Based on collected data and site survey, it is found that, at the preparation stage, FSRs or project designs included analysis of geo-hazards. Alternatively, specialized geo-hazard assessments were conducted to identify potential impacts and risks of natural disasters during the construction and operational phases and formulate management plans. During the construction phase, construction contracts signed referred to the conclusions of FSRs and or specialized assessments, specified the responsibilities and obligations of the construction party in managing community and employee health and safety. Throughout the construction period, various safety management positions and personnel, including safety supervisors, were established according to the safety management plans to implement health and safety management on the construction site and monitoring mechanisms were developed to promote health and safety management measures conform to the requirements outlined in the management plan. During the project's operation phase, rules and regulations in various forms were developed based on assessment conclusions and management plans and related trainings, record, and supervision systems were implemented. For example, the Guazhou County Livestock and Poultry Manure Resource Utilization Promotion Project conducted a survey on geological conditions, such as the discovery of structural fault zones and recent structural activities, as outlined in the FSR.

249. **Assessment:** During the construction phase, requirements have been made for the implementation of relevant measures. The investigation of project facilities in relevant counties shows that relevant units have fully managed the implementation process of natural disaster management.

#### 5.4.4 Core Principle #4: Involuntary resettlement management system

250. In terms of land use, the PforR Program doesn't support any activities involving large-scale land acquisition and house demolition. Most of the activities will be implemented through FALU, LURT or

within existing facilities or sites. The main land use type include:

- **FALU:** involved by the activities related to the livestock production and affiliated facilities, like the construction of green, standardized, regulated, and low-emission livestock farms and zones, breeding farms, hay storage sheds, organic fertilizer processing plants, waste disposal facilities for livestock farming, slaughtering, processing and distribution process, diseases inspection and quarantine facilities, forage processing facilities, straw processing facilities, etc.
- **LURT:** involved by the activities of forage (e.g., alfalfa, corn) plantation in agricultural areas,
- **Upgrade on the existing facilities:** including the construction of emission reduction facilities for livestock farms (enterprises, cooperatives, family farms), precision feeding facilities, sheltered and penned feeding facilities, upgrade of livestock and poultry manure treatment facilities and, the digitization of environmental and disease monitoring systems throughout the livestock production, distribution, and slaughter processes, as well as low-emission transformations for existing slaughter and processing enterprises, and enhancements to facilities for animal disease prevention, control, inspection, and quarantine. The majority of these activities involve upgrades and enhancements to existing facilities without additional land acquisition or occupation.
- **Limited TLU:** In some cases, during the construction of some livestock farming facilities, there might be a limited TLU during the construction phase.

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

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

252. The physical activities supported by this PforR must undergo the basic processes of preliminary evaluation, design, and approval by competent government departments, monitoring or supervision of construction process, and completion acceptance. According to the requirements of laws and regulations related to project permitting and management, the preliminary assessments of the project need to be reviewed by the NRB for compliance, including reviewing whether the project land use meets national and local spatial planning, whether the land type meets policy requirements, and whether the project site selection follows the principle of avoiding or minimizing land occupation (especially not occupying basic farmland). For example, the Gansu Province Rural Revitalization Industrial Park (Ecological Livestock Farming Park) Project located in Lanzhou New District underwent a meticulous site selection process. Following the final determination of the site during the preparation phase, the project submitted a request to the Agricultural and Forestry Water Bureau and the NRB of Lanzhou New District. The Agricultural and Forestry Water Bureau granted an approval and outlined four key clarifications in the document: i) The project site is not within a restricted livestock farming area; ii) The selected area does not occupy forestry land, wetland parks, or basic farmland and high-standard farmland; iii) The project site complies with epidemic prevention distance requirements. The NRB of Lanzhou New District, in their approval regarding the project site (see Figure0-16), explicitly specified: i) Prohibition of permanent basic farmland occupation; ii) Approval requirement and adherence to relevant standards for agricultural facility construction on general cultivated land; iii) Implementation of cultivated land “in and out balanced” when involving conversion cultivated land to other agricultural land and construction land for agricultural facilities; iv) The project is situated within the scope of the Dengjiagou Ecological Restoration Project, and it is suggested to minimize or avoid occupying cultivated land. It is found through this case that avoiding and minimizing land acquisition is an important principle for project site selection in the early evaluation and design stages of each project, which is also one of the important measures to avoid and minimize the negative social impacts of the project. The investigation and analysis of project cases in this regard has been described in detail in **Section 5.4.1**.

253. LURT typically applies to forage cultivation and related activities. According to legal requirements,

LURT must be strictly limited to those activities related to agricultural cultivation, ensuring that the land remains dedicated to agricultural use. The ownership nature and agricultural purpose of the contracted land must not be changed. To prevent the "non-agriculturalization" of cultivated land, a daily inspection mechanism has been established by the law enforcement team within the county NRB. Therefore, the LURT management systems in each county can effectively minimize adverse impacts resulting from land occupancy.

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

254. It's confirmed by NRBs at each sample counties that the laws and regulations as well as procedures of FALU, LURT and TLU is basically the same. There is an identification process of socio-economic impacts caused by each type of land use according to law and development of management measures accordingly. This section mainly discusses the identification process of social impacts caused by various types of land use, and section iv) will discuss socio-economic impact management.

- FALU: Before initiating the land review process, relevant departments must conduct on-site inspections, boundary surveys, DMS and registration of impacts caused by land use and obtaining confirmation and signatures from affected villagers. The DMS results and the draft agreement for FALU are disclosed in the affected community for at least 10 days. If there are no objections received at the end of the announcement period, the signing of the land use agreement can proceed. For land no longer in use, land restoration must be taken as required before returning to the village, and compensation for soil fertility loss should be provided. Take the been established Guziwen Livestock Farm in Tianshengchang Community, Qifeng Tibetan Township, Sunan County as an example, the responsible authorities for approving the FALU include the County ARAB confirmed that the project's land complies with facility agriculture land policies; the NRB verified that the land use aligns with local spatial planning of national land and policies, while the FGB confirmed the project complies with grassland use policies. Simultaneously, the Guzai Township Government and the Tianshengchang Community Committee expressed their consent and acknowledged that the project's construction is conducive to the development of village collective economy and the overall livestock industry in the township.
- LURT: there are usually two forms of LURT. First, villagers directly sign LURT agreements with the land user. In general, it involves limited land area and Guzan fewer households. The LURT agreement explicitly outlines terms such as the area, land type, price, duration, and payment conditions (see Figure0-17). The second form is collective economic organizations signing LURT agreements with the land user. In such cases, the land area is usually larger, involving more households. The village collective organization registers the affected households and their land areas and disburses LURT compensation fee to affected households after receiving the payment from the land user. The price of LURT is agreed upon by both parties.

255. In addition, a systematical GRM has been established from grass-root rural village committees or community committees to township government, county-level government and above. Please see **Section 6.2** for the details about GRM.

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

256. According to consultations with relevant provincial and county-level NRBs, ARABs, and sample enterprises or facilities in Gansu Province, the funds for project land use must be in place first, and compensation must be made before using land. Otherwise, local governments and villagers would oppose the use of land, and land cannot be provided. The leasing fees for FALU and LURT are typically determined through mutual agreement and explicitly stated in the land use agreement. For example, before the land user completes the LURT filing procedures, the corresponding leasing fees or payments must be paid to the affected farmers. The payment receipt serves as one of the materials for the filing review, as shown in

Figure0-18. In addition to the annual leasing payment of LURT, land equity is also one of the ways of LURT, that is, the village community or villagers to convert the land use rights into a certain number of shares in a production activity, and to receive equity dividends annually according to the shareholding agreement.

**(iv) Livelihood restoration**

257. As described in **Section 5.1.4**, livelihood restoration mechanisms are included in the domestic social management system: For example, the Land Management Law (2020) requires that living standard of farmers who's land have been expropriated should not be reduced and their long-term livelihoods should be guaranteed; The Notice of the Ministry of Natural Resources, the Ministry of Agriculture and Rural Affairs, the State Forestry and Grassland Administration on Issues Related to Strict Control of the Use of Cultivated Land (ZRZF [2021] No.166) requires that permanent basic farmland should not be converted to forest land, grassland, garden land, and other agricultural land and agricultural facility construction land. The annual in and out balance should be implemented for the conversion of cultivated land to other agricultural land and agricultural facility construction land through the converting other agricultural land, such as forest land, grassland, garden land, and other agricultural facility construction land into cultivated land to supplement the same amount and quality of cultivated land that can be used stably for a long time, and priority should be given to balancing cultivated land "in and out" within the collective economic organization so that affected people within the economic organization can access to the same amount and quality of land. For example, Sunan County engaged a third-party company to formulate the "Annual Cultivated Land In-Out Balance Plan" (see Figure0-19) each year. This Plan entails a detailed investigation into the location, area, scope, and current status of the proposed construction projects, and allocate additional cultivated land area adhering to the principle of supplement before use. This approach promotes the non-reduction of cultivated land area and land quality. The Notice on Issues Related to the Management of Facility Agricultural Land Use (ZRZY [2019] No. 4) has strict regulations on the use and scale of FALU. For the facility agricultural land that is no longer used, it must be restored as required (see Figure0-20). All these measures are mean to avoid or minimize the project impacts on farmers' livelihoods as much as possible from a systematic perspective.

258. After excluding the activities involving large-scale land acquisition, the land use scale of activities supported by the PforR Program are limited. Most of the activities will be implemented through FALU, LURT, TLU or within existing facilities or site, without involving permanent land acquisition. During the PforR implementation, farmers may be affected in the short-term and compensated for such impacts or receive continuous benefits through leasing fee or shareholder dividends. Upon the expiration of the land use period, the land will be returned to the farmers. Furthermore, farmers can also participate in work during the land lease period to obtain secondary benefits, thereby promoting the development of livelihoods. For example, the Hongdesen Alfalfa Planting Demonstration Base in Zhenxing Village, Qinchuan Park of Lanzhou New Zone not only pays LURT fees but also employs several hundred villagers from nearby communities for alfalfa cultivation, with an average wage ranging from CNY 130 to 150 yuan or day. Lanzhou Tianxin Modern Livestock Farming Demonstration Base employs about 90 staff, all of whom are farmers affected by LURT, contributing to increased income of affected households. Jingchuan County Xukang Food Co., Ltd., not only provides employment opportunities to LURT affected farmers but also leads approximately 4,060 people from 1,296 households in surrounding villages to engage in livestock farming with offering technical supports, including i) quarterly free livestock farming technology training and practical training organized jointly by the county ARAB, with a cumulative participation of 3,000 person-times; ii) providing superior breeds and feed formulas and recovering fattened bulls from farmers, leaving cows for breeding. Additionally, as mentioned in **Section 5.41**, ARABs have established a free farmer training system from the provincial to the county level. Moreover, localities are exploring effective measures to help farmers quickly improve their agricultural plantation and livestock production technology and management skills; the HRSSBs also organize various types of vocational skills training to help farmers broaden their income sources.

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

259. As analyzed above, In the process of implementing FALU, information disclosure, village meetings, and public notices were carried out according to law in sample counties, because records of information disclosure and public participation are essential components of the land approval application materials. Concerning LURT, the land user underwent qualification reviews by the village community and township government during the application phase. For projects exceeding a certain scale, such as over 1,000 mu, reviews of county ARABs were conducted. Upon review, while negotiating the LURT agreement, relevant project information was freely and unconditionally shared with the township government, collective economic organizations, and farmers involved. Both parties involved can only sign the LURT agreement after reaching a consensus on various terms, such as boundaries, area, duration, and price. Therefore, LURT is the mutually recognized result.

260. It's learnt from the communication with representatives of villagers during the site survey that villagers are generally satisfied with the process and compensation of land use and compensation. During the implementation process, affected people can raise their complaints or concerns to village committees, project implementation units or competent government authorities. As confirmed by villagers that their complaints can get a satisfied resolution. For example, in 2021, some farmers in Jingchuan County leased their contracted land to a project as a mixing site. However, it was later found that the project engaged in unauthorized sand mining without approval and failed to promptly pay the land leasing fee. In response, the affected farmers reported the situation to the village committee, township government, and the NRB, resulting in the immediate cessation of illegal sand mining activities. Regarding the delayed payment of the land leasing fee, a complaint was reported to the ARAB. After receiving the complaint, the ARAB promptly conducted an investigation and informed the investigation results and corrective measures in written form (see Figure0-21) to the township government for appropriate action.

261. **Assessment:** For FALU, LURT, TLU, etc. that may be involved in the PforR Program, a systematic legal system has been established at national and local level. Mature impact control principles, identification process, compensation, resettlement, and livelihood restoration mechanisms have been established, and specialized implementation agencies and financial support have been arranged. These mechanisms and their effective operation help to manage impacts of land use. In terms of information disclosure, land use information within the village needs to be disclosed for a certain period for all types of land use. Through the survey of villagers' representatives in the sample counties, people are generally satisfied with the implementation process and compensation payment of FALU, LURT and TLU, etc.

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

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

262. Among the 7 demonstration counties (district) under the PforR, there are one ethnic autonomous county, namely the Sunan Yugur Autonomous County, 8 ethnic minority - concentrated townships and 137 EM-concentrated villages, with a total ethnic minority population of 77,079, accounting for 6% of the total population. The details of EM-concentrated townships, villages and population in each county is presented in the following:

- There are 24 EM groups with an EM population of about 16,000 in Lanzhou New District, accounting for 3% of the total population. The EM people are living in a scattered manner and mixed with the Han people. There are no EM-concentrated townships or villages.
- There are 22 EM groups with an EM population of 23919 in Guazhou County, mainly are the Hui, Dongxiang, Tibetan, etc., accounting for 18% of the total population of Guazhou. There are 4 EM-concentrated townships and 11 EM villages. The difference between the EM residents and the Han

are primarily in language, religious beliefs, clothes, and food practices all ethnic groups in the county are involved in the livestock sector (confined feeding) and crop plantation.

- Sunan Yugur Autonomous County is the only one Yugur autonomous county in China, with a total population of about 39,300. Among which, 22,590 of them are EM people of 20 EM groups, accounting for 57.5% of the total population. 3 townships and 102 villages or communities of the county are EM concentrated townships and villages or communities. Among the EM population, 10,684 of them are the Yugur, accounting for 27.2% of the total population. Livestock farming is the main income source of local EM people.
- There are 931 EM people in Minle County, mainly the Hui, Mongolian, Uyghur, etc., accounting for 0.5% of the total population. The EM people are living in a scattered manner and mixed with the Han people. There are no EM-concentrated townships or villages.
- There are 25 EM groups with a population of 2,292 in Jingchuan County, accounting for 0.7% of the total population. Among them, 2,040 are the Hui people living in two villages concentratedly, accounting for 89% of the total EM population. There are no EM townships in the county.
- There are no EM-concentrated townships in Lingtai County, but 16 EM-concentrated villages with a total EM population of 8,562, mainly are the Hui, Miao, Tujia, Zhuang, Mongolian, etc., accounting for 3.8% of the total population in the county.
- There are 23 EM groups with 2,785 persons in Zhengning County, accounting for 1.15% of the total population. Among them, 2,592 are the Hui people, accounting for 93% of the total EM people in the county. There are one EM-concentrated (the Hui) townships and 3 EM-concentrated villages in the county.

263. Village leaders, village-resident task team and villager representatives participated in the meeting, discussed key infrastructure construction projects in the village and the annual village work plan, collected feedback on current needs, hotspots, and challenges from the residents sought opinions and suggestions from village representatives specifically for collective benefit projects such as road paving, safe drinking water, environment and sanitation improvement, and infrastructure development in the farming areas (see Figure0-26). During the FGDs with representatives of EM-concentrated villages, it was found that a sound communication mechanism has been established in each village. It was highlighted that each village has established a WeChat group for villagers, and matters concerning the interests of villagers were disclosed through WeChat groups, bulletin boards, or village meetings. There are two situations for matters to be discussed or decided through the villagers' meeting, depending on their importance: 1) Each villagers' group shall have a group of villagers' representatives. These representatives are elected by the villagers through voting. Villagers who are not representatives of the villagers who are voted but are interested in participating may also attend the meeting and put forward their opinions; 2) The villagers' meeting of the whole village, more than 60% of the total number of villagers, and at least one representative of each household, regardless of gender. If for any reason they are unable to attend the meeting, they should notify the village committee first. At the same time, each village group and village level have a WeChat group. At least one representative from each household joins the WeChat group. All information related to the villagers is released to the villagers through WeChat groups, including training information, program proposals, subsidy verification, policy advocacy, etc. Villagers can choose to participate or not according to their wishes and interests. The investigation found that all activities implemented in the village were informed through the villagers' WeChat groups and villagers' meetings, and the villagers' consent was obtained before implementation.

264. **Assessment:** It's learnt from the provincial and county level management system that fully consultation and negotiation with EM residents can be implemented when dealing with EM related affairs through existing EM management system. When implementing projects in ethnic minority areas, the

interests of EM are fully protected according to law and the right to be informed are guaranteed. The efficient implementation of these management systems will help the Program receive broad support from residents in ethnic minority areas. Thus, the social practice effects are consistent with the bank policy.

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

265. The PforR will not involve culture-related activities, land or assets taking, and will create no adverse impact on their unique cultural identities and well-being, do not bring barriers for their participation in the program activities. Village representatives expressed strong support for the implementation of the PforR, believing that activities promoting sustainable low-emission livestock industry development are beneficial for the economic development of the local communities, including ethnic minorities. For example, in Guazhou County, the mode of livestock farming is confined feeding. Activities such as livestock farming technology promotion and livestock infrastructure improvement will contribute to the local development of livestock husbandry. During the FGDs with representatives of EM-concentrated villages in Sunan County, it was found that the county implemented activities such as confined feeding in the past. The government provided corresponding subsidies to affected farmers and carried out public consultations and information disclosure before subsidies distribution. Village representatives expressed full understanding and support to the PforR and the implementation of the PforR would not face significant challenges. At the same time, when it comes to livestock technology, farmers are completely voluntary. You can choose to adopt or not to adopt new technologies based on your needs and considerations. The discussion showed that even if costs increase and there are no subsidies, as long as it is profitable, such a technology will be welcomed by farmers.

266. **Assessment:** Despite varying cultures in ethnic minority areas involved in the Program, plans and relevant protective projects are in place and implemented every year to protect the cultures of ethnic minorities. To better understand how ethnic minorities benefit from the Program, there is a need to establish a monitoring system to monitor benefits across the Program.

267. **Recommendation:** Establish social benefit monitoring system to monitor beneficiaries' composition and distribution of benefits, to assess how (whether) ethnic minorities benefit from the Program.

**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.

268. All rural extreme poor residents and all 75 poor counties in Gansu province had been officially lifted out of poverty by the end of 2020 through the national poverty reduction plan in Gansu Province, the Measures for Recognizing Low-income Population and Providing Assistance in Gansu Province was published in December 2022. According to this policy, the low-income include those: (i) have been out of poverty, but still under the government monitoring of prevention for return to poverty again; (ii) below the minimum living standard (MLS); (iii) in extremely hardship, such as widowed and orphaned elderly, (iv) on the margins of MLS and (v) in expenditure-type difficulties. By the end of 2022, among the 7 Program counties or district, there are 86,957 households with 226,482 persons were categorized as the low-income, accounting for 17% of the total population. Among which, 4,796 households with 9,027 low-income people in urban areas (4%) and 82,161 households with 217,455 low-income people in rural areas (96%). The social survey indicated that the main causes of low incomes and vulnerability were (i) physical disabilities and prolonged illness; (ii) the small working-age population, low education levels; (i) lack of start-up capital for production; and (iv) limited skills and lack of jobs.

269. According to law, the protection of women's rights and interests is part of the routine management work of all departments and units, which is mainly implemented through women's federations at all levels

and women's affairs management departments within enterprises and units. Projects and funds for the protection of women's rights and interests and women's development are prepared by governments and women's federations at all levels and the internal management departments of enterprises arrange every year. It's confirmed through the investigation that supporting women's development is one of the main tasks of the local women's federations, and significant resources are deployed every year. .

270. The CABs and disabled person's federations at each county are responsible for information collection and assistance for orphans, minors and old people left-behind, disabled persons and extremely poor persons within the administrative areas. Special financial funds are arranged by government to protect these groups' rights and interests. Surveys identified that CABs at all levels are the competent authorities for the management and monitoring of low-income Although all regions have been officially lifted out of extreme poverty in 2020, the local governments still track, record and manage the names and family conditions of the people who have been lifted out of poverty in each village. At the same time, the governments still implement the "four measures" for households lifted out of poverty, namely, responsibility, policies, assistance, and supervision. In this regard, all counties have formulated corresponding policies and measures and made budgetary arrangements to consolidate the results of poverty alleviation and rural revitalization in an effective manner. In general, the governments expect to take five years transition period to consolidate and expand the achievements of poverty alleviation and provide a smooth transition period for poverty-lifted rural households to become self-reliant and self-improvement through orderly adjustment.

271. **Assessment:** In terms of women's development and protection of women's rights and interests, it is guaranteed through women's federations, women's organizations in enterprises and grass-roots women's organizations. For left-behind minors and old people, the government has established relevant databases mainly through CABs and provided timely assistance through township governments and villages or communities. In terms of the support to poor and low-income families, the national and local governments have established a complete system and mechanism from policies, budgets to institutional arrangements, which can not only protect the legitimate rights and interests of poor and low-income families in various projects, but also effectively manage the support and development of poor and low-income families. However, compared to others, women and low-income households may face more challenges and vulnerabilities in livestock farming development. There is a need to establish a monitoring system to monitor how such groups of people benefit across the Program.

272. **Recommendation:** Establish social benefit monitoring system to monitor beneficiaries' composition and distribution of benefits, to assess how (whether) they benefit from the Program.

## 6. Public Participation and Grievance Redress Mechanism

### 6.1 Public Participation

273. Stakeholder engagement is an important aspect of this ESSA and a requirement of the Bank policy. During the ESSA, stakeholders have been identified subject to the impacts of activities, interest in the activities and power of influence on decisions, mainly including government authorities at different levels, villages and communities, activity implementation agencies, women's federations and other social organizations, affected persons, etc. (see **Appendix 4**). During the ESSA preparation, extensive stakeholder engagements were conducted with provincial and 7 county (district) authorities of Gansu Province in September to November 2023 of virtual and in-person consultation meetings; consultations on the ESSA report with relevant government authorities at provincial and county (district) level were carried out in December 2023.

#### 6.1.1 Initial Participation Activities

274. At the preparation stage, the Bank team and ESSA consulting team engaged with relevant authorities of the Gansu provincial and county (district)-level governments from September to October 2023, covering the Bank's PforR provisions, E&S policies, implementation management practices, operating processes, assessment document preparation, etc.

275. From October 2023, extensive public participation has been conducted in Gansu Province to prepare and improve this report (see **Appendix 5: Stakeholder Engagement**), including consultation meetings of provincial authorities, involving provincial DARA, AHVMB, FGB, Grassland Technology Extension General Station (GTEGS), DEE, DNR, etc. At the county level, Lanzhou New District, Guazhou County and Sunan County of Zhangye City, Jingchuan County of Pingliang City in Gansu Province visited, and FGDs held with government authorities with over 70 participants cumulatively. In addition, information was also collected from 7 project counties (district) for further confirmation. In the various surveys and FGDs as mentioned above, exchanges were made with government authorities, relevant enterprises (large-scale livestock husbandry enterprises, livestock farming zone in the village, livestock farming cooperatives, family farms, forage planting enterprises, cattle and sheep breeding enterprises, etc.), head of village committees, villager representatives (including 4 ethnic minorities concentrated villages), etc., and sites of livestock farms, animal and plants inspection and quarantine, forage planting, land consolidation project, livestock and poultry manure treatment and resource utilization facilities, straw processing and other typical activities were visited. These activities cover the following items:

- Responsibilities and organizational setup of each authority
- Prevailing main sectoral policies and regulations
- Scope of implementation, policy requirements, implementation progress, effects and main issues related to livestock breeding, livestock farming, animal and plants inspection and quarantine, livestock and poultry manure treatment and resource utilization, forage planting, straw processing, waste treatment of animal died of diseases, etc.
- Enterprise scale, recruitment mode, worker benefits, safety and skills training, occupational health hazards and inspection, availability of protective equipment, facility land use approval, EIA, SSRA, safety assessment, geological disasters, management, etc.
- Villager employment, especially participation in livestock farming, forage planting and process projects

276. In October 2023 and February 2024, the E&S team also carried out a special visit to eight ethnic minorities-concentrated villages in Guazhou County and Sunan Yugur Autonomous County of Gansu Province and had discussions with village leaders and villagers' representatives. In March 2024, the E&S team conducted supplementary site visits to seven Program counties (district) and conducted questionnaire survey on 43 sample farms, covering enterprises, cooperatives, family farms and household farms. The visits and consultation helped understand the potential impact and benefits of the project on local village residents, their basic social, economic and cultural conditions, and the conducted project-related actions including information disclosure, public participation, grievance redress mechanism, etc. The consultation indicated that the project will not pose negative impacts on the EM-concentrated villages and has won wide support of all the visited village who will much benefit from the proposed activities. For example, the implementation and promotion of low-emission livestock production technologies mainly target to existing livestock enterprises, cooperatives, large family farms and affiliated facilities, and will not involve new construction or expansion of large-scale livestock farms. Therefore, it will not involve new land acquisition; At the same time, activities such as livestock and poultry manure treatment and resource utilization, forage formulas improvement, technical trainings, and the establishment of “one health” collaborative mechanism will enhance the overall ecological environment of the local area and improve farmers livestock production technologies and standards, which is conducive to the improvement of the livelihood and living standards of local ethnic minority residents(See Appendix 9 for detail).

### 6.1.2 Public Consultation on the ESSA

277. The draft ESSA was provided to Gansu Province on 20 November 2023 and an initial discussion on the draft ESSA was conducted between the PPMO and the ESSA team on 28 November 2023. The draft ESSA was revised and provided to the PPMO again for public consultation on 12 December 2023. The PPMO then shared the draft ESSA report with all relevant government departments at provincial and county (district) levels to seek their comments and disclosed on government official website for public comments on 14 December 2023. The PPMO organized all relevant provincial and county (district)-level government authorities to have consultation meetings with the ESSA team during the period from 26 to 28 December 2023. The participants include officials from the provincial authorities such as ARAB, AHVMB, FGB, NRB, WRB, EEB, HC, DCPC, HRSSB, CAB, etc., and relevant county-level government authorities, enterprises, community representatives of 7 demonstration counties (district). At the meetings, the PforR and the draft ESSA report were introduced, including the purpose, scope, methods, conclusions, and recommendations of the ESSA. The main concerns of the meetings include:

- Whether the laws and regulations quoted in the ESSA are accurate and relevant.
- Whether the analysis of the laws and regulations is pertinent.
- Whether the description of the organizational setup in the report is accurate, and whether the assessment of institutional capacity is appropriate.
- 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.

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

## 6.2 GRMs

279. **Existing Program-Level of GRMs** usually include village (community)-level and enterprise-level GRMs. The village (community) -level GRM consists of three levels: firstly, grievances are reported directly to the relevant PIUs to seek a solution; second, grievances are reported to the village or community committee and resolved by grass-root government, which usually take two weeks; thirdly, grievances are reported to the county PCPBs or the county head's hotline or mailbox, etc., which includes a mechanism of collection, initiation within 7 days, and solving within two months. In addition, residents can resolve more serious disputes through civil actions at court. An enterprise GRM basically has two aspects: one is workers' grievances: workers' grievances are handled through a three-tier labor dispute resolution mechanism, namely, the enterprise labor disputes and redressing mechanism, the township government's labor disputes mediation center and the county government's labor disputes mediation center. On the enterprise level, workers can seek a solution through the enterprise or factory manager mailbox, or the trade union. If any dispute cannot be addressed satisfactorily, the worker can go through the government mediation mechanism, or seek solution by labor arbitration (see Principle #3 under Element 8 in Section 5.4). Second, the enterprise sets up an external relations department, and assigns a contact and a telephone number to collect complaints and suggestions from the public. There are also various channels for the public to report, and track environmental related grievances, such as the "National Ecological and Environmental Complaints and Reporting Platform", the Minister's Mailbox, 12369 hotlines, the mayor's hotline, etc., which give full play to the efficacy of the public's supervision on the environmental management of construction projects. Any persons and entities can raise their suggestions, opinions or complaints through ways like website, letters, telephone call, fax, visits, etc. The key operating principles of the GRMs mentioned above include: i) the GRM should be disclosed to the public through all means, including address, contact information, persons in charge, time and location for visits, ways to check progress and results of resolution, etc. ii) the GRM is open to all people for free; iii) people or entities can raise their complaints in real name or anonymous. It shall not disclose or transfer the petitioner's report information to the person or organization being denounced or reported. iv) resolve in a legal, fair and timely manner.

280. **Assessment:** Based on interviews with village (community) committees and villager (resident) representatives, village (community)-level GRMs are sophisticated in general. Any projects to be implemented in the village, consent of villagers was obtained through notification in villagers WeChat group and village meetings before implementation. The occurrence of grievance or complaints were low. Over 98% complaints or grievances received were resolved at the village level and the rest were resolved as well through discussion with township or county-level level governments, with very few solved through civil litigation. GRMs for labors of enterprises are quite normative and can solve worker grievances. Therefore, the existing grievance redress mechanisms are workable. However, considering various types of beneficiaries of the Program, it's suggested to strengthen the GRM to enable issues and complaints from all types of beneficiaries to be received, recorded and resolved in a timely manner.

## 7. Conclusions, Recommendations, and Action Plans

### 7.1 Conclusions

281. The Program aims to improve the low emission livestock industry value chain. High risk activities are excluded from the operation and have therefore not been addressed by the ESSA. On this basis, the operation will not have any major negative E&S impacts, however, it is possible that some short-term, site-specific, small-scale, and mitigatable adverse impacts may be created during the implementation.

282. *Risk Rating:* The nature of the likely impacts present mostly moderate risks. It is also noted that the boundaries of the Program are known and comprise physical areas which can be identified and closely monitored. Notwithstanding this, because the Program covers demonstration counties (districts) in Gansu Province, including areas and livestock entities with ethnic minority communities, the overall E&S risk rating of the operation is substantial.

283. *Contextual Risks:* The Program boundary is within the 700 identified livestock production entities. This ESSA recommends a Program Action Plan to enable ongoing monitoring of beneficiaries which will also allow an ongoing assessment of the nature and the scale of any risks that may arise and how (and whether) they are affecting the program and or affecting the associated risks.

284. *E&S Systems Assessment:* The ESSA found the existing E&S systems are effective for managing the assessed E&S risks however it also identified opportunities for systems strengthening via Program Action Plans (PAPs) to improve the development outcomes, to further mitigate impacts and to provide technical remedies in the event of risks not being effectively mitigated. Effective E&S management systems have been established in China as well as Gansu Province to identify, assess, avoid, mitigate, manage, and monitor the E&S impacts and risks related to the PforR activities, including (1) a complete regulatory system, including applicable laws, regulations, policies, standards, and technical guidelines at the state and local levels; (2) clear implementation mechanisms, including clear administrative procedures, institutional arrangements, and responsibilities for E&S impacts and risk management, and necessary professionals and financial resources; and (3) satisfactory outcome performance of the E&S systems. The random surveys on the past cases in the sample counties (district) show that E&S impacts and risk management measures have been implemented effectively. Based on the assessment, the E&S systems related to the PforR are compatible with the requirements of the Bank's PforR policy and guidance. Notwithstanding the general adequacy of the systems to manage the likely risks, and that the legal framework provides a sound basis for addressing the E&S issues related to the Program activities, some gaps and opportunities to improve systems as well as to manage risks in the Program have been identified in the ESSA.

285. The ESSA has also identified the following risks and areas for improvement:

- The environment and sanitary conditions of some small-medium livestock farming zones are poor due to inadequate manure treatment and utilization and animal diseases control facilities, and some operators of them exhibit a lower adoption rate of health and safety, environmental protection management measures due to inadequate operational procedures and internal management systems and are supervised and inspected inadequately by health authorities. There is a need to upgrade pollution control and animal diseases & zoonotic diseases control facilities, improve their internal management systems and further strengthen the health and safety (including animal welfare) awareness-raising and environmental protection training as well as the daily supervision.
- There are various types of beneficiaries of the Program, although existing information disclosure channels and GRMs are functioning, the opportunity exists to improve and diversify information delivery channels from farmers, such as written manuals, electronic versions, online platforms,

specific promotion and awareness raising to different target groups like women, ethnic minorities, older people, etc. Identification and management of E&S risks and impacts as well as public consultation and information disclosure in relation to construction and operation of some facilities were not consistently reflected in the project documents. In addition, there is an opportunity to strengthen the GRM to manage potential risk of uneven benefit distribution and E&S risks management.

- Compared to enterprises, cooperatives and family farms may face more challenges and vulnerabilities in livestock farming development. There is a potential risk that social benefits and beneficiary composition (gender, ethnic minority etc.) do not improve over time. To promote the objective of all target farms, regardless of farm size and structure, gender and ethnicity, benefitting equally from the Program, ongoing beneficiary monitoring will enable ongoing assessment of the nature and scale of these risks and how (and whether) they are benefiting from the program or affecting the associated risks.

## 7.2 Recommendations

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

**Recommendation 1:** Document cases of the good practices and experiences of various counties in controlling pollution from livestock production, and in preventing & controlling animal diseases & zoonotic disease, and animal welfare, share with participating cooperatives and large family farms for them to prepare Environmental & Safety Code of Procedures (ESCOP); and

**Recommendation 2:** Strengthen the publicity, education, supervision and management of the prevention and control of animal diseases, zoonotic diseases, health and safety, environmental protection training and management of the operators of cooperatives and family farms.

