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Report No: PAD3656

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF €459,800,000
(US$500 MILLION EQUIVALENT)

TO THE

REPUBLIC OF KAZAKHSTAN

FOR A

SUSTAINABLE LIVESTOCK DEVELOPMENT PROGRAM FOR RESULTS

P170365

June 10, 2020

Agriculture and Food Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

Exchange Rate Effective April 30, 2020

Currency Unit	=	Kazakhstani Tenge (KZT)
429.41 KZT	=	US$1

FISCAL YEAR

January 1 - December 31

Regional Vice President:	Anna M. Bjerde
Regional Director:	Steven N. Schonberger
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Task Team Leader(s):	Artavazd Hakobyan, Pierre Gerber

ABBREVIATIONS AND ACRONYMS

ACC	Agrarian Credit Corporation
ACG	Anti-Corruption Guidelines
ADB	Asian Development Bank
AMR	Anti-Microbial Resistance
bln	Billion
CO2	Carbon Dioxide
CIPA	Committee for Internal Public Audit of the MOF
CPSD	Country Private Sector Diagnostic
DLI	Disbursement-Linked Indicator
DLR	Disbursement-Linked Result
E&S	Environmental and Social
EBRD	European Bank for Reconstruction and Development
ESSA	Environmental and Social Systems Assessment
FAO	Food and Agriculture Organization of United Nations
FFS	Fund for Financial Support
FSA	Fiduciary Systems Assessment
GEF	Global Environmental Facility
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GRS	Grievance Redress Service
ha	hectare
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IFI	International Financial Institution
INDC	Intended Nationally Determined Contribution
IPF	Investment Project Financing
IVA	Third-party independent Verification Agency
IPSAS	International Public Sector Accounting Standards
KazNAU	Kazakhstan National Agrarian University
kg	kilogram
KZT	Kazakhstani Tenge
MAPS	Methodology for Assessing Procurement Systems
M&E	Monitoring and Evaluation
MEGNR	Ministry of Ecology, Geology and Natural Resources
mln	Million
MOA	Ministry of Agriculture
MOF	Ministry of Finance
MRV	Monitoring, Reporting and Verification
NAMA	Nationally Adapted Mitigation Action

NASEC	National Agrarian Scientific-Educational Center
NDC	Nationally Determined Contribution
NPV	Net Present Value
OECD	Organisation for Economic Co-operation and Development
OIE	World Organization of Animal Health
OIE PVS	Performance of Veterinary Services Assessment of the World Organization of Animal Health
OPRC	Operational Procurement Review Committee
PEFA	Public Expenditure and Financial Accountability
PCC	Program Coordination Council
PDO	Program Development Objectives
Program	Program for Results
PMO	Program Management Office
POM	Program Operations Manual
PPP	Public-Private Partnerships
RA	Results Area
SME	Small and Medium Enterprise
SOE	State-Owned Enterprise
TBD	To Be Determined
TFP	Total Factor Productivity
TOR	Terms of Reference
US$	United States Dollar
WA	Withdrawal Application

TABLE OF CONTENTS

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Kazakhstan	Sustainable Livestock Development Program For Results	
Project ID	**Financing Instrument**	**Does this operation have an IPF component?**
P170365	Program-for-Results Financing	No

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Fragile State(s)
[ ] Contingent Emergency Response Component (CERC)	[ ] Fragile within a non-fragile Country
[ ] Small State(s)	[ ] Conflict
[ ] Alternate Procurement Arrangements (APA)	[ ] Responding to Natural or Man-made Disaster

Expected Project Approval Date	Expected Closing Date
30-Jun-2020	31-Dec-2025
Bank/IFC Collaboration	**Joint Level**
Yes	Complementary or Interdependent project requiring active coordination

Proposed Program Development Objective(s)

The proposed Program Development Objective is to support the development of an environmentally sustainable, inclusive, and competitive beef production in Kazakhstan

Organizations

Borrower :	Ministry of Finance
Implementing Agency :	Ministry of Agriculture
Contact:	Gulmira Isaeva
Title:	Vice-Minister

Telephone No: 77172555773

Email: isaeva@minagri.gov.kz

COST & FINANCING

SUMMARY

Government program Cost	2,020.00
Total Operation Cost	500.00
Total Program Cost	500.00
Total Financing	500.00
Financing Gap	0.00

Financing (USD Millions)

International Bank for Reconstruction and Development (IBRD)	**500.00**

Expected Disbursements (USD Millions)

Fiscal Year	2020	2021	2022	2023	2024	2025	2026
Absolute	0.00	50.00	110.00	120.00	120.00	50.00	50.00
Cumulative	0.00	50.00	160.00	280.00	400.00	450.00	500.00

INSTITUTIONAL DATA

Practice Area (Lead)
Agriculture and Food

Contributing Practice Areas
Environment, Natural Resources & the Blue Economy

Climate Change and Disaster Screening
This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Low
9. Other	Moderate
10. Overall	Substantial

COMPLIANCE

Policy

Does the program depart from the CPF in content or in other significant respects?

[ ] Yes [✔] No

Does the program require any waivers of Bank policies?

[ ] Yes [✔] No

Legal Operational Policies

	Triggered
Projects on International Waterways OP/BP 7.50	No
Projects in Disputed Areas OP/BP 7.60	No

Legal Covenants

Sections and Description

Section I.A.2(b). Schedule 2.

The Borrower shall, through MOA, establish, not later than three (3) months after the Effective Date, and thereafter maintain throughout Program implementation, a Program Coordination Council, headed by the Deputy

Minister of Agriculture, and comprised of representatives of the MOA, including Committee for Veterinary Control and Supervision, NASEC and any applicable subsidiary, and selected Akimats, MEGNR, as well as relevant stakeholders such as National Chamber of Entrepreneurs Atameken, education and research institutions, industry associations and farmer unions, responsible for strategic oversight and guidance under the Program, all under terms and conditions acceptable to the Bank and as set forth in the POM.

Sections and Description
Section III.B. Schedule 2.(a) The Borrower shall, through MOA promptly select and, not later than three (3) months after the Effective Date, employ, and thereafter during the period of Program implementation maintain employed, an Independent Verification Agent, with qualifications and experience and under terms of reference satisfactory to the Bank ("Independent Verification Agent"), to verify the data and other evidence supporting the achievement of DLIs as set forth in the table of Section IV.A.2 of this Schedule.

Conditions

Type	Description
Effectiveness	The Program Operations Manual has been adopted by MOA in form and substance satisfactory to the Bank;
Effectiveness	The PMO has been established by MOA in form and substance satisfactory to the Bank and staffed with experts with qualifications and under terms of reference satisfactory to the Bank.
Effectiveness	The Program has been incorporated in the State Program in form and substance satisfactory to the Bank.

I. STRATEGIC CONTEXT

A. Country Context

1. **As an upper middle-income country, Kazakhstan's economy has grown rapidly.** Kazakhstan had a gross domestic product of US$9,244 per capita in 2019, powered by an abundance of oil, gas, and other minerals. It has used this wealth to improve the lives of its citizens and reduce poverty, which has fallen from 36 percent in 2006 to 8.6 percent in 2019[1]. In addition to the impact of economic growth, the decline in poverty was supported by significant price and social service support.

2. **Going forward, Kazakhstan's growth model needs to be revamped to address three significant challenges.** First, the economy lacks a diversified base, with most of the growth coming from oil and mineral sectors. The vulnerability of this model has been exposed in the two recent economic downturns—the global financial crisis of 2008 and the Russian economic crisis of 2014, combined with the fall of global oil prices – which severely impacted Kazakhstan's growth rate. Second, significant disparities continue to occur in wealth, employment, health, educational and social conditions in the population across the rural/urban and regional boundaries. Third, there is need to enhance sustainability and resilience of its development path, especially under increased pressure from climate variability and water scarcity, population pressure and need for accelerated growth.

3. **Government of Kazakhstan's development vision and strategy respond to these challenges in the following way.** The Kazakhstan Strategic Development Plan 2025 aims to: reduce state share in the economy; increase share of non-mineral items in overall exports; raise share of small and medium enterprises in the GDP; reduce inequality; reduce economic gap and expand access to quality infrastructure and services; and address environmental challenges.

4. **For implementation of its Strategic Development Plan 2025 (and the long-term Kazakhstan 2050 development strategy in which it is embedded) Government is looking to exploit the significant untapped potential of the agriculture (including livestock) sector for value-addition, exports, jobs, and inclusive and sustainable growth.** Agriculture remains a key anchor for local and regional rural economies, with nearly 13.5 percent of workers relying on this sector for employment in 2019. Poverty also tends to be concentrated in rural areas, especially in subsistence agriculture. Hence stimulating agricultural growth is considered as an important driver for rural growth, along with ancillary and spillover effects. This is enshrined in the State Program for Agro-Industrial Complex Development – the main agricultural development program of Government.

5. **In his "State of the Nation" address on September 2, 2019, President Tokaev[2] re-emphasized the need to promote non-oil exports and develop rural areas.** The President specifically highlighted the role of the agriculture and livestock sector in achieving this objective in an environmentally sustainable way and instructed Government to take steps to improve the implementation of the State Program for Agro-Industrial Complex

[1] Poverty defined as a consumption of less than US$ 5.5 per day in 2011 PPP terms

[2] Source: https://www.akorda.kz/en/addresses/addresses_of_president/president-of-kazakhstan-kassym-jomart-tokayevs-state-of-the-nation-address-september-2-2019

Development and its impacts.

6. **The crisis generated by the COVID19 pandemic and its impact on commodity prices including oil, have reinforced the relevance of these strategic orientations.** Government has incorporated the agriculture sector as one of the key elements of its economic response package. The COVID-19 pandemic and the resulting economic crisis have substantially deteriorated the revenue base of Kazakhstan and its growth prospects, now estimated at a 3 percent contraction in 2020. It is expected that poverty may jump up to 12.7 percent in 2020, and regional disparities may increase. In such a context Government views the agriculture and food security, including livestock sector, as an important part of its recovery strategy. It is currently reviewing its strategic documents for 2025 but it is already clear that the sector will be a an even higher priority. Government also plans to use some of its accumulated buffers to maintain support to the sector during the post-crisis period.

B. Sectoral (or Multi-Sectoral) and Institutional Context

7. **Kazakhstan has an impressive agriculture potential.** It has the world's fifth largest endowment of agricultural land (nearly 25 million ha of arable land and over 70 million ha of pasture land, of which only 30 percent is currently used); reasonable availability of water (ground, river and melt-water) resources; relatively unpolluted natural production base (compared to some large agricultural countries) which create the opportunity for premium values; proximity to large markets; and significant and growing investment in transport/trade corridors.

8. **Current performance of the sector remains constrained well below its potential due to multiple factors**. Overall the agriculture sector is characterized by low land and labor productivity, yields significantly below international benchmarks, insufficient use of modern inputs and production systems, inadequate public support services, low investments in value chain infrastructure and inadequate private sector investments in downstream processing and marketing activities. Inefficiencies also increase the toll on natural resources, especially through land degradation, greenhouse gas (GHG) emissions and depletion of water resources.

9. **The Systematic Country Diagnostic (SCD)[3] emphasized that the development of livestock and horticulture has strong potential to raise incomes, especially for small farmers**, stimulate the local non-farm economy, and create earning opportunities for input and service providers along the value chain. This was also affirmed by the World Bank Group's Country Private Sector Diagnostic (CPSD)[4] which finds that the country has the fundamental resources to support a competitive export-oriented sector in beef, building in particular on suitable low-cost land, potential for larger scale operations and competitive feed input costs. However, these analyses note that the realization of a competitive, sustainable beef export sector will require a number of critical investments and transformations, on both public and private sectors. The findings of these diagnostic studies have stimulated interest in and appreciation of the livestock sector's role in diversification, job and income growth.

10. **Recognizing its importance, Government of Kazakhstan prioritized the livestock sector within the**

[3] World Bank, 2017. A new growth model for building a secure middle class: Kazakhstan Systematic Country Diagnostic. Report No. 125611-KZ

[4] Fengler, Wolfgang; Miller, Christopher David; Coutinho, Daniel; Gill, Indermit S. 2017. Creating Markets in Kazakhstan: Country Private Sector Diagnostic (English). Country Private Sector Diagnostic (CPSD). Washington, D.C. World Bank Group. http://documents.worldbank.org/curated/en/867531531292103142/Creating-markets-in-Kazakhstan-country-private-sector-diagnostic