**Recommendation 3:** Strengthen the engagement and grievance management so that all beneficiaries are well informed and engaged with the Program, particularly women, ethnic minorities and older people and to identify, manage and record E&S risks in relation to program activities.

**Recommendation 4:** Establish a social benefit monitoring system to monitor beneficiaries' composition and distribution of benefits.

## 7.3 Action Plan

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

**Table 7-1: E&S Action Plans**

No.	Action	Responsibility	Timing for Completion	Completion Measurement
1	Document cases of the good practices and experiences of various counties in controlling pollution from livestock	PMOs; local relevant government authorities; PIUs	Throughout the implementation	<ul style="list-style-type: none"> <li>• Cases of good practices and experiences from various counties are documented with clear and detailed insights into pollution control measures, prevention of animal diseases, and zoonotic disease control.</li> <li>• Environmental &amp; Safety Code of Procedures (ESCOP) based on good international industry practice is prepared by each of cooperative and</li> </ul>

No.	Action	Responsibility	Timing for Completion	Completion Measurement
	production, and in preventing & controlling animal diseases & zoonotic diseases and animal welfare, share with operators the participating cooperative and large family farms for them to prepare Environmental & Safety Code of Procedures (ESCOPE)			<p>large family farm.</p> <ul style="list-style-type: none"> <li>The participating livestock production cooperatives and large family farms upgrade their farming facilities to address or equip them with essential animal safety, disease prevention and control facilities, and manure treatment facilities. Incorporate this into the Program implementation plan (PIP).</li> <li>Report the implementation progress of above activities in the semi-annual Program progress report to the World Bank.</li> </ul>
2	Strengthen the publicity, education, supervision and management of the prevention and control of animal diseases, zoonotic diseases, health and safety, animal welfare and environmental protection training and management of the operators of cooperatives and large family farms.	PMOs; local relevant government authorities; PIUs	Throughout the implementation	<ul style="list-style-type: none"> <li>Develop training programs based on good international industry practice</li> <li>Training programs are implemented in each program county (district) at least twice each year.</li> <li>The PIUs record the information of publicity, education and training activities, including date, location, contents, participants, photologs, etc. and report in the semi-annual Program progress report to the World Bank.</li> </ul>
3	Strengthen engagement and grievance management system for beneficiaries and workers with focus on ethnic minority people and women and E&S risks management.	PMOs; local relevant government authorities; PIUs	Within 6 months after effectiveness. Throughout the implementation	<ul style="list-style-type: none"> <li>Citizen engagement and GRM system, with particular focus on vulnerable people and based on good international industry practice, in place within 6 months after effectiveness for beneficiaries to provide ongoing feedback and resolve grievances in a timely way during Program implementation.</li> <li>Stakeholder engagement, E&amp;S risks identification, analysis, and management measures <u>for each physical program activity</u>, and grievance received, and details of the manner in which the grievance was resolved, are recorded and reported in the semi-annual Program progress report to the World Bank, including the name, gender, ethnicity of complainant, reported issues, resolutions and progress, etc.</li> </ul>

No.	Action	Responsibility	Timing for Completion	Completion Measurement
4	Develop Social Benefit Monitoring system to monitor beneficiary composition and distribution of benefits.	PMOs; local relevant government authorities; PIUs	Within 6 months after effectiveness.  Semi-annually throughout the implementation	<ul style="list-style-type: none"> <li>• A baseline database established within 6 months after effectiveness, disaggregated by ethnicity, language, religion (where appropriate), gender and age.</li> <li>• A monitoring system based on good international industry practice established within 6 months after effectiveness for ongoing measurement of benefits across the Program, disaggregated by ethnicity, language, gender and age.</li> <li>• Periodic monitoring carried out and reported in the semi-annual Program progress report to the World Bank.</li> </ul>

## 8. Management and Monitoring

288. As per the Bank PforR Policy<sup>31</sup> and the agreements between the Bank and the Borrower, the two parties will manage and monitor the PforR implementation from different perspectives.

### 8.1 The Borrower

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

- Prepare and implement the environment and social risk management measures defined as the Program Operational Manual (POM<sup>32</sup>).
- Implement the agreed E&S actions as per the PAP and maintain the E&S management systems and the implementation capacity as recommended by the ESSA.
- Submit semiannual monitoring reports on the PAP implementation to prove continuous compliance with the applicable E&S management mechanism. The monitoring reports should include the reflection of implementation of the social risk identification, screening, management, documentation as well as beneficiaries' composition and distribution of benefits, etc.
- Evaluate and audit the system performance regularly as necessary.
- Review the performance of GRMs (both village-level and enterprise level), procedures, and results regularly, and include specific grievance cases in the progress reports.
- Consult the Bank for any change made to the E&S systems during implementation.

290. Gansu PPMO is responsible for the overall management of the PforR activities. The county (district) level CPMOs are responsible for overall implementation of county-level activities. The PIUs may include the ARABs, AHVMBs, FGBs, NRBs, WRBs, EEBs, etc. and they are also responsible for implementing the proposed E&S actions. The PIUs should have specific divisions and staff to implement the E&S actions, report to the county-level CPMOs, and provide information to the PPMO and the Bank for supervision and monitoring.

### 8.2 The World Bank

291. The Bank is to provide supports to the implementation of the PforR and oversee the E&S management performance against the ESSA requirements especially the PAP. The Bank will monitor the Borrower's commitment to compliance with E&S risk management, including actions to strengthen institutional capacity. The Bank will evaluate the PforR performance based on the risk assessment conducted at the preparation stage and hence help the Borrower handle expected and unexpected risks and give recommendations to manage the risks. The Bank will also conduct field visits and provide support to the PIUs and stakeholders and review audit and progress reports. At least two supervision missions will be conducted per year throughout the life of the Program with participation of international specialists. The Bank team will submit memorandum to the Bank management group to report the PforR implementation performance regularly, by the way of document review, consultation with the PIUs and stakeholders, field

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<sup>31</sup> As per the Bank's PforR Policy (paragraph 12), the Borrower is responsible for preparing and implementing the PforR Program. The PforR Program's scope and objectives and the Borrower's contractual obligations to the Bank are set out in the legal agreements with the Bank. These obligations include the requirement to carry out the PforR Program with due diligence, and to maintain appropriate monitoring and evaluation arrangements (including credible disbursement-linked indicator verification protocols), fiduciary and environmental and social PforR Program Systems, and governance arrangements.

<sup>32</sup> The POM is a stand-alone document when the ESSA is finalized. It will specify each gap and corresponding action, dedicated organization and person-in-charge, roles and responsibilities, training arrangement, budget required, timeline. Detail of the POM will be confirmed with the PPMO and CPMOs.

visits, etc. The main activities are as follows:

- Verify the implementation of agreed actions, including any agreed capacity building activity and any designated E&S mitigation measure.
- Conduct regular monitoring so that the Borrower's environmental and social management system (ESMS) performance at the implementation stage is accepted by the Bank.
- Identify any extra management measure that may be taken to underperformance or any unexpected challenge during implementation.
- Enable the effective operation and monitoring of the GRMs through semiannual reports.

## Appendix 1: Boundary of Government Program and the PforR

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			<b>The PforR</b>		<b>Reason for non-inclusion</b>
<b>Planning Areas</b>	<b>Categories of developments</b>	<b>Typical activities under provincial and county-level government programs</b>	<b>Activities to be included in the PforR</b>	<b>Related result areas of the PforR</b>	
(1) Optimization of the development layout to steadily improving the productivity of agriculture and livestock industry.	Standardized and scaled livestock development	Upgrade and renovation of emission reduction facilities in large-scale intensive livestock farms, bases, and parks for adoption of low emission technologies and practice. For example, the Lanzhou New District proposes to (i) establish a smart management system and an intelligent forage processing facilities for existing ecological livestock industrial parks; etc.	Same as the left column	RA2- Increased Sustainability and Reduced Emission from the Livestock Sector	
		Upgrading livestock farms and farming zones by emphasizing green standardization, regularization, and the adoption of low-emission technologies, while also promoting technological and facilities upgrades to achieve low emissions in livestock farming. For example, (i) the <b>Sunan County</b> Standardized Livestock Improvement Project, including the construction of 80 cattle and sheep sheds (400m <sup>2</sup> each), 30 forage storage facilities (200 m <sup>2</sup> each), 5 manure storage sheds (200 m <sup>2</sup> each), and the establishment of 23 collection points for the harmless treatment of dead livestock and poultry (including 23 intelligent cold storage units with a capacity of 100m <sup>3</sup> , 10 transformers with a capacity of 10 kilowatts, 7 harmless treatment refrigerated vehicles, and the construction of basic infrastructure such as water, electricity, and roads); (ii) the <b>Minle County</b> Low Carbon Smart Sheep Farming Technology Upgrade Project, focuses on the improvement of facilities and equipment for low-carbon and smart sheep farming. This includes the construction of facilities for precision feeding, targeted feeding, automated transportation, automated feeding, and residual material recovery systems. Additionally, the project involves the renovation and improvement of facilities for pregnant ewe exercise pens and the	Same as the left column	RA2- Increased Sustainability and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		construction of sheep isolation pens, encompassing both the infrastructure and equipment required for these components; etc..			
		Construction of new large-scale intensive livestock farms, bases, or parks, with a capacity exceeding 1,000 head of cattle or equivalent livestock.	None	None	Potentially high E&S risks
	Constructing forage crops plantation bases	The climate smart fodder production : for example, (i) a project in <b>Minle County</b> aims to build a 15,000mu low-carbon smart fodder production area for artificial forage cultivation, including land leveling and upgrading, along with the construction of supporting facilities such as machinery wells, reservoirs, pump stations, inspection wells, seepage wells, electricity distribution cabinets, water supply pipelines, agricultural machinery, smart drip irrigation systems, etc.. It also includes enhancing basic infrastructure like water supply and roads, the installation of smart management systems like automatic control system for irrigation, field management, soil moisture monitoring, meteorological stations, video surveillance, etc.(ii) the <b>Guazhou County</b> High-Yield, High-Quality Alfalfa (artificial forage) Demonstration Base Construction Project, with a total investment of 7.35 million yuan, aims to construct a base covering 10,500mu over three years, with an annual addition of 3,500mu, and a subsidy of 700 yuan per mu is provided. (iii) The proposed construction of a 60,000 mu forage crop planting base in the <b>Lanzhou New District</b> through land consolidation. (iv) the <b>Minle County</b>	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		Low Carbon Organic fodder production Base Transformation Project: This initiative involves the transformation of a 20,000mu organic fodder production base, with the cultivation of crops such as silage corn on over 13,500mu and alfalfa on more than 6,500mu. The project also includes comprehensive statistical accounting of carbon emissions from farm machinery, irrigation, fertilization, and the carbon sequestration capacity of crops and soil during the forage production process and the purchase and transformation of 20 sets of new energy machinery; etc.			
		Construction of artificial forage plantation bases that are water-intensive and requiring the development of new water sources and the construction of large-scale water irrigation facilities.	None	None	Potentially high E&S risks
	Strengthening the technological support in livestock sector	Introducing and breeding high-quality, efficient and low-emission livestock breeds. e.g., (i) the <b>Guazhou County</b> Livestock Improvement Project, categorized by livestock type, with an investment of 42.57 million yuan for beef cattle and 21.12 million yuan for sheep. For beef cattle, the funds will be used to introduce 1,290 foundation cows to scale breeding farms across the county. For sheep, the investment aims to introduce 13,200 foundation ewes to livestock farmers throughout the county; (ii) the <b>Jingchuan County</b> Livestock Breeding System Enhancement Project, including the protection and utilization of breeding cows, promotion of using frozen semen from Pingliang Red Cattle for beef cattle improvement, with an annual target of over 10,000 heads, upgrading of existing frozen semen improvement stations and expanding to more than 30 improvement stations, upgrading the Pingliang Red Cattle Breeding Center with a renovated area of 2,160m <sup>2</sup> ,	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		purchase of automated feeding, frozen semen production, testing, and analysis systems, and introducing 30 breeding bulls to cultivate excellent Pingliang Red Cattle. The total investment for this project is estimated to be 6.8 million yuan; (iii) the establishment of a breeding laboratory in <b>Sunan County</b> , which includes importing 200 high-quality fine-wool ram sheep and breeding an additional 200 fine-wool ram sheep, introducing 150 high-quality wild blood yaks, and breeding 100 excellent yaks, and purchasing 30,000 doses of frozen beef cattle semen. (iv) the <b>Minle County</b> Low-Carbon Smart Sheep Technology Enhancement Project - Germplasm Resource Enhancement subproject, which aims to enhance the germplasm resources by introducing 1,000 Dongfuli ewes and 200 rams, embryo breeding with a target of 10,000 embryos, utilizing both in vivo and in vitro techniques.			
		Enhancing dietary formulas for balanced nutrition and establishing precision feeding facilities to reduce the intestinal methane emissions per unit of livestock and poultry products and improve the efficiency of inputs. For example, (i) the <b>Minle County</b> Forage Inspection Center and the biological feed and fresh green forage Development Project; (ii) the <b>Zhengning County</b> Green and Efficient Feed Processing, and Harmless Treatment of Dead Poultry Project, includes the construction of new facilities such as hay sheds (1,620m <sup>2</sup> ), forage sheds (864m <sup>2</sup> ), silage pits (3,395m <sup>2</sup> ), and hardened areas (2,130m <sup>2</sup> ); etc.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		Establishing a big data platform to promote the application of modern information technologies such as the Internet of Things (IoT), cloud computing, and mobile internet in various stages of livestock production, distribution and slaughter. For example, (i) the <b>Guazhou County</b> Smart Livestock Platform Construction Project, with a total investment of 15 million yuan, entails the establishment of an intelligent animal husbandry big data management platform, encompasses livestock management, inventory and sales management, traceability system, disease prevention and control, and early warning functionalities. The project also includes purchase of a 20m <sup>2</sup> big data display screen, seven sets of livestock management systems (incorporating weight measurement, size measurement, pedigree, meat-to-feed ratio determination, environmental monitoring, and video), 680,000 livestock and poultry RFID chips and four sets of Total Mixed Ration (TMR) fully automatic feeding equipment equipped with an automated control system; etc.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
	Improving livestock products processing	Applying low emission technologies to renovate the existing slaughter and processing enterprises, complemented by enhancing facilities and equipment for cutting and processing, cold storage and freezing, cold chain distribution and wholesale market, etc. For example, (i) construction of an e-commerce trading center, 2 agricultural product sorting, processing, and packaging workshops, a logistics transfer and distribution station, a temperature-controlled cold storage, a light food by-product processing and packaging plant, an administrative building, a raw material warehouse, and a wastewater treatment station, 7 cold chain delivery vehicles, and pre-packaged vegetables and beef jerky production lines with supporting facilities in <b>Sunan County</b> . (ii) establishment of an automated precise	Same as the left column	R22- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		environmental monitoring system and a digitized precision feeding management system at existing livestock farms in <b>Jingchuan County</b> . (iii) construction of an automated slaughterhouse, cold storage, feed processing facility, manure resource utilization center, and a beef trading center in Suoyang Township, and the purchase of relevant facilities and equipment in <b>Guazhou County</b> .			
		Construction of large-scale livestock slaughtering and processing facilities (with a capacity of exceeding 100,000 head of pigs, 10,000 head of cattle, 150,000 head of goats, 10 million of poultry)	None	None	Potentially high E&S risks
		Construction of modern livestock industrial parks.	None	None	Potentially high E&S risks
	Strengthening animal health and diseases control, improving whole value-chain food safety management practices	Establishing food safety traceability systems. for example, the Construction Project of a Quality Traceability System Across the Full Industry Chain of Pingliang Red Cattle in <b>Jingchuan County</b> , including the application of IT to establish a comprehensive product identification and traceability system that covers the entire process from breeding, standardized farming, processing, cold chain logistics, sales, and post-sales service. This system is designed to create end-to-end monitoring mechanisms and achieve full traceability management for Pingliang Red Cattle throughout the entire supply chain.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
		Constructing or improving the county-level animal diseases prevention and control system. For example, (i) the <b>Guazhou County</b> Livestock and Veterinary Service System Construction Project, with a total investment of 20	Same as the left column	RA1- Increased Sustainability & Productivity and	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			<b>The PforR</b>		<b>Reason for non-inclusion</b>
<b>Planning Areas</b>	<b>Categories of developments</b>	<b>Typical activities under provincial and county-level government programs</b>	<b>Activities to be included in the PforR</b>	<b>Related result areas of the PforR</b>	
		<p>million yuan, encompasses several key components: 1) establishment of livestock and veterinary stations in all 13 rural townships across the county. Each station, occupying an area of 500m<sup>2</sup>, includes a newly constructed or expanded office building of 300m<sup>2</sup>; 2) procurement of 13 sets of equipment for the stations. This equipment includes a microscope, centrifuge, constant temperature box, high-pressure disinfection pot, laboratory workbench, animal dissection table, quarantine workbox, vaccine refrigeration box, infrared thermometer, cattle artificial insemination instruments, sheep artificial insemination instruments, refrigerated cabinet, office furniture, computer printer, ultrasound machine, pipettor, enzyme-linked immunosorbent assay analyzer, plate washer, biochemical incubator, and forage nutritional analysis equipment; 3) establishment of a village-level epidemic prevention room in each of the 75 administrative villages throughout the county; 4) renovation of the county-level animal disease prevention and control training base; (ii) the <b>Minle County</b> Prevention and Quarantine Capacity Enhancement Project at Biandukou involves the construction of one epidemic prevention channel and the provision of supporting facilities and equipment for epidemic prevention and quarantine; (iii) the <b>Lingtai County</b> Major Animal Disease Prevention and Control System Construction Project, includes the establishment of a 3,000m<sup>2</sup> Animal Disease Prevention and Control Center and Livestock Technology Extension Center, the construction of laboratories for livestock performance testing, forage formulation, and disease detection, the purchase of two animal disease monitoring vehicles and 60 sets of testing and inspection facilities, the construction of a Smart Livestock Big Data Platform and a digitalized livestock farming and animal disease monitoring and prevention system to</p>		<p>Reduced Emission from the Livestock Sector</p>	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		enhance animal disease monitoring and prevention capabilities through frozen semen breeding improvement, the promotion of new and superior technologies, and comprehensive supervision of the breeding process; (iv) the Animal Epidemic Prevention System Construction Project in <b>Sunan County</b> , includes the construction of a 100km electronic fence, the establishment of eight new township animal husbandry and veterinary stations with vaccine cold storage facilities (each measuring 20m <sup>2</sup> ), the acquisition of nine matching vaccine transport vehicles, 60 sets each of mobile disinfection foggers, continuous injectors, and refrigerated boxes; the Animal Product Safety Production System Construction Project in <b>Sunan County</b> , involves the customization of 400,000 identification tags, 4,000 packaging boxes, and the creation of 15 promotional signs; etc.			
		Applying livestock product certificates with green and organic or low-emission indications and system certification. For example, (i) The Green and Organic Livestock Product Branding Project in <b>Lingtai County</b> , supports livestock farming and processing enterprises in the county through project funding to achieve the registration and certification of three distinct brands: "Ganwei"), "Fine Quality", and "Green". The goal is to enhance the recognition of livestock products within the county, ultimately increasing the profitability of the livestock industry; (ii) The Green Livestock Product Branding Project in <b>Zhengning County</b> , involves achieving ISO9000, ISO14001, ISO45001, HACCP certifications, as well as Green Food certification and the establishment of a quality management system for the "Ganwei" brand; etc.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		Strengthening the assessment, management, and communication of public health and food safety risks along the dairy and meat value chains. Support will be provided to better communicate behavioral and environmental risks for disease occurrence or outbreaks, development of risk communication tools for influencing health, food, and hygiene behaviors, campaigns to communicate the risks of human exposure to wildlife, and others.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
	Other Activities	Activities like optimizing trade structures, implementing waste segregation, constructing new energy bases, enhancing urban environmental infrastructure, and conducting green transformations of transportation technologies and facilities.	None	None	Not a PforR priority
(2) Preservation of cultivated land resources to promote sustainable land use in agriculture (including grasslands)	Reducing or restoring cultivated land to grassland at appropriate level	Restoring the cultivated land to forest or grassland, restoring the grazing pastures to grassland.	None	None	Potentially high E&S risks
	Other Activities	Maintaining the total area and improve the quality of cultivated land, constructing high-quality farmland, etc.	None	None	Not a PforR priority
(3) Implementation of high-efficiency water and	Promotion of high-efficiency water and	Establishing resource efficiency (energy, water) value chain through application of green and renewable energy, energy and water saving technologies and equipment or machines along the value chain, such as	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
and water-saving practices to ensure agricultural water security.	energy saving technologies	farming machinery, feed milling, livestock slaughtering and meat processing, cold chain storage and logistic transportation;		Emission from the Livestock Sector	
	Construction of water-saving irrigation facilities	Constructing or renovating large and medium-sized irrigation backbone projects incorporating water-saving facilities.	None	None	Potentially high E&S risks
	Other Activities	Activities related to water resource management, the construction of rainwater collection systems in farmland, and the establishment of rainwater collection pits and other facilities.	None	None	Not a PforR priority
(4) Remediation of environmental pollution to improve the agricultural and rural environment	Livestock and poultry manure treatment and utilization	Upgrading or constructing low emission manure treatment and utilization facilities for livestock and poultry farms (zones, cooperatives). e.g., (i) The Eco-friendly Livestock and Poultry Manure Treatment Project in <b>Lanzhou New District</b> , provides complementary manure treatment facilities for the rural revitalization industrial park's ecological livestock farming project, including one set of an eco-friendly manure collection and utilization recycling system and one supporting facility for the resourceful utilization of manure; etc.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
		Constructing organic fertilizer processing facilities, such as (i) the Organic Fertilizer Processing Project in <b>Zhengning County</b> , involves the establishment of one organic fertilizer processing plant, the purchase of equipment such as overturning machines, drying machines, cooling machines, screening machines, and pelletizers, along with the construction of supporting facilities like storage workshops. The annual production capacity is targeted	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		at 20,000tons; (ii) the Comprehensive Utilization Construction Project for Livestock and Poultry Manure Resources in <b>Minle County</b> , aims to construct a 50mu comprehensive manure resources utilization facilities, including manure pools, solid-liquid separation workshops, manure fermentation workshops, liquid fertilizer storage pools, yards, screening and crushing workshops, and production management rooms, and also road construction, landscaping, lighting, and outdoor pipeline networks, and intelligent processing equipment; etc.		the Livestock Sector	
	Construction of collection, transfer and sanitary treatment facilities for livestock and poultry died of diseases	Establishing waste treatment facilities at the farming, slaughtering or processing and distribution stages of the value chain to improve waste management and effective utilization of residues and to reduce emissions. For example, (i) the Construction Project for the Harmless Collection and Disposal System of Livestock died of Diseases in <b>Minle County</b> , comprises the establishment of five centralized storage sites for livestock died of diseases, including five cold storage facilities with a capacity of 1,500m <sup>3</sup> each, along with five management buildings covering an area of 300m <sup>2</sup> . five sewage sedimentation tanks (50m <sup>3</sup> each), a perimeter wall and gate spanning a total of 600m, the hardening of the factory floor area by 1500m <sup>2</sup> , and the purchase of disinfection, loading or unloading, and monitoring equipment in sets of five each, two vehicles for the transportation of livestock died of diseases; (ii) the Construction Project for the Standardized Collection and Transportation Center for Animals Died of Diseases In <b>Zhengning County</b> , includes establishing one standardized collection and transportation center with supporting facilities and equipment; the Green and Efficient Feed Processing and Harmless Treatment Project for Livestock Died of Diseases in	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		<b>Zhengning County</b> entails the purchase of a set equipment for the harmless treatment of animals died of diseases; etc.			
	Integrated utilization of crops straw	Establishing straw feed processing factory to enhance the utilization of crops straw and increase the supply of forage. For example, the Forage Processing Base Construction Project in <b>Lingtai County</b> , which involves the establishment of five high-quality forage processing bases, along with 30 pieces (sets) supporting facilities and equipment for forage storage, processing, and transportation, with an annual storage and processing capacity of 300,000 tons for whole-plant corn silage and dry forage from crop straw; etc..	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
	Other Activities	Activities like the prevention and control of non-point source pollution from farmland, the construction of ecological ditches and wastewater purification facilities in farmland, plastic film recycling and utilization, regulation of heavily polluted cultivated land, the development of village remediation plans, and rural development.	None	None	Not a PforR priority
(5) Restoration of agricultural		Optimizing livestock structure, accelerating livestock turnout and promoting confined feeding.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
ecosystems to improve ecological functionality				Emission from the Livestock Sector	
(6) Establishment of institutional guarantee systems (provincial activities and demonstration in project counties)	Establishing and improving legal system	Establishing and implementing incentive systems (subsidies) to promote the sustainable low-emission livestock development technologies and practices. For example, (i) the 2023 <b>Jingchuan County</b> Cattle Industry Development Subsidy Project, providing subsidy to livestock farming cooperatives, enterprises, smallholders who purchased at least 3 high-quality cows; (ii) Subsidies to livestock farmers for purchase of cow in <b>Minle County</b> ; (iii) Subsidies are provided in each project county to encourage livestock farming zones or smallholders to purchase animal health insurance and the harmless disposal of animals died of diseases; etc.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission Livestock Sector Management	
		Improving the policies and technical standards: identify the regulatory and standards gaps for promotion and scale-up of low emission livestock production, processing and logistics and support work for closing these identified gaps, such as sustainable low emission technologies and practices. When necessary, developing a regulating framework for carbon trade.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission Livestock Sector Management	
		Establishing cross-sectoral collaboration mechanism between veterinary services, public health and environment (wildlife and forestry) departments.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion	
			Activities to be included in the PforR	Related result areas of the PforR		
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs				
				Livestock Sector Management		
	Establishing a green technology innovation system	Support review and strengthening of the existing livestock sector Measuring, Reporting and Verification (MRV) systems, as well as support development of new MRV protocols for GHG emissions. Establishing the new technologies application system for green value chain, e.g., the establishment of a green development model of “fine breed selection and breeding+efficient reproduction + nutrition control + precision feeding + comprehensive prevention and control of diseases + standardized production + marketing and branding” for the whole industry chain of livestock development in <b>Sunan County</b> , etc.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission Livestock Sector Management		
		Developing GHG emission measurement APP for grazing livestock, to raise farmers’ awareness on GHG emission source and level.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission Livestock Sector Management		
		Developing easy-to-use low methane emission diet formulation app for grazing livestock	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission		

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
				Livestock Sector Management	
	Disseminating , training and technologies promotion	Training on food safety: promoting science-based livestock farming and food safety practices, such as promoting on-farm biosecurity, responsible use of antibiotics, reducing human, animal and wildlife interface, improve milk and meat quality through tailored capacity building to farmers and enhanced extension service delivery.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
		Trainings on smart agricultural technologies.	Same as the left column	RA1- Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	
		Promotion and training on precise feeding and low emission livestock technologies and practices.	Same as the left column	RA1-Increased Sustainability & Productivity and Reduced Emission from the Livestock Sector	

<b>Government Program: the National Sustainable Agricultural Development Plan (2015-2030) and sector plans for Gansu Sustainable Agricultural Development: Notice of the PGGP on Accelerating the Establishment and Improvement of the Implementation Plan for a Green, Low carbon and Circular Development Economic System (2025) and Notice of the General Office of the PGGP on the Implementation Plan for Optimizing and Upgrading the Agricultural Industrial Structure Using the Breeding Industry as the Lead (2025) and Gansu Province Green Carbon Sequestration Implementation Opinions</b>			The PforR		Reason for non-inclusion
			Activities to be included in the PforR	Related result areas of the PforR	
Planning Areas	Categories of developments	Typical activities under provincial and county-level government programs			
		Raising awareness and understanding of carbon trading markets among livestock producers and the public agencies responsible for implementing the MRV protocols.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission Livestock Sector Management	
		Strengthening the support to and promotion of One Health concept. This could be achieved by reinforcing cross-sectoral collaboration and communication between veterinary services, public health, and environment (wildlife and forestry), reinforcing the control of drugs residues, and promoting best practices for responsible use of antibiotics.	Same as the left column	RA2-Improved Governance System for Sustainable and Low Emission Livestock Sector Management	
	Other Activities	Activities like creating a green finance support system, advancing reforms in green trading markets, developing infrastructure for state-owned forest farms, reforming forest and grassland contractual management rights and paid usage systems, and enhancing the performance evaluation system, etc.	None	None	Not a PforR priority

Note: The examples listed in the table serve as represent illustrative examples of typical activities. It is indicated that activities of such types can be included within the boundaries of the PforR. These examples should not be interpreted in the traditional concept of Investment Project Financing (IPF) with specifically defined construction content and scale.