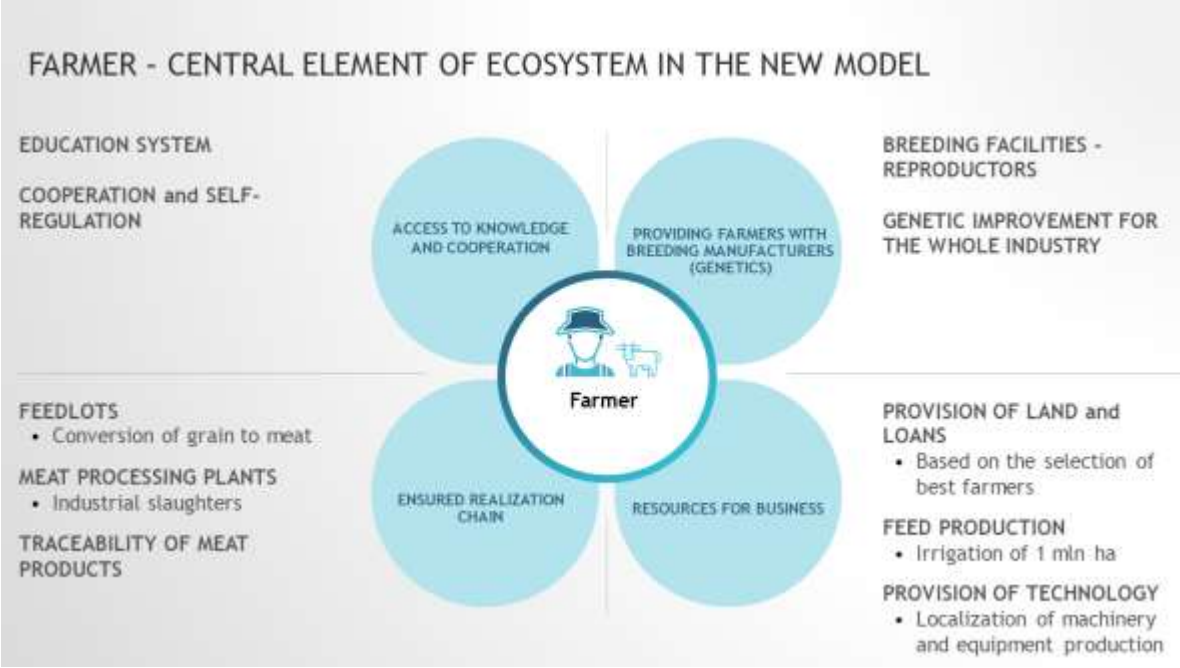
current State Program for Agro-industrial Complex Development (hereafter State Program). The State Program sets the strategic objective to increase agricultural labor productivity and agri-food exports by at least 2.5 times by 2021 compared to 2017. It emphasizes the importance of the livestock sector, and particularly of export-oriented high-value beef production.[5] The State Program *inter alia* identifies the following results: (i) increase the size of high-value beef cattle herd in the country by importing genetically high quality cattle stock and by acclimatizing it to local conditions; (ii) expand productive pasture and grassland by investing in infrastructure (roads and irrigation) and quality seed production; and (iii) improve market linkages and provision of services for improved productivity of livestock producers, including of export-oriented high-value beef cattle producers by investing in animal health, traceability, and trade logistics. Following the COVID-19 crisis, Government continues to maintain the priority of the sector.

11. **Building on the background of intense dialogue with various stakeholders including development partners and the private sector** Government has recently formulated a long-term National Strategy (up to 2027) for Beef Industry Development. In line with the overall objectives of the State Program, this strategy prioritizes the following (Figure 1):[6]

- farmer-centric service delivery model, which shifts the focus of State support measures to small and medium farmers (away from the traditional focus on large agri-enterprises) as the primary target group for Government's development interventions;
- export-oriented beef sector development, including market promotion and opening of new markets;
- improved veterinary and animal health service delivery, targeting improved cattle traceability and food safety;
- leveraging Kazakhstan's natural potential – pasture and grassland resources and geographic proximity to export markets;
- improved agricultural advisory and knowledge transfer services, farmer training, and capacity building;
- promoting private investments in feedlots, slaughterhouses, meat processing, and other downstream infrastructure and activities.

[5] While the livestock sector includes other sub-sectors such as dairy, sheep and goats, pigs, and horses, beef production is considered to have the highest potential to increase its export share, increase income, and create more jobs along the value chain.
[6] Refer to the Technical Assessment for an analysis of these State Program elements, including an assessment of performance.

Figure 1. The ecosystem of the proposed Farmer-Centric Approach



Source: Ministry of Agriculture

12. **The strategy is the foundation for the long-term development of a competitive and sustainable beef industry that will become an important driver for agricultural productivity-led growth, exports and jobs.** Government also recognizes, however, that the strategy can be institutionally strengthened (through extending the scope, coverage and quality of key public support services; improved leveraging of State support to make the beef industry more productive, resilient and climate-smart; and increased efficacy and accountability of public expenditures) and augmented to include sustainable and resilient practices and environmentally responsible actions, including to counteract the increase of GHG emissions as a result of cattle population growth. A strengthened and augmented beef sector strategy – which is the focus of the proposed PforR – is expected to further enhance reliability, quality, and commercial viability of operations, thus creating enabling market conditions for attracting private sector investment, especially in processing, logistics and marketing activities.

13. **Beef production in Kazakhstan is undertaken by two categories of farmers:** registered beef producers, comprised of large agri-enterprises and individual farmers, as well as informal beef producers. Each category has distinct economic characteristics and differs in the extent of public support received and its development challenges.

14. **The (registered) large agri-enterprises typically operate at the scale of 2,000 to 10,000 cattle heads and display some level of business integration.** Many are feedlot-operators who also engage in fodder/grain production, while some are integrated forward with slaughterhouses and meat processing enterprises. While these large agri-enterprises utilize public support through various State support measures, they are generally able to acquire finance and directly contract or integrate key business services, such as veterinary and agronomic

expertise and product quality certification, all of which are critical to accessing higher value domestic and export markets.

15. **Individual farmers have holding sizes of between 10 and 500 heads of cattle.**[7] They typically operate on rented natural pastures and grasslands, use family labor and local labor flexibly. As registered beef cattle farmers, they are eligible for State support measures. However, in practice, they have had variable access to and utilization of these support measures. They are disadvantaged by the current structure of State support, which is heavily tilted towards payments related to cattle headage and larger scale investments in equipment and fixed assets. However, critical support services such as agronomic advisory support and disease management are seldom available to them either as a public or private service. Many of these farmers also tend to be less well informed regarding higher value market requirements than larger, commercial farmers. Given their relatively small-scale and dispersed nature, such producers thus have difficulties to enhance their productivity and quality and to integrate into modern value-chains. While at present there is little data available on the share of public support benefiting individual and household farmers, there is evidence of a lack of transparency in beneficiary selection processes, resulting in a low impact of support on this category.

16. **The (unregistered) informal household farmers typically have small holdings of on average 3-5 heads of cattle.** These household farmers have a highly diversified livelihoods base. Rearing of multi-purpose dairy/beef cattle is one of many activities, often not organized as a business, but rather serving family consumption needs and as a safety net. Numerically, though, this is the largest category, with almost 85 percent of all farmers who own beef cattle belonging to this category. However, together they account for only 15 percent of total beef production. Currently these farmers lie largely outside the domain of public support: being unregistered, they are ineligible for State support measures; and the lack of relevant public services means they have little external support for improving their production "model" or practices.

17. **The individual and household farmers can be competitive with larger, agri-enterprise farmers in Kazakhstan when they have access to programs and services that are tailored to their needs**. The WBG CPSD[8] analysis of the beef value chain showed that small and medium farmers could be competitive and commercially viable in the context of Kazakhstan when linked to value chains and supported by tailored state programs. This model would also be better positioned than a reliance on very large farms to generate more jobs in rural areas and boost shared prosperity. According to a survey conducted in 2012,[9] individual farmers have the potential to better utilize the pasture and grassland resources, can use flexible family and hired labor, and to access financial resources through credit partnerships. The survey also highlights that the production and productivity characteristics of beef cattle herds of individual farmers are similar to those of large agri-enterprises.

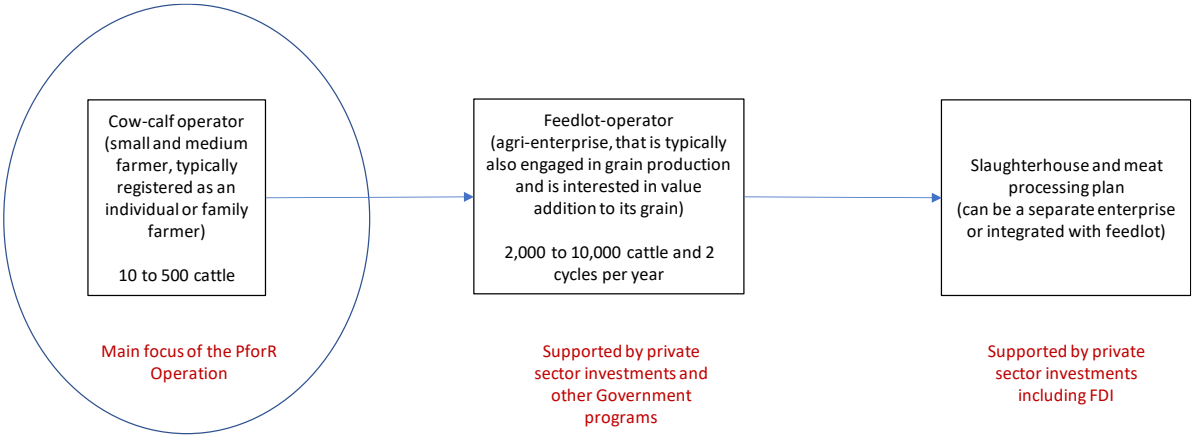
18. **Government defines its policy through a Farmer-Centric Approach**, where its interventions are expected to help these farmers to better access and use the State support available to the sector. It seeks to enhance public service outreach for improved productivity, technology transfer, and access to pasture and grassland that, in turn, would also allow them to better access State support and private financing. Government's objective is to enable individual farmers to move up the value chain (including target export markets) as well to incentivize household farmers to commercialize through registering as individual farmers. This objective has a strong equity

[7] These farmers constitute the group of medium size farmers referred to in the PAD.
[8] World Bank Group. 2019. Kazakhstan Priority Sectors' Competitiveness. Country Private Sector Diagnostics (CPSD) Report.
[9] Petrick, Martin, Dauren Oshakbaev, and Jürgen Wandel. 2014. Kazakhstan's Wheat, Beef and Dairy Sectors: An Assessment of Their Development Constraints and Recent Policy Responses. No. 145. Discussion Paper, Leibniz Institute of Agricultural Development in Central and Eastern Europe.

dimension. Rural and peri-urban areas are where most of the households in the bottom 40 percent are located. In such areas, the private sector is extremely thin and agricultural activities are among the few that are available to bottom 40 percent households. Box 1 describes the important role that small and medium farmers play in the beef production value chain.

Box 1. The role of individual and household farmers in the beef value chain.

Traditionally, the beef cattle production chain comprises the following key operators: cow-calf, feedlot and slaughterhouses. A cow–calf operation is a method of raising beef cattle in which a permanent herd of cows is kept by a farmer, and calves are produced for later sale to feedlots for fattening. Cow–calf operations are one of the key aspects of the beef industry in many countries, such as United States, Canada, Australia, Uruguay and others. Cow calf operations, mostly family-owned, favor natural pastures due to lower production costs. Such operations are typical for individual or family farmers, who have access to natural pastures and grasslands, who have flexible family labor and can hire local seasonal labor. While some countries, such as Russia, adopted more integrated beef cattle production, global experience shows that family farm types are the most common cow-calf operators in the beef industry. A typical beef cattle value chain in Kazakhstan:



A recent study[10] shows that grassland resources essential for fodder production and grazing, are currently underutilized, and significant potential exists to expand cattle production through both, sustainable intensification and expansion of rangeland utilization, especially in the east and the northwest of Kazakhstan. While fodder production constraints are addressed by various Government programs (see Table 1), the proposed Program will enable the delivery of essential public services and will strengthen the public goods aspects of Government programs for improved supply chain performance of beef cattle farmers. The Program will support capacity building and pro-active approaches for linking farmers with markets as well as for adoption of good agricultural practices, which would enable participating farmers better manage natural resources (pastures, grassland, fodder production), hence improving the productivity of the resource.

19. **Kazakhstan's beef can be competitive in global markets, but the sector needs improved management practices, increased production, and lower production costs.** According to the WBG CPSD, constraints include public sector inefficiency, low productivity and under-developed upstream, i.e. farm-level, production.[11] The CPSD highlighted the potential for growth and diversification of the agribusiness sector into high value-added products, most notably beef, to leverage Kazakhstan's position near the large export markets. It also stressed the

[10] Hankerson, Brett R., et al. 2019. Modeling the Spatial Distribution of Grazing Intensity in Kazakhstan." PloS one 14.1: e0210051

[11] Fengler, Wolfgang; Miller, Christopher David; Coutinho, Daniel; Gill, Indermit S. 2017. Creating Markets in Kazakhstan: Country Private Sector Diagnostic (English). Country Private Sector Diagnostic (CPSD). Washington, D.C. World Bank Group. http://documents.worldbank.org/curated/en/867531531292103142/Creating-markets-in-Kazakhstan-country-private-sector-diagnostic

significant potential to expand transport and logistics services to take advantage of Kazakhstan's location, linking Asia to Europe and the Middle East, and to facilitate the growth of export-oriented sectors in agriculture. These findings were supported by the assessment of the production costs of beef in Kazakhstan indicating the sector's competitiveness potential.[12] Government expects its main targets for export of beef are achievable even in the aftermath of COVID-19 crisis, as it expects considerable unmet demand for meat in its key regional and international markets even under a lower economic growth scenario.