## Appendix 2: E&S Risks or Impacts Assessment

Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
<b>RA 1 Increased Sustainability &amp; Productivities and Reduced Emissions from Livestock Sector</b>					
<ul style="list-style-type: none"> <li>Construction or upgrading livestock breeding and farming facilities run by enterprises, cooperatives, large family farms who adopt low-emission technologies practice, undertaking livestock certificate with green and organic or low emission indicators</li> <li>Upgrade the livestock slaughtering processing, cold chain logistics and market facilities</li> <li>Upgrade livestock &amp; poultry manure treatment facilities for livestock farms or</li> </ul>	<ul style="list-style-type: none"> <li>Upgrading livestock production facilities and supporting facilities involve the FALU, mainly unused land, construction land, etc., or a small piece of cultivated land, or the transformation on the basis of existing facilities, and does not involve the change of land type.</li> <li>The construction activities will involve short-term and limited social impacts, such as temporary land use, labour employment, construction safety risks, etc.</li> <li>The construction activities will involve short-term and limited environmental impacts, such as dust, noise, solid water, wastewater, topsoil disturbance, soil erosion, etc. These impacts are predictable and can be mitigated through application of known technologies and measures</li> <li>Operation of the constructed facilities involve health and safety risks to workers and the community. For example, livestock and poultry manure treatment and utilization activities may produce wastewater affecting the environment, and odour &amp; flying dust affecting the health of workers and nearby residents; the risk of pathogens caused by sick and dead animals; biosafety risk from handling of diseased animals, pathogens in veterinary laboratories, quarantine facilities; the quality of organic fertilizer or manure fertilizer disqualified or excessive application may pollute the soil environment; Laboratories generate</li> </ul>	<ul style="list-style-type: none"> <li>The activities sites are mainly in, rural areas and quasi-urban areas, do not involve important natural habitats that have not been disturbed by human beings, without encroachment to the natural reserves and are conducive to reducing pollution and GHG emissions, and alleviating the pressure on the ecology brought by overgrazing in the protected areas.</li> <li>The activities will be carried out in a board coverage, including areas inhabited by ethnic minorities.</li> </ul>	<ul style="list-style-type: none"> <li>The activities will involve ARABs, AHVMBs, NRBs, EEBs, WRBs, Industrial &amp; Communication Bureaus, MSAs, HCs, DCPCs, DRCs, FBs, etc., requiring cross-sectoral collaboration</li> <li>Risk is substantial.</li> </ul>	<ul style="list-style-type: none"> <li>The activities are in line with national and local laws, regulations, policies and procedures with no political risks.</li> <li>The activities are conducive to reduce emission, improving eco-environment, improving livestock productivity and efficiency and quality &amp; safety of agro-food. The activities will be widely supported by the public with no reputational risk.</li> <li>China is in the process of establishing a standard system for animal welfare and related laws and regulations, and there is a need for</li> </ul>	Substantial

Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
<p>zones or smallholders.</p> <ul style="list-style-type: none"> <li>• Artificial forage cultivation in fodder production areas</li> <li>• Construct straw for forage use processing facilities</li> <li>• Increase animal health service capacity by equipping veterinary service labs and agro-food quality testing labs at county level</li> <li>• Collect, transfer and sanitary disposal of dead and diseased animals</li> </ul>	<p>general and hazardous chemical, biological (medical) waste, etc.</p> <ul style="list-style-type: none"> <li>• The use of chemical fertilizer, pesticides and irrigation to the fodder production area involve the consumption of water resources, soil degradation, and environmental pollution from agricultural NPS pollution. These impacts are predictable and can be mitigated through application of known technologies and measures (refer to Appendix 8), while better management of artificial forage plantation will be positive to carbon sequestration.</li> <li>• Risk is substantial.</li> </ul>	<ul style="list-style-type: none"> <li>• Risk is substantial.</li> </ul>		<p>widespread awareness-raising on animal welfare</p> <ul style="list-style-type: none"> <li>• Risk is low to moderate.</li> </ul>	

*RA2 Improved Governance System for Sustainable and Low Emission Livestock Sector Management*

Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
<ul style="list-style-type: none"> <li>• Establish incentive system for promoting sustainable low emission technologies.</li> <li>• Strengthen technical capacity &amp; regulatory framework for low emission livestock value chain</li> </ul>	<ul style="list-style-type: none"> <li>• Soft activities on policies, mechanism, technical standards will not involve any civil works, and will not have direct negative environmental and social impacts, and pose only minor health and safety risks to the people involved.</li> <li>• The implementation of the policies, mechanism, technical standards may induce downstream activities with indirect E&amp;S impacts, e.g., livestock breeding, farming facilities, slaughterhouses, meat processing, agro-food distribution facilities, etc., as well as long term operational E&amp;S risks from the operation of these constructed facilities. These facilities will indirectly generate temporary, site-specific, limited environmental impact caused by dust, noise, solid waste, wastewater, topsoil disturbance, soil erosion, land use or occupation, labour employment, construction safety risks, etc. These impacts are predictable and can be mitigated through application of known technologies and measures. The implementation of the policies, mechanism, technical standards will eventually reduce emission and bring about long-term positive E&amp;S effects.</li> <li>• Training and study tour activities may pose health and safety risks to the people involved.</li> <li>• Risk is moderate.</li> </ul>	<ul style="list-style-type: none"> <li>• The activities have provincial-wide implications, involving non-physical construction. But the environmental and social contexts in which downstream activities are triggered can be diversified.</li> <li>• The activities will be carried out in a board coverage, including areas inhabited by ethnic minorities.</li> <li>• Risk is moderate</li> </ul>	<ul style="list-style-type: none"> <li>• The activities will involve ARABs, AHVMBs, MSAs, NRBs, FGBs, EEBs, HCs, DCPCs, etc., requiring cross-sectoral collaboration</li> <li>• Risk is moderate</li> </ul>	<ul style="list-style-type: none"> <li>• The activities are in line with national and local laws, regulations, policies and procedures with no political risks.</li> <li>• The activities are conducive to reduce emission, improving eco-environment. The activities will be widely supported by the public with no reputational risk.</li> <li>• Risk is low.</li> </ul>	Moderate
<ul style="list-style-type: none"> <li>• Develop MRV system for livestock sector</li> </ul>	<ul style="list-style-type: none"> <li>• Soft activities will not involve any civil works, and will have nearly no direct negative environmental and social impact.</li> <li>• These activities will not induce downstream activities with no indirect E&amp;S impacts.</li> <li>• Risk is low.</li> </ul>	<ul style="list-style-type: none"> <li>• The activities have provincial-wide implications, involving neither physical construction, nor downstream</li> </ul>	<ul style="list-style-type: none"> <li>• The activities will involve ARABs, AHVMBs, MSAs, EEBs, HCs, DCPCs, etc., requiring</li> </ul>	<ul style="list-style-type: none"> <li>• The activities are in line with national and local laws, regulations, policies and</li> </ul>	Low

Typical activities	Likely E&S effects	E&S contextual risks	Institutional capacity and complexity risks	Political and reputational risks	Overall risk ranking
		activities with no triggering of E&S sensitive contexts. • Risk is low.	cross-sectoral collaboration • Risk is moderate.	procedures with no political risks. • The activities are conducive to enhancing capacity to response to animal diseases control, ensuring quality and safety of agro-food, and OHS of workers engaged in livestock sector, benefiting to local residents. The activities will be widely supported by the public with no reputational risk. • Risk is low	
<b>Overall assessment</b>	<b>Substantial</b>	<b>Substantial</b>	<b>Moderate to Substantial</b>	<b>Low to Moderate</b>	<b>Substantial</b>

### Appendix 3: Comparison with the Bank PforR Policy and Directive

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
<p><b>Principle #1:</b> Program E&amp;S management systems are designed to promote E&amp;S sustainability in the program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to a program's E&amp;S effects.</p>		
<p><b>Element 1:</b> Operate within an adequate legal and regulatory framework to guide E&amp;S impact assessments, mitigation, management, and monitoring at the PforR level.</p>	<p><b>Environmental:</b> China has established a complete legal framework on environmental management. (1) governed by the “Environmental Protection Law”, China has developed a variety of environmental management laws, regulations, standards, technical guidelines, such as the “Environmental Impact Assessment Law” (2018), the “Water Pollution Prevention and Control Law” (2017), the “Air Pollution Prevention and Control Law” (2018), the “Solid Waste Pollution Prevention and Control Law” (2020), the “Soil Pollution Prevention and Control Law” (2018), the Regulations on Pollution Prevention and Control of Large-scale Livestock and Poultry Farming” (2013), the “Construction Projects Environmental Protection Management Regulations” (2017), the “Construction Projects EIA Classification Catalogue” (2021), the “EIA Technical Guidelines”, Classified Management Catalogue for Discharge Permits of Fixed Pollution Sources” (2019) etc., which constitutes the legal framework for guiding the assessment of environmental impacts and managing the environmental risks of the PforR activities. (2) Gansu province has established PPMO at provincial level, coordinating various provincial authorities (e.g., EEBs, ARABs, NRBs, WRBs, FGBs, MSAs, etc.) to jointly implement the PforR. These provincial government authorities, together with local counterparts will be responsible for mobilizing their resources, taking necessary actions and designating their statutory regulatory bodies to manage the PforR environmental impacts or risks. Through review of the adequacy of environmental management systems in China and Gansu Province, it’s demonstrated to have a sound legal and regulatory framework to guide E&amp;S impact assessments, mitigation, management, and monitoring at the PforR level. Specifically, the national environmental management systems are also compared with the WBGs EHS guidelines. The system for managing water and wastewater is found to be equivalent to WBGs EHS Guidelines for Water and Sanitation by covering good international industry practices (GIIP), such as improving design, operation and maintenance of manure treatment facilities to be in compliance with national allowable discharging standard, installing rendering equipment in closed spaces and operate under negative pressure compared to ambient air conditions to prevent odor from emission, etc. To improve quality of crop irrigation, Water Quality Standard for Farming Irrigation of China includes basic control indicators and selected control indicators by referring to the similar standards of international organizations, FAO, USA, Canada and other countries. The standard cleared that the EEBs at all levels shall lead and work together with ARABs at all levels to supervise the implementation of the standard. China’s national “Pollutant Discharge Standards for Livestock and Poultry Farming set the maximum allowable concentration of effluent, which is the same as recommended in the WBG’s EHS Guidelines for Water and Sanitation.</p>	<p>Consistent.</p>

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
	<p><b>Social: i) Notice of the National Development and Reform Commission on Issuing the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2012):</b> For any major fixed asset investment project in China, the owner shall conduct an SSRA at the preparatory stage to identify risks and degree of impact, solicit opinions from the affected people, propose measures to prevent and mitigate risks, and determine the recommended social stability risk rating after such measures are taken. <b>ii) Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) (CPCCCO [2012] No.2):</b> An SSRA shall be conducted for any decision-making on major project or matter that concerns the immediate interests of the public, and is likely to cause social stability risks, such as LA and HD, farmers' burden, state-owned enterprise restructuring, environmental impacts, social security, and public welfare. <b>iii) The Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances</b> promulgated by the General Office of the CPC Central Committee and the General Office of the State Council in February 2020: An SSRA shall be carried out on major decisions including those on major construction projects. It specifies the contents, methods, procedures, and management of SSRA, and application of SSRA results, and underlines that the contents of SSRA are integral to the Program's feasibility study and application reports.</p> <p>The SIA system applicable to the Program is adequate. Specific laws and regulations are sorted out by the following principles and elements.</p>	Consistent.
<p><b>Element 2:</b> Incorporate recognized elements of good practice in E&amp;S assessment and management, including</p>	<p><b>Environment:</b> China has established a complete EIA system, covering environmental impacts screening, alternatives comparison, site selection, impacts assessment (positive vs. vegetative, direct vs. indirect, cumulative, etc.), mitigation measures, environmental management institutional arrangement, environmental management costs, public consultation, and information disclosure, etc. In the due diligence investigation, the ESSA team collected a variety of primary and secondary data and sample EIA documents approved by EEBs as evidence for similar projects, which demonstrate that the EIA system is well established. Details are given below.</p>	Consistent.
	<p><b>Social:</b> The state laws and regulations on project screening include the Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects (2008.11.29), Cultural Relics Protection Law (2017 Amendment), Land Administration Law (2020.1.1), Regulations on the Prevention and Control of Geologic Disasters (2004.3.1), and Notice of the National Development and Reform Commission on Issuing the Interim Measures for the Social Stability Risk Assessment of Major Fixed Asset Investment Projects (NDRCI 2012), and Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances (GOSC, 2020.2.22)</p>	Consistent.
<p>(i) early screening of potential impacts;</p>	<p><b>Environment:</b> The <i>Environmental Impact Assessment Law</i> clearly requires that early screening should be conducted to confirm EIA category for each construction project. The <i>Construction Projects EIA Classification Catalogue</i> (2021) provides a guidance on classifying EIA instruments for 173 types of projects in 55 sectors. Environmental impacts are classified to Class A – high to significant impacts, Class B – small to moderate</p>	Consistent.

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
	<p>impacts, and Class C - minor impacts based on project nature, scale, and environmental sensitivity. EIA report, EIA form, and EIA on-line registration for EEBs endorsement will then be development for Class A, Class B, and Class C, respectively. Environmental impact identification and EIA classification are necessary procedures for every construction project. The small-sized facilities related to livestock production, including farming zones in Gansu, only EIA registration for EEBs' endorsement is required due to their minor adverse environmental impact. The EIA law also requires Plan-EIA shall be carried out for plans related to land use, integrated development, sectoral development (including agricultural sector and livestock sector) at early planning stage to manage and control cumulative environmental impact.</p> <p><b>Social: Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim):</b> Scope of assessment: The Party and government institutions shall conduct an SSRA before making any decision on any major project or policy or matter that concerns the immediate interests of the public, and is likely to cause social stability risks, such as LA and HD, farmers' burden, state-owned enterprise restructuring, environmental impacts, social security, and public welfare. Decisions subject to SSRA shall be made by relevant local authorities according to the above regulations and in the light of the realities, and the SSRA of any major construction project shall be an integral part of its feasibility study. <b>Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects:</b> The area and type of the land used for the project shall be identified before the feasibility study report or project proposal is reviewed to avoid the expropriation of permanent basic farmland, and nature reserves, etc.</p>	
(ii) consideration of strategic, technical, and site alternatives (including the "no action" alternative);	<p><b>Environment:</b> EIAs for construction projects are required to include comparison of different natural background conditions especially environmental sensitive areas, site alternatives, pollution control options, pollutants treatment techniques, as well as environmental benefits and costs of different designs. In addition, EIAs will review environmental legacy issues and clarify how the environment will continue deteriorating without the proposed project, which is equivalent to analysis of "with" and "without" project alternatives. For this PforR activities, when selecting sites, following principles will be followed: (1) the sites with activities' nature shall be subject to the constraint of the ERL and the "list for industrial or sectoral access in ecological functional zones; (2) when planning and designing sites for livestock farming, the "Principles of Technical</p>	Consistent.

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	<p>Guidelines for the Demarcation of Prohibited Areas for Livestock and Poultry Farming” will be strictly followed by each Program counties.</p> <p><b>Social: Cultural Relics Protection Law: Article 20:</b> The site selected for a construction project shall keep away from immovable cultural relics as far as possible. If the impact on a protected culture relic can't be avoided for special circumstances, the original site shall be protected by whatever possible means. <b>Article 29:</b> Before launching a large-scale capital construction project, the construction contractor shall firstly apply to the cultural relic authority of concerned province, autonomous region and municipality for an archaeological investigation at places where cultural relics may be buried underground within the project area. <b>Regulations on the Prevention and Control of Geologic Disasters: Article 13:</b> The development and implementation of overall plan for land utilization and other plans for the construction of a major project shall take full account of the requirements on prevention and control of geologic disasters to avoid and mitigate the losses arising from geologic disasters. The plans on prevention and control of geologic disasters shall be an integral part of overall plans developed at municipal, village or township levels.</p>	Consistent.
(iii) explicit assessment of potential induced, cumulative, and trans-boundary impacts;	<p><b>Environment:</b> The Regulation on Plan-EIA requires that programs or plans related to land use and special sector plan (including agriculture, animal husbandry development), plan-EIA shall be carried out to identify, analysis, projection and assess cumulative impacts potentially caused by implementing the said plan. Furthermore, according to the “Technical Guidelines on Environmental Impact Assessment”, EIA documents will include the assessment of cumulative impacts in temporal and spatial aspects if construction projects are likely to have cumulative impacts on the environment.</p>	Consistent.
	<p><b>Social:</b> Outline for the Preparation of the Chapter on the Social Stability Risk Analysis of Major Fixed Asset Investment Projects and Assessment Report (Interim) (NDRCOI [2013] No.428): Analysis of potential induced and cumulative risks shall be conducted, with effective risks management measures being taken.</p>	Consistent.
(iv) identification of measures to mitigate adverse E&S risks and impacts that cannot be otherwise avoided or minimized;	<p><b>Environment:</b> According to the “Environmental Impact Assessment Law”, EIA documents will include proper measures to avoid or mitigate negative environmental impacts. As per the “Technical Guidelines on Environmental Impact Assessment”, EIAs will also include specific and operational mitigation measures to manage the identified environmental impacts, and the measures will be incorporated into EMPs. Any EIA documents without appropriate mitigation measures and institutional arrangement will not pass review and approval.</p> <p>It is noted that the environment and sanitary conditions of some small-medium livestock farming zones are poor due to inadequate manure treatment and utilization and animals’ diseases control facilities. Some of which lack corresponding operational procedures and internal management systems. There is still room for improvement as against the "Gansu Province Livestock and Poultry Farming Zone Construction Standards and Filing Management Measures".</p>	Generally consistent. Recommendations: Document cases of the good practices and experiences of various counties in controlling pollution from livestock production, and in preventing & controlling animal diseases and zoonotic diseases and animal welfare, share with

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	<p><b>Social: Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim):</b> The SSRA report shall specify the scope and procedures of SSRA, opinions of relevant parties and opinions accepted, social stability risks potentially caused by any major decision, conclusions of SSRA, proposals, risks prevention and mitigation measures, and emergency response plans, etc. If the assessment report thinks that a high risk is present, a decision of non-implementation shall be made, or a decision may be made after the plan is adjusted or the risk level is reduced; if an moderate risk is present, a decision of implementation shall be made after effective risk prevention and mitigation measures are taken; and if a low risk is present, a decision of implementation may be made, provided that actions like explanation and persuasion to the people affected are taken and reasonable requests of people affected are handled properly. The SSRA report, signed by person in charge of the assessor, shall be submitted to the decision-making authority for review step by step, with copies being sent to the decision implementation, political and legislative affairs, comprehensive social governance, stability maintenance, legislative affairs, and letters and visits authorities.</p>	<p>operators of &amp; Productivity for them to prepare Environmental &amp; Safety Code of Procedures (ESCOP); Complete or equip necessary animal safety, disease prevention and control facilities, and manure treatment facilities, and include them in the project implementation plan (PIP).</p> <p>Consistent.</p>
(v) clear articulation of institutional responsibilities and resources to support implementation of plans;	<p><b>Environment:</b> According to the “Technical Guidelines on Environmental Impact Assessment”, EIA documents should clearly define institutional organization and responsibilities, environmental management costs and financial resources, and environmental monitoring and supervision arrangement in terms of parameters, timing, and frequency, etc.</p> <p><b>Social: Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim):</b> Implementation agency of SSRA: SSRA of any major decision shall be conducted by the assessor. For decisions made by the local party committee and government, the assessor shall be designated by such party committee and government; for decisions made by any department of the local party committee and government, the assessor shall be designated by such department or the leading department</p>	<p>Consistent.</p> <p>Consistent.</p>

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

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<b>Principle #2:</b> 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		
<b>Element 3:</b> Identify, and screen for adverse effects on potentially important biodiversity and cultural resource areas and provide adequate measures to avoid, minimize, or mitigate adverse effects.	<b>Environment:</b> According to <i>The Technical Guidelines for Environmental Impact Assessment - Ecological Impact</i> , identification and screening of ecological environmental elements (such as wild-fauna and flora, important habitat, biodiversity) is one of the important assignments for EIA to identify environmental protection targets. At the early stage of project proposal and EIA preparation, NRBs and EEBs will strictly implement the ERL mechanism for ecological protection based on <i>Opinions on Delineating and Strictly Observing the EPL</i> , and local <i>Scheme for Delineating ERL</i> when reviewing and approving the selected project site. If any project that encroaches the ERL and may cause adverse impact on natural reserves, the proposed project site will be rejected. For activities related to intensive livestock production, if the selected sites are to be in the experimental zone of a natural reserve, EIA-report or a special report on the impact of the activities to the ecology of the natural reserve will be prepared, that are subject to the strict experts' review before being approved by EEBs. These are the type of activities excluded from the scope of the PforR. The Program activities in Sunan, Guazhou counties are conducive to alleviated pressure of grazing on natural grassland and thus bring about very positive impact on biodiversity protection. Therefore, the PforR will not cause significant damage to or degradation of important natural habitats.	Consistent.
	<b>Social: Cultural Relics Protection Law: Article 20:</b> The site selected for a construction project shall keep away from immovable cultural relics as far as possible. If the impact on a protected culture relic can't be avoided for special circumstances, the original site shall be protected by whatever possible means. <b>Article 29:</b> Before launching a large-scale capital construction project, the construction contractor shall firstly apply to the cultural relic authority of concerned province, autonomous region and municipality for an archaeological investigation at places where cultural relics may be buried underground within the project area.	Consistent.
<b>Element 4:</b> Support and promote the protection, conservation, maintenance, and rehabilitation of natural habitats. Avoid significant conversion or	<b>Environment:</b> The PforR activities will be taken place in rural areas and quasi-urban areas without encroachment to the natural protected areas. (1) China has many laws & regulations on conserving and managing natural ecology, e.g. Law on Wetland Conservation, Law on Wild Animal Conservation, Regulation on Wild Plants Conservation, Regulation on Natural Reserves, Grassland Law, Animal Husbandry Law, Opinion on Delineating and Strictly Observing the Red Line for Ecological Protection, etc. The PforR is designed and will be constructed, operated to strictly comply with the requirements of these laws and regulations. (2) Program activities in Sunan, Guazhou counties are conducive to alleviated pressure of grazing on natural grassland to avoid degradation of natural grassland and conserve grassland ecosystem, some of which are within the natural protected areas. (3) Important plant and animal resources and natural habitats have been included in the scope of ERL management, the site selection of various physical facilities construction activities will be under the supervision of NRBs and EEBs and other departments or bureaus, as per strictly requirement of ERL mechanism, and will not easily trigger the ERL and affect the natural habitat. (4) The PforR exclusion criteria	Consistent.

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degradation of critical natural habitats. If avoiding the significant conversion of natural habitats is not technically feasible, include measures to mitigate or offset the adverse impacts of the PforR activities.	have excluded any activities that may negatively impact natural habitat. (5) The contractors will be required to perform their contractual responsibilities on eco-environment protection to reduce disturbance to artificial and natural ecosystem and restore vegetation in the first time after the completion of construction; water and soil conservation will be taken to reduce soil erosion and improve regional eco-environment. In summary, the PforR activities will not course significant conversion or degradation of critical natural habitats.	
Element 5: Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.	<b>Social: Cultural Relics Protection Law: Article 17:</b> No construction works or operations such as blasting, drilling and digging are allowed within the area of a protected cultural relic. If such works or operations are unavoidable, measures must be taken to ensure the safety of the protected cultural relic, and such works or operations shall be subject to the approval by the government approving and announcing its status as a protected cultural relic. <b>Article 20:</b> The site selected for a construction project shall keep away from immovable cultural relics as far as possible. If the impact on a protected culture relic can't be avoided for special circumstances, the original site shall be protected by whatever possible means. <b>Article 29:</b> Before launching a large-scale capital construction project, the construction contractor shall firstly apply to the cultural relic authority of concerned province, autonomous region and municipality for an archaeological investigation at places where cultural relics may be buried underground within the project area. <b>Article 31:</b> The expenses needed for archaeological investigation, prospecting, or excavation, which have to be carried out because of capital construction or construction for productive purposes, shall be included in the budget of the construction contractor for the construction project. <b>Regulations for the Implementation of the Cultural Relics Protection Law: Article 25:</b> The scope and rates of funds for archaeological investigation, exploration and excavation shall be in line with applicable Chinese regulations.	Consistent.
<i>Principle #3: Program E&amp;S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction 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.</i>		
Element 6: Promote adequate	<b>Environment:</b> China's management system on animal health disease prevention & control, zoonotic disease prevention & control, and quality and safety of livestock products is in line with the WBG's General EHS Guidelines and for Mammalian Livestock Production, EHS Guidelines for Annual or Perennial Crop	Generally consistent. Recommendation :

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<p>community, individual, and worker health, safety, and security through the safe design, construction, operation, and maintenance of program activities; or, in carrying out activities that may be dependent on existing infrastructure, incorporate safety measures, inspections, or remedial work as appropriate.</p>	<p>Production, for Hazardous Materials Management, and the OIE's Manual of Diagnostic Tests and Vaccines for Terrestrial Animals covering GIIP. Technical Specifications for Sanitary treatment of Sick and Diseased Animals, Technical specifications or Guidelines for the Prevention &amp; Control of Major Animal Diseases, Quality and Technical Requirements for Veterinary Laboratories, Guidelines for the Rational Use of Pesticides (GB or T 8321.10-2018), Code for the Safe Use of Feed Additives, and Guidelines for Farming and Management of Pollution-Free Food Pigs, etc. were developed in accordance with China, the Food and Agriculture Organization of the United Nations (FAO) or World Health Organization (WHO), the World Organization for Animal Health and reference to other countries, which specified the maximum values of residue limits of pesticides in the pork. The management system can guide the scientific, reasonable, and safe use of animal feed and feed additives, pesticides and veterinary drugs, effectively prevent and control forage diseases, insects and rodents, and ensure that pesticide residues in agro-food do not exceed the prescribed limit standards. In order to implement the operational mechanism of the system, Gansu and the Program counties (district) are staffed with appropriate personnel and resources to perform the health and safety management responsibilities and be in line with the Bank's core principles.</p> <p>It is noted that some operators of small-medium livestock farming zones exhibit a lower adoption rate of health and safety management measures, disease prevention and control measures (including zoonotic diseases) and inadequate wear of personal protective equipment. There is a need to upgrade animal diseases &amp; zoonotic diseases control facilities, and further strengthen the health &amp; safety and animal welfare awareness-raising and environmental protection training as well as the daily supervision.</p> <p><b>Social:</b> China has established a full set of work safety management systems at the design, construction, and operation stages of projects. Safety management is the top priority during project implementation. The implementation of safety management measures is subject to all-round supervision by competent industry supervision and emergency management (work safety) authorities. The owner, construction contractor and operator of a project must establish a well-staffed safety management organization, and competent administrative authorities have developed work safety management mechanisms to supervise the effectiveness and outcomes of work safety in the project. In addition, the emergency management bureau (work safety authority) is responsible for supervising and regulating all industries and key sectors. Thus, China's work safety management system is adequate for safety supervision of the PforR Program activities.</p> <p><b>i) Labor Law: Article 15:</b> the employer shall be banned from recruiting juveniles under the age of 16s shall not recruit minors (under 16 years); special protection shall be given to female and underage (above 16 years old and below 18 years old) workers. <b>Article 53:</b> Labor health and safety facilities shall comply with the national standards. Newly constructed, reconstructed or expanded labor health and safety facilities must be designed, constructed, and put into operation together with main parts of the project. <b>Article 54:</b> The employer must provide labor health and safety conditions, and necessary labor protection articles complying with the state provisions to workers, and workers dealing with operations with occupational hazards shall receive health</p>	<p>Strengthen the publicity, education, supervision and management of the prevention and control of animal diseases, zoonotic diseases, health and safety and animal welfare, environmental protection training and management of the operators participating cooperatives and large family farms.</p>

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	<p>checkup regularly. <b>Article 57:</b> The state shall establish a statistical reporting and handling system of accidents and occupational diseases. <b>Article 61:</b> Pregnant female workers shall not be arranged to deal with physical labor of intensity level III stipulated by the state and prohibited labor, and female workers pregnant for seven months or more shall not work overtime or at night; <b>Article 94:</b> if an employer illegally recruits persons under the age of 16, the labor administrative department in charge shall command a correction and a fine. If the case is very serious, the license of the employer shall be revoked.</p> <p><b>ii) Regulations on Prohibition of the Use of Child Labor (2002): Article 2:</b> no employer, including state organs, social organizations, enterprises, institutions, private non-enterprise units, or individual industrial and commercial households shall hire individuals under the age of 16. It is forbidden for any entity or individual to introduce employment opportunities to individuals under the age of 16. Individuals under the age of 16 are prohibited from starting individual business operations; <b>Article 6:</b> if an employer uses child labor, the labor administrative authorities shall impose a penalty according to a standard of 5,000 yuan per month for each employed child laborer.</p> <p><b>iii) Work Safety Law: Article 21:</b> The primary person in charge of a production and operation entity shall be responsible for establishing and improving its work safety responsibility system, developing policies, rules, and operating procedures for work safety, developing and implementing work safety education and training plans, supervising and inspecting work safety to eliminate hidden risks of work safety accidents in a timely manner, preparing and implementing emergency rescue plans for work safety accidents, and reporting work safety accidents in a timely and honest manner. <b>Article 73:</b> Departments in charge of supervision and control over work safety shall set up a complaint system, such internet reporting platforms as the complaint telephone numbers, mailbox numbers or e-mail addresses known to the public, to facilitate receipt of complaints related to work safety. <b>Article 74:</b> All units and individuals shall have the right to report or complain about hidden dangers that may lead to accidents and practices violating work safety laws to the departments in charge of supervision and control over work safety. <b>Article 75:</b> When community committees or villager committees discover hidden dangers that may lead to accidents or practices violating work safety laws in production and business units located in their areas, they shall report the matter to the local people's governments, or the departments concerned.</p> <p><b>iv) The Civil Code</b> requires that labor safety and hygiene facilities for new construction, reconstruction and expansion projects must be designed, constructed, put into production and used at the same time as the main project; a person who has been sexually harassed again will by another person through oral words, written language, images, physical acts, or the like, has the right request the actor to bear civil liability in accordance with law</p> <p><b>v) The Regulations on Work-Related Injury Insurance (Amended in 2010)</b> stipulate that enterprises, institutions, social organizations, private non-enterprise units, foundations, law firms, accounting firms and other organizations within the territory of the People's Republic of China, as well as individual industrial and</p>	

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	<p>commercial enterprises with employees (hereinafter referred to as "employers"), shall participate in work-injury insurance in accordance with the provisions of the Regulations, and pay work-related injury insurance premiums for all of the workers or employees of the organization (hereinafter referred to as "employees"). (Hereinafter referred to as employees) for all employees or hired workers (hereinafter referred to as employees) of the organization.</p> <p><b>vi) Law on the Prevention and Control of Occupational Diseases (2018 Amendment): Article 4:</b> Employees shall be entitled to occupational health protection according to law. Employers shall create work environment and conditions meeting the national occupational health standards and health requirements and take measures to ensure that employees receive occupational health protection. Trade unions shall oversee the prevention and control of occupational diseases and protect the lawful rights and interests of employees according to law. When formulating or amending rules and regulations on the prevention and control of occupational diseases, employers shall solicit the opinions of trade unions. <b>Article 5:</b> Employers shall establish and improve a responsibility system for the prevention and control of occupational diseases, strengthen the management of prevention and control of occupational diseases, improve their capabilities of prevention and control of occupational diseases, and assume responsibilities for their own occupational hazards. <b>Article 6:</b> The primary person in charge of an employer shall assume the overall responsibility for the employer's prevention and control of occupational diseases. <b>Article 7:</b> Employers must make work-related injury insurance available for its employees according to law. <b>Article 9:</b> An occupational health supervision system shall be implemented in China. <b>Article 10:</b> The State Council and the local governments at and above the county level shall prepare plans on the prevention and control of occupational diseases, which shall be included in the national economic and social development plan and organize the implementation of such plans.</p> <p><b>vii) Provisions on the Management of Occupational Hygiene in Workplaces (2020), article 8,</b> employers with serious hazards of occupational diseases shall set up or designate occupational hygiene management institutions or organizations with full-time occupational hygiene management personnel. <b>Article 9,</b> the main person in charge of the employing unit and the occupational hygiene management personnel shall have occupational hygiene knowledge and management ability appropriate to the production and business activities engaged in by the unit and shall receive occupational hygiene training. <b>Article 10:</b> Employers shall provide occupational hygiene training to workers before they start work and regular occupational hygiene training during their employment, popularize occupational hygiene knowledge, and urge workers to comply with laws, regulations, rules, national occupational hygiene standards and operating procedures for the prevention and treatment of occupational diseases. <b>Article 11:</b> Employers with occupational disease hazards shall formulate plans for the prevention and control of occupational disease hazards and implementation programs and establish and improve occupational health management systems and operating procedures. <b>Article 13,</b> where hazardous factors for occupational diseases listed in the Occupational Disease Catalog exist in the workplace of an employer, the employer shall, in accordance with the Measures for Declaration of Occupational Disease</p>	

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	<p>Hazardous Items, promptly and truthfully declare the occupational disease hazardous items to the competent department of health at the location and accept the supervision and inspection of the competent department of health.</p> <p><b>viii) The "Requirements and Guidelines for the Use of Occupational Health and Safety Management System" (2020)</b> requires enterprises to commit themselves to comprehensively and systematically identifying and controlling potential sources of occupational health and safety hazards of the organization, and to try their best to nip safety accidents that may arise in the course of the organization's activities in the bud, so as to achieve the purpose of protecting the health and safety of employees. Enterprises can apply for the certification of "Occupational Health and Safety Management System", and through the establishment of a systematic and standardized management system, identify the source of hazards and control the whole process, so as to achieve continuous improvement and compliance with the law. However, an occupational health and safety management system is not a mandatory requirement.</p> <p><b>ix) The Stock-breeding Law of the People's Republic of China (2022)</b> stipulates that the site selection of stock-breeding farms should comply with national regulations, keeping a considerable distance from drinking water sources, animal slaughter and processing facilities, and animal and animal product markets, with a minimum distance of at least 500 meters from other livestock farms or villages.</p> <p><b>x) The Law of the People's Republic of China on Animal Epidemic Prevention (2021)</b> mandates that livestock farms, quarantine facilities, slaughter and processing plants (yards), harmless treatment plants, and places for isolating infected animals must meet the animal epidemic prevention conditions specified by the administrative authorities of agricultural and rural affairs under the State Council.</p> <p><b>xi) The Food Safety Law of the People's Republic of China (2021)</b> requires that, in the slaughter and animal products processing phases, (i) food producers and operators must establish and implement a health management system for employees. Individuals suffering from diseases that jeopardize food safety, as specified by the health administrative department of the State Council, are prohibited from engaging in work involving direct contact with food intended for human consumption. (ii) personnel involved in work directly related to food for human consumption must undergo an annual health check. They are allowed to work only after obtaining a health certificate. Additionally, the law also establishes fundamental principles and systems for the quality and safety of agricultural products, including standards, monitoring, and traceability. Among which, specific requirements and management measures for the use of feed and veterinary drugs and agricultural product quality and safety in the livestock farming industry chain are outlined.</p> <p><b>xii) The Law of the People's Republic of China on Quality and Safety of Agricultural Products (2022)</b>, regulates that agricultural product production enterprises and cooperatives should issue a commitment certificate for the quality of its agricultural products and those entities or individual who sell these edible agricultural products must be responsible for the content of the commitment certificate. Entities engaged in the testing of agricultural product quality and safety must obtain a qualification certificate issued through</p>	

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	<p>assessment before conducting such testing activities.</p> <p>xiii) <b>Others:</b> The <b>Law of the People's Republic of China on the Prevention and Control of Infectious Diseases</b>, requiring that for external migrant workers who may pose a risk of infectious disease transmission, health checks and registration are required. Necessary preventive measures, such as vaccination and isolation treatment, should be implemented to prevent the spread of infectious diseases. The <b>Notice on Strengthening AIDS Prevention and Control Work in the Construction Industry (2005)</b> requires construction administrative authorities across regions to widely conduct AIDS prevention and control knowledge training for migrant workers. It emphasizes the improvement of the working environment and living conditions of on-site construction workers and the implementation of preventive immunization measures for AIDS and other statutory infectious diseases. The notice further calls for organizing pre-employment and routine health examinations for migrant workers. The <b>Public Security Administration Punishment Law of the People's Republic of China</b> requires that the construction unit shall proceed identity registration of migrant workers at local government and implement stringent measures against illegal activities and crimes to ensure social stability.</p>	
<p><b>Element 7:</b> (i) Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the PforR.</p>	<p><b>Environment:</b> Regarding the possible physical, biological, and chemical injuries during livestock production and risks of animal health, Diseases control, agro-food quality and safety, public health and OHS, China has established a comprehensive health and safety management system under a series set of laws, regulation, standards and guidelines, such as the “Law on the Prevention and Control of Occupational Diseases”, the “Provisions on the Prevention and Control of Occupational Diseases”, the “Law on Animal Epidemic Prevention”, the “Regulations on the Management of Veterinary Drugs”, the “Regulations on the Management of Pesticides”, the “Regulations on the Management of Medical Waste”, the “Regulations on the Implementation of Pest Control and Rodent Control in Grasslands” and relevant guidelines for safe use them, the “Safety Instruction Manual for Confined Space Operations”, etc. According to the “Classification of Occupational Hazards in Construction Projects”, risk of crop cultivation under agricultural sector is classified as “general”, risk of cattle and sheep farming are classified “severe”, risks of other operations related to livestock and poultry production, slaughtering, meat processing are classified “general”. With regard to livestock facilities, there are safety management procedures during design and construction; During the operation, to manage the safety of the use of veterinary drugs and pesticides, the competent government authorities (mainly the AHVMBs), provide official veterinarian service or unified service through procurement of specialized agencies for crop pest prevention &amp; control who have more stringent safety rules and regulations and preventive equipment to minimize the safety risks of small farmers and herdsman's exposure to pesticides. With regard to the management of risks of health and safety potentially brought by hazardous wastes from veterinary service labs and agro-food quality testing labs, collection, transferring and disposal of sick and dead animals and diseased animal products, mechanisms of “official veterinarian appointment”, “site certificated and institutions licensing”, “designated sites for</p>	<p>Consistent.</p>

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	slaughtering” , “link insurance with sanitary treatment of sick & dead animals”, “unified bills for collection, transferring and centralized sanitary treatment of medical wastes” etc., are implemented to minimize risks of operators, communities, public from exposure to hazardous wastes in the PforR activities.	
	<p><b>Social: i) Work Safety Law: Article 24:</b> An entity engaged in mining, metal smelting, building construction or road transportation, or an entity manufacturing, marketing, or storing hazardous substances shall establish a work safety management body or have full-time work safety management personnel. <b>Article 25:</b> The work safety management body and work safety management personnel of a production and operation entity shall be responsible for: (1) organizing or participating in the development of the work safety policies, rules and operating procedures and the emergency rescue plans for work safety accidents; (2) organizing or participating in and honestly recording its work safety education and training; (3) supervising the implementation of safety control measures for the major hazard installations of the production and operation entity; (4) organizing or participating in the emergency rescue rehearsals of the production and operation entity; (5) inspecting its work safety condition, conducting screening for any work safety risks in a timely manner, and offering recommendations for improving work safety management; (6) prohibiting and redressing any command against rules, forced operation at risk, or violation of the operating procedures; and, (7) supervising the work safety related corrective actions taken by the production and operation entity.</p> <p><b>ii) Regulations on the Safety Management of Hazardous Chemicals: Article 4:</b> A hazardous chemical entity shall provide safety education, legal education, and on-the-job technical training to its employees. Employees shall accept education and training and may not hold office until they have passed the relevant examinations.</p> <p><b>iii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use:</b> This is a regional standard on OHS management systems, designed to systematically identify and control occupational health and safety risks that may arise in organizational activities, products and services, prevent safety accidents, and protect workers’ health and safety. Enterprises may apply for OHS management system certification, establish a normative management system for the source identification and whole-process control of hazards, and realize continual improvement and compliance. An assessment includes: 1) OHS pre-assessment; 2) inspection reports on OHS and fire protection; 3) test reports on OHS and fire protection; 4) chemical safety reports for hazardous chemicals; 5) copy of manufacturing license (when required); and 6) copy of business license. The following shall be reviewed comprehensively: 1) the organization’s work safety permit; 2) production or service flowchart; 3) organizational chart; 4) list of applicable laws and regulations; 5) location map; 6) factory layout; 7) workshop layout; 8) list of major hazards; 9) OHS targets, indicators and management plan; and 10) certificate of compliance, etc.</p> <p><b>iv) Guidelines for Occupational Disease Prevention and Control for Employers:</b> The general requirements for occupational disease prevention and control, classified and tiered management, occupational health file management, and OHS assessment, etc. are stipulated, including: a corporate occupational health policy shall be developed, and an occupational disease prevention and treatment agency and an occupational health</p>	Consistent.

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	<p>management agency shall be established, with relevant functions being clearly defined and full or part-time occupational health officers being appointed; occupational disease prevention and control shall be included in the management-by-objective responsibility system; an occupational disease prevention and control plan, and an implementation plan shall be developed; a sound occupational health management system and job SOPs shall be established; sound occupational health files shall be established; efforts shall be made to establish a sound workplace occupational hazard monitoring and evaluation system, provide necessary financial support for occupational disease prevention and control, develop a sound emergency rescue plan for occupational diseases, and make work-related injury insurance available.</p> <p><b>v) Gansu Province "14th Five-Year Plan for Occupational Diseases Prevention and Control" (GWF [2022] No.36):</b> By 2025, a sounder occupational health management system shall be established, the occurrence of occupational diseases will be significantly reduced, the labor management and working time management will be further improved, key occupational diseases like pneumoconiosis will be effectively controlled and the service for occupational health will be significantly improved, the awareness of the public on occupational health will be improved and workers health condition will be further improved. Below are the main objectives: the number of contributors of work-related injury insurance is increased steadily; over 90% of industrial enterprises and projects exposed to occupational hazards are declared; over 85% of workplaces pass the occupational hazard monitoring; over 90% of non-medical radiation workers receive the radiation dose monitoring; over 85% of key groups exposed to occupational hazards have a good knowledge of occupational health protection; the rate of accessibility of centralized pneumoconiosis rehabilitation service in townships (communities) is over 90%; occupational health violations are fully investigated and handled; existing medical resources are made use of to establish provincial medical institutions providing occupational diseases treatment; at least one provincial agency is designated to provide technical guidance on the protection against occupational hazards such as dust, poisonous chemicals, noise and radiation; at least one public medical and health institution in every city (prefecture) is designated to provide diagnosis of occupational diseases; at least one public medical and health institution in every city, county and district to provide occupational health examination with a service coverage of 95%.</p>	
(ii) Promote the use of integrated pest management practices to manage or reduce the adverse impacts of pests or	<p><b>Environment:</b> China has a mature pesticide management system and has formulated regulations and systems such as the “Regulations on Pesticide Management”, the “Regulations on the Implementation of Pest Control and Rodent Control in Grasslands” and the “Regulations on the Prevention and Control of Crop Diseases and Pests”. The production and marketing of pesticides shall be subject to a licensing system, and pesticide users shall use pesticides according to requirements. In grassland management practice, following principles of prevention first, comprehensive treatment and ecological priority, those insecticides and rodenticides with high efficiency, low-toxicity, economic and safe natures are used with the help of helicopters and drones flight prevention and artificial + large, small and medium-sized equipment and other equipment for spraying, while chemicals with secondary poisoning and serious environmental pollution effects will be strictly</p>	Consistent.

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disease vectors	prohibited. Such activities are subject to supervision of FGBs' law enforcement teams. In the forage cultivation practice, the IPM is encouraged. Reduced use of pesticide actions is being taken through the use of ecological management, healthy cultivation, biological control, physical control and other green prevention and control technologies. ARABs at all levels have full-time institutions responsible for the comprehensive supervision of pest control and pesticide reduction. .	
(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.	<b>Environment:</b> The use of chemical pesticides in the prevention and control of pests and diseases in artificial forage cultivation may involves the use of organophosphorus pesticides, chloramine and other hazardous chemicals that are harmful to operators' health. In accordance with the Regulations on the Safety Management of Hazardous Chemicals, the Catalogue of Hazardous Chemicals, the Law on Safety in Production, and the Law on the Prevention and Control of Occupational Diseases, the IPM measures are promoted the reduction of toxic chemical pesticides. Specialized organizations are purchased by county ARABs for providing unified service for prevention and control of crop pests. These specialized organizations have formulated sound safety management systems and better measures and equipment for pesticides application, operators are equipped with standard labor protective equipment under the guidance and supervision of ARABs or AHVMBs.	Consistent.
	<b>Social:</b> <b>i) Regulations on the Safety Management of Hazardous Chemicals: Article 4:</b> A hazardous chemical entity shall provide safety education, legal education and on-the-job technical training to its employees. Employees shall accept education and training and may not hold office until they have passed the relevant examinations. <b>ii) Occupational Health and Safety Management Systems—Requirements with Guidance for Use:</b> This is a regional standard on OHS management systems, designed to systematically identify and control occupational health and safety risks that may arise in organizational activities, products, and services, prevent safety accidents, and protect workers' health and safety. Enterprises may apply for OHS management system certification, establish a normative management system for the source identification and whole-process control of hazards, and realize continual improvement and compliance. An assessment includes: 1) OHS pre-assessment; 2) inspection reports on OHS and fire protection; 3) test reports on OHS and fire protection; 4) chemical safety reports for hazardous chemicals; 5) copy of manufacturing license (when required); and 6) copy of business license. The following shall be reviewed comprehensively: 1) the organization's work safety permit; 2) production or service flowchart; 3) organizational chart; 4) list of applicable laws and regulations; 5) location map; 6) factory layout; 7) workshop layout; 8) list of major hazards; 9) OHS targets, indicators and management plan; and 10) certificate of compliance, etc. <b>iii) Guidelines for Occupational Disease Prevention and Control for Employers:</b> The general requirements for occupational disease prevention and treatment, tiered and classified management, occupational health file management, and OHS assessment, etc. are stipulated, including: a corporate occupational health policy shall be developed, and an occupational disease prevention and treatment agency and an occupational health management agency shall be established, with relevant functions being clearly	Consistent.

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
	defined and full or part-time occupational health officers being appointed; occupational disease prevention and control shall be included in the management-by-objective responsibility system; an occupational disease prevention and control plan, and an implementation plan shall be developed; a sound occupational health management system and job SOPs shall be established; sound occupational health files shall be established; efforts shall be made to establish a sound workplace occupational hazard monitoring and evaluation system, provide necessary financial support for occupational disease prevention and control, develop a sound emergency rescue plan for occupational diseases, and make work-related injury insurance available.	
<p><b>Element 8:</b> Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the PforR activities are located in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events affected by</p>	<p><b>Social:</b></p> <p><b>i) Regulations on the Defense against Meteorological Disasters: Article 27:</b> When implementing major national construction projects and major regional economic development projects, and preparing urban and rural development plans, governments at or above the county level shall consider climatic feasibility and risks of meteorological disasters and take actions to avoid or mitigate such impacts. <b>Article 23:</b> Lightning protection devices of buildings, places and facilities shall comply with the national lightning protection standards. Lightning protection devices of newly constructed, reconstructed or expanded buildings, places and facilities must be designed, constructed, and put into operation together with main parts of the project.</p> <p><b>ii) Regulations of the People's Republic of China on Flood Control:</b> Systematic arrangements for flood control in terms of organization, preparation, implementation, emergency rescue, recovery, and funding, etc. are made.</p> <p><b>iii) Regulations on the Prevention and Control of Geologic Disasters: Article 10:</b> A geologic disaster investigation system shall be practiced at the state, provincial and county levels. The land and resources authority shall work out the planning on prevention and control of geologic disasters within its own jurisdiction according to the result from investigation of geologic disasters within such jurisdiction as well as the planning of the next higher level on prevention and control of geologic disasters and submit it to the government at the same level for approval and promulgation after expert evaluation. Systematic arrangements for the investigation, prevention and control of geological disasters are made in terms of the prevention, emergency response and control of geological disasters, and legal responsibilities, etc.</p> <p><b>iv) Law on Protecting Against and Mitigating Earthquake Disasters: Article 35:</b> The construction projects newly built, expanded or rebuilt shall meet the seismic fortification requirements. The major construction projects and the construction projects which may induce serious secondary disasters shall be subject to the seismic safety evaluation as required, and the seismic fortification shall be conducted in accordance with the seismic safety evaluation 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</p>	Consistent.

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	or the ground motion parameter zoning map. The construction projects in densely populated places such as schools and hospitals shall be designed and constructed in compliance with the seismic fortification requirements higher than those for other buildings in the locality, and effective measures shall be taken to increase the capability of seismic fortification.	
<b>Principle #4:</b> 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.		
<b>Element 9:</b> i) Avoid or minimize land acquisition and related adverse impacts.	<b>i) Measures for the Administration of the Pre-examination on the Use of Land for Construction Projects:</b> The area and type of the land used for the project shall be identified before the feasibility study report or project proposal is reviewed to avoid the acquisition of permanent basic farmland, and nature reserves, etc. <b>ii) Guidelines on Establishing a Sound Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim) (CPCCCO [2012] No.2):</b> An SSRA shall be conducted for any project involving LA and HD, farmers' burden or social security. <b>iii) Guidelines on Establishing a Social Stability Risk Assessment Mechanism for Major Decisions and Matters (Interim):</b> If the assessment report thinks that a high risk is present, a decision of non-implementation shall be made, or a decision may be made after the plan is adjusted or the risk level is reduced; if an moderate risk is present, a decision of implementation shall be made after effective risk prevention and mitigation measures are taken; and if a low risk is present, a decision of implementation may be made, provided that actions like explanation and persuasion to the people affected are taken and reasonable requests of people affected are handled properly. For impact and risk management, the legitimacy, rationality, feasibility and controllability of measures shall be assessed. <b>iv) Opinions on Strengthening Social Stability Risk Assessment for Major Decisions under New Circumstances:</b> SSRA, if required, shall be an important part of the feasibility study of any major construction project. Major decisions, items and matters with low social stability risks decided to be put in place when conditions are ripe shall be advanced in a well-planned way in accordance with the risk control plan. If social stability risks are identified and the conditions are not ripe, the decision making shall be subject to approval or be postponed until the original plan is improved, the conditions are ripe, and risks are eliminated. Decisions, items and matters urgently needed to be put in place despite high risks shall be advanced prudently and carefully after precautionary and mitigation measures are taken. Those with major social stability risks and fall short of relevant requirements shall in no case be put in place. <b>v) The Circular of the MNR on Regulating the Management of Temporary Land Use (Natural Resources Regulation [2021] No. 2)</b> requires that cultivated land should be occupied as little or as little as possible. Temporary land that is difficult to reclaim land after use should strictly control the occupation of cultivated land and is required to restore the original planting conditions after the construction is completed. <b>vi) Notice of MNR, MARA and NFGA on Issues concerning Strict Control of Cultivated Land Usage (MNRP [2021] No.166),</b> requiring that permanent basic farmland shall not be converted into forest land,	Consistent

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	<p>grassland, garden land and other agricultural land or agricultural facilities construction land. The annual "balance in and out" shall be carried out for any conversion of cultivated land to other agricultural land and agricultural facilities construction land, and the same amount and quality of cultivated land shall be made up by means of the consolidation of forest land, grassland, garden land, other agricultural land and agricultural facilities construction land into cultivated land.</p> <p><b>vii) Measures for the Administration of the Transfer of Rural Land Management Rights (MARA, Decree No. 1, 2021)</b>, which requires that when the transferee subject submits an application, the local people's government at or above the county level or the people's government of the township or township shall, in accordance with the law, organize an examination and review by the relevant departments, representatives of the collective economic organization of the rural area, representatives of the farmers, and experts on the use of the land, the ability of the transferee subject to engage in agricultural business, and whether the business project is in line with the planning of the food production industry and other industrial planning, etc., and that where an application for the examination and review is not submitted in accordance with the regulations or where the examination and review fails to be carried out, the transfer of the right to operate the land may not proceed.</p> <p><b>viii) Implementing Opinions of the CPC Gansu Provincial Committee and the People's Government of Gansu Province on Strengthening the Protection of Cultivated Land and Improving the Balance of Occupancy and Compensation (GZBF [2019]):</b> 1) Strengthening the control of land planning and the control of use, giving full play to the overall control role of the overall plan for land use, approving the scale of new construction land in a stringent manner, optimizing the layout of construction land, and controlling the occupancy of cultivated land for construction in a stringent manner, especially high-quality cultivated land. 2) Strictly delineating and protecting permanent basic farmland. Basic farmland delimitation and protection, all relevant departments in the preparation of urban and rural construction, infrastructure, ecological construction and other related planning, to promote the process of multi-planning, should be fully integrated with the layout of permanent basic farmland, in principle, shall not break through the boundaries of the permanent basic farmland. 3) Strictly control the occupation of non-agricultural construction of permanent basic farmland. Once the permanent basic farmland is delineated, no unit or individual shall occupy or change the use without authorization. In addition to the legal provisions of the energy, transportation, water conservancy, mining, military facilities and other national and provincial key construction projects site cannot be avoided, any other construction projects are not allowed to occupy permanent basic farmland, and resolutely prevent the permanent basic farmland "non-farming". If it is really difficult to avoid the permanent basic farmland for major construction projects, the necessity, reasonableness and feasibility of the replenishment program must be rigorously demonstrated during the feasibility study stage, and the land use pre-approval of the Ministry of Land and Resources must be passed; and the conversion of agricultural land and land acquisition shall be reported to the State Council for approval in accordance with laws and regulations. 4) Ease the pressure on the occupation of cultivated land for construction with land-saving and land-intensive use. Strictly control the total amount and</p>	

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	<p>intensity of construction land. 5) Do a good job of demonstrating the occupation of cultivated land for construction, strictly implement the rules of determining the occupation by replenishment, replenishment before occupation, and guide the construction projects not to occupy or occupy less cultivated land, and avoid the cultivated land of higher quality grade if it is necessary to occupy cultivated land. Strengthening the pre-examination of construction land, strict project control, land use pre-examination stage, prohibit the approval of construction projects unrelated to environmental protection at all levels and in all types of protected areas. 6) Reasonably adjust the proportion of construction land structure. Activate the stock of construction land, guide the structural adjustment of urban construction land, optimize the structure of rural construction land, promote the structural adjustment of urban and rural land use, reasonably increase urban land use, and increase the remediation of idle, unused and inefficient land in rural areas.7) Strictly prevent the "non-agriculturalization" of collective land transfer. Strictly adhere to the agricultural use of agricultural land, strictly prohibit non-agricultural construction in the name of agricultural land transfer, prevent the "non-food" and "non-farming" of cultivated land, and strictly prohibit the "non-farming" of cultivated land. 8) Strictly implement the responsibility of cultivated land occupation and replenishment balance, and complete the task of replenishing cultivated land.</p> <p>ix) <b>The Notice of Gansu DNR on Implementing the Requirements of MNR Circular to Further Strengthen the Management of Temporary Land Use (GZZ [2021] No. 81)</b> stipulates that TLU shall try not to take up or take up as little as possible of cultivated land. If it is difficult to restore the original planting conditions, such as girder making yard and mixing station, the TLU shall not occupy cultivated land and permanent basic farmland, and the land can be used in the way of construction land use or temporary occupation of unutilized land. If the TLU does need to occupy permanent basic farmland, it must be able to restore the original planting conditions.</p> <p>x) <b>Notice on Issues Related to the Management of Facility Agricultural Land (ZRZG [2019] No. 4)</b>, strictly defines the scope of facility agricultural land, clarifies the support policies and regulatory opinions for facility land directly used for crop cultivation and livestock, poultry and aquaculture in agricultural production, and at the same time, requires the relevant departments at the provincial level to highlight the characteristics of the local conditions, and to further refine the scale of production and construction standards.</p> <p>xi) <b>The Measures for Implementation of the Land Management Law of the People's Republic of China in Gansu Province (effective January 1, 2022)</b> clearly states that "any unit or individual is prohibited from engaging in land development activities within the scope of prohibited reclamation as determined by the spatial planning of the land. It is prohibited to destroy forests and grasslands to reclaim cultivated land, and it is prohibited to encircle lakes to create fields and encroach on river banklands"; at the same time, the Measures also propose that "county (city and district) people's governments shall implement the national rural revitalization strategy, and safeguard the demand for land for the development of rural industries, rural public facilities, and construction of public welfare undertakings in accordance with law, as well as reserving relevant</p>	

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	<p>construction land indexes in accordance with state regulations. Land use indicators. On the premise of conforming to the land use scope and scale standards stipulated by the State and the province, priority may be given to arranging land for facility agriculture that is directly used for crop cultivation and livestock, poultry and aquaculture".</p> <p>xii) <b>"Notice on Strengthening the Management of Facility Agriculture Land Use (2020, Gansu DNR and DARA)"</b> clearly puts forward that "the land use agreement for facility agricultural land shall be implemented under the land use agreement filing system, which shall be filed by the township under the jurisdiction of the township, and the township government and the collective economic organization of the village shall be the main body of the management of the land used for facility agricultural land, and the county-level department of natural resources and the department of agriculture and rural areas shall be responsible for the supervision of facility agricultural land". The county-level natural resources departments and agricultural and rural departments are responsible for the supervision of agricultural land for facilities", and accordingly formulated strict procedures and work requirements.</p>	
<p>(ii) Identifying and addressing economic and social impacts arising from land acquisition or loss of access to natural resources:</p>	<p><b>i) Land Administration Law: Article 26:</b> Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate as required by the local land and resources authority. For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures.</p> <p><b>ii) Regulations for the Implementation of the Land Administration Law: Article 25:</b> Municipal or county government of the locality whose land has been expropriated shall, upon approval of the LA plan according to law, organize its implementation, and make an announcement in the township and village where land acquisition occurs on the approval organ of the LA, number of the approval document, use, scope and area of the acquired land as well as the rates for compensation of LA, measures for the resettlement of agricultural workers and duration for processing LA compensation. <b>Article 26:</b> Land compensation fee shall go to the rural collective economic organization, and compensation for ground attachments and standing crops shall be disbursed to their owners.</p> <p><b>iii) The Measures for the Administration of the Transfer of Rural Land Management Rights (Order No. 1 of MARA, 2021)</b> requires that the transfer of land management rights should follow the principles of lawfulness, voluntariness, and compensation, and that a contract for the transfer of land management rights should be signed; and that the proceeds from the transfer of land management rights should be attributed to the contracting party. In addition, a full set of mechanisms for handling complaints regarding compensation for land expropriation has been established from the grassroots level in rural areas or communities, to townships, and to governments at the county level and above. If affected persons are dissatisfied with the handling of identification, compensation and resettlement affecting their rights and interests, villagers may appeal to the president or village committee and request that the matter be handled, or they may apply to the township</p>	<p>Consistent.</p>

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	<p>government and the county and municipal governments for handling of the matter.</p> <p><b>iv) The Regulations on Letters and Visits (2022)</b>, the letters and calls departments of the Party committees and governments at all levels shall fulfill their duties of accepting, transferring, handing over and coordinating the resolution of complaints, and supervising and checking. If the complainant is not satisfied with the outcome of the complaint, he or she may also resolve the dispute through legal proceedings to safeguard his or her legitimate rights and interests.</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><b>i) Real Right Law: Article 42:</b> For collective land acquired, land compensation, resettlement subsidy, compensation for ground attachments and standing crops, etc. shall be fully paid according to law, and social security funds for land-expropriated farmers shall be appropriated to secure their livelihoods and protect their lawful rights and interests. Where any house or other immovable property of any entity or individual is expropriated, compensation shall be granted according to law to protect the lawful rights and interests of the affected entity or individual. Where any personal residence is expropriated, the affected person's housing conditions shall be secured.</p> <p><b>ii) Land Administration Law: Article 48:</b> Fair and reasonable compensation shall be granted for land acquisition. In case of land acquisition, the land compensation, resettlement subsidy, and compensation for rural residential houses, other ground attachments and standing crops, etc. shall be paid timely and fully according to law, and social security costs for the affected farmers shall be disbursed.</p> <p><b>iii) Notice of the People's Government of Gansu Province on Issuing the Standard of Block Compensation Land Price on Farmland Acquisition (GZF [2023] No.55)</b>, clarified that 60% of the block comprehensive land price is the resettlement subsidy and 40% is the land compensation fee, excluding the social security insurance subsidies for land-lost farmers as stipulated by law; for other farm land and construction land, one time of the standard shall be applied; for unused land acquired, .0.1 times of the standard shall be applied, In addition to the explicit price of grassland in pastoral areas, 0.4 times of the standard shall be applied for grassland in other non-pastoral agricultural land acquired; for state-owned farmland and construction land (got the land through allocation), refer to the compensation standard of collective land within the region; for state-owned unused land, no compensation is required.</p>	<p>Consistent.</p>
<p>iv) Provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income-</p>	<p><b>i) Land Administration Law: Article 48:</b> Efforts shall be made to ensure that living standard of farmers affected by land expropriation are not reduced, and that their long-term livelihoods are secured.</p> <p><b>ii) Guidelines on Improving the Compensation and Resettlement System for Land Acquisition (MLR [2004] No.238):</b> 1) Agricultural resettlement: When rural collective land out of urban planning areas is acquired, land-expropriated farmers shall be first provided with necessary cultivated land in forms of mobile collective land, contracted land turned over by contractors and cultivated 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</p>	<p>Consistent.</p>

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generating opportunity (e.g., loss of crop production or employment).	<p>urban planning areas is acquired, land-expropriated farmers shall be included in the urban employment system and the social security system. 3) Dividend distribution resettlement: when any land with long-term stable yields is to be used for a project, the affected rural collective economic organization may become a project shareholder with compensation fees for LA or rights to use construction land in consultation with the land user. The rural collective economic organization and rural households will receive dividends as agreed. 4) Non-local resettlement: if basic production and living conditions are not available locally to land-expropriated farmers, non-local resettlement may be practiced under the leadership of the government in consultation with the rural collective economic organization and rural households.</p> <p><b>iii) Notice on Doing a Good Job in Employment Training and Social Security for Land-expropriated Farmers (SC [2006] No.29):</b> Employment training and social security for land-expropriated farmers shall be an important part of land acquisition system reform. Local governments shall, against the backdrop of coordinating economic and social development in urban and rural areas, enhance employment training and social security, include employment of land-expropriated farmers in the economic and social development plans and annual plans of local governments, establish a social security system suited to the characteristics and needs of land-expropriated farmers, take effective measures to secure employment training and social security funds, help land-expropriated farmers get employed and assimilate into the urban community, and ensure that the living standard of land-expropriated farmers is not reduced due to land expropriation and that their long-term livelihoods are secured.</p> <p><b>iv) Notice of the Ministry of Labor and Social Security and the Ministry of Land and Resources on Doing a Substantially Good Job in Social Security for Land-expropriated Farmers (MLSS [2007] No.14):</b> All localities shall establish a social security system for land-expropriated farmers as soon as possible. Funds required for social security for land-expropriated farmers shall be fully transferred to the special account and credited to the individual or pooling account within 3 months after the approval of the land acquisition compensation and resettlement plan.</p> <p><b>v) Implementation Measures for Basic Endowment Insurance for Land-lost Farmers in Gansu Province (GZZ [2021] No.81),</b> farmers, who lost their contracted land (including pasture, grassland) due to unified land acquisition by the government, shall be covered by the social security system. The application shall be prepared by the land expropriated individuals, discussed by the rural collective economic organization or villagers' committee, primarily checked by the township (subdistrict) government, reviewed by county or municipal or district level ARAB or NRB and confirmed by HRSSB. After that, the township (subdistrict) government shall disclose the information within the affected rural collective economic organizations or village committees for no less than 10 days., and then submitted to county or municipal or district level government for approval and HRSSB for registration. Land-expropriated farmers who meet the conditions can choose to participate in the basic endowment insurance for urban workers or social endowment insurance for urban and rural residents on their own will, and the subsidy funds for the participation of land-lost farmers in basic endowment insurance</p>	

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	should be included in the project budget, counted as part of the cost of land acquisition, and arranged separately and in full in the compensation costs. The standard for the subsidy funds is the average annual wage of employed persons in full-calibre urban units in the previous year, multiplied by the proportion of land acquired	
v) Restore or replace public infrastructure and community services that may be adversely affected by the Program.	<p><b>i) Land Administration Law: Article 47:</b> For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic organization and its members, village committee and other stakeholders affected.</p> <p><b>ii) Regulations for the Implementation of the Land Administration Law: Article 25:</b> Municipal or county government of the locality whose land has been acquired shall, upon approval of the LA plan according to law, organize its implementation, and make an announcement in the township and village where land acquisition occurs on the approval organ of the LA, number of the approval document, use, scope and area of the acquired land as well as the rates for compensation of LA, measures for the resettlement of agricultural workers and time limit for completing LA compensation.</p> <p><b>iii) Real Right Law: Article 36:</b> If any immovable or movable property is damaged, the right holder may request repair, rework, replacement or restoration.</p>	Consistent.
(vi) Information disclosure, public participation and informed decision-making	<p><b>i) Land Administration Law: Article 26:</b> Owners or users of the land to be expropriated shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate as required by the local land and resources authority. For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. <b>Article 47:</b> If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic organization and its members, village committee and other stakeholders affected.</p> <p><b>ii) Regulations on Letters and Visits: Article 14:</b> The Party Committee and relevant departments of the people's government at all level, as the specific administrative organ in charge of complaint letters and visits, shall perform the following duties: (1) to accept, transmit and assign another organ to handle the letter-or-visit matters; (2) to coordinate efforts in handling important letter-or-visit matters;; (3) to urge and examine the handling of letter-or-visit matters; (4) to reflect the information of letters and visits, analyze and judge the situation of both letters and visits, provide suggestions to party committees and governments for decision making; (5) to provide guidance to other relevant departments of the people's government at the corresponding level and the department or units for letters and visits of the people's government at lower level in their work</p>	Consistent.

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	<p>regarding letters and visit; (6) to provide suggestions for work, policy and accountability improvement; and (7) to undertake other tasks assigned by the Party Committee and people's government at the corresponding level.</p> <p><b>iii) Document No.1 of the Central Government (2020):</b> Leaders, especially municipal and county leaders, shall pay regular visits to departments at grass-roots level to deal with complaints proactively. Diversified legal services like designating one legal adviser for each village shall be offered, and civil mediation shall be strengthened to ensure that disputes and conflicts are resolved at the village and township level where possible. Unblocked complaint channels shall be made available for farmers to have their reasonable complaints resolved timely and properly.</p> <p><b>iv) Standard Guide to Grass-root Government Affairs Disclosure on Collective Land Acquisition (June 2019, Ministry of Natural Resources):</b> Efforts shall be made to define matters to be disclosed and the scope of disclosure, standardize the disclosure procedures, improve modes of disclosure, and practically safeguard the people's rights to know, participate, oversee and be heard. The main objectives of public participation at different stages of LAR are as follows:</p> <ul style="list-style-type: none"> <li>• During project preparation, option argumentation and comparison, the project owner and design agency shall conduct meaningful consultation with affected people and other stakeholders, improve the engineering measures, and determine the range of land use based on feedback, thereby evading sensitive objects and minimizing LAR impacts.</li> <li>• Participation at the DMS stage includes land acquisition announcement, DMS publicity, participation in the DMS, and confirmation, disclosure and review of DMS results.</li> <li>• At the SSRA stage, meaningful consultation shall be conducted with stakeholders to assess potential major social risks arising from land expropriation and house demolition, including other major risks that are not directly related to but may materially affect the project.</li> <li>• During the drafting of the compensation plan, the plan should be disclosed to collect comments from affected people, and a public hearing will be held when necessary.</li> <li>• Public participation at the implementation stage mainly includes effective information disclosure and consultation in relation to production and livelihood restoration and the allocation and use of compensation to ensure that opinions of the affected people are heard and agreements are signed through negotiation.</li> </ul> <p><b>v) Notice on Implementing MNR Requirements on Further Strengthening Temporary Land Use Administration (GZZ [2021] No.81),</b> requiring that TLU agreement shall be signed with the rural economic organizations or village committees in terms of occupying collective land, and confirmation of farmers shall be attached if farmers' contracted land involved.</p>	
<b>Principle #5:</b>	Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of indigenous people and vulnerable groups.	
<b>Element 10:</b>	<p><b>i) Constitution: Article 4:</b> All ethnic groups in the People's Republic of China are equal.</p> <p><b>Undertake prior ii) Law of the People's Republic of China on Regional National Autonomy: Article 51:</b> In dealing with</p>	Generally consistent. Recommendation:

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<p>informed consultations if the ethnic minorities are potentially affected (positively or negatively) free of charge, to determine whether there is broad community support for the PforR Program activities.</p>	<p>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. <b>Article 52:</b> The organ of self-government of a national autonomous area shall guarantee that citizens of the various nationalities in the area enjoy the rights of citizens as prescribed in the Constitution.</p> <p><b>iii) Social Stability Risk Assessment of Major Fixed Asset Investment Projects: Article 3:</b> At the feasibility study stage of a project, the PIU (or through a specialized agency) shall conduct an SSRA to identify impacts, propose mitigation measures, and prepare an SSRA report. On the other hand, if a government at or above the county level applies for land acquisition, a current status survey and an SSRA should be conducted for the land to be expropriated. The SSRA report shall be reviewed by experts organized by the designated authority of the county government before being approved. Local governments have issued opinions or notices on the implementation of SSRA, such as the Notice of Gansu Provincial Committee and Government on Issuing Several Implementation Measures for Strengthening the Mechanism of Social Stability Risk Assessment for Major Decisions under New Circumstances (GBF [2021] No.33).</p> <p><b>iv) Land Administration Law (2020): Article 47:</b> For expropriation of land by the state, the local governments at and above the county level shall make an announcement and organize implementation after approval according to the legal procedures. If a government at or above the county level is to apply for land acquisition, it shall conduct the current status survey and SSRA, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township, village and village group affected for at least 30 days to collect comments from the rural collective economic organization and its members, village committee and other stakeholders affected.</p> <p>However, there are various types of beneficiaries of the Program, although existing information disclosure channels and GRMs are functioning, there is a call for improving and diversifying information delivery channels from farmers, such as written manuals, electronic versions, online platforms, specific promotion and awareness raising to different target groups like women, ethnic minorities, older people, etc. In addition, there is a need for strengthen the GRM to manage potential risk of uneven benefit distribution and E&amp;S risks management.</p>	<p>Strengthen the engagement and grievance management to ensure all beneficiaries are well informed and engaged with the Program, particularly women, ethnic minorities and older people.</p>
<p><b>Element 11:</b> Ensure that ethnic minorities can participate in devising opportunities to benefit from exploitation of customary</p>	<p><b>i) Law of the People's Republic of China on Regional National Autonomy: Article 65:</b> While exploiting resources and carrying out construction in national autonomous areas, the state shall give consideration to the interests of these areas, make arrangements favorable to local economic development and pay proper attention to the productive pursuits and the life of local minority nationalities. <b>Article 66:</b> State organs at higher levels shall incorporate major projects for maintaining ecological balance and achieving comprehensive environmental protection in national autonomous areas into national economic and social development plans.</p> <p><b>ii) Interim Regulations on Major Administrative Decision-making Procedures (2019.9.1):</b> Prior public consultation shall be conducted for decision makings in relation to the development of important plans for economic and social development and other aspects, the development of major public policies and measures to</p>	<p>Generally, consistent. Recommendation: Establish social benefit monitoring system to monitor beneficiaries composition and distribution of benefits, to promote the Program objective of all</p>