20. **While beef exports still account for a modest share in Kazakhstan's exports, they are on the upward trajectory.** Agricultural exports comprised around 18 percent of non-oil exports and Kazakhstan exported US$ 3.3 billion worth of agricultural products in 2019 (mostly grain). In 2017 fresh and frozen beef exports were about 0.27 percent of agricultural exports and grew to almost 0.7 percent of agricultural exports or to US$ 21 million in 2019. Government has been actively pursuing market access through bilateral agreements with China, Iran, Middle Eastern countries and Russia. With the proposed Program, Kazakhstan aims to increase its beef exports over the next five years, reaching a total export volume of at least US$100 million per year. Kazakhstan has diversified export destinations, from a single market (Russia) in 2013 to five major destinations in 2018 - Russia, Iran, Uzbekistan, Kyrgyzstan, and Bahrain, comprising 98 percent of meat exports. In 2019, Kazakhstan was able to negotiate a market-opening agreement with China and exported frozen beef worth US$13.5 million. Fresh, chilled, and frozen beef exports showed improved, revealed comparative advantage in 2018 according to the most recent global export data (see Technical Assessment) with Kazakhstan's export prices (free on board) for fresh or chilled beef (at US$3.2/kg) and frozen beef (US$3/kg) were the lowest vis-à-vis its comparators in the above-mentioned export destinations.

21. **Furthering the development of an export-oriented, high-value beef sector is an opportunity to achieve important national development objectives of diversifying exports and increasing rural incomes.** This will require transforming the sector through greater efficiencies, innovation capacity, sustainable land management and value chain organization. Given its relatively limited experience with export-oriented beef, in contrast with major beef market players such as the United States, Brazil, Uruguay and Australia, Kazakhstan will also face significant competition. Positioning its products as environmentally and socially sustainable can represent an additional asset in facing this competition.

22. **Foreign firms have begun to invest in the Kazakhstan beef sector based on the expectation of enhanced Government support for more efficient service provision, including advisory services, animal health, food safety, and traceability.[13]** Investors consistently highlight the need for public support to focus on creating an enabling environment for sustainably increasing the production base which will facilitate considerable private investments in downstream value addition , such as slaughterhouses, meat processing facilities, input services and export-oriented logistics. Most recently, major international agricultural processors and input producers have announced their entry in the Kazakhstan market. One major company has signed an agreement with Government to set up three large slaughterhouses and meat processing plants in Kazakhstan with a capacity equivalent to 2,000 cattle/day each, resulting in an annual cattle demand of around 866,000 heads.[14]

[12] Also see Petrick, Martin, Dauren Oshakbaev, and Jürgen Wandel. 2014. Kazakhstan's Wheat, Beef and Dairy Sectors: An Assessment of their Development Constraints and Recent Policy Responses. No. 145. Discussion Paper, Leibniz Institute of Agricultural Development in Central and Eastern Europe.

[13] Foy et al "Tyson eyes multibillion-dollar bet on Kazakh beef as route to China". May 23, 2019. *https://www.ft.com/content/691aedd0-7c6f-11e9-81d2-f785092ab560*.

[14] For comparison, current feedlot capacity is 400,000 heads per year.

Government is also taking practical steps for opening markets for agricultural products with significant export potential.

23. **Expansion of beef production requires careful attention to industry susceptibility and potential contribution to land degradation and climate change**. Severe climatic conditions limit the year-round availability of fodder and around 75 percent of the country is at increased risk of adverse environmental impacts due to climate change.[15] Most degraded dryland areas are steppes and pastureland which are expected to worsen as climate change intensifies**.** Vegetation cover degradation in pastures and hayfields (rangelands) is one of the most widespread and visually evident processes, with pastures adjacent to villages experiencing the most severe degradation. According to the Committee for Land Management of the Republic of Kazakhstan, as of January 1, 2014, around 15 percent of rangelands suffered extreme degradation (27.8 million hectares out of a total of 188.9 million hectares). Kazakhstan already experiences an increasing number of droughts, floods, landslides and mudflows and changing rainfall patterns, especially associated with increasing the intensity and frequency of droughts. Climate change impacts are likely to critically increase volatility of agricultural production and pasture and grassland productivity. Already, Kazakhstan has one of the highest variations in annual yields of grains of any major wheat-growing country in the world and Kazakhstan's steppe regions experience drought two out of every five years, resulting in yield variabilities of pastures and grassland.[16] Climate change can also alter the impact of plant pests and diseases with more frequent outbreaks and expansion into new environments. For example, locust outbreaks, which are linked to overgrazed pastures, exacerbate under climatic variation.[17] The Program is introducing and supporting several measures to support improved adaptation and mitigation practices for beef production, drawing upon international experience with sustainable rangeland management and lowering the carbon footprint of livestock production (see results area 2 for a more detailed description).

24. **Logistics and transportation are critical for an export-oriented beef value chain, and Kazakhstan continues to upgrade its export logistics and infrastructure.** Effectiveness of the transport and logistics sector in Kazakhstan just several years ago was a significant barrier to expanding meat and livestock exports. Among key reasons were high costs, the limited number of private service providers, inefficient transport and logistics infrastructure, poor quality of available services, and lack of knowledge of modern logistics and supply chain management. Yet, in 2020, according to Kazakhstani logistics companies involved in beef exports and companies producing and processing beef, the situation has significantly changed and the transport and logistics sector in Kazakhstan is expected to respond to the requirements associated with expansion of beef exports.

25. **Government is committed to pursue international competitiveness through strong partnership with the private sector, enhanced environmental sustainability, and a focus on small and medium farms, based on increased effectiveness of the State support measures**. In 2018, Kazakhstan spent about 0.77 percent of gross domestic product (GDP) and 4.3 percent of total budget expenditures on agricultural programs, with almost 15 percent of supporting the livestock sector. This is a significant amount, but not larger than for most of

[15] https://climateknowledgeportal.worldbank.org/country/kazakhstan
[16] Araujo-Enciso, Sergio René, and Thomas Fellmann. 2019. Yield Variability and Harvest Failures in Russia, Ukraine and Kazakhstan and Their Possible Impact on Food Security in the Middle East and North Africa." Journal of Agricultural Economics.
[17] Toleubayev, K., K. Jansen, and A. Van Huis. 2007. Locust Control in Transition: The Loss and Reinvention of Collective Action in the Post-Soviet Kazakhstan. Ecology and Society 12(2): 38. [online] URL: http://www.ecologyandsociety.org/vol12/iss2/art38/

Kazakhstan's peers, upper-middle-income countries spend on agriculture[18], and it has been declining over time.[19] As a share of the value of gross agricultural output, during 2016-2018, public support to agriculture in Kazakhstan was less than for its peers, averaging 6 percent compared to 18 percent in Organization for Economic Co-operation and Development (OECD) countries and 14 percent in non-OECD countries. Recently, Government has begun to reduce the number of support measures and payment schemes and shift towards decoupling support from production.[20] The share of budget transfers based on stimulating production and promoting the use of inputs, such as fertilizers and chemicals, in the total agricultural budget declined from 40 percent in 2010-2015 to 28 percent in 2018. More public expenditures have been shifted to investments in fixed assets, advisory services and knowledge transfer, productivity improvement programs, and other general support programs such as agricultural research and development, and infrastructure.