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
<p>resources and indigenous knowledge, the latter to include the consent of ethnic minorities.</p>	<p>develop, utilize and protect important natural and cultural resources, the implementation of major public construction projects in the administrative region, and other major matters that have a significant impact on economic and social development, involve material public interests, or the immediate interests of the public.</p> <p><b>Article 14:</b> The decision-making entity shall fully solicit opinions in the form widely available for public participation. Opinions may be solicited in such forms as symposiums, hearings, field visits, written solicitation of opinions from the public, questionnaires, and opinion polls, etc. <b>Article 15:</b> If public opinions are solicited for a matter subject to decision-making, the decision-making entity shall disclose the draft decision and its explanation, and the mode and period of solicitation of public opinions by publicly available means, such as government website, new media, newspapers, radio and TV, etc. The period of solicitation of public opinions is usually not less than 30 days, and explanations shall be made when the solicitation of public opinions begins if such period is to be shortened due to emergencies. For matters of extensive public concern, or highly technical matters, the decision-making entity may make explanations by means of expert interview, etc. <b>Article 16:</b> If any matter subject to decision-making concerns immediate interests of citizens, legal persons or other organizations, or involves a major dispute, a public hearing may be held in accordance with any applicable laws, regulations and rules. The decision-making entity or the organizer of the public hearing shall disclose the draft decision and its explanation in advance, and make clear the time and venue of the public hearing. <b>Article 29:</b> If the public participation procedure is performed, the decision-making entity shall submit the draft decision together with main accepted public opinions to the decision-making authority for discussion. <b>Article 30:</b> When the draft decision is discussed, the meeting attendees shall give opinions adequately, and chief administrative officer shall give a final opinion. If such final opinion differs from the majority opinion, the reason shall be given at the meeting.</p> <p><b>iii) The 13<sup>th</sup> Five-Year Plan for Economic and Social Development of Ethnic Minorities-concentrated Areas of Gansu Province</b> setting objectives in the area of accelerating infrastructure construction, poverty alleviation, social programs, ecological construction, industrial restructuring, etc., increasing capital investment to ethnic minority areas, providing more preferential policies and financial support and solving the shortages in their development.</p> <p>Compared to enterprises, cooperatives and family farms may face more challenges and vulnerabilities in livestock farming development. There is a potential risk that social benefits and beneficiary composition (gender, ethnic minority etc.) do not improve over time. To promote the objective of all target farms, regardless of farm size and structure, gender and ethnicity, benefitting equally from the Program, beneficiary monitoring will enable ongoing assessment of the nature and scale of these risks and how (and whether) they are benefitting from the program or affecting the associated risks.</p>	<p>beneficiaries equally benefitting from the Program.</p>
<p><b>Element 12:</b> Give attention to</p>	<p><b>i) Notice of the State Council on Issuing the 13th Five-year Plan for Promoting the Development of Minority Areas and Smaller Ethnic Minorities (SC [2016] No.79):</b> The development of advantaged and</p>	<p>Generally consistent. Recommendation: (i)</p>

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
<p>groups vulnerable to hardship or discrimination, including, as relevant, the poor, disabled, women and children, the elderly, ethnic minorities, racial groups, or other marginalized groups; and if necessary, take special measures to promote equitable access to PforR Program benefits, and if necessary, take special measures to promote equitable access to PforR Program benefits.</p>	<p>characteristic industries, especially stockbreeding and traditional handicrafts, of poor ethnic minority areas and villages shall be supported, and efforts shall be made to achieve rural revitalization and poverty alleviation by developing village-specific leading products and industries and making use of the Internet in poor villages. Poverty alleviation by e-commerce, photovoltaic, rural tourism, etc. shall be implemented to increase local residents' income, and major infrastructure and construction projects shall be carried out in ethnic minority areas to improve livelihoods. Basic social service mechanisms in ethnic minority areas shall be improved to provide support in old-age services, social assistance, social welfare, special care and resettlement. The disaster assistance and emergency relief system for natural disasters shall be improved in ethnic minority areas. Urban and rural minimum living security (MLS) standards for ethnic minority areas shall be fixed rationally, and the sound development of public welfare and charity programs shall be supported.</p> <p><b>ii) The Opinions on Reform and Improvement of the Social Assistance System (ZBF [2020] No. 18)</b> calls for the integrated development of the social assistance system, the consolidation of the results of the poverty eradication campaign, and the practical realization of the bottom line of basic livelihood protection. Families in which the per capita income of family members living together is less than the local minimum subsistence guarantee standard and in line with the property status regulations are given minimum subsistence guarantee. For urban and rural elderly people, persons with disabilities, and minors who are unable to work, have no source of livelihood, and have no legal obligor to provide support or maintenance, or whose legal obligor has no ability to fulfill his or her obligations, they are provided with assistance and sustenance for persons in special hardship. At the same time, special social assistance in the areas of medical care, housing, education and employment is provided in accordance with actual needs. For low-income families that do not meet the requirements for low-income insurance or special hardship support, and for families with large rigid expenditures that cause serious difficulties in their basic lives, special social assistance in the form of medical care, housing, education, employment, etc. is provided in accordance with actual needs, or other necessary assistance measures are implemented. Families or individuals suffering from emergencies, accidental injuries, major illnesses, public health emergencies such as infectious disease outbreaks, or other special reasons that lead to temporary difficulties in their basic lives, as well as those who are in temporary distress and have no means of subsistence, are provided with social assistance in emergencies. In the event of a natural disaster, assistance is provided to those affected by the disaster.</p> <p><b>iii) Several Measures on Reform and Improvement of the Social Assistance System (GBF (2021) No. 5)</b> focuses on creating a multi-level assistance system, continuously expanding the ways of providing social assistance, promoting the integrated and coordinated development of urban and rural areas, improving the minimum subsistence guarantee system, improving the system of providing assistance and support to people in special hardship, improving the mechanism for dynamic adjustment of assistance standards, and improving the mechanism for dynamic management of assistance recipients. The provincial and municipal civil affairs departments have formulated detailed requirements and specifications for such work as strengthening guidance</p>	<p>Strengthen the engagement and grievance management to ensure all beneficiaries are well informed and engaged with the Program, particularly women, ethnic minorities and older people. (ii) Establish social benefit monitoring system to monitor beneficiaries composition and distribution of benefits, to promote the Program objective of beneficiaries equitably benefitting from the Program</p>

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
	<p>and supervision of the dynamic management of social assistance.</p> <p><b>iv) The 14th Five-Year Plan of Civil Affairs of Gansu Province (2021.10.15)</b> sets 15 key development targets, 12 specified fields, 24 engineering projects and 89 key tasks in the aspects of basic livelihood guarantee, basic social services, elderly care services, etc., covering social assistance, elderly care services, children's welfare, grassroots social governance, basic social services, social organization development, philanthropy and social work, regional name management services, "five modernizations" of new Gansu civil affairs. The Plan requires that by 2025: the annual growth rate of MLS in rural areas shall be no lower than that of per capita consumption expenditure of the previous year; the MLS standard in urban and rural areas accounts for more than 75% of that in urban areas; living subsidies are provided to all financially-challenged disabled people; nursing care allowances are offered to all severely disabled people; trans-provincial marriage registration is fully achieved; all vagrants and beggars with known identity information are returned to their homes; nonprofit cremains burying (storage) facilities are available in all counties; at least 55% of beds in elderly care institutions meet requirements for nursing care; comprehensive elderly care institutions are accessible in 50% of townships (sub-districts); minor protection centers are available in 50% of townships (sub-districts); the number of social service professionals stands at 24,000; volunteer service centers account for 80% of comprehensive urban and rural community service facilities; the area of comprehensive community service facilities accessible by every 100 residents tops 30 square meters; and the number of full-time employees of social organizations reaches 300,000.</p> <p><b>v) Other poverty alleviation policies:</b> In China, poor households refer mainly to those below the minimum living security (MLS) standard, and are classified into: a) MLS households, whose per capita annual income is below the MLS standard. MLS standards and relevant policies are updated by the local governments every year. In 2023, the MLS standard is 8,400 yuan per capita per annum in urban areas and 5,580 yuan per capita per annum in rural areas in Gansu Province; and b) extremely poor persons, old and disabled persons and persons under 16 years with no ability to work, no income source, or statutory supporter, or whose statutory supporter is incapable to support. In 2023, extremely poor persons in urban and rural areas of Gansu Province were eligible for financial support of 10,920 RMB per person per annum and 7,260 RMB per person per annum respectively in Gansu Province. These poor households receive full support from the Chinese government in food, clothing, medical care, housing, children education, and basic income which is no less than the local MLS standard. All localities shall establish files for the poor households, and offer living and housing subsidies, free children education, interest-free loans, special occupational training, and priority in job placement, etc.</p> <p><b>vi) Law of the People's Republic of China on the Protection of Women's Rights and Interests (2022 Revision): Article 40:</b> sexual harassment against women is prohibited and victims have the right to file complaints with relevant units; <b>Article 41:</b> Women shall enjoy the same labor and social security rights as men. <b>Article 45:</b> Men and women shall receive equal pay for equal work, and women shall enjoy the same remuneration rights as men. <b>Article 47:</b> Employer shall protect women's health, safety and time for rest at work.</p>	

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
	<p>Women shall receive special protection during menstruation, pregnancy, lying-in and breastfeeding. <b>Article 48:</b> No employer shall reduce female workers' salaries and welfares, restricted female workers from career promotion and professional and technical titles and posts evaluation and assignment or dismiss female workers or unilaterally terminate the labor (employment) contract or service agreement with them on the basis of marriage, pregnancy, lying-in and breastfeeding. <b>Article 50:</b> The state shall develop social insurance services, ensure that women are entitled to social insurance, social assistance, and social welfares, and encourage and support public welfare activities for women. <b>Article 51:</b> The state shall implement maternity insurance system and establish a sound security system for women in other aspects like baby care service.</p> <p><b>vii) Outline for Women's Development in China (2021-2030):</b> The overall objective is to fully implement the basic state policy of gender equality to innovate and improve the systems and mechanisms for promotion gender equality and women's all-round development. Women have equal access to a full range and whole life-cycle health services, and their health will be improved continuously. Women enjoy equal rights to education, and their quality and ability will be continuously improved. Women enjoy equal economic rights and interests, and their economic status will be steadily improved. Women enjoy equal political rights, and their participation in the administration of country, economic, cultural, and social affairs will be gradually improved. Women enjoy equal access to multi-level and sustainable social security, and their treatment levels will be steadily improved. The policies and regulations for supporting family development will be improved, and the new trend of socialist family civilization will be widely promoted. The concept of gender equality become more popular, and the environment for women's development will be improved. The legal system will be improved to protect women's legitimate rights and interests effectively. Women's sense of gain, happiness and security will be increased significantly.</p> <p><b>viii) The Gansu Provincial Women's Development Plan (2021-2030) (2021.12.30)</b> sets eight areas for women's development: health, education, economy, participation in decision-making and management, social security, family building, environment, and law, and puts forward 75 major goals and 93 strategic measures.</p> <p><b>ix) The Law of the People's Republic of China on the Protection of Minors (Revised in 2020)</b> stipulates that minors enjoy all rights equally in accordance with the law, and are not discriminated against on the basis of their ethnicity, race, gender, household registration, occupation, religious beliefs, level of education, family status, or physical or mental health status, or that of their parents or other guardians. The law has made detailed provisions on the protection of minors in family, school, society, network, government and judiciary.</p> <p><b>x) The Gansu Provincial Child Development Plan (2021-2030) (2021.12.30)</b> puts forward 70 major goals and 89 strategic measures in seven areas of child development: health, safety, education, welfare, family, environment and legal protection.</p> <p>However, there are various types of beneficiaries of the Program, although existing information disclosure channels and GRMs are functioning, there is a call for improving and diversifying information delivery channels from farmers, such as written manuals, electronic versions, online platforms, specific promotion and</p>	

PforR core principles or elements	China's E&S management requirements and practices	Consistency and recommendations
	<p>awareness raising to different target groups like women, ethnic minorities, older people, etc. In addition, there is a need for strengthen the GRM to manage potential risk of uneven benefit distribution and E&amp;S risks management.</p> <p>Compared to enterprises, cooperatives and family farms may face more challenges and vulnerblitiies in livestock farming development. There is a potential risk that social benefits and beneficiary composition (gender, ethnic minority etc) do not improve over time. To ensure all target farms, regardless farm size and structure, gender and ethnicity, equally benefit from the Program, there is a need to establish a monitoring system to monitor benefits across the Program.</p>	
<b>Principle #6:</b> Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.		
<b>Element 13:</b> Consider conflict risks, including distributional equity and cultural sensitivities.	Not relevant.	

## Appendix 4: Stakeholder Analysis

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

**Table A- 1: Stakeholder Identification and Analysis**

Result Area	Typical activities	Affected entities	Interested entities	Management agencies
RA1: Increased Sustainability, Productivity and Reduced Emissions from the Livestock Sector	<ul style="list-style-type: none"> <li>Apply CSA technologies in fodder production area plantation</li> </ul>	<ul style="list-style-type: none"> <li>Livestock farmers</li> <li>Forage planters</li> </ul>	<ul style="list-style-type: none"> <li>Individuals or organizations concerned about ecological environment</li> </ul>	<ul style="list-style-type: none"> <li>Competent departments, such as provincial and county-level ARABs, NRBs, Natural Reserves Administration Agencies, etc.</li> <li>County governments</li> <li>Township governments</li> <li>Village (community) committees</li> </ul>
	<ul style="list-style-type: none"> <li>Construct straw for forage use processing facilities</li> </ul>	<ul style="list-style-type: none"> <li>Livestock farming enterprises, cooperatives and family farms</li> <li>Villages or residents affected by land occupation</li> </ul>	<ul style="list-style-type: none"> <li>Individuals or organizations concerned about ecological environment</li> <li>Organic fertilizer producers</li> <li>Service and goods providers;</li> </ul>	<ul style="list-style-type: none"> <li>Competent departments, such as provincial and county-level ARABs, EEBs, etc.</li> <li>County governments</li> <li>Township governments</li> <li>Village (community) committees</li> </ul>
	<ul style="list-style-type: none"> <li>Apply low emission technologies and practices in livestock farms</li> </ul>	<ul style="list-style-type: none"> <li>Livestock farming enterprises, cooperatives and family farms</li> </ul>	<ul style="list-style-type: none"> <li>Individuals or organizations concerned about ecological environment</li> </ul>	<ul style="list-style-type: none"> <li>Competent departments, such as provincial and county-level ARABs, AHVMBs, NRBs, EEBs, etc.</li> <li>County governments</li> <li>Township governments</li> <li>Village (community) committees</li> </ul>
	<ul style="list-style-type: none"> <li>Construction or upgrading livestock breeding and farming facilities run by enterprises, cooperatives, family farmers who adopt low emission technologies</li> </ul>	<ul style="list-style-type: none"> <li>Livestock farming enterprises, cooperatives and family farms</li> <li>Villages or residents affected by land occupation</li> </ul>	<ul style="list-style-type: none"> <li>Individuals or organizations concerned about ecological environment</li> <li>Individuals and organizations concerned about the development of the low-income, women and ethnic minorities</li> </ul>	<ul style="list-style-type: none"> <li>Competent departments, such as provincial and county-level ARABs, AHVMBs, NRBs, EEBs, etc.</li> <li>County governments</li> <li>Township governments</li> <li>Village (community) committees</li> </ul>

<b>Result Area</b>	<b>Typical activities</b>	<b>Affected entities</b>	<b>Interested entities</b>	<b>Management agencies</b>
	practice, undertaking livestock certificate with green and organic or low emission indications		<ul style="list-style-type: none"> <li>• Service and goods providers</li> </ul>	
	<ul style="list-style-type: none"> <li>• Upgrade livestock and poultry manure treatment facilities for livestock farms</li> </ul>	<ul style="list-style-type: none"> <li>• Livestock farming enterprises, cooperatives and family farms</li> <li>• Villages or residents affected by land occupation</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Organic fertilizer producers</li> <li>• Service and goods providers;</li> </ul>	<ul style="list-style-type: none"> <li>• Competent departments, such as provincial and county-level ARABs, EEBs, etc.</li> <li>• County governments</li> <li>• Township governments</li> <li>• Village (community) committees</li> </ul>
	<ul style="list-style-type: none"> <li>• Upgrade the livestock slaughtering, processing, cold chain logistics and market facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Villages or residents affected by land occupation</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Individuals and organizations concerned about the development of the low-income, women and ethnic minorities</li> <li>• Service and goods providers</li> </ul>	<ul style="list-style-type: none"> <li>• Competent departments, such as provincial and county-level ARABs, AHVMBs, NRBS, Industry and Information Technology Bureaus, EEBs, etc.</li> <li>• County governments</li> <li>• Township governments</li> <li>• Village (community) committees</li> </ul>
	<ul style="list-style-type: none"> <li>• Increase animal health service capacity by equipping veterinary service labs and agro-food quality testing labs at county level</li> </ul>	<ul style="list-style-type: none"> <li>• Villages or residents affected by land occupation</li> <li>• Workers in laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Service and goods providers;</li> </ul>	<ul style="list-style-type: none"> <li>• Competent departments, such as provincial and county-level ARABs, AHVMBs, etc.</li> <li>• County governments</li> <li>• Township governments</li> <li>• Village (community) committees</li> </ul>
	<ul style="list-style-type: none"> <li>• Collect, transfer, and sanitary disposal of dead and diseased animals</li> </ul>	<ul style="list-style-type: none"> <li>• Livestock farming enterprises, cooperatives and family farms</li> <li>• Villages or residents affected by land occupation</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Individuals and organizations concerned about the development of the low-income, women and ethnic minorities</li> <li>• Service and goods providers</li> </ul>	<ul style="list-style-type: none"> <li>• Competent departments, such as provincial and county-level ARABs, AHVMBs, EEBs, etc.</li> <li>• County governments</li> <li>• Township governments</li> <li>• Village (community) committees</li> </ul>

<b>Result Area</b>	<b>Typical activities</b>	<b>Affected entities</b>	<b>Interested entities</b>	<b>Management agencies</b>
RA2: Improved Governance System for Sustainable and Low Emission Livestock Sector Management	<ul style="list-style-type: none"> <li>• Establish incentive system for promoting sustainable fodder production area management and low emission technologies</li> <li>• Strengthen technical capacity &amp; regulatory framework for low emission livestock value chain</li> </ul>	<ul style="list-style-type: none"> <li>• Livestock farming enterprises, cooperatives and family farms</li> <li>• Households of contracted land</li> <li>• Forage planters</li> <li>• Livestock products processing, logistic transporting, retail enterprises and its employees</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Individuals and organizations concerned about the development of the low-income, women and ethnic minorities</li> </ul>	<ul style="list-style-type: none"> <li>• Central and provincial government, and ARABs, EEBs, NRBs, FBs, etc. at all levels</li> </ul>
	<ul style="list-style-type: none"> <li>• Develop MRV protocols for livestock sector</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Individuals or organizations concerned about public health and wellness</li> </ul>	<ul style="list-style-type: none"> <li>• Provincial and county-level ARABs, AHVMBs, EEBs, HCs, MSAs, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>• Apply for livestock product certificates in compliance with green, organic or low emission standards.</li> </ul>	<ul style="list-style-type: none"> <li>• Livestok farms</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals or organizations concerned about ecological environment</li> <li>• Individuals or organizations concerned about public health and wellness</li> </ul>	<ul style="list-style-type: none"> <li>• Competent departments, such as provincial and county-level ARABs, AHVMBs, EEBs, etc.</li> </ul>

## Appendix 5: Stakeholder Engagement

No.	Date	Venue	Authorities involved	E&S topics
1	2023.10.16-17	Lanzhou New District of Gansu Province	PPMO, AFWB, NRB, EEB, EMB, HC, Bureau of CPC, Civil Affairs, Justice and Social Security Bureau, CTB, Agricultural Investment Group, Animal and Plant Inspections and Quarantine Laboratory, representatives of livestock farming bases, forage planting base, etc.	<p>Consultations with E&amp;S competent departments and site survey in Lanzhou New District:</p> <ul style="list-style-type: none"> <li>• Large-scale forage planting bases</li> <li>• Large-scale livestock farms</li> <li>• Animal and plant inspection and quarantine</li> <li>• Land consolidation</li> <li>• Livestock and poultry manure treatment and resource utilization facilities</li> <li>• Harmless collection and disposal of animals died of diseases</li> <li>• Fine breed reproduction</li> <li>• Animal diseases prevention and control</li> <li>• E&amp;S risks and impacts, corresponding management system and performance at county, township levels</li> <li>• Interviews with representatives of forage planting enterprises and livestock farming enterprises</li> </ul>
2	2023.10.18	Provincial DARA	PPMO, provincial DRC, DOF, DARA, AHVMB	<p>Kick-off meeting:</p> <ul style="list-style-type: none"> <li>• PforR objectives, scope, result areas, DLIs, etc.</li> <li>• ESSA arrangements</li> </ul>
3	2023.10.19-21	Provincial DARA	PPMO, provincial DARA, AHVMB, FGB, DNR, DEE, PLAC, HC, HRSSB, CAB, RRB, WRB, MSA, etc.	<p>Consultations with provincial E&amp;S competent departments:</p> <ul style="list-style-type: none"> <li>• The low-carbon livestock development plans</li> <li>• Livestock farming management system</li> <li>• E&amp;S risks and impacts, corresponding management system, institutional arrangements and procedures at provincial level</li> </ul>
4	2023.10.21-23	Guazhou County of Jiuquan City	PPMO, county-level ARAB, AHVMB, FGB, NRB, EEB, PLAC, HC, HRSSB, CAB, RRB, MSA, WRB, Women's Federation, PCPAB, CTB, etc.	<p>Consultations with county-level E&amp;S competent departments and site survey:</p> <ul style="list-style-type: none"> <li>• Livestock farming facilities and management</li> <li>• Animal diseases prevention and control</li> <li>• Livestock and poultry manure treatment and resource utilization facilities</li> <li>• Forage planting and processing facilities</li> <li>• Straw processing facilities</li> <li>• Harmless collection and disposal of animals died of diseases</li> <li>• Livestock slaughtering, processing, cold chain and logistic facilities</li> <li>• Certification of livestock products</li> <li>• Trainings on high-quality farmers or new agricultural business entities</li> </ul>
5	2023.10.24-25	Sunan County of Zhangye City		
6	2023.10.26-27	Jingchuan County of Pingliang City		

No.	Date	Venue	Authorities involved	E&S topics
				<ul style="list-style-type: none"> <li>• Management of land acquisition and house demolition, LURT, FALU</li> <li>• Implementation of SSRA</li> <li>• OHS management and supervision</li> <li>• The implementation of GRMs, such as public complaints, labor disputes remediation and arbitration, etc.</li> <li>• The development of ethnic minorities assistance to vulnerable groups including ethnic minorities, management and monitoring of the people lifted out of the poverty</li> <li>• Women's right and interest protection and women's development</li> <li>• Cultural relics protection</li> </ul>
7	2023.10.21	Guazhou County of Jiuquan City	Huiyuan village and Xinhua village in Guazhou County	Consultation with people of ethnic minority-concentrated villages in Guazhou County and Sunan Yugur Autonomous County
8	2023.10.24	Sunan County of Zhangye City	Dacaotan village and Songmutan village in Sunan Yugur Autonomous County	<ul style="list-style-type: none"> <li>• Introduction of the PforR;</li> <li>• Communication and understanding of local environment, ethnic culture or resources, and livelihood;</li> <li>• Communication of the PforR activities and potential E&amp;S impacts, and confirm that no negative impacts like land acquisition, income and livelihood impact, or impact on culture or resources to ethnic minority peoples, but bring improvement of local livestock development, increase of income and improvement of ecological environment;</li> <li>• Confirmation that the ethnic people support the implementation of the PforR.</li> </ul>
9	2023.10.30	Online	PPMO, 7 CPMOs, provincial DARA and county-level ARABs	<p>Wrap-up meeting:</p> <ul style="list-style-type: none"> <li>• Key findings of the E&amp;S due diligence</li> <li>• Subsequent ESSA arrangements</li> </ul>
10	2023.11.28	Online	PPMO	Communicate with the PPMO on the draft ESSA, findings and recommendations.
11	2024.2.23-24	Guazhou County of Jiuquan City	Four ethnic minorities concentrated villages	Consultation with people of ethnic minority-concentrated villages in Guazhou County and Sunan Yugur Autonomous County
12	2024.2.24-25	Sunan County of Zhangye City		<ul style="list-style-type: none"> <li>• Introduction of the PforR;</li> <li>• Communication and understanding of local environment, ethnic culture or resources, and livelihood;</li> <li>• Communication of the PforR activities and potential E&amp;S impacts, and confirm that no negative impacts like land acquisition, income and livelihood impact, or impact on culture or resources to ethnic minority peoples, but bring improvement of local</li> </ul>

No.	Date	Venue	Authorities involved	E&S topics
				livestock development, increase of income and improvement of ecological environment; <ul style="list-style-type: none"> <li>• Confirmation that the ethnic people support the implementation of the PforR.</li> </ul>
13	2024.3.14-21	7 program counties (district	Social survey on sample farms	Consultation with 43 sample farms from 700 demonstration farms on: <ul style="list-style-type: none"> <li>• Socio-economic background;</li> <li>• Existing experience and practices in livestock farming;</li> <li>• Knowledges and techonologies applied, and impacts;</li> <li>• Labor use;</li> <li>• Information disclosure, promotions and trainings;</li> <li>• Needs and expectations on the Program;</li> <li>• Willingness to participate the Program.</li> </ul>

## Appendix 6: Feedback of the Public Consultation on the ESSA

No.	Issues	Comments	Advised by	Report Revision
<b>About the PforR Activities</b>				
1	Appendix 1: about the typical activities under provincial and county-level government programs	It's suggested to update according to the project list which is still under preparation, and all activities in the project list are strongly linked to the RAs and DLIs and shall not be excluded.	Provincial DARA	It is aligned that the table will be updated accordingly when the latest list of typical activities is defined jointly by the Bank technical team and Gansu. And the E&S team also explained that activities with high E&S risks will be excluded.
2	Full text: the description of the project counties is not accurate	It's suggested to updated all "project counties" to "project counties (district)"; Use a unified unit of fodder area	Provincial DARA	Updated.
<b>About E&amp;S impacts or risks</b>				
3	Section 3.5: about the E&S risk rating	Is it the same with the risk rating of SSRA?	Jingchuan PLAC	The E&S team made an explanation to all government departments that it is two different and separate risk rating mechanism.
4	About the environment impacts identification and mitigation	The impacts on biodiversity should be considered.	Technical expert hired by the PPMO	Updated in Section 3.4.1 and Appendix 8.
<b>About the versions and sufficiency of regulatory documents</b>				
5	Table 5-1 the applicable land acquisition and compensation policy has been updated	It is suggested to replace the "Gansu Province Block Compensation Land Price on Farmland Acquisition (GZF [2020] No.41)" by "Notice of the Gansu People's Government on Issuing Standard of Block Compensation Land Price on Farmland Acquisition (GZF [2023] No.55)"	Provincial DNR	Updated
6	Para 178, 179 and Appendix 3: About the date of issuing Plan of Gansu Province for Women's Development (2021-2030) (GZF [2021] No.91) and Plan of Gansu Province for Children's Development (2021-2030) (GZF [2021] No.91) is not accurate	It's suggested to update the date as "2021.12.30"	Provincial Women's Federation Jingchuan Women's Federation	Updated

No.	Issues	Comments	Advised by	Report Revision
7	Table 5-1: The date of issuing the Special Rules on the Labor Protection of Female Employees (Decree No.619 of the State Council) (May 2012) is not accurate	It's suggested to update "May 2021" to "2021.4.28"	Provincial HRSSB	Updated.
8	Measures on Environmental Complaints	The version of 1997 and 2006 has expired	Provincial PCPA	Updated to the latest regulations on letters and visits and relevant environment laws and regulations revised in 2021.
9	About the version of applicable laws and regulations on EIA and information disclosure of construction projects	It's suggested to delete the information disclosure mechanism of EIA of construction projects, and update the relevant provisions and timeframe of three times of information disclosure by construction unit and two announcements and one public notice by the competent authority as stipulated in the Measures for Public Participation in EIA issued by the MEE in 2018.	Provincial DEE	Updated in Section 4.2
10	About the version and applicability of relevant laws and regulations on soil and water conservation	The Management Regulations on the Preparation and Approval of Soil and Water Conservation Plan for Development and Construction Projects has expired. It is suggested to replace it by the Management Measures for the Soil and Water Conservation Plan of Construction Projects which is published in 2023 and update the Table 4-14 accordingly. Some technical specifications presented in the draft report are not applicable to the PforR Program. It is suggested to update it.	Provincial WRB	Updated in Section 4.4.2
<b>About policy analysis and understanding</b>				
11	Para 143: About the process of land acquisition and compensation	It's suggested to update as "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 be the responsible party of announcement and implementation. Before land application submission, DMS and SSRA should be conducted and the key information, e.g. the	Provincial DNR	Updated.

No.	Issues	Comments	Advised by	Report Revision
		purpose and boundary of land acquisition, current status, compensation rate, resettlement mode, social security, etc. should be disclosed 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. Upon completion of the relevant preliminary work, local people's governments at or above the county level may apply for land acquisition, and make land acquisition announcement and implementation upon approval in accordance with legal procedures.”		
12	Para 148: About the explanation of underage workers	It is suggested to update “16-18 years” as “above 16 years old and below 18 years old”.	Provincial HRSSB	Updated.
13	Appendix 3: About the process of social insurance for land lost farmers	It’s suggested to update “for no less than 10 days” to “for no less than 5 days”; update “and the government provide corresponding subsidies to land-expropriated farmers. The standard of subsidy funds for land expropriation insurance is the provincial average annual salary of workers of the previous year multiplied by the proportion of land expropriated” to “subsidy funds for the participation of land-lost farmers in basic endowment insurance should be included in the project budget, counted as part of the cost of land acquisition, and arranged separately and in full in the compensation costs. The standard for the subsidy funds is the average annual wage of employed persons in full-calibre urban units in the previous year, multiplied by the proportion of land acquired.”	Provincial HRSSB	As checked with the HRSSB, the period of disclosure remains unchanged and the rest has been updated.
14	Para 266: About the GRM for labor disputes	It’s suggested to update “township labor dispute mediation center” and “county government’s labor mediation center” to “township labor disputes mediation center” and “county-level labor disputes mediation center”.	Provincial HRSSB	Updated
<b>About analysis of E&amp;S management systems</b>				
15	Para 221: the description of cultural relics	It’s suggested to update the “national cultural relics protection unit” to “national key cultural relics protection	Provincial CHAB	Updated

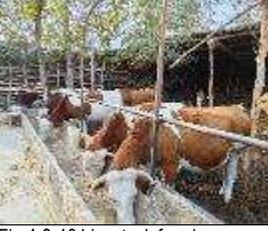
No.	Issues	Comments	Advised by	Report Revision
		unit”.		
16	About the cultural relics review of the PforR Program	It is recommended that the Program should avoid immovable cultural relics as far as possible in the process of planning and site selection. The agricultural construction projects within the protection scope and construction control zone of cultural relics protection units and the area of immovable cultural relics which has not been approved and announced as cultural relics protection unit, should carry out reporting and approval procedures in accordance with the relevant laws and regulations for cultural relics protection.	Provincial CHAB	It has been communicated and aligned with the PPMO and CPMOs.
17	Section 5.3.3: about the description of spatial planning of national land	It’s suggested to change all “overall land use planning” to “overall spatial planning of national land”.	Provincial DNR	Updated.
18	Full text: about the description of ethnic minority	It’s suggested to update “EM village” to “EM concentrated village”, “EM township” to “EM-concentrated township”, “EM autonomous area” to “ethnic autonomous area”.	Provincial EAC	Updated
19	Section 5.2.5 and Section 5.4.5: About the ethnic minority management system	It’s suggested to separate the ethnic minority management system from vulnerable groups management system.	Provincial EAC	The ethnic minority management system is discussed separately from the vulnerable groups by elements. The E&S team has made an explanation and accepted by the provincial ERAB.
20	Para 258: About the low-income management system	The competent authority of the low-income is the CAB, and the RRB is responsible for the monitoring and management of people who are lifted out of poverty and those prone to poverty.	Provincial RRB	Updated.
21	Para 251: About the data of ethnic minority in Zhengning County	It should be updated as “there are 23 ethnic minority groups with a total population of 2785, accounting for 1.15% of the total population. Among them, 2592 are the Hui people, accounting for 93% of the total population of ethnic minority; there is one ethnic minority concentrated township and 3 EM-concentrated villages”.	Zhengning County	Updated.
22	Para 256: About the description of ethnic minority	It’s suggested to delete all words about religious belief.	Zhengning County	Updated.