26. **More remains to be done to strengthen the impact of the State support programs for development of the beef sector and to achieve the development objectives set by Government**. The proposed Program for Results (PforR, or the Program) adds value by incentivizing improvements in Government programs so that service delivery and public goods aspects are enhanced. Major shifts include: (i) making the agricultural support measures increasingly linked to meeting conditions such as climate co-benefits, environmental compliance, including better manure management, quality improvements, or working with smaller farms and (ii) increasing the allocation to general support programs such as research and development, agricultural advisory and knowledge transfer services to help farmers with adoption of productivity-enhancing and climate-smart practices and technologies.

C. Relationship to the CPS/CPF and Rationale for Use of Instrument

27. **The PforR instrument is aligned with and directly contributes to the CPF which was discussed by the World Bank Board on December 12, 2019.**[21] The proposed Program supports CPF Focus Area 1: Promoting Inclusive Growth. Within this focus area, the Program is aligned with Objective 2: Promoting Market-led Agriculture Growth, which aims to strengthen institutions providing services to farmers; shift the focus from production-expanding State support programs to those that promote productivity and competitiveness, improve access to finance, seeds, and veterinary services; and improve pasture land management. The Program is one of the two operations prioritized for World Bank Group support by Government of Kazakhstan, reflecting the World Bank Group's comparative advantage in providing transformative and strategic investment, technical assistance, and knowledge aligned to specific development challenges.

28. The Program will be informed by the complementary World Bank/FAO Landscape Restoration Project financed by the Global Environment Facility (GEF) (US$4.2 million grant), also under preparation, that will pilot afforestation and landscape restoration on pasturelands to increase pasture productivity in a sustainable manner. Additionally, the Asian Development Bank's proposed US$100 million project with the Ministry of Agriculture will focus on financial intermediary lending for the livestock sector (including beef production). This project will provide an on-lending facility to the Agrarian Credit Corporation (ACC) to improve access to finance

[18] Based on the OECD reports monitoring non-OECD countries with high importance for global agricultural and food markets. These countries include Argentine, Brazil, China, Colombia, Costa Rica, India, Indonesia, Israel, Kazakhstan, Philippines, Russia, South Africa, Turkey, Ukraine, and Vietnam.
[19] In 2010-2017, according to the OECD, the total State support to Kazakhstani agriculture was 1.00 percent of GDP.
[20] This is aligned with the recommendations of the World Bank. 2018. Public Programs and the Agricultural Sector in Kazakhstan. Joint Economic Research Program.
[21] World Bank. 2019. Country Partnership Strategy for the Republic of Kazakhstan for the Period of FY20-25. Report Number 143372-KZ.

for agriculture sector entities and households in rural and remote areas. Through a separate technical assistance facility, ADB has been assisting ACC to implement its recently adopted long-term development strategy for 2017 - 2026 through (i) developing a comprehensive and actionable business plan; (ii) improving corporate governance; (iii) strengthening the institutional capacity; (iv) developing its environmental and social management system; and (v) providing expertise for strengthening credit unions and financial organizations in rural areas.

29. **The Program will support institutional reforms and help develop markets in order to support private financing of development needs**. Government has declared that it intends to improve institutional implementation and delivery capacity of Government programs overall to ensure that the results of the programs are adequately implemented. The choice of the PforR instrument was guided by Government's objective to have a broad-based impact on sector policies, as well as to ensure country-wide coverage of the reform program. Such reforms should help maximize finance for development in the sector. The Program will address constraints to improvement in public service provision to help unlock private solutions like the entry or more efficient operation of downstream private sector operators in the beef value chain. Government's fiduciary and environmental and social risk management systems are sufficiently established and capable to warrant the utilization of the PforR instrument. Government also indicated its willingness to make any necessary improvements in its internal systems (including fiduciary) for the implementation of the Program. Technical assistance needs were assessed to be relatively small and Government is capable of covering technical assistance through its programs and budgets. In addition, the Bank received a grant from the Korean Green Growth Trust Fund facility to support important policy and Program design aspects, especially focusing on green growth.

30. **The World Bank has several roles to play in assisting Government of Kazakhstan in developing its beef sector.** The first is to help the country build capacity to be ready to access highly competitive and regulated international markets by upgrading its traceability system, inspection services, and export and marketing strategies. The second is to assist Government in designing interventions that could help achieve the sector's growth potential in an environmentally sustainable and inclusive manner, generating jobs and incomes in rural areas, improving climate resilience, controlling the GHG emissions and mitigating impacts of climate change. The third is to assist Government in making good choices in terms of putting in place the policies, expenditures, and institutions that will enable the sustainable transformation and growth of the sector.

II. PROGRAM DESCRIPTION

A. Government Program

31. **Supported through the State Program actions, progress is being made towards meeting Government's long-term vision.**[22] By 2027, Government aims to substantially increase beef production and meat exports. It envisions to increase exports from about 20,000 to 1.3 million tons; increase the number of cattle farms at least five times – with increases in on-farm employment from 100,000 to 600,000; increase cattle numbers from 7 million to 15 million; increase feedlots from 85 to 117; and import close to one million purebred cows.

32. **These long-term targets are highly ambitious.** So far, the observed growth may not be able to meet these targets. For example, while beef exports have shown a marked increase above historic trends in recent

[22] The Kazakhstan National Livestock Strategy 2018-2027.

years, they fall short of the program targets (a jump from the average of US$5 million for the preceding five years, where beef exports fluctuated between US$1.4 - 9.0 million with prior to 2013, Kazakhstan not exporting beef). In the first two years of the current State Program implementation, about 1,000 new beef cattle farms were created per year. The share of pedigree cattle in the beef population is low but growing, currently at 11 percent (an increase from approximately 2 percent in 2003). Credits received under the Sybaga program for importing pedigree cattle markedly increased in 2018 and 2019, to KZT 24.7 million and KZT 32.0 million, respectively, more than double the amount disbursed in previous years.

33. **Most State Program targets, so far, focus on production, not productivity, and do not emphasize efficiency gains.** Although productivity issues are not disregarded, the State Program targets are mostly formulated in terms of growth in output levels, and not the resources required to achieve them.

34. **With consideration of the performance of the State Program to date, several constraints have been identified as critical to the development of the beef sector** (see a summary of the constraints and their mitigation measures in Table 1).

Table 1. Sector constraints and mitigation measures

Risks	Mitigation Measure (Addressed by the State Program)	Included in Program boundary?	Other Sources	Residual Risk[23]
(i) Low genetic quality of cattle in targeted cow-calf farms	Short-term: Import of high productivity beef breeds (Angus, Hereford) Long-term: Cross breeding of imported high productivity bulls with local breeds	No	Government budget, private sector	Slower than planned implementation of activities.
(ii) Insufficient fodder and mixed feed for scaling up production	Establishment of irrigated fodder production areas	Yes, through promotion of good practices	Government budget, private sector	Focus on improvements may remain insufficient and lack funding
(iii) Lack of up-to-date knowledge of farmers about good husbandry and agricultural practices in commercial beef production	Training support, advisory system (limited outreach)	Yes, through strengthening of advisory services	Government budget but needs boost	Minimal
(iv) Vast pasture and rangeland areas with below-potential production levels, spread out over large distances	Pasture watering Government partially covering investment cost; Integration of agricultural databases with land cadaster to digitize land allocation, making it more transparent	Yes, through improved State support measures and public expenditures.	Government budget	Access to land
(v) Risks of outbreaks of potentially dangerous animal diseases	Work with OIE to establish disease-free zones Development of a traceability system	Yes, through improvement in veterinary service delivery and improvement of the traceability system	Government budget	Minimal

[23] Residual risk is the risk that remains after the mitigation measures are implemented.

	Measures to improve epizootic situation			
(vi) Limited sources of institutional credit to finance viable investments	Sybaga Credit Program with subsidized interest rates	No	Government budget, Planned ADB credit line facility	Commercial financial intermediaries are not being involved.
(vii) Constraints in logistics downstream processing infrastructure that may limit export potential	Government is facilitating investments in this space and opening-up markets. Private sector is responding to perceived opportunities.	No	Government budget, private sector	Expected logistics uptake may be slower than expected.

35. **In addition to addressing the constraints, Government also started to gradually realign public expenditures for overall livestock production, including support measures and headage payments.** In recent years, Government policy has aimed to achieve a mix that is better positioned to modernize agriculture overall and the beef sector in particular. This realignment is based on the following goals: (i) ensuring incentives for more efficient and competitive production systems; (ii) increasing the funding for public goods (research, advisory services, sanitary and phytosanitary services, environmental measures, infrastructure, etc.); and (iii) using public programs for crowding in private investments in value chains for priority sectors (beef, vegetables, oilseeds, fodder crops). As noted by OECD, the change started only in 2016 and is gradual – having taken off from a high-level of State support with the composition of expenditures heavily biased towards output and variable input payments and credit subsidies. Such expenditure realignment, though gradual, is going in the right direction, and will be further supported by the Program.

B. Theory of Change

36. **The Program will contribute to Government's long-term objectives of export diversification and rural job creation, together with improved ecosystem services and increased climate resilience.** Within the Program boundary, the expected results are increased exports, better linkage of farmers with markets, and an increased share of public expenditures that directly address environmental performance. The theory of change is presented in Figure 2. The Program support strengthens the delivery of public goods and services through a series of interventions to impact the beef value chain upstream, i.e. at the level of individual farmers and production of young cattle for fattening and downstream at the meat value chain, i.e. feedlots, processing, slaughterhouses, logistics and marketing, being addressed by private sector investments.

37. **The Program will support improvements in the upstream section of the beef value chain, and open pathways for the private sector to invest downstream.** The Program interventions will focus on necessary upstream improvements in public services and in the delivery of public goods that will contribute to increased production quantity and quality, better linkage of small and medium cattle farmers with markets, improved environmental performance (including reduced GHG emissions), and improved adaptation of the beef value chain to climate change. As more farmers are able to benefit from advisory and veterinary services, they will produce higher quality cattle more efficiently and sustainably, be more resilient to climate change, and become better able to meet the demands of feedlots and meat processors. To meet their own supply requirements, feedlots and processors have a strong interest in helping farmers to improve quality and supply.

38. **The Program strengthens public service delivery for animal health and veterinary services.** Since 2012 Kazakhstan has made significant improvements in its animal health and veterinary services. Currently, there are

2,331 veterinary stations, with more than 15,000 veterinary specialists who provide services to animal owners, including household and individual farmers. In addition to public veterinary professionals, there are 2,750 private veterinarians who provide services in markets, private farms and veterinary hospitals, carrying out medical and preventive activities, sale of veterinary drugs, as well as engaging in disinfection, deratization and deworming activities on a need basis.[24] As many household and individual farmers are based in remote areas with limited use of veterinary services and low awareness of production diseases, private veterinary services will be drawn on for an increased outreach and improved services through training and logistics support for a new cohort of veterinarians. Following successful completion of training, MOA intends to proactively engage private veterinarians to provide services to farmers, including in remote areas. The MOA will make its public infrastructure available to private veterinarians (office space, vehicles, computer equipment and laboratories), in order to improve the service delivery. Going forward, farmers are expected to gradually pay for the services of private veterinarians; however, during the transition, the MOA will ensure that some key services are available to farmers for free. Improved access to veterinary service provision will contribute to the competitiveness and resilience of Kazakhstan's beef production.

39. **Better traceability and a unified animal recording system will ensure that exported meat complies with market requirements**. The strengthened traceability systems will enable Kazakhstan to export more high-value beef, as it will assure compliance with export market requirements. Through awareness campaigns, farmers will be encouraged to register their animals in the unified system. This will allow them to receive advisory services, access breeding associations, participate in State supported credit programs, and other types of assistance. The expansion of export markets enabled by an improved registration system will stimulate demand from meat processors and feedlots for high quality cattle, encouraging more farmers to enter the value chain and improve the quality of their animals. This, in turn, would strengthen demand by farmers for veterinary services in order to comply with cattle health and food safety requirements, and address production diseases. Information collected through the unified animal information system will be analyzed to identify low enteric methane (CH4) emission traits in the cattle population, and to monitor and control the emergence of diseases related to climate change.

40. **The Program strengthens the Farmer-Centric service delivery approach.** It seeks to address constraints faced by small and medium farmers (household and individual farmers) by strengthening service delivery practices and allocating more funds for agricultural advisory and knowledge transfer services in remote areas. This will be achieved by: (i) improving the advisory system through expansion of the curriculum and improving outreach methods and (ii) increasing the training outreach through including also household farmers (around 53,000, plus 27,000 existing and 20,000 new individual farmers). Household farmers have not previously received training through Governmental advisory services. These household farmers will be trained in good production and management practices and how they can scale-up, become registered, and enter the value chain by selling animals to feedlots. Going forward, State support payments to farmers will be conditional on farmers adopting practices, which should stimulate a wide uptake of those practices, also serving as an indicator for training adoption.