No.	Issues	Comments	Advised by	Report Revision
23	Para 193: About the Joint Prevention and Control Mechanism for Brucella melitensis	It is suggested to update as "With regard to brucellosis, anthrax and other zoonotic diseases involved in the livestock development industry under this PforR, in the case of brucellosis, the HC and AHVMB has established a joint prevention and control mechanism at the provincial level, exchange monitoring information on a monthly basis, regularly analyze and examine the outbreak, and jointly carry out research and supervision in key areas."	Provincial HC	Updated.
24	Section 5.4.1: About the technical staff of Jingchuan county AHVMB	The description is not accurate. It is suggested to update as "County Animal Husbandry and Veterinary Medical Center assigns professional technician to Jingchuan County Yudu Town Shengtong Livestock Farming Cooperatives as the cooperatives' designated technician."	Jingchuan DARA	Updated.
25	Para 233: About the address mechanism of labor disputes	It's suggested to update as "In the event of a labor dispute, the employee may file a complaint with the labor security supervisory agency of the local HRSSB. The labor security supervisory agency will file a case for investigation and handling within 5 working days after receiving the complaint that meet the principle of acceptance. Generally, it's required to address the complaint within 60 working days, which may be extended for up to 30 working days for cases in complex situations with the approval of the head of HRSSB. It can also apply for labor disputes arbitration. The effective period for applying for arbitration of labor disputes is one year."	Provincial HRSSB	Updated.
26	Appendix 8: About the purchase of social insurance	It's suggested to update "purchase...insurance" to "pay for ...insurance".	Provincial HRSSB	Updated.
27	Para 173 and Appendix 3: About the standards of urban and rural MLS and subsidies for urban and rural people in extremely hardship	It's suggested to use the standards of 2023.	Provincial CAB	Updated.
28	Full text: About the description	It's suggested to update all "basic farmland" to "permanent basic	Provincial DNR	Updated.

No.	Issues	Comments	Advised by	Report Revision
	of basic farmland	farmland” according to the revised policies.		
<b>About institutional organization, roles, and responsibilities</b>				
30	Section 5.3.4 and Section 5.3.5: About the responsibilities of Women’s Federation (WF)	It’s suggested to update as “protect the legal rights and interests of women and children, provide assistance to aggrieved women and children” and “responsible for uniting and mobilizing women to play a unique role in society and family, protecting the legal rights and interests of women and children, providing assistance to aggrieved women and children, promoting the implementation of the basic national policy of gender equality.” respectively.	Provincial Women’s Federation	Updated.
31	Section 5.3.3: About the responsibilities of HRSSB	It’s suggested to update as “The HRSSB is responsible for calculating of subsidy funds for the social insurance of land-lost farmers, processing the participation and payment of insurance premiums, approving and disbursing the pension, and doing a good job of managing the subsidy funds for land-lost farmers.”	Provincial HRSSB	Updated.
32	Para 192: About the institutional organization of Jingchuan HC	It’s suggested to update “At the same time, public medical institutions qualified for occupational health examination are set up in Jingchuan County, including County Hospital, county disease prevention and control center, township hospital and community health service centers” as “At the same time, public medical institutions qualified for occupational health examination is set up in Jingchuan County, namely County Hospital”; the staff number of the Health and Wellness Affairs Center should be updated as 5.	Jingchuan HC	Updated.
33	Full text: about the name of NRB	The NRB and Planning Bureau has been combined as one department, it should be updated as “NRB”.	Provincial DNR	Updated.
34	About the responsibility of EIA competent authorities	the qualifications of consulting agencies for the preparation of EIA and the manner of registration and filing of EIA are not accurate, and there is no mandatory requirement for technical assessment before the approval of EIA. The statement of environment protection acceptance upon project completion shall be conducted by	Provincial DEE Jingchuan EEB	Updated in Section 4.2 and Appendix 3

No.	Issues	Comments	Advised by	Report Revision
		construction unit independently is not precise enough.		
35	Para 93: About the responsibility of EEB on “three lines and one list”	The definition of three lines and one list as well as the responsibilities of EEB at provincial and municipal level on three lines and one list is not accurate and need to be updated.	Provincial DEE	Updated in Section 4.4.1 and Para 93.
36	The role of environment law enforcement team on livestock and poultry pollution prevention and supervision	As specified in the 14th Five Year Plan on Livestock and Poultry Pollution Prevention of Gansu Province and the Implementation Plan of Agriculture Exempted from Pollution Control and Supervision in Gansu Province, the environment law enforcement team is also responsible for supporting and urging livestock farming enterprises to implement pollution prevention and control in addition to environment regulatory responsibilities.	Provincial DEE	Updated in Section 4.3.1

# Appendix 7: Field Visit Records

Photologs for Chapter 4 on Environmental Management System Assessment			
4-3 EMS for livestock breeding and farming			
			
Fig.4-3-1 Exhaust gas deodorizer installed in Tianxin Livestock Farming Demonstration Base in Lanzhou New District	Fig.4-3-2 Manure collection tank installed in the New Plateau Livestock Farming demonstration base in Lanzhou New District	Fig.4-3-3 Feed processing plant in the New Plateau Livestock Farming demonstration base in Lanzhou New District	Fig.4-3-4 Lab management procedures formulated by Agricultural Technology Service Center of Lanzhou New District
			
Fig.4-3-5 Dry manure dump in Guazhou Breeding Center	Fig.4-3-6 Dry manure dump in Guazhou Ecological Circular Agricultural Sectoral Park.	Fig.4-3-7 Organic Fertilizer Production Center in Guazhou Ecological Circular Agricultural Sectoral Park	Fig.4-3-8 Rules and Measures formulated by entity running Guazhou Ecological Circular Agricultural Sectoral Park
			
Fig.4-3-9 Sanitary disposal of dead and diseased animals in Guazhou Ecological Circular Agricultural Sectoral Park )	Fig.4-3-10 Livestock farming zone run by household in Qigong Village of Guazhou County	Fig.4-3-11 isolation room for diseased animal in a livestock farming zone run by cooperative.	Fig.4-3-12 manure dump and fermentation tank run by cooperative
			
Fig.4-3-13 Approval Document of EEB on EIA-form for a regional center for comprehensive treatment and resources	Fig.4-3-14 Form filled by Xinruiwang Livestock Farming Cooperative for registration at	Fig.4-3-15 Approval Document of Jiuquan Municipal EEB on EIA-form of a project for increased ecology &	Fig.4-3-16 Opinion of Jiuquan Municipal EEB on environmental acceptance check at

utilization of livestock & poultry manure in Sunan County.	EEB for endorsement.	environmental monitoring capacity of Guazhou County	construction completion of increased ecology & environmental monitoring capacity of Guazhou County
			
Fig.4-3-17 Approval Document of WRB on WSC scheme report for a livestock farms project located in rural revitalization industrial park of Lanzhou New District	Fig.4-3-18 Approval Document of WRB on WSC scheme report for facility agriculture base to be used for sheep breeding (with stock capacity of 5000) facility run by Gansu Huarui Agricultural Corporation Limited in Minle County	Fig.4-3-19 safety facilities design for sheep & cattle slaughtering, splitting and deep processing production lines run by Grassland Huicheng Agro-food Co. Ltd of Sunan County.	Fig.4-3-20 Notice of Zhangye Municipal EEB on a Plan for on-site inspection of ecological and environmental law enforcement
			
Fig.4-3-21 Notice of Sunan Branch of Zhangye Municipal EEB and Sunan County ARAB on issuing and distributing the Implementation Plan of Agricultural NPS pollution Control and Supervision in Sunan County (trial)	Fig.4-3-22 Approval opinion of Guazhou branch EEB on the "A inspection opinion of livestock and poultry manure storage yard and other simple pollution treatment facilities"	Fig. 4-3-23 Agreement signed for disposal of medical waste generated by Jingchuan County Veterinary Service Center	Fig.4-3-24 Unified fills for transferring hazardous waste generated by Minle County Veterinary workstations.
			
Fig.4-3-25 Permit for hazardous waste treatment hold by Gansu Jingchuang Lvfang Environmental Technological Co.	Fig.4-3-26 Letter of Gansu EED on environmental acceptance Check after completion of	Fig.4-3-27 Medical waste business permit hold by Pingliang Municipal Huanchuang Centralized Medical	Fig. 4-3-28 Agreement signed for centralized disposal of medical waste generated by

Ltd.	construction the hazardous disposal center project.	Waste Disposal Co. Ltd.	Zhengning County Community Health Service center
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**4-4 EMS for Eco-environment Conservation**

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Fig.4-4-1 Artificial forage cultivation land development and forage cultivation

Fig.4-4-2 Review opinions of the EEB on the special report on the impact of breeding center construction projects on the ecological environment of nature protected areas



Fig.4-4-3 Feed processing and distribution at a quality artificial forage cultivation base

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**4-5 EMS for Animal Health, Agro-food Quality and Publics Health and Safety**

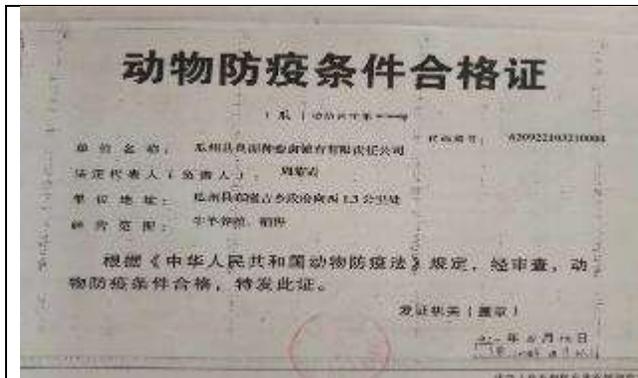


Fig.4-5-1 inspection of livestock farming facility and issuing certificate to facilities meeting animal epidemic prevention conditions



Fig.4-5-2 Flow chart of a county AHVMB in administrative licensing procedures

姓名	性别	年龄	学历	专业	培训时间	培训地点	培训科目	考核成绩	考核日期	考核地点	考核科目	考核结果
...	...	...	...	...	...	...	...	...	...	...	...	...

序号	动物种类	品种	产地	品种	品种	品种	品种	品种
1	...	...	...	...	...	...	...	...

Fig.4-5-3 Animal quarantine personnel training, assessment and quarantine certificate management

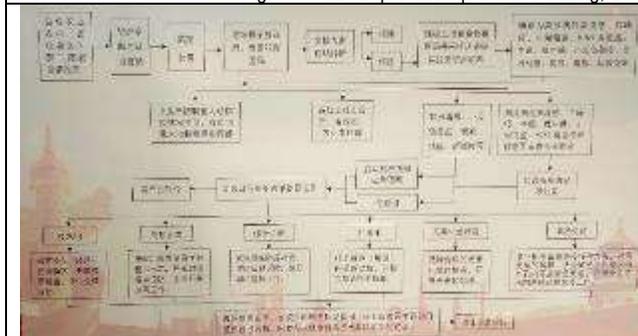


Fig.4-5-4 Flow chart of handling major animal epidemics at county level

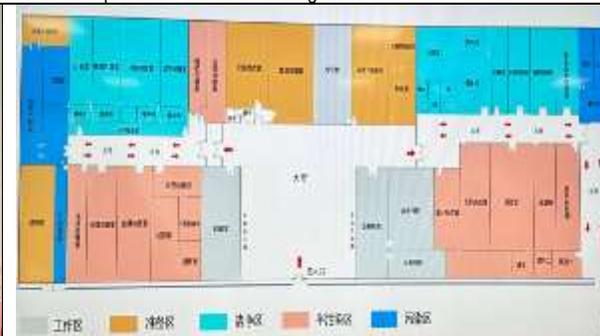


Fig.4-5-5 Layout of a veterinary service and agro-food testing lab at county level



Fig. 4-5-6 SOP of a veterinary service and agro-food testing lab and separately collection of different category of wastes





Figure0-4: Qualification review on the LURT of Guazhou Shunyue Agro-machinery service cooperatives



Figure0-5: SSRA report and filing sheet of the cattle shed construction project in Niujiayu Village, Gaoping Town



Figure0-6: Mitigation measures for operational risks of Guazhou Shunyue Agro-machinery service cooperatives



Figure0-7: Notice on the Protection of County-level Cultural Relics Cultural Relics Protection Area within verification of cultural relics in a Protection Units and Construction the Preliminary Site Selection of the livestock farming zone construction livestock farming zone construction project published by the People's Government of Minle County



Figure0-8: Examination Opinion on the Park Infrastructure Construction Project



Figure0-9: Reply of Sunan CTB on the verification of cultural relics in a the verification of cultural relics in a



Figure0-10: Reply of Guazhou CTB on the verification of cultural relics in a



Figure0-11: Construction contract of the affiliated facilities of Guazhou Hedong township beef cattle farming zone-safety management contract



Figure0-12: Completion and acceptance report of safety facilities of the Caoyuan Huicheng cattle and sheep slaughtering, cutting and processing line construction project



Figure0-13: Sample of labor contract of Guazhou livestock breeding base



Figure0-14: Sample of the safety and fire inspection record of Guazhou ARAB



Figure0-15: Test report on beef issued by the MSA



Figure0-16: Reply of the NRB of Lanzhou New District on the site selection of the Gansu Province Rural Revitalization Industrial Park Ecological Livestock Farming Park Project (phase II)



Figure0-17: Sample of LURT agreement



Figure0-18: Payment record of LURT leasing fee



Figure0-19: The "Annual Cultivated Land In-Out Balance Plan" of Sunan County in 2023



Figure0-20: Sample of FALU restoration agreement



Figure0-21: Letter of Jingchuan ARAB on handling the issues related to LURT of a land



Figure0-22: FGD in EM-concentrated village (Songmutan Village, Sunan)



Figure0-23: FGD in EM-concentrated village (Huiyuan Village, Guazhou)



Figure0-24: FGD in EM-concentrated village (Dataocan Village, Sunan)



Figure0-25: Information disclosure and meetings for public comments on the Plan for Construction of a Demonstration Zone for the Common Prosperity of All Ethnic Groups in Sunan County





Figure0-26: Village meeting of Liuzhuangzi Village in Q1 2023



Figure0-27: Consultations with Provincial Government Departments



Figure0-28: Consultations with County-level Government Departments

## Appendix 8: Generic E&S Mitigation Measures

The following general environmental and social impact mitigation measures are summarized in this report based on previous experiences in similar project or program management. Specific mitigation measures for each main activities under the PforR Program will be detailed in the specific and standardized subsections on E&M management, with cost estimated and included into the bidding documents and contracts.

Item	Main Activities	Main Impacts	Generic Mitigation Measures
Pollution prevention and control	Civil works construction	Potential pollution from dust, noise, wastewater, construction waste, spoil, etc.	The bidding documents and construction contract shall include environmental protection clauses; the contractors' construction implementation plan shall incorporate environmental protection measures recommended in the approved EIA & water conservation scheme into their construction design, (such as water sprinkling to reduce dust, reasonable arrangement of operating hours and installation of sound barriers, collection and reuse of construction wastewater, etc.); these clauses and measures are implemented by the construction unit, inspected by the supervision unit, monitored by the employer, and supervised by the EEBs or Housing and Urban & Rural Construction Bureaus (HURCBs)
	Operation of livestock and poultry farming, manure treatment and utilization facilities	Potential pollution from odor, wastewater, biogas residue, biogas slurry, etc.	Livestock and farms or farming zones shall apply separation of urine from dry feces, biological fermentation and other processes technologies to reduce the volume of wastewater and odor impact; and spray deodorants on livestock sheds and manure treatment facilities. The biogas residue and biogas liquid can be reused as organic fertilizer by in-depth fermentation. The ARABs, EEBs, shall strengthen supervision and provide technical guidance and training
	Slaughtering and meat processing	Odor, wastewater	Installation of deodorization device, on-sit wastewater treatment stations to ensure effluent compliance with discharge standard. The ARABs, EEBs, shall strengthen supervision and provide technical guidance and training.
	Veterinary service and agro-food quality & safety testing Labs.	Medical waste, hazardous waste	Wastes generated from such labs are usually medical or hazardous wastes, which shall be collected separately on-site and hand over to the certified agencies for unified collection, transferring and disposal. Contracts shall be signed between the labs and the certified agencies with unified bills for transferring and disposal.
	Artificial forage cultivation		Soil degradation and environmental pollution from agricultural runoff caused by improper use of fertilizers
environmental pollution, animal health, agro-food safety impact, human health impact caused by improper use of			Strictly implement the pesticide management mechanism, licensing mechanism for pesticide producers and sellers. IPM are highly encouraged. The use of green prevention and control technologies such as ecological management, healthy cultivation, biological control and physical control shall be promoted to reduce the use of pesticides. The ARABs, shall strengthen supervision and provide technical guidance and

Item	Main Activities	Main Impacts	Generic Mitigation Measures
		pesticides	training.
Ecological conservation	Civil works construction	Short-term disturbance to artificial or natural ecosystem, impact on water ecological environment, local soil erosion, etc.	The construction units shall be responsible for requesting the contractors to taking actions to implement those mitigation measures on eco-environmental conservation, the water and soil conservation recommended by EIA document or water and soil conservation scheme. For example, controlling the length of working time in water; Scheduling construction period during dry seasons; In water operations, isolation construction methods (building dikes or diverting water) can be used to keep from disturbing silt; Avoiding important stages in the life cycle of plants and animals (such as migration season, spawning season, etc.); Avoid soil erosion caused by construction in rainy days; Restoring surface vegetation in time after construction, and regularly carry out water protection monitoring, etc.
	Artificial forage cultivation	Destruction of forest, grasslands and wetland resources; Forest and pests, forest and fires	Strictly abide by relevant national laws and regulations; Strictly observe the ERL mechanism for natural protected areas; It is forbidden to destroy forests and grass for land reclamation; Prevent and control invasive alien species; Implement the responsibility system for forest and pests and fire prevention and control; Carry out forest and grasslands resources monitoring, etc.
Health and Safety	Civil works construction	Health and safety risks to construction workers due to excessive force, slips, dust, moving machinery, excavation, and construction in confined spaces	The contractors shall set up a safety management unit and mechanism, and be staffed with full-time safety personnel; Appropriate safety construction measures and safety protection facilities shall be taken at the construction site, and distinct safety warning signs shall be placed at the dangerous parts of the construction site; Construction workers shall be provided with standard PPE and safety trainings and informed of the operation procedures of dangerous positions in writing. Construction supervision firm shall designate full-time safety personnel responsible to safety supervision in accordance with laws, regulations and construction standards, etc.
	Animal health and disease, zoonotic disease prevention and control	Environmental and ecological safety incidents pose risks to the health and safety of farmers, veterinary quarantine personnel, laboratory workers, communities and the public	Control farm animals, equipment, personnel, and wild or domestic animals entering the facility (e.g. quarantine periods for new animals, washing and disinfecting crates, disinfection and coverage of shoes before entry into livestock zones, providing protective clothing to personnel, and closing holes in buildings to keep out wild animals; Sanitize animal sheds or housing areas, Identify and segregate sick animals and develop management procedures for adequate removal and disposal of dead animals); Vehicles that go from farm to farm shall be subject to special precautions such as limiting their operation to special areas with biosecurity measures, spraying of tires and treating parking areas with disinfectants. Voluntarily receive compulsory animal immunization.  Operating agencies shall abide by production safety laws, regulations and technical norms to establish a production safety management system, set up full-time safety officers, and formulate safety operation procedures, formulate emergency plan for responding animal epidemic reporting to the EMBs for

Item	Main Activities	Main Impacts	Generic Mitigation Measures
			<p>record, and conduct emergency response program exercises. In veterinary service labs and agro-food quality testing labs, biosafety cabinets shall be installed at the key points of aerosol emission, install fume hoods at key points of volatile organic compound emission. For the use of hazardous chemicals, veterinary labs shall assign particular staff responsible for managing medical waste and other hazardous waste; when working in limited space, distinct safety warning signs shall be placed and workers or operators shall be provided with training and PPE. Operating agencies shall regularly carry out self-inspection of cleaning and disinfection operations, and government departments shall regularly inspect and provide guidance.</p> <p>The villagers, community residents and the general public should be extensively trained or educated on the knowledge of preventive measures for preventing &amp; controlling animal diseases, especially zoonotic diseases.</p>
Animal welfare	Mistreating livestock animal will affect animal health, lead to high incidence of animal disease, reduce breeding efficiency, and affect the quality of agro-food products		<p>Provide farm animal with healthy &amp; clean feed &amp; water, shed or lariate, good veterinary care including vaccination, periodically diagnosis the presence of parasites, sickness. Use compliant additives according to relevant standards and specifications. Any sick or injured animals should be treated or cared for to alleviate pain and distress as soon as practically possible; Animals should be handled using low-stress methods, equipment, and facilities that facilitate calm animal movement; Animal accommodation should be designed, constructed, and maintained to allow all animals space to stand, stretch, turn around, sit, and or lie down comfortably at the same time. Facilities for loading, transporting, and unloading should be designed, constructed, and maintained to permit proper handling of animals and minimize risk of injury; Prior to slaughter, proper handling techniques, and lighting, space, and ventilation should be used to keep the animals calm. Animals should be slaughtered as soon as possible after arriving at the slaughter facility. In cases where animals are kept for long periods prior to slaughter, feed and water must be provided and no water shall be injected for the purpose of increased weight.</p>
Agro-food safety	Hazards to public health from residues of veterinary drugs, feed additives and contaminants in animal products		<p>Mechanisms of site certificates, institutional licensing, animal epidemic prevention &amp; control certificate before livestock farms or farming zones are put into operation, official veterinarians, etc., shall be strictly implemented. Veterinary drugs and animal food additives are used under the advisory supervision of official veterinarians. Strictly implement the sectoral standards for ensuring the quality and safety of livestock products issued by MARA, and avoid excessive veterinary use and illegal use of animal feed additives. AHVMBs and MSAs shall strengthen the supervision and inspection.</p>
Livestock manure	Risks of environmental		<p>Ensure that all underground manure storage tanks and lagoons are properly covered and fenced off at a sufficient height;</p>

Item	Main Activities	Main Impacts	Generic Mitigation Measures
	treatment and resource utilization, sanitary treatment of sick and dead animals	emergencies, odors, and hazardous chemicals operating in limited space	<p>□ Store liquid manure (e.g. in barn pits, pumping stations, storage tanks, and application tankers) to minimize release of dangerous gases (e.g. hydrogen sulfide); □ Design pens, gates, and chutes to facilitate movement of livestock and reduce the need for farm workers to enter pens; □ Instruct staff in correct livestock care, to reduce the incidence of bites and kicks.</p> <p>Enterprises, cooperatives, households engaged in livestock sector, as required, shall improve measures such as the collection and treatment of feces and the sanitary treatment of sick and dead livestock and poultry to eliminate hidden dangers from the source, establish safety production mechanism, and provide on-the-job training for operators, equipped them with necessary PPE, assign full-time safety personnel, formulate safety code of procedures, prepare emergency plans for environmental emergencies report the plan to EMBs for recording, carry out emergency drills, close the main links that produce odor according to the design requirements, obtain licenses for the use of hazardous chemicals and assign personnel to manage them, set up warning signs and harmful substances notification plates in limited spaces. Government departments conduct regular inspections and provide guidance.</p>
	Artificial forage cultivation	Risk of health effects of pesticides, rodenticides and insecticides	Formulate and implement IPM programs, and strengthen the training and guidance of users on the safe use of pesticides; operators shall wear necessary protective equipment when applying pesticides (e.g. gloves, protective clothing, goggles, masks, etc.)
Cultural relics protection	Construction of facilities	Cultural relics may be excavated underground	<p>No construction works or operations such as blasting, drilling and digging is allowed within the area of historical and cultural protection site; At the time of site selection for a construction project, location where immovable cultural relics located should try to be avoided; If a construction project is needed to be implemented, it should be approved by the cultural relic authority firstly, and then the urban-rural development and planning authority; Within the protection area or construction restricted area of a protected cultural relic, any facilities that may pollute such relic and its environment are not allowed to construct, and any activities that may affect its safety and environment are not allowed to conduct; Before launching a large-scale infrastructure construction project, the construction unit shall firstly apply to the provincial cultural relic authority for arranging a unit engaged in archaeological excavations to conduct archeological investigation at places where cultural relics may be buried underground within the project area.</p> <p>When the construction unit prepare the budget, they should allocate funds for cultural relics protection as contingency expenses in the project budget. Before the project implementation begins, both the project management unit and the construction unit should provide additional training to their on-site staff to enhance their awareness of cultural relics protection. If cultural relics such as historical sites or tombs are discovered during the construction process, construction</p>

Item	Main Activities	Main Impacts	Generic Mitigation Measures
			activities should be immediately halted to protect the site, and the Yichang Municipal CTB should be contacted to handle the situation.
Labor management	Construction of facilities; O&M of manure treatment facilities, forage planting and processing facilities, animal and plants inspection and quarantine, livestock slaughtering, livestock products processing facilities, etc.	Potential labor disputes, e.g., labor relationship, payment of salary, social security, etc.	The operation units shall sign labor contract or service contract with employees at the time of onboarding according to law, and the terms of working time, location, salary, and payment timely should be included, provide social security insurance for workers, and pay salary timely and fully. The local HRSSBs shall supervise and inspect operation units regularly, and request to take correction action if any noncompliance identified. Maintenance of GRM to ensure timely receive and resolve related complaints.
		Potential gender discrimination, like refusing to hire women	Implementing gender equality, equal pay for equal work, no restriction on male recruitment is allowed; developing special preferential policies for female employees, like providing free cervical and breast cancer screening and physical examination, listening to female employees' opinions when arranging jobs, not arranging pregnant women to engage in positions with high strength demanding or poor working environment, providing maternity leave and other protection measures and welfares in accordance with the law.
		Potential occupational health and safety risks	Operation units shall identify and test occupational health hazard factors; implement the "three simultaneous" measures, develop, and implement an occupational health and safety training plan for workers; provide necessary personal protective equipment for workers during operation, and organize and carry out regular physical examination, and purchase work-related injury insurance for all employees.
Community impacts			
	Construction of facilities	Daily life and production of surrounding residents may be impacted due to dust, noise and "three wastes" generated	Conducting FSR, EIS, SSRA, etc. at the preparation stage according to law, including alternative sites selection, social impacts identification, analysis, mitigation, and monitoring plan; carrying out information disclosure and public participation activities to inform people about potential adverse impacts in advance, negotiate and design mitigation measures; and setting up GRM to timely receive, resolve and reply to related grievance, appeal, complaints.
Involuntary resettlement	Construction of facilities	TLU may be involved	Site selection should adhere to the principle of "how much to use, how much to approve, how much to occupy, and how much to restore", and try not to occupy or less occupy farmland; For temporary land that is difficult to restore after use, the occupation of cultivated land must be strictly controlled. If it's indeed needed to occupy permanent basic farmland, it must be able to restore the original planting conditions. Organizing and carrying out information disclosure and public participation activities to fully consult farmers' opinions. Signing land use and compensation agreements, in which terms of land use area, period, and payment time should be listed. Setting up GRM to timely receive, resolve and reply to related grievance, appeal, complaints.
	Forage	LURT may be	Organizing and carrying out information disclosure and public

Item	Main Activities	Main Impacts	Generic Mitigation Measures
	planting, livestock farming	involved	participation activities to fully consult farmers' opinions following the principles of legal, voluntariness and compensation. Signing LURT agreements, in which terms of land use area, period, rent and payment timeline should be listed. For projects involving the transfer of land use right of the whole village (group) with a large area, a large number of rural households and higher operational risks, risk security funds may be established. Giving priority to affected farmers when there are any employment opportunities. Setting up GRM to timely receive, resolve and reply to related grievance, appeal, complaints.
	Construction of livestock farming zones, livestock and poultry manure treatment and resource utilization facilities, forage or straw processing facilities, inspection and quarantine facilities, etc.	FALU may be involved	Following the principles of law, voluntariness and compensation; Organizing and carrying out information disclosure and public participation activities to fully consult farmers' opinions; Signing land use and compensation agreements, in which terms of land use area, period, and payment time should be listed; Giving priority to the affected farmers If there is a demand for labor during the construction and operation and maintenance of facilities; Processing the procedures for FALU in a timely manner; Setting up GRM to timely receive, resolve and reply related grievance, appeal, complaints.
Ethnic minorities	All program activities	Some ethnic townships or villages may be impacted	During the preparation and implementation phase of the project, extensive consultation and negotiation should be conducted with representatives of ethnic minorities during the program activities preparation and implementation, and their opinions should be respected and incorporated into the program activities design.
Vulnerable groups	All program activities	Vulnerable groups may be impacted more heavily than others	During the preparation and implementation phase of the project, extensive consultation and negotiation should be conducted with representatives of vulnerable groups during the program activities preparation and implementation, and their opinions should be respected and incorporated into the program activities design. Develop and implement supporting measures for affected vulnerable groups, e.g., giving priority to them in labor use, providing welfare employment opportunities, covering by urban or rural minimum living standard subsidies.

## Appendix 9 : Records of Focus Group Discussion with EM-concentrated Village Leaders and Villager Representatives

### 1. Huiyuan Village, Qidun Township of the Hui and Dongxiang People, Guazhou County, Zhangye City, Gansu Province

**Date:** 21 October 2023

**Location:** Huiyuan Village, Qidun Township of the Hui and Dongxiang People, Guazhou County, Zhangye City, Gansu Province

**Attendees:** one representative of the PPMO, one representative of the ARAB of Guazhou County, one representative of the Qidun township government, 3 representatives of the Huiyuan village committee and 10 representatives of villagers (among which, 4 of them were female, all are ethnic minority people)

#### **Records:**

The social specialist briefly introduced about the PforR, typical activities, goals of this FGD to all representatives, learnt about the social, economic and cultural conditions, and seek comments and suggestions from representatives on the PforR and its potential E&S impacts.

Basic information about the population of Huiyuan Village: this village consists of 5 villager groups, with a total of 173 households and 1,049 persons. All of them are ethnic minorities, with the Hui and Dongxiang people each accounting for 50%. The villagers are living in a concentrated area. The village has a total labor force of about 310 people, and most of them work in other cities in Gansu Province and outside the province, mainly working on construction sites, electronics factories, etc. There are 142 households and 859 persons who have been lifted out of poverty, 34 persons with disability, 29 households and 103 persons living on the minimum living security, and no households in extremely hardship. According to the representative of the villagers, the Dongxiang people have their own language and characters, and the Hui people basically speak Mandarin, which is a local dialect. The main daily communication language is the local dialect. The customs and culture of the Dongxiang and Hui people are basically the same, such as the Eid al-Adha, Friday prayers, etc. In 2022, the annual net income per capita of the villagers was CNY 12,442 yuan. Among which, 50% was from migrant work, 30% was from agricultural planting, and 20% was from livestock farming. The village has a certain amount of ethnic minority development funds every year, normally used for upgrading and renovating livestock farming facilities, such as pen repairs, etc.

The village has a total of 5,665 mu of cultivated land, with an average cultivated land per capita of about 5 mu; forest land covers about 1000 mu, primarily designated for farmland shelterbelt purposes; the rest are wasteland and unused land, no grassland area. The cultivated land is predominantly planted with corn, alfalfa, and safflower, all of which are cultivated by the households themselves, without any LURT arrangements. Corn and alfalfa are mainly used as forage for their own livestock production.

The village is identified as a specialized livestock production community, currently housing 510 cattle and over 10,000 sheep, all raised in fixed enclosures situated around residential areas. Lambs are normally reproduced by villagers themselves. The forage primarily comes from locally cultivated corn and alfalfa, supplemented by purchases from surrounding townships. The manure of cattle and sheep is usually gathered in spring, left to undergo natural fermentation, and subsequently utilized in fields during spring plowing. The livestock disease control and prevention are mainly managed by village-level veterinary officers, administering compulsory vaccinations in both spring and autumn for free. Cattle and sheep died of diseases are generally handled by villagers themselves by burying them in excavated pits. There is no centralized disposal site for animals died of diseases or waste in surrounding townships. Traders visit the village to purchase cattle and sheep periodically, so villagers don't need to transport animals to designated markets.

Additionally, the county and township animal husbandry and veterinary medicine stations offer irregular livestock farming related skill training sessions for farmers.

Village representatives expressed that they had not heard about the PforR. Because there is no grassland in the village, there is no subsidies related to prohibiting grazing, rotation grazing or balance between capacity of grassland and livestock. Villagers traditionally release cattle and sheep into harvested fields for a duration of approximately two weeks in autumn. Testing for Brucellosis primarily falls under the purview of the county ARAB and the PCPC. In the event of infectious diseases such as Brucellosis in cattle and sheep, centralized intervention is carried out by the township government. There are two livestock farming zones in the village, constructed with funding from the local government, but they are currently underutilized. Representatives interviewed generally support the PforR implementation, recognizing the potential benefits for the village's livestock industry and the enhancement of livestock quality. However, concerns were also raised about the potential increase in costs associated with low-emission livestock production techniques.

Information disclosure and public participation: there is a WeChat group that all villagers have been invited in. Notices and information are usually disseminated to villagers through WeChat. Village meetings are held for comments when majority of the villagers are affected by any event or project.

GRM: villagers usually contact the village committee first for resolution if they have any questions, suggestions or complaints on an event. Representatives of the village committee and villagers expressed that most of the grievances or complaints can be addressed at the village level.

## 2. Xinhua Village of Shuangta Township in Guazhou County, Zhangye City, Gansu Province

**Date:** 21 November 2023

**Location:** Xinhua Village of Shuangta Township in Guazhou County, Zhangye City, Gansu Province

**Attendees:** one representative of the PPMO, one representative of the ARAB of Guazhou County, one representative of the Shuangta township government, 1 representatives of the village committee and 7 representatives of villagers (all male and ethnic minority people)

### **Records:**

The social specialist briefly introduced about the PforR, typical activities, goals of this FGD to all representatives, learnt about the social, economic and cultural conditions, and seek comments and suggestions from representatives on the PforR and its potential E&S impacts.

Basic information about the population: the village consists of 5 villager groups, totaling 431 households with 2,561 persons, all are the Hui people. They relocated from Yongjing County in 2003 and reside collectively. The village has about 900 labor forces, among which, 500 of them are working outside as migrant workers in sectors such as construction, catering, factories, and transportation. There are 244 households that have lifted out of poverty, 44 persons with disabilities, 71 households with 225 persons living on minimum living subsidies, and one household categorized as in extremely hardship. According to villager representatives, the Hui people in the village primarily communicate in the local Chinese dialect of Mandarin. In terms of customs and culture, the key distinctions between the Hui people and the Han manifest in dietary preferences and festivals (such as Eid al-Fitr, Eid al-Adha, and Friday prayers). The main sources of income for villagers are migrant working, supplemented by livestock farming. In 2022, the average annual net income per capita for villagers was about CNY 10,000 yuan. Among which, migrant working accounted for 40%, livestock farming 30%, crops cultivation 20%, and other sources accounted for the remaining 10%. The village did not receive any ethnic minority development funds.

The village has a total cultivated land area of 7,200 mu, with an average cultivated land per capita of approximately 3 mu. Forest land covers about 1,100 mu, while the remaining areas consist of wasteland

and unused land. There is no grassland in the village. The cultivated land is primarily used for the cultivation of wheat, corn, Chinese wolfberry, and licorice. Most of the land are cultivated by villagers themselves, while some households with limited labor force lease their land to other households for planting or livestock farming at a rate of about CNY 200 yuan or mu or year. Wheat and corn are mainly used as forage for livestock production.

The village is one of the specialized livestock production communities, currently housing over 500 cattle and more than 8,000 sheep. These animals are housed in fixed enclosures situated around the residential area of households, with an average of several dozen to over a hundred sheep per household. The village has one livestock farming zone, with over 10 households engaging in livestock farming within the designated area. Villagers typically reproduce lambs by themselves, and forage is primarily sourced from locally cultivated crops and purchases from surrounding townships. About 50% of households in the village possess forage processing machinery, while others borrow such equipment from neighbors. The manure of cattle and sheep is usually excavated in spring, left to naturally fermentation, and then utilized in fields during spring plowing. Disease prevention and control for cattle and sheep is overseen by village-level veterinary officers, with compulsory vaccinations administered in both spring and autumn for free. Animals died of diseases are generally buried by villagers in excavated pits. Traders visit the village to purchase cattle and sheep periodically, so villagers don't need to transport animals to designated markets. The county-level and township-level animal husbandry and veterinary medicine stations offer irregular livestock farming related skill trainings for farmers, including guidance on disease prevention measures.

Village representatives mentioned being previously unaware of the PforR. Given there is no grassland in the village, there is no related grassland subsidies and programs on balance between capacity of grassland and livestock. Regarding the PforR activities, representatives interviewed expressed support, recognizing potential benefits for the village's livestock industry and the enhancement of livestock quality, for example, organic fertilizer processing could contribute to improving the efficiency of manure utilization.

The village has established a WeChat group encompassing all villagers, serving as a platform for daily communication. Typically, village affairs involving villagers are disseminated and opinions are sought through the WeChat group and village meetings. Regarding grievances and complaints, villagers commonly choose to contact the village committee for coordination and resolution. Both village committee and villager representatives conveyed that most of the grievances can be effectively addressed at the village level.

### **3. Dacaotan Village of Kangle Township in Sunan Yugur Autonomous County, Zhangye City, Gansu Province**

**Date:** 24 October 2023

**Location:** Dacaotan Village of Kangle Township in Sunan Yugur Autonomous County, Zhangye City, Gansu Province

**Attendees:** one representative of the PPMO, one representative of the ARAB of Sunan County, one representative of the ERAB, one representative of the Kangle township government, 1 representatives of the village committee and 13 representatives of villagers (including 5 female)

#### **Records:**

The social specialist briefly introduced about the PforR, typical activities, goals of this FGD to all representatives, learnt about the social, economic and cultural conditions, and seek comments and suggestions from representatives on the PforR and its potential E&S impacts.

Basic information about the population: Dacaotan Village is predominantly inhabited by the Yugur ethnic group, with other ethnicities such as Hui, Han, and Mongolian also residing in this village. The village has a total of 108 households with 329 persons, among which, females account for 51% of the population. There

are 85 ethnic minority households with 286 persons, accounting for 87% of the total population. The village has a labor force of 268 persons, with the majority engaged in livestock farming activities, and only around 20 persons working outside the village. There are 14 persons with disabilities, 14 households with 14 persons living on minimum living subsidies, and 3 households categorized as in extremely hardship. According to villager representatives, the Yugur people has its own language but no characters, and they believe in Tibetan Buddhism. The Tibetan and Mongolian ethnic groups have their own languages and characters, while the Tu people doesn't have a distinct language and characters. The Yugur language in the village is similar to the Mongolian language. Despite the diversity, all villagers can speak Mandarin in local Chinese dialect. Residents adapt their dwelling patterns based on seasonal grazing demands, with a relatively concentrated settlement during the summer and a more dispersed in winter. Men in the family primarily handle livestock farming activities and other heavy works, while women are chiefly responsible for taking care of the elderly, children, and domestic chores. Additionally, villagers place significant emphasis on education, reflected in the relatively high education level of children in each household that commonly every household has at least one child studied or studying in university.

The primary source of income for villagers is livestock farming activities. In 2022, the average annual net income per capita reached CNY 25,000 yuan. Among which, livestock farming accounted for 85%, crops cultivation accounted for 10%, and migrant working accounted for 5%. The village received ethnic minority development funds from the national and provincial levels every year, for example, it was CNY 4.26 million yuan in 2022 and CNY 2.1 million yuan in 2023. These funds were primarily allocated for infrastructure development within the village and the improvement of the livestock industry, including the construction of roads, houses, and enclosures. Each household possesses a small car for transportation and an agricultural vehicle for livestock farming needs. Cultivated land is normally used for the cultivation of forage such as corn and oats for self-use.

There are one livestock farming cooperative and 65 livestock farming households. At the end of 2022, there was an inventory of about 11,000 sheep and 2,600 yaks in the village, averaging 200 sheep per household in the realm of cattle and sheep farming:

- Each household has fixed enclosures in front and behind their residential houses and simple quarters and enclosures on the pasture.
- Breeding primarily relies on natural mating, with unified and free breeding services provided by the township animal husbandry and veterinary medicine stations.
- Animal disease prevention and control involve 2-3 rounds of deworming and vaccination conducted by the township animal husbandry and veterinary medicine stations annually. Key diseases include brucellosis and enterotoxemia. According to the survey, villager representatives surveyed rarely wear necessary masks and gloves during lambing, and there had been cases of villagers being infected with brucellosis. Manure disposal methods primarily include (i) sheep dung collected by planting households in the agricultural area for fermentation and returning to the fields and (ii) cattle dung used as fuel by farmers themselves.
- Regarding animals died of diseases, there are some designated harmless treatment pits in the village and primarily using deep burial as the disposal method.
- Cattle and sheep sales mainly involve door-to-door purchases by traders.
- The county and township animal husbandry and veterinary medicine stations conduct 2-3 training sessions annually on livestock farming, covering topics such as breeding techniques and disease prevention and control. These sessions are typically organized in spring, summer, and autumn.

The villagers' representatives expressed that they had not heard of this PforR before, but were very supportive of the PforR implementation, believing that it would be beneficial to the development of the village's livestock farming industry, the improvement of farming techniques, and would not have any significant negative impacts. They also expressed their expectations on improvement and maintenance of enclosures, and grass-storage sheds, etc.

In terms of information disclosure and public participation, villagers' representatives said that similar projects had been implemented in their village before and that they had been notified by way of public announcements and village meetings prior to implementation, and that the feedback from the villagers had

basically been adopted. When it comes to complaints and grievances, villagers generally choose to contact the village committee for coordination. Representatives of villagers and village community indicated that most complaints could be resolved at the village level.

In response to the feedback from the villagers' representatives during the FGD, the technical experts of the PforR team provided detailed answers and reminded the representatives of the farmers to further strengthen personal safety protection and take the necessary safety measures, such as wearing gloves and masks, etc., in the process of livestock farming.

#### **4. Songmutan Village of Dahe Township in Sunan Yugur Autonomous County, Zhangye City, Gansu Province**

**Date:** 24 October 2023

**Location:** Songmutan Village of Dahe Township in Sunan Yugur Autonomous County, Zhangye City, Gansu Province

**Attendees:** one representative of the PPMO, one representative of the ARAB of Sunan County, one representative of the ERAB, one representative of the Kangle township government, 1 representatives of the village committee and 10 representatives of villagers (including 5 female)

#### **Records:**

The social specialist briefly introduced about the PforR, typical activities, goals of this FGD to all representatives, learnt about the social, economic and cultural conditions, and seek comments and suggestions from representatives on the PforR and its potential E&S impacts.

Basic information about the population: Songmutan Village is predominantly inhabited by the Yugur ethnic group, with other ethnicities such as Hui, Tu, and Han also residing in this village. The village has a total of 106 households with 291 persons, among which, females account for 47%. There are 90 ethnic minority households with 240 persons, accounting for 82% of the total population. The village has a labor force of about 100 persons. Among them, those under 30 years old are working outside as migrant workers and the rest are engaging in livestock farming activities. There are 9 persons with disabilities, 9 households with 19 persons living on minimum living subsidies, and 1 person categorized as in extremely hardship. According to villager representatives, the Yugur people has its own language but no characters, and they believe in Buddhism. The Tu people doesn't have a distinct language and characters. Villager speak their own language and Mandarin in local dialect in daily communication, while children normally speak Mandarin. All villagers are living in the urban area of Sunan County except one household. Men in the family primarily handle livestock farming activities and other heavy works, while women are chiefly responsible for taking care of the elderly, children, and domestic chores.

The income of this village is mainly based on livestock production and ecological tourism. In 2022, the annual net income per capita of villagers was CNY 26,842 yuan. Among which, livestock farming accounted for 80% and migrant working accounted for 20%. This village receives national and provincial ethnic minority development funds and special funds for rural revitalization every year, such as CNY 960,000 yuan in 2022 and CNY 2.72 million yuan in 2023, which were mainly used for infrastructure construction as well as the development of livestock production. A total of 56 households in this village are engaged in livestock farming, stocking about 7,550 sheep and 4,787 yaks at the end of 2022, with an average of 300 sheep and 180 yaks per household. In yak and sheep farming:

- Each household has simple quarters and enclosures on the pasture.
- or Breeding primarily is conducted by farmers themselves through purchasing yak and sheep for improvement, and local government provides subsidies support at about CNY 3,000 yuan or household.

- Animal disease prevention and control is carried out by the two village-level veterinary officers who are responsible for vaccination, deworming and technical support.
- Manure is treated through gathering and spreading into the fodder production field every spring.
- Animals died of diseases are buried deeply by villagers themselves.
- Yaks and sheep sales mainly involve door-to-door purchases by traders.
- The county and township animal husbandry and veterinary medicine stations conduct 2-3 training sessions on livestock farming every year, covering topics such as livestock farming techniques and disease prevention and control. These sessions are usually provided in summer in the form of intensive training on the pasture.
- Some of the farmers involve a small amount of labor during the lambing period in winter and spring, mainly villagers of surrounding villages and communities and relatives, with a labor cost of about CNY 100 RMB or day and a work period of about 2-3 months.

Villager representatives expressed that they had not heard about the PforR before but strong support for its implementation. They believe it will be good for the development of the village's livestock production and promoting advancements in livestock farming techniques without causing significant adverse effects. Villager representatives highlighted that the overall costs of livestock farming are high. They expressed a desire for increased support in introducing superior breeding stock, and constructing enclosures, etc.

In terms of information disclosure and public participation, villager representatives noted that similar projects have been previously implemented in the village. Prior to implementation, villagers were informed through public announcements and village meetings. Regarding soliciting opinions on other projects, such as the formulation of government development plans, the opinions of village leaders were consulted. Cases of grievances or complaints are generally rare among villagers. In the cases where they occur, villagers typically choose to contact the village committee for coordination and resolution, and these matters are generally resolved at the village level.

## 5. Xinhua village, Shuangta Township, Guazhou County, Jiuquan, Gansu Province

**Date:** 24 February 2024

**Location:** Xinhua village, Shuangta Township, Guazhou County, Jiuquan, Gansu Province

**Attendee:** Representatives of PPMO (2 females), county mayor of Guazhou, head of the Guazhou ARAB, head of the Shuangta township government, representatives of village committee (2 persons), representatives of villagers (36 persons, including 12 females; all were the Hui people)

### Records:

In this meeting, the social specialist briefly introduced the typical activities under the World Bank PforR and the purpose and significance of this focus group discussion, understood the basic production and living conditions of the villagers, the implementation of similar projects in the past, and solicited the opinions and suggestions of the representatives on the Program activities and the potential impacts.

**Population Overview:** Xinhua Village has 5 villager groups, a total of 439 households and 2560 people, all of whom are the Hui nationality. Villagers live in a concentrated manner. There are 244 households with 1479 people just lifted out of poverty, 2 households 8 people under poverty monitoring, 44 persons with disabilities, 71 households with 225 people live on government minimum living subsidies, 1 household in extremely hardship. The main income source of these groups of people is government subsidies, living and nursing subsidies for people with disabilities, and income from public welfare positions. The Hui residents of the village do not have their own ethnic language, the commonly used language is the local Chinese dialect. All villagers can understand and speak Mandarin; the Hui people believe in Islam and there is a mosque in the village; the ethnic specific festivals are Eid al-Adha and Eid al-Fitr. In terms of economic activities, there is no difference from the surrounding Han villages. The village has a total labor force of about 960 persons, of which about 580 persons work outside as migrant workers, mainly engaged in

construction, catering, transportation, services and other work, the remaining labor force and other villagers mainly engage in planting and livestock farming or working at local market (crane operation, freight, etc.). There are 6 officials in the village committee, all of whom are Hui nationality.

**Villagers' Economic Situation:** As of the end of 2022, the per capita disposable income of the villagers was about 16922 yuan, and the per capita net income was 10938 yuan. Among them, the income from migrant working accounted for 40%, the income from livestock farming accounted for 25%-30%, from crops planting accounted for 20%, and the income from running business accounted for 10%. According to the interview with the villager representatives, almost all the villagers used loans from government as the start-up capital for livelihood development, with an average loan of about 100,000 yuan or household, mainly used for building houses, buying cranes, etc. Poverty-alleviated households benefited from government-subsidized loans of 30,000-50,000 yuan, while the interest rate for loans among ordinary resident households averaged around 6%.

**Crops Cultivation:** This village encompasses a cultivated land area of 7,200 mu and woodland of approximately 1,100 mu; the rest comprises barren and unused land. there is no grassland in the village. Cultivated land area per capita is about 3mu, predominantly cultivating wheat, corn, Chinese wolfberry, and alfalfa, most of which is for self-cultivation, with straw utilized for livestock breeding.

**Livestock Farming:** There are no livestock farming cooperatives in the village, all are smallholders. Among them, 80% of households adopt the confined breeding model, while the remaining 20% households favor free-range methods. On average, each household raises around 80-100 head of sheep and 300 head of cattle. Villagers primarily breed cattle and sheep by themselves, with the government offering subsidies for the introduction of new species (200-280 yuan per head) or artificial insemination subsidies, with villagers bearing a portion of the costs themselves. Livestock feed primarily consists of corn, wheat straw, and alfalfa grown by villagers themselves. Livestock manure is managed through composting and returning to fields. In terms of disease prevention and control, the village appoints one epidemic prevention officer, who conducts 1-2 free vaccinations in each spring and autumn, and at other times, villagers conduct diseases prevention and control under the guidance of technical personnel from the village and township livestock veterinary station. Regarding livestock sales, some are collected by traders while others are transported by livestock farming households to slaughterhouses, with the processed meat sold in local markets. Labor is minimally involved in the process of livestock farming.

**Livestock Farming related Technology Promotion and Training:** Technicians from the government's livestock veterinary center conduct at least 3-4 free training sessions annually in the village, focusing on the promotion of new livestock farming technologies and targeted training organized based on community needs after investigation. Training is primarily conducted in Mandarin. Farmers decide whether to participate in training based on their own needs; for example, there is generally high enthusiasm among livestock farming households to participate in training, while those whose livelihoods do not primarily rely on livestock farming have lower participation rates.

**Past Livestock Technology Promotion and Application Activities:** there is no grasslands in the village, thus there were no activities related to grasslands protection and restoration. In terms of livestock farming, technologies such as optimizing feed formulations, improving forage quality, and promoting the breeding of superior species were implemented.

- Optimizing feed formulations involves increasing the proportion of green forage in the feed for cattle and sheep to 40%-60%. Prior to implementing feed formulation optimization, the feed for smallholders included wheat and corn straw (corn straw priced at 800-900 yuan or ton, wheat straw at 1200 yuan or ton) and concentrate feed. The average daily cost of raising a head of sheep was 1.2-1.5 yuan, with a lamb survival rate of approximately 2-3 per year and a feeding period of 4-5 months. After increasing the proportion of green forage (priced at 500 yuan or ton), the daily cost of raising a head of sheep decreased to 0.8-1 yuan, the lamb survival rate increased to 3-4 per year, and the feeding period shortened to 3-4 months. Overall, the cost of raising livestock decreased, while profits increased significantly.

- Improving forage quality primarily involves expanding alfalfa cultivation among villagers, with the government providing a subsidy of 600 yuan or mu to planting households.
- Breeding superior species includes the introduction of new species of rams and basic ewes. Representatives of livestock farming households stated that after introducing new species, meat production of cattle and sheep increased, fattening periods shortened, costs decreased, and profits increased, resulting in increased household income. The government provides free ram introductions or subsidized or interest-free loans for low-income families annually, while other households bear the corresponding costs themselves (2,000-3,000 yuan or head).

Regarding previous activities like promoting and applying new livestock farming technologies, villagers expressed support and willingness to participate. Attendees generally support the Program activities, believing they are beneficial for the development of livestock industry, improving livestock survival rates, meat quality, shortening fattening periods, reducing costs, and increasing income, without causing negative impacts on villagers. Even if the application of new technologies might lead to increased costs, they are still willing to participate.

**Information Disclosure and Public Participation:** Given that both the village committee officials and villagers are the Hui people, meetings are typically conducted in the local Chinese dialect. Each villager group elected several village representatives. Concerning relevant construction activities or projects within the village, villagers usually submit applications to the village committee based on their needs. The village committee convenes meetings of village representatives for discussion and consultation. Upon unanimous consent, proposals are forwarded to the township and county-level governments for approval and subsequent implementation.

**GRM:** The GRM in the village primarily involves the following steps: Villagers initially raise complaints or appeals to the village committee, which then conducts investigations, mediations, or resolutions. If the village committee is unable to address the issues, they are escalated step by step to the township and county-level governments for resolution. For example, appeals regarding livestock farming technologies are reported by villagers to the village committee, which then forwards them to the township's livestock veterinary station, and subsequently to the county-level livestock veterinary center. Villagers usually raise their complaints orally, or through phone calls or WeChat. In the past, almost all grievances were resolved at the village level, with very few cases requiring escalation to the township and county-level governments.

**Suggestions or Expectations on this PforR:** Villager representatives expressed that the management of smallholders' livestock farming is relatively extensive and expected that the implementation of this PforR can enhance their livestock farming techniques. Furthermore, they offer the following suggestions:

- (i) **Promotion and Application of Green Forage:** Currently, smallholders face challenges such as inadequate green forage technology, lack of green forage storage facilities, and absence of machinery for green forage packaging. Engaging third-party services for green forage harvesting and packaging incurs high costs (approximately 190 yuan or mu). Therefore, they propose the introduction of socialized services for green forage packaging machinery (priced at 60 yuan or ton) to reduce costs. Additionally, they seek technical guidance and subsidy policies for constructing green forage storage facilities.
- (ii) **Disease Prevention and Control:** currently, mandatory immunization in spring and autumn only targets certain diseases, leaving some diseases outside the scope of compulsory immunization. They urge the government to expand the scope of mandatory immunization to cover all relevant animal diseases.
- (iii) **Forage Processing:** there is a significant demand among livestock farmers for forage mixing machines, but the purchasing cost is relatively high (approximately 10,000 yuan for each). They request government subsidies and support in the area of forage processing machinery to alleviate the financial burden.

## 6. Hezhou village, Shahe Township, Guazhou County, Jiuquan, Gansu Province

**Date:** 24 February 2024

**Location:** Hezhou village, Shahe Township, Guazhou County, Jiuquan, Gansu Province

**Attendee:** Representatives of PPMO (2 females), county mayor of Guazhou, head of the Guazhou ARAB, head of the Shahe township government, representatives of village committee 3 persons, including 1 female and 1 ethnic minorities), representatives of villagers (20 persons, including 4 females; 13 ethnic minorities)

### **Records:**

In this meeting, the social specialist briefly introduced the typical activities under the World Bank PforR and the purpose and significance of this focus group discussion, understood the basic production and living conditions of the villagers, the implementation of similar projects in the past, and solicited the opinions and suggestions of the representatives on the Program activities and the potential impacts.

**Population Overview:** This village is a resettlement village, relocated from Ningxia County around 1980. There are a total of 4 villager groups with 261 households and 1,192 residents living in a concentrated manner. Among them, there are 206 households and 890 people belonging to ethnic minorities, including the Hui, Dongxiang, and Bao'an. In terms of cultural customs, the Hui residents in the village observe two additional festivals compared to other ethnic groups. There are two mosques in the village where the Hui residents gather for prayers every weekend. There are some differences in attire, mainly reflected in headwear, while other customs are generally comparable to those of the Han. Both ethnic minority residents and the Han residents primarily engage in crops planting and livestock farming, with occasional employment as migrant workers. The total labor force in the village amounts to 530 people, with over 300 individuals working in electronics factories in Fujian, Jiangsu, and Guangdong as migrant workers. Those not engaged in migrant work are employed within the county. There are 189 households with 890 persons just lifted out of poverty in 2020, 2 households with 8 people still under the government poverty-monitoring, 13 persons with disabilities, 48 households with 108 people living on the MLS, and 2 households with 2 people in extremely hardship. While households under government poverty-monitoring are still involved in crops planting and livestock farming with corresponding government subsidies, those with disabilities, living on MLS and in extremely hardship rely mainly on government subsidies such as MLS, severe hardship allowances, disability living allowances and care subsidies as they are unable to engage in crops planting or animal farming due to lack of labor force.

**Villagers' Economic Situation:** The average net income per capita for villagers in 2022 was around 12,000 yuan. Of this, 35% came from crops planting, 30% from livestock farming, 25% from migrant work, and 5% from other sources.

**Crops Cultivation:** This village has a total cultivated land area of 1,130 mu, with an average per capita cultivated land area of 1 mu. There are 30 mu of woodland and no grassland area. The cultivated land is primarily used for planting alfalfa, corn, Chinese wolfberry, and wheat, all cultivated by farmers themselves, with straw used for livestock farming.

**Livestock Farming:** There is one livestock farming cooperative in the village, 220 smallholders engaged in livestock husbandry. Apart from those households engaged in migrant work, all other households are involved in livestock farming, with an average of over 20 head of sheep per household, primarily raised in enclosures with no free-range practices. Breeding of cattle and sheep is primarily done by farmers themselves, facilitated by government-assisted ram introductions. Feed comes from crops grown by farmers themselves, such as corn, wheat, and alfalfa, although some households with larger livestock numbers need to purchase additional feed from the market. The village has 4 forage processing machines available for rental by villagers at a processing cost of 2 yuan or bag. Manure is collected and naturally fermented in fields after being cleared in spring, to be used as fertilizer during planting. Regarding disease prevention and control, a village-level technician conducts centralized vaccination during spring and autumn, while villagers purchase medicine from township veterinary station during other times. Diseased animals undergo

specific procedures before being buried in designated deep pits. During the sale phase, large-scale breeders usually transport livestock to external markets such as Yumen Livestock Trading Market, while smallholders mainly rely on traders for purchases. In terms of labor, livestock farming involving fewer than 70 head of cattle and sheep is usually managed by farmers themselves without additional labor. The operating costs of livestock cooperatives are slightly higher than those of smallholders due to the involvement of labor and higher levels of management.

**Livestock Farming Technology Promotion and Training:** The government organizes no fewer than 4 free livestock farming technology training sessions annually in the village, conducted by county or township livestock veterinary technicians. Additionally, at least 2 training sessions per year are organized for large-scale farmers to receive centralized training outside the village, led by livestock farming experts, and provided free of charge. Prior to organizing these training sessions, the county-level livestock veterinary center issues training notices to township governments, which then disseminate the information to villages. Villages notify residents through village WeChat groups, villager representative meetings, and other means, and residents voluntarily register for participation. Local training primarily employs the local Chinese dialect, while training conducted outside the village is in Mandarin. Representatives of those who participated in the trainings before generally find the training content highly practical and effective. They also share the knowledge gained with other livestock farmers in the village who did not participate in the training.

**Past Livestock Farming Technology Promotion and Application:** This village previously implemented projects focusing on breeding superior species, including the introduction of superior rams, basic breeding cows, and superior bulls. Before implementation, technicians conducted promotional training and explanations during villager meetings, allowing villagers to voluntarily choose whether and when to participate based on their actual needs. Villager representatives noted that through the breeding of superior species, calves and lambs became healthier, with increased survival rates, reduced diseases, faster growth rates, improved meat quality, and decreased costs. The enthusiasm among livestock farmers to participate was very high. However, the county currently has limited annual allocations for the introduction of superior rams and basic breeding ewes, prioritizing the low-income households, leaving other farmers in high demand. For example, prior to the introduction of new species, farmers primarily raised local yellow cattle, purchasing calves at 3,500 yuan or head, with a 2-year feeding period and feeding costs of approximately 6000 yuan or year. The slaughtered weight was around 150kg, sold at 44 yuan or kg, resulting in a total cost of approximately 15,500 yuan or head and an income of 6,600 yuan or head, leaving farmers in a significant loss. With the introduction of new species, the purchase price of calves increased to 7,000 yuan or head, with a feeding period of 10 months and a cost of 6,000 yuan or head. The slaughtered weight increased to 350-400 kg, sold at 44 yuan or kg (or even higher), resulting in a total cost of 13,000 yuan or head and an income of 15,400-17,600 yuan or head, yielding a net income of 2,400-4,600 yuan or head in just one year. Regarding subsidies, the government provides a subsidy of 3,000 yuan or head for low-income families participating in superior ram introductions, while other farmers obtain a 3-year subsidized loan from the government to purchase rams from the market. In addition, in 2023, the government provided a subsidy of 5,000 yuan per household to each livestock farmer for the purchase of materials such as hollow bricks to renovate cattle and sheep pens through a project initiative.

**Information Disclosure and Public Participation:** The village committee consists of 4 village cadres, including 1 ethnic minority. Based on the number of households, approximately 50 villager representatives were elected through recommendations from villager group leaders and self-nominations by villagers, comprising both ethnic minority and the Han residents. Daily communication among villagers primarily occurs in the local Chinese dialect, although villagers understand and speak Mandarin, albeit not always fluently. When meetings concerning village affairs are necessary, the village committee typically notifies villagers through WeChat groups. Depending on the importance of the matter, the village committee organizes villager representative meetings or general villager meetings. Sometimes, meetings are conducted separately for each villager group to ensure the participation of all villagers in discussions and decision-making processes. Language used in villager meetings includes both Mandarin and the local Chinese dialect,

with meetings held within the village primarily using the local Chinese dialect.

**GRM:** Villagers first report grievances or complaints to the village committee, which coordinates resolution efforts. If the village committee cannot resolve the issues, they are escalated to the township government for further explanation and resolution.

**Suggestions or Expectations on the Program:** Villager representatives participating in the discussion unanimously expressed support for the PforR implementation, believing it will have a positive impact on livestock farming with minimal negative impacts. Villager representatives were willing to accept increased costs as long as the project increases income. However, they highlighted the poor market conditions for cattle and sheep sales over the past two years, which have somewhat dampened the enthusiasm of farmers. Additionally, they expected for focused support in the following areas:

- Organic Fertilizer Processing
- Animal Disease Prevention and Control
- Improvement of Forage Quality
- Slaughtering Facilities: Currently, cattle and sheep sold locally must be transported to designated slaughterhouses for processing, costing 500 yuan or head for cattle, and without quarantine certificates, making them ineligible for market sale. They hope for the construction of improved slaughterhouses to reduce processing costs, issue quarantine certificates, and facilitate the sale of beef and mutton.
- Trade Market Construction: Currently, local cattle and sheep are mainly transported by railway to the Yumen livestock trading market, where prices are determined by buyers, resulting in relatively low prices and low profitability. They aspire to enhance cattle and sheep sales by constructing a local trading market to increase selling prices and broaden sales channels.

## 7. Bayin village, Kangle Township, Sunan Yugur Autonomous County, Zhangye, Gansu Province

**Date:** 5 February 2024

**Location:** Bayin village, Kangle Township, Sunan Yugur Autonomous County, Zhangye, Gansu Province

**Attendee:** Representative of PPMO (1 female), Sunan ARAB (3 person, including 1 female), township government (1 person), village committee (2 persons), villager representatives (11 persons, all the Yugur, including 5 females)

### **Records:**

In this meeting, the social specialist briefly introduced the typical activities under the World Bank PforR and the purpose and significance of this focus group discussion, understood the basic production and living conditions of the villagers, the implementation of similar projects in the past, and solicited the opinions and suggestions of the representatives on the Program activities and the potential impacts.

**Population Overview:** The village comprises a total of 82 households with 222 persons, among which ethnic minorities account for 69 households with 170 individuals, with over 80% belonging to the Yugur ethnic group. Most households in the village are scattered, with approximately 1km distance. There are a total of 149 labor forces, with 29 individuals working outside the village, mainly in other counties and cities within Gansu Province. The village has no households under poverty monitoring, but it includes 17 persons with disabilities, 16 households receiving MLS, and 1 household under extreme hardship assistance. These individuals, due to illness or the loss of labor capabilities, are not engaged in crops planting or livestock farming and primarily rely on government subsidies for their livelihoods. The Yugur people in the village have their own language without a written form, although they understand Mandarin, and typically communicate in the Yugur language among themselves. The other ethnic minorities in the village have their own language and script, also understand and speak the Yugur language, and they communicate in various

languages depending on the situation, with local and county officials often using local Chinese dialect. Both Yugur and the other ethnic minority people celebrate their own festivals, such as the 15th day of the first lunar month, the 11th day of the fourth lunar month, and arts festivals in the 7th and 8th lunar months, usually organizing village-wide festivities by themselves. All ethnic minority groups adhere to Buddhism, with a Kanglong Temple located around the village. Within Yugur families, women hold higher status, often taking charge of household affairs.

**Villagers' Economic Situation:** Livestock farming serves as the primary source of income for villagers. In 2022, the per capita net income of villagers was 23,363 yuan. Livestock farming income accounted for over 80%, while income from migrant work accounted only 10%, and other sources accounted for 5%. Additionally, the village received central and provincial minority development funds every year for production and infrastructure development. For example, in 2023, the village received a total of 300,000 yuan of ethnic minority development funds, which was used to construct a wool storage facility for farmers and herders to store wool.

**Crops Cultivation:** The village has a total cultivated land area of 122 mu. The per capita cultivated land area is 1 mu, primarily used for planting corn and oats. **Livestock Farming:** There are a total of 71 households with 170 individuals engaged in livestock farming in the village, all of whom are smallholders, with no livestock farming cooperatives established. Currently, the households with the most sheep raise around 300 heads. The young cattle and sheep in the village primarily relies on self-breeding and self-rearing. Regarding manure treatment, it's applied to the fields after fermentation. In terms of disease prevention and control, each village has a technician assigned by the township's animal husbandry and veterinary station, and the village also has two epidemic prevention focal points who provide free vaccination during the spring and autumn seasons. Regarding the sale of cattle and sheep, when the market conditions are favorable, traders come to purchase directly from the farmers. However, in recent two years, due to poor market conditions, farmers need to transport animals to the market themselves. In the process of livestock farming, most households do not require hired labor. The large livestock farms may hire one temporary worker, with labor costs ranging from 120 to 150 yuan per day.

**Livestock Farming Technology Promotion and Training:** The government organizes 2-3 livestock-related training sessions in the village each year, usually conducted during the relatively idle periods for farmers and herders. At least one training session is held during each of the spring and autumn seasons. The training venues are primarily located at the township government offices. Before conducting the training, the county government informs the township, which then notifies the village committees. The village committees then inform the villagers through WeChat groups, based on the principle of voluntary participation. Most farmers and herders with available time usually attend the training sessions. The language used for instruction mainly consists of local Chinese dialect and Mandarin.

**Past Livestock Farming Technology Promotion and Application:** The village has been implementing policies such as promoting and applying new livestock farming technologies such as confined feeding and breeding of superior species. The promotion and application of new livestock farming technologies are non-policy related measures and voluntary for farmers and herders.

- **Breeding superior species:** This includes the introduction of superior species, such as breeding rams. Participation in this program is voluntary for farmers, and those who choose to participate receive a government subsidy of 1,500 yuan or animal, while farmers themselves contribute about 1,000 yuan or animal. According to feedback from villager representatives, all livestock farmers in the village have participated in the breeding of superior species. This is because the new species increase the number of lambs produced and shorten the fatten cycle, resulting in higher economic benefits. The government also organizes farmers and herders to visit other areas for observation and allows them to choose the species they wish to introduce.

**Information Disclosure and Public Participation:** The Village Committee comprises three members, all of whom belong to ethnic minority groups. Regarding production or infrastructure projects within the village, the usual process involves prior consultation among village residents. A village meeting is convened to form resolutions, which are then reported to the township and subsequently to the county-level

government for approval and implementation. Villager meetings typically require full attendance, with participation from at least 60% of the village population. Gender representation at these meetings is approximately equal, with about 50% male and 50% female attendees. If any villagers are unable to attend due to personal reasons, they are required to inform the Village Committee in advance, ensuring that at least one representative from each household participates. Activities had been organized through villager meetings for mobilization. In cases where certain farmers and herders have objections, communication efforts were made by the Village Committee and the township authorities.

**GRM:** The GRM in the village consists of three levels: the Village Committee, the township government, and the county-level government. Before project implementation, villager meetings were typically conducted to seek approval from the residents. This proactive approach minimized instances of complaints or grievances. Even if occasional complaints arise, they were generally resolved at the Village Committee level.

**Suggestions and expectations regarding the Program:** The villager representatives who attended the focus group discussion universally expressed support for the Program. They believe that adopting more scientific feeding methods will enhance productivity and promote the development of livestock farming with limited adverse effects on farmers and herders. However, they highlighted the current downturn in the cattle and sheep market, indicating that livestock farmers are barely making profits. As a result, they hope the government will take measures to reduce the farming costs, such as providing subsidies for land leasing and animal transportation.

## **8. Kangfeng village, Kangle Township, Sunan Yugur Autonomous County, Zhangye, Gansu Province**

**Date:** 5 February 2024

**Location:** Kangfeng village, Kangle Township, Sunan Yugur Autonomous County, Zhangye, Gansu Province

**Attendee:** Representative of PPMO (1 female), Sunan ARAB (3 person, including 1 female), township government (1 person), village committee (2 persons), villager representatives (11 persons, all the Yugur, including 1 female)

### **Records:**

In this meeting, the social specialist briefly introduced the typical activities under the World Bank PforR and the purpose and significance of this focus group discussion, understood the basic production and living conditions of the villagers, the implementation of similar projects in the past, and solicited the opinions and suggestions of the representatives on the Program activities and the potential impacts.

**Population Overview:** The village comprises a total of 82 households with 233 persons. Among them, 65 households totaling 186 people are ethnic minorities, with over 90% being Yugur. Villagers reside scattered, with approximately 10 households per residential site, spaced roughly 500m apart. The village has a labor force of 121 persons, with 8 engaged in migrant work, while the majority are involved in local livestock farming and local employment. There are 21 persons with disabilities, 19 households with 29 persons in MLS, primarily comprising elderly and single-parent families. Their main sources of income include land use right transfer funds, MLS, pensions, and support from children. The village has no households under poverty monitoring or individuals in extremely hardship. The Yugur is the primary language of daily communication, while Mandarin predominates in meetings. Most villagers understand and speak the local Chinese dialect, with less than 10% of the elderly unable to understand Mandarin. The Han residents in the village primarily engage in migrant work, while ethnic minorities focus on livestock farming, with minimal disparities in other aspects.

**Villagers' Economic Situation:** In 2022, the average disposable income per capita in the village was

approximately 21,000 yuan. Livestock farming contributed to over 60% of the income, while migrant work accounted for about 15%, and the remaining comprised income from tourism and gothers, totaling 20%. Additionally, the village received central and provincial ethnic minority development funds every year, amounting to 8 million yuan in 2022, primarily used for infrastructure projects.

**Crops Cultivation:** The village possesses a total cultivated land area of 470 mu, with an average per capita cultivated land area of about 2.5 mu. There are 5 households engaged in crops planting, primarily oats.

**Livestock Farming:** There are 3 livestock farming related specialized farmer cooperatives and 1 collective livestock farming cooperative and 47 smallholders in the village. On average, each household raises around 160 head of sheep and 90 head of yaks. The primary forage for livestock farming consists of corn, alfalfa, and oats, with additional purchases during winter and spring. Breeding of cattle and sheep primarily involves self-reproduction by farmers. During winter and spring, the manure from cattle and sheep is usually collected by nearby plantation households, fermented, and returned to the fields. Disease prevention and control are administered by the government, offering free vaccinations in spring and autumn, while households manage diseases prevention and control during other times. The sale of cattle and sheep primarily relies on traders who purchase directly from households, eliminating the need for villagers to transport their livestock to designated trade markets. Large livestock farmers may require limited short-term labor, with labor costs averaging around 130 yuan or person or day.

**Livestock Farming Technology Promotion and Training:** The county-level ARAB organizes centralized livestock farming technology training and disease prevention sessions in towns and county seats every year. These include on-site training sessions conducted in villages and periodic visits by technicians for guidance. Participation in these training sessions is voluntary for villagers. Should the content not meet the needs of livestock farmers, they have the option not to participate the training sessions. According to the villager representatives involved in discussion, there is a high level of enthusiasm among livestock farmers to participate, with almost all farmers attending all training sessions.

**Past Livestock Farming Technology Promotion and Application:** The village has been engaged in promoting new livestock farming technologies.

or **Information Disclosure and Public Participation:** The village committee has 3 cadres; all are ethnic minorities. A village WeChat group has been established, with all villagers joining. Daily notifications and information dissemination within the village are primarily conducted through the WeChat group. For matters involving a large number of affected individuals, villager meetings are organized to solicit opinions. Regarding infrastructure projects within the village, village committee meetings were usually conducted in advance to discuss project planning with villager representatives, formulating project proposals for submission to township and county-level authorities for approval and implementation.

**GRM:** Villagers with grievances or objections regarding certain matters generally opt to first contact village committee, who then escalate the issues step by step if it's failed to resolve at the village level. If the construction party is present on-site, affected persons usually contact them directly for on-site resolution.

**Suggestions or Expectations on the Program:** Villager representatives who attended the focus group discussion expressed strong support to the Program. They endorse any activity beneficial to agriculture and capable of increasing income, hoping for implementation as soon as possible. According to village representatives, frequent droughts in Sunan County have affected fodder production and livestock productivity in the past 4 years. They believe that the Program implementation would enhance the climate resilience of livestock farming, benefiting farmers. Additionally, they hope for the development of deep processing industries for livestock products within the county to increase their value. They also aspire to establish a brand for livestock products in Sunan County, intensify promotion efforts, and broaden local market channels for livestock products.

## Appendix 10: Supplementary Program Beneficiaries Analysis

### I. Introduction

- 1 The purpose of this supplementary survey and analysis note (the note) is to:
  - Provide targeted information and analysis regarding the social risks related to vulnerable groups including ethnic minorities relevant to the proposed operation which now focuses on livestock. This includes a short description of each participating group (smallholder, medium, large enterprises, etc.) and their social risk profile based on social context and potential activities to be supported by the PforR.
  - Explain how the program will affect and engage with different stakeholder groups with a focus on ethnic minority communities, assess the ability of the government to engage with these communities appropriately, reviewing the risk rating considering these and developing mitigation measures where necessary.
- 2 The survey reviewed the existing livestock farming practices of different type of participation groups and their adoption of and feedback on technologies and activities and systems adopted by the government program, to assess how the Bank Program can contribute to improved outcomes. A central part of this work has been to identify issues or obstacles for ethnic minorities benefiting from the Program including potential impacts on key customary aspects including language, religion and livelihood systems.
- 3 This note is structured as follows:
  - Beneficiary profile
  - Needs and expectations of beneficiaries
  - Program benefits and impacts
  - Participation and empowering the livestock farmers

### II. Methodology and limitations

- 4 The clearer P4R boundaries and activities have allowed more targeted social assessment and systems assessment including social surveys to collect socioeconomic information of the beneficiaries in program area, identify their vulnerabilities, needs, concerns and program impacts. The World Bank social team conducted a supplementary survey in 7 counties or district from March 14 to 20 2024. A total of 43 detailed surveys were completed with respondents including:
  - 8 livestock farming enterprises or companies,
  - 10 farmer cooperatives,
  - 7 family farms and
  - 18 household farms
- 5 The 6.1% sample of 700 farms included samples from:
  - each type of the scaled (medium and large) enterprises, farmer cooperatives, family farms and household farms,
  - farms operated by the dominant ethnic group, ethnic minorities, the low-come families,
  - farms from each of the 7 program counties or district.

### III. Beneficiary Profile

#### i) Program Beneficiaries

6 Given the continued growth in demand for livestock products in response to rising disposable incomes, and the province's focus on livestock sector as a driver of economic growth, the contribution of the livestock sector to GHG emissions is set to increase without effective and proactive mitigation efforts. At the same time, livestock productivity improvements are necessary, to support growth of farmer incomes in the province. The Program is therefore centered around introduction of new, innovative, productivity-improving and effective GHG mitigation technologies and practices, amplifying emission reductions under the government program, accelerating the mitigation and adaptation efforts in Gansu's livestock sector, and increasing livestock productivity and farmer incomes. The proposed Program will bring additionality and sharpen the climate mitigation, resilience and productivity improvement focus to the Gansu's livestock sector, resulting in higher productivity, higher incomes and lower emissions going forward.

7 **Group of Beneficiaries.** The program has designed a series of activities for achieving a triple win of reducing GHG emissions, enhancing resilience, and increasing productivity of livestock production systems in Gansu, including (a) promoting advanced climate smart technologies and practices that improve the productivity and climate resilience of fodder production; (b) promoting state-of-the-art technologies and practices that lower GHG emissions from intensive livestock production systems; (c) improving selected areas of livestock value chain operation and sustainability to reduce their GHG emissions and environmental footprint; and (d) establishing an enabling governance system to support the introduction and future scale-up of the green, productivity-improving and low-emission investments in the livestock sector. It covers 7 counties in 5 municipalities or prefectures - Minle county and Sunan county of Zhangye municipality, Lanzhou New District of Lanzhou municipality, Jingchuan county and Lingtai county of Pingliang municipality, Zhengning county of Qingyang municipality and Guazhou city of Jiuquan municipality. The primary beneficiaries of the Program include:

- Farmers engaged in animal husbandry, including livestock farming enterprises, cooperatives, family farms, household farms;
- Rural households engaged in fodder production;

8 **Population of Beneficiaries.** The 700 livestock demonstration farms consist of scaled (medium and large) owned by 52 enterprises (with an average of 747 heads of cattle and 690 sheep), 141 farmer cooperatives (average 206 heads of cattle and 283 sheep), 82 family farms (average 57 heads of cattle and 24 sheep), and 425 household farms (average 37 heads of cattle and 244 sheep). Of the 130,000 ha of feed production area, around 31,000 ha will be with the demonstration farms and the remaining area will be clearly identified feed production areas suitable for the PforR purposes.

#### ii) Socioeconomic Profile of Beneficiaries

9 Among the 43 respondents, 35 (81%) of them are Han, 5 (12%) of them are Yugur who are mainly from Sunan County and 3 (7%) of them are the Hui. The basic socioeconomic profile of project beneficiaries is analyzed from the following aspects.

#### Demographic Profile

10 **Population.** Among the 43 sample farms, there are 538 households with 2,596 persons involved, among which, 2,260 are ethnic minorities, mainly Hui and Yugur people. While, the actual operators of the sample farms are 203 persons, accounting 8%; 23 of them are ethnic minorities. The remain persons engage in other business, such as migrant work, working in

enterprises or companies, and others. Particularly for cooperatives, family farms and household farms, young people are working outside for other business, while older people engage in livestock farming.

11 **Population disaggregated by gender.** Among the rural farmers of sample program counties, about 54% of farmers are men and 46% of them are female.

12 **Education level.** The survey shows that the education level of majority farmers is the junior middle school and below, accounting for up to 75%, while only 25% of the farmers have an education level of senior middle school and above level.

### **Economic Status**

13 **Ownership of sample livestock farms:** Among the 43 livestock farms surveyed, 33 of them are individually owned with the remaining 10 being partnerships. Livestock farming enterprises, cooperatives and family farms are required to be legally registered while household farm do not require industrial and commercial registration.

14 **Modality of livestock farming.** Based on the survey outcomes, there are two types of seasonal grazing:

- *Type I:* confined feeding as dominant method and only releasing the animals on the agricultural land for straw after harvest in Autumn, lasting for less than one month;
- *Type II:* Rotational grazing on pastureland in Summer and Autumn and pastureland in Winter and Spring.

15 Among the 43 sampled farms, 33 (77%) of them focus on intensive feeding and fattening, 3 (7%) are grazing, 6 (14%) are seasonal grazing, 1 (2%) of them are partially grazing and partially confined feeding.

16 It's found that confined feeding is undertaken in majority of the program counties, like Zhengning, Lingtai, Jingchuan, Lanzhou New Zone, Guazhou and Minle, while in Sunan, both seasonal grazing and confined feeding is executed.

17 **Scale of livestock farming facilities.** The survey shows that the average land area of different type of farms varies with averages per type as follows:

- 116 mu for enterprises,
- 20 mu for cooperatives,
- 10 mu for family farms and
- 8 mu for household farms.

18 Livestock farming enterprises usually have concentrated manure collection and treatment facilities, while other type of farms have a manure drying area or fermentation pool in the farm. Some of the enterprises are equipped with diseased and dead animal treatment facilities, while for cooperatives, family farms and household farms, there is usually a designated area in the field for deep burying dead animals with a land area of about 20-30 m<sup>2</sup> for harmless disposal.

19 **Type and scale of livestock farming.** Sample farms in Zhengning, Lingtai and Jingchuan are primarily engaging in beef cattle farming, including both fattening and basic cow for breeding. Sample farms in Lanzhou New District are engaging in both dairy cattle, sheep and goat. Among which, only one enterprise engages in dairy cattle, while the remaining farms are engaging in sheep and goat. Sample farms in Guazhou county dominantly engage in sheep and goat farming, and only one engages in beef cattle farming. Sample farms in Minle and Sunan mainly engage in sheep, few

of them engage in dairy cattle and yak farming. This is basically consistent with the overall livestock farming status of 7 program counties or district.

20 **Trend of livestock scale by location.** According to the survey, the scale of livestock of sample farms was increasing in the past five years, except for Guazhou county, which was decreased significantly in 2023, mainly affected by the downturn market.

21 **Trend of livestock scale by farms.** In the past five years, the trend of livestock scale of different type of farms varies. Generally, the scale of livestock farming enterprises and household farms was increasing year by year, while it's increasing in the first 4 years but decreasing in 2023 for cooperatives, and there was a continuous decline in the livestock scale of family farms since 2020.

22 **Annual gross product value in 2023.** The market price of different type animals varies. The gross product value of each sample farm was also diverse based on the type and number of animals they sold. See **Table A- 2** for the range and average gross product value of sample farms in 2023 without deducting the input costs.

**Table A- 2: Range and Average Gross Product Value of Sample Farms in 2023**

Type of farm	Gross Product Value in 2023 (unit:10,000 yuan)		
	Low	High	Average
Enterprise	7	2562	850
Cooperatives	7	1,800	351
Family farms	-20	260	54
household farm	0	586.5	76

23 **Trend of income from livestock farming.** Among the 43 sample farms, 5 (12%) reported their income from livestock farming was slightly increasing over the past five years, 15 (35%) unchanged, 11 (25%) slightly decreased and 12 (28%) significantly decreased. However, the survey indicates that majority of the livestock enterprises reported their income was unchanged or slightly increased over the past five years, while majority of the cooperatives and family farms reported income decreased. Among the 6 sample farms operated by ethnic minorities, 7 (88%) of them reported their income from livestock farming was unchanged, and 1 (12%) was slightly decreased.

24 As consulted with the representatives of sample farms, the key reasons for such changes of income level include:

- (i) A large number of cull dairy cattle and imported beef and mutton entered the local market, leading to a decrease in the overall domestic market price;
- (ii) rising feed costs;
- (iii) Climate events, e.g., draught, leading to poor forage or grass growing, increasing the input costs in feed purchase or decreasing the number of animals;
- (iv) Lack of farming technologies.

**iii) Existing Knowledge and Practices**

25 **Feeds and source:** Animal feed consists of whole-plant corn silage, straw of corn and wheat, bran, corn, oilseeds, alfalfa, soybean meal, concentrated feed, etc. About 40% of the feed is planted by farmers themselves through own contracted land or land that the use right is transferred from other households, and 60% were purchased from the market. The survey indicates that enterprises,

cooperatives and household farms mainly relied on purchasing feeds from the market, while family farms mainly relied on self-planted.

26 **Manure treatment methods:** the primary method for manure treatment of sample farms was piled up, fermented and then returned to the self-contracted or rented cultivated land. Three livestock farming enterprises proceeded the manure as organic fertilizer through anaerobic fermentation and sold to the market; two family farms sold over 50% of the fermented manure to surrounding crops or fruit tree planters at a price ranged from CNY 60 to 120 or m<sup>3</sup>.

27 **Animal disease prevention and control.** The primary measures for animal disease prevention and control include: (i) compulsory vaccination in Spring and Autumn conducted by technicians of local veterinary stations; (ii) disinfect the farming facilities regularly under the guidance of technicians of local veterinary stations; (iii) wear of personal protective equipment, like gloves, masks and protective clothing. Some of the sample farms also adopt the measures like (i) door-keeping and (ii) all-in and all-out to avoid disease spreading.

28 **Brand building and certification.** Among the 43 sample farms, 8 (19%) of them has built their own brand or certificate for animal products, including one farm in Jingchuan county obtained HACCP certification, one in Guazhou county certified Pollution Free Lamb and Eco-Farm 2022 and 6 household farms in Sunan County where the brand of “Gansu Alpine Fine Hair Sheep” is registered. However, the majority (81%) of the sample farms haven’t obtained any brand or certificate.

29 **Marketing of animals or animal products.** The survey reflects that livestock farming enterprises have established a sound marketing channels with mature partners, e.g., downstream dairy processing enterprises or animal food processing enterprises. Compared to them, family farms and household farm have a limited market channel, primarily relying on the mobile peddlers.

30 **Greenhouse gas emissions.** Among the 43 sample farms, none of them keep inventory of greenhouse gas emissions. 5 (12%) of them reported that actions were taken to reduce greenhouse gas emissions during farm operations, mainly concentrated manure collection and treatment, manure drying, fermenting and returning the field. It also observed that representatives of sample farms have a relatively low awareness on greenhouse gas emissions.

#### iv) Labor Use

31 **Population segregated by sex and ethnic.** Among the 43 sample farms, 21 (49%) of them involved labor use, mainly enterprises and some cooperatives, totaling 326 long-term and short-term workers. Among which, 231 (71%) are male and 95 (29%) are female; 314 (96%) are the dominant ethnic group and 12 (4%) are ethnic minorities; 45 (14%) of them are from the low-income families and 1% of them are people with disabilities. Family farms are usually operated by the owners themselves, seldom involving additional labor use.

32 **Positions segregated by sex and ethnic.** The survey shows that male normally take the positions of breeder, technician like veterinary surgeon, pens cleaner and driver; while female workers are primarily on the positions of cooks, milkers, logistics work, etc. There is no difference in positions between the dominant ethnic group and ethnic minorities.

33 **Education level segregated by sex and ethnic.** The overall education level of workers is relatively low, among which, 57% have an education level of junior middle school and below, 12% have an education level of senior middle school level and 31% are at college and above level.

34 **Language.** Among the workers, local Chinese dialect is the most common used language in daily works, following Mandarin, and ethnic minorities’ own language. 100% of workers can understand Mandarin and fluently use local Chinese dialect, though 43 (13%) of them can’t speak Mandarin, particularly older people.

**35 Recruitment channels:** Majority (62%) of the workers are from relatives, neighbors or villagers of surrounding villages, irrespective of ethnicity. Government supports the low-income and people with disabilities when there are employment opportunities in sample farms. Regarding technicians, common workers were normally recruited from local labor market or online platform. 90% of these workers signed written labor contract with employers, and 10% of them recruited through oral commitment from employers.

**Salary and Payment terms.** The average salary for long-term workers is about RMB3,105 yuan or month for men and RMB2,792 for women, depending on their positions, which is higher than the minimum salary level of Gansu province in 2024, which ranges from RMB 1,850 to RMB 2,020 based on locations. On the same position, there is no income difference between men and women, the Han workers and ethnic minority workers, the low-income and non-low-income workers. The salary includes two types: (i) fixed wage (52%) and (ii) fixed wage plus bonus (48%). 81% of the workers are paid monthly and 19% of them are paid once-off at the end of each year. The workers paid on annual basis are usually relatives or neighbors of family farms and household farms, or members of cooperatives, and getting paid or dividends after the farms sold cattle and sheep. There are also short-term labors involved during the busy season at an income level of CNY 100-150 or day, paid on a daily basis.

**36 Holidays and taking leaves.** The survey shows that workers of sample farms usually take rest rotationally according to the need of the farm. Ethnic minority workers also can enjoy their specific holidays like Eid al-Fitr, Eid al-Adha, etc. The Hui workers can take a break for worship at mosque (male) or home (female) every Friday. In addition, among the 21 farms with ethnic minority workers, 13 (62%) of them expressed that employees can take leave at any time if something comes up and 38% of them require employees to apply in advance and be approved before taking leave, ensuring at least one person on duty.

**37 Grievance redress mechanism for labors.** For cooperatives and family farms the most common channel for grievance redress is talking to the employer directly through face to face, phone calls and WeChat. Normally, the grievance can be resolved by immediate negotiation. For enterprises, there are three escalating levels for grievance redress: (i) report to line manager, resolve within 1 day; (ii) report to department level, resolve with 1 day, and (iii) report to group level, resolve within 3-5 days. For household farms, there is no need of GRM because they are operated by the couples.

#### v) Challenges and Vulnerabilities

38 According to the survey on sample farms, it is found that different type of livestock farms face difference challenges.

39 **Enterprises**, particularly large-scale enterprises, have a relatively well-equipped facilities with sound management system established. compared to cooperatives, family farms and large farmers, enterprise have established a better marketing channel, or processing system. Therefore, enterprises have a stronger ability in response to market volatility or fluctuations. However, there are also some challenges they faced, including (i) lack of brand building; (ii) balancing profit with environmental impact, e.g., water use; (iii) climate events. Gansu is an area with relatively scarce water resources, once drought occurs, feed planting will be affected significantly, resulting in increasing of input costs and decreasing of profit.

40 **Cooperatives, household farm and family farms** usually operated by one household or few households. The key challenges and vulnerabilities they faced are quite similar, include:

- (i) Weak climate-resilience livestock farming system. They mainly relied on purchasing feeds from the market and self-planted. Their feed sources are vulnerable when droughts and extreme weather events occur, particular in the areas with limited water sources. Soil degradation also affect their sustainable livestock production;

- (ii) Lack of brand building and certificate, hindering productivity and competitiveness;
- (iii) Lack of sound marketing linkages and processing system, leading to challenges in accessing markets and adding value to their products. Fluctuating market prices also significantly impact their income stability.
- (iv) Compared to those well-educated, a less-educated rural workforce also leading to challenges in access to modern livestock farming technologies.

**vi) Needs and Expectations**

41 According to the survey on sample farms, they expect to get support in the following aspects:

- (i) Financial support. Majority of them are currently benefiting from government interest-free loans and hope for continued support. They also expect to receive more government project fund, low-interest loans and subsidies to reduce the input cost and enhance their capacity to market volatility, particularly under such a downturn market situation.
- (ii) Technical support. This includes technical guidance on livestock breeding, feed formulation, disease prevention, more precise feeding methods, as well as water-saving technologies. They expect to learn more advanced technologies to improve their productivity and profitability.
- (iii) Infrastructure improvement, include expansion and renovation of farming facilities, access roads, water supply system, renewable power generation and heating facilities, electric vehicles for feed spreading and manure removal, etc.
- (iv) Services improvement, such as disease prevention and control, machinery services related to livestock breeding, establishment of network platforms for training, marketing information and trade.
- (v) Value chain improvement. They have a high demand of the development of deep processing industries for livestock products within the county to increase their value, also eager to establish a brand for livestock products, intensify promotion efforts, and broaden market channels for livestock products.

**IV. Program Benefits and Impacts**

**i) Program Positive Impacts**

42 The program is expected to have significant positive impacts on ecological and environmental system in the program areas. It will also bring significant social benefits to local farmers engaged in livestock husbandry and industry development, including ethnic minorities and the low-income people, especially the ethnic minorities whose primary livelihood relies on livestock farming including:

- (i) Upgraded livestock farming infrastructures.
- (ii) Increased productivity and profitability through improved livestock farming technologies, so livestock production becomes more productive and sustainable; Reduced input costs.
- (iii) Improved food safety in the livestock value chains, ensuring human health.
- (iv) Enhanced community and livestock resilience to climate change.
- (v) More employment and income-generating opportunities.

**ii) Potential Adverse Impacts**

43 The Program will only cover activities that can improve productivity, increase sustainability, increase incomes and improve the level of production under the guidance of science and technology, and will not be subject to changes in production patterns or income sources of farmers in 7 participating counties or district. They are still engaging in the animal husbandry they are familiar with, and the Program will not lead to the loss of production techniques and life skills that livestock producers are familiar with.

44 During the program implementation, typical E&S risks under the Program that are identified include temporary and site-specific risks or impacts of construction disturbance, land use, labor and OHS issues during construction, community and public health and safety risks or impact during the operation of the constructed facilities and application of technologies promoted, etc. These adverse impacts are neither significant nor irreversible and can be easily mitigated through known management system.

## **V. Participation and Empowering the Farmers, including ethnic minorities.**

45 The survey indicates that, with the expansion of livestock development industry and technology update and transformation, both government and farmers were proactively improving the livestock farming technologies. Several promotions and trainings were provided through diverse channels each year. Corresponding supporting measures were summarized as below.

### **i) Institutional Arrangement**

46 A sound institutional organization has been established from the county to township and village level in each program counties for technologies promotion, motivation and training. There are Animal Husbandry and Veterinary Medicine Bureaus (AHVMBs) or workstations (subordinated to Agricultural and Rural Affairs Bureau) at provincial, municipal and county levels. At the county level, there are AHVMBs or workstation (1~14 staff), or or and Law enforcement Supervision and Quarantine section (4~16 staff), technical service agencies providing laboratory services for animal epidemic prevention & control and for agro-food quality tests (e.g., county animal disease prevention & control center, or or and agricultural (animal husbandry) technical service center, or or and animal health surveillance office (3~19 staff) , plus livestock stations at town or township level, and grass-root animal quarantine intendants (2~4 staff or village in average) at village level. For example, Jingchuan County has more than 130 personnel, including more than 100 professional and technical personnel from the county bureau to the township level. In Lingtai county, there are 9 administrative staff in the county government, 3 technical service agencies (staffing with about 15 persons) worked on animal diseases prevention and control, one integrated livestock farming service center at each township (staffing with about 60 persons in total), 50 administrative staff at township government and one technician and coordinator at each of villages.

### **ii) Training and Capacity-building**

47 **Training needs collection and information delivery.** It's learnt that there are generally five channels for trainings needs collection: (i) farmers directly contact local government to express their training needs; (ii) local agricultural and rural departments distribute questionnaire to collect feedback and requirements from farmers; (iii) technical personnel from agricultural and rural departments visit villages to conduct research and collect training needs; (iv) collect training needs during the meetings with villagers; (v) regular learning sessions are organized by the government to disseminate knowledge and skills. In terms of information delivery channels, it includes: (i) WeChat groups. Local government have established WeChat groups of livestock farmers, which was used instantly notify farmers about training opportunities; In addition, after each training session, a small WeChat group of trainers and trainees were usually established, which is also a common way for further training information sharing and technology exchanging; (ii) phone call is another most popular way used for delivering training notifications. All livestock farmers were registered with contact information at the township and county level government. (iii) the village committees play a crucial role in disseminating training information. There is a villager WeChat

group at each village level, in which at least one representative from each household joined. Once a training program is developed at the county level, it will be communicated to the township government, then to village committees who will share the information with the villagers in WeChat group.

48 **Training providers and delivery modalities.** According to the survey, there are diverse training providers, including technicians of government, external experts invited by government or farms, technicians hired by farms, etc. It reveals that there is a high participation rate of trainings provided by government, which also is the primary channel for farms learning new technologies.

49 **Participation rate and frequency.** Representatives reported that they would participate as long as the time is appropriate to them. All the sample farms participated in livestock farming technologies related trainings in the past. Over 53% of the sample farms participated in trainings at least once every half year; 35% of them participated in at least once every quarter, 9% of them at least once every year and 5% of them at least once every month.

50 **Language used in training.** Mandarin is the most common language used in trainings, following is the local Chinese dialect and ethnic language. According to the survey, all farmers can read and listen Mandarin, though some older people can't speak it.

51 It's noted that the majority of Yugurs speak a Turkic language known as Western Yugur, while some speak Eastern Yugur, a Mongolic language. Both languages are now unwritten. They also speak local Chinese dialect and Mandarin Chinese. The Hui and Dongxiang people predominantly speak local Chinese dialects and Mandarin Chinese, without written characters as well. The written information was disseminated to them in Chinese characters and oral information was disseminated to them in diverse languages. Therefore, language will not be an obstacle for ethnic groups in program counties or district to participate in the Program activities.

### iii) **Promotion and Adoption of Technologies**

52 The survey found that similar activities were implemented in the program counties or district in the past, such as precise feeding, species improvement, energy and water-saving technologies, forage and straw processing. The summary of the activities implementing area, adoption rate, and feedback from sample farms was presented as below.

53 According to sample farms' feedback, majority of them reported benefited from this technology, including: (i) faster growth rate of cattle; (ii) reduced susceptibility to diseases among cattle; (iii) improved meat quality, leading to higher selling prices; (iv) high survival rate of newborn calves and lambs; (v) increased reproductive rates, with cows having 2-3 litters in 3-4 years; (vi) reduced feeding period and costs; (vii) increased income. 2 sample farms reported that there is a risk of difficult labor. As consulted with local Animal Husbandry and Veterinary Bureau, it's primarily because of the larger physical size of the Simmental breed compared to the local Red cattle. It is typically recommended to breed with Red cattle for the first calf and switch to Simmental for the second. If Simmental is used for the first calf, the calf tends to be larger, increasing the risk of difficult labor.

54 For green, energy and water-saving technologies, majority of them reported benefited from the activity, including (i) reduced electricity expenses due to the use of biogas as fuel for cooking and heating; (ii) improved the environment of the farm; (iii) upgraded infrastructure of the farm; (iv) enhanced manure management through recycling and reuse, with cowsheds using recycled flushing water and digital management for more accurate and efficient savings. None of them reported being negatively impacted. It is expected that costs can be further reduced through the adoption of new energy and energy- and water-saving technologies in the future.

55 Feed processing and straw for feed processing. 35 (81%) of the sample farms in 7 program counties or district participated in the forage processing or straw for forage processing technologies,

mainly about corn stalks processing, corn stalk silage, and whole plant corn silage. The typical government supports they gained include but not limited:

- (i) Subsidy for purchasing forage harvesting and processing machinery. There is a list of machinery to be subsidized by government. Eligible farmers can get a subsidy of 15-35% of the total purchase price based on type of machine.
- (ii) Subsidy of CNY30-40 or ton for implementing corn silage, or based the land area;
- (iii) Subsidy of 30% for twine and film used in corn straw baling;
- (iv) Subsidy for construction of silage storage facilities;

56 Such support measures are inclusive policies that all eligible farmers can apply for. 100% of the sample farms adopted the technologies voluntarily. 100% of them provide positive feedback on such technologies, such as (i) reduced feed costs, labors cost and machinery purchase costs; (ii) higher efficiency of production; (iii) improved resource utilization rate; etc. There were no negative impacts reported. One sample farm reported that they didn't know well about the government support measures and subsidies and expected that local government can enhance the promotion and publicity activities.

#### **iv) Information Disclosure and Effects**

57 According to the survey, the key information disclosure channels of government support policies include:

- (i) During the training session of livestock farming technologies, corresponding government support measures are introduced;
- (ii) Local animal husbandry and veterinary stations at county and township level communicate relevant information directly to farmers through WeChat groups and phone calls.
- (iii) Competent departments communicate the information to township government, village committees through meetings or internal working platform, and then transmit to villagers through village meetings or WeChat groups.
- (iv) Social media, television, government websites, brochures are also utilized for promotion and information disclosure.

58 Comments and suggestions raised by sample farms include:

- (i) Enhance promotion efforts to increase awareness among livestock farmers;
- (ii) Diversify information delivery format. Some information is verbally conveyed, and it's forgotten over time, especially technical information. It's suggested to produce printed or electronic versions like videos that can be easy accessed when needed.
- (iii) Develop online platforms, such as APPs to push updated policies and techniques and provide online training sessions.
- (iv) Conduct target promotion for specific groups, such as large-scale livestock farms.

59 Overall, the survey results indicate that sound information disclosures and participation mechanisms have been established. Farmers can promptly and effectively receive information, express opinions smoothly, and have a positive impact on the design or implementation of project activities. The government also recognizes the importance of involving farmers in project implementation, has established institutional arrangements in place, and sufficient personnel have been equipped to ensure active participation of farmers. 100% of sample farms are satisfied (25%

very satisfied and 75% basically satisfied) with the government program activities they have participated or implemented to date.

#### **VI. Participation Willingness to the Program**

60 Among the 43 sample farms, 38 (88%) of them are willing to participate the Program and expect the program can be implemented as early as possible; the remaining 5 (12%) see the benefits of the Program and will work with the authorities so the activities support their operation to the maximum extent possible.