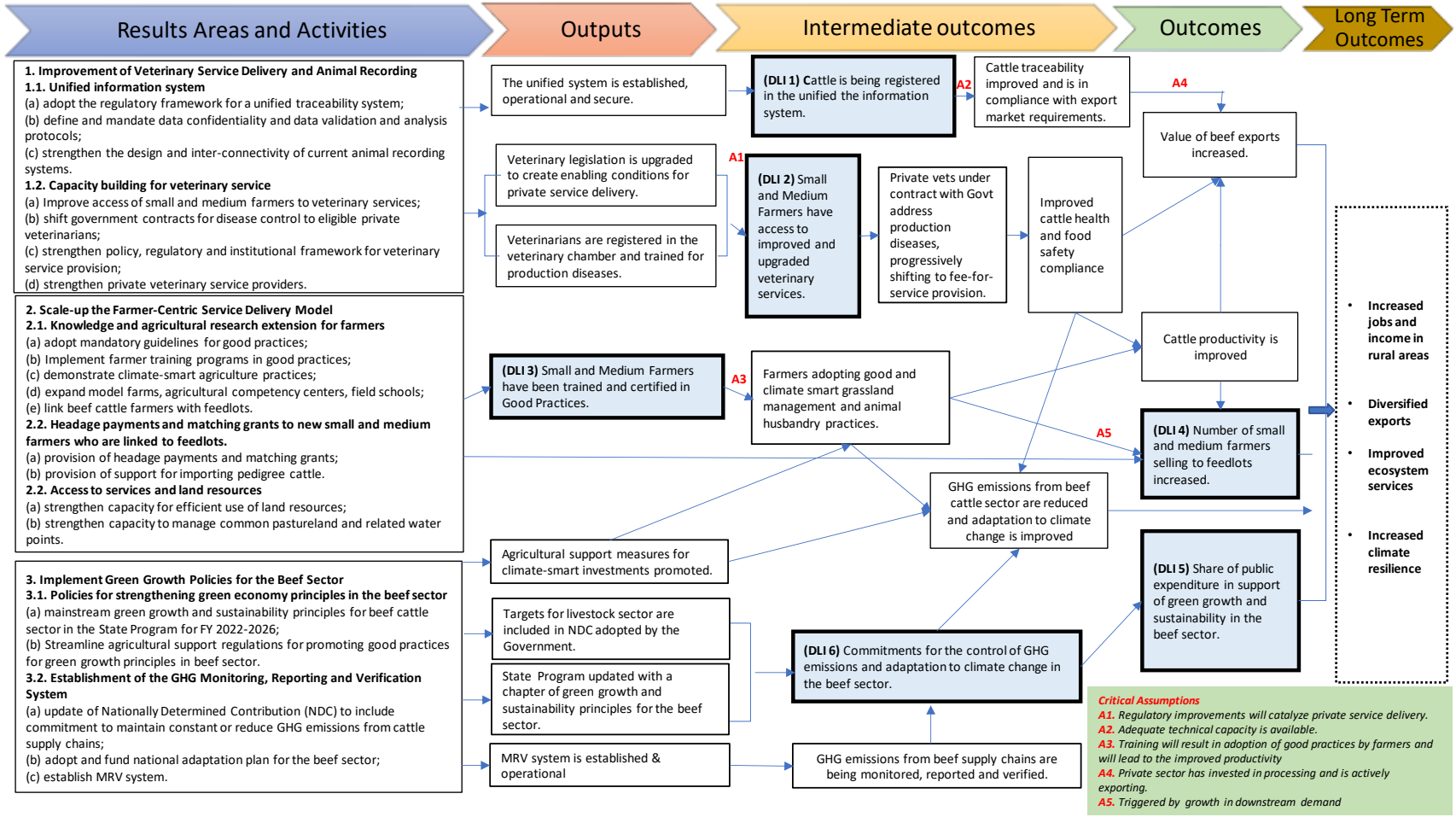
41. **Furthermore, through the Program's monitoring and evaluation (M&E) system, the expanded group of farmers who receive training will be monitored to learn how the training helped them and what is being adopted.** This will generate lessons which will be incorporated, on an ongoing basis, into curriculum revisions. In addition, the Program will improve service delivery for this group of farmers to help them expand access to

[24] See Box A3-2 for the summary of achievements of the veterinary services in Kazakhstan in recent years.

productive pastures, land leases and other Government services. In this way, a positive feedback loop mechanism will be stimulated: building the production capacity of farmers by enhancing their productivity, helping them enter the value chain, and providing feedback directly into what works, and introducing changes into the training services. At the same time, the Program will bring in thousands of new farmers into the value chain, thereby expanding their opportunities. Information on adoption of trainings received will be part of the direct feedback loop.

42. **The Program fosters environmental performance and climate change adaptation and mitigation throughout the export-oriented high-value beef sector.** As more farmers expand into the beef cattle sector, and both herd size and liveweight increase, targeted public intervention is important to mitigate the potential growth of GHG emissions due to increased production of beef cattle. The Program will address issues of sustainable grassland management (landscape restoration, sustainable land and water management, adding trees and shrubs to farms to protect water streams or act as wind breaks, biodiversity conservation), pollution control (manure management on feedlots and slaughterhouse waste management), mitigation of net GHG emissions along the value chain - from breeding to feed production, slaughterhouses, and development of renewable energy (biogas, wind and solar). The Program will instigate a switch to new and efficient agri-environmental-targeted support, support GHG monitoring, verification and reporting system, and scale-up good animal husbandry and grassland management practices. Adaptation to climate change will be improved through (i) the adoption of good practices at farm level; (ii) the control of emerging diseases related to climate change and (iii) at policy level, mainstreaming green growth and sustainability principles for the beef cattle sector in the State Program for 2022-2026.

Figure 2. Theory of Change[25]



[25] For full DLI definitions see Table 5.

C. Program Scope

43. **The PforR includes the parts of the State Program that are aimed at improving veterinary service delivery and animal recording, scaling-up the farmer-centric service delivery model, and improving agri-environmental policies for the beef cattle sector.** These comprise the boundaries of the Program (Table 2).

Table 2. Program Boundary Definition

	Government Program (State Program for Agro-Industrial Complex Development, hereafter State Program)	**Sustainable Livestock Development Program-for-Results**	
Objective	To ensure production of competitive products of the Agro-industrial Complex that are in demand on the markets.	To support the development of an environmentally sustainable, inclusive, and competitive beef production in Kazakhstan.	
Duration	The current State Program ends in 2021. The new State Program will be prepared in 2021 and run from 2022 to 2027.	2021-2025	
Scope	Government's main agricultural policy document. Financed by the state budget and covers all areas of state services and support measures in agriculture and livestock sector. Covers central and local level budgets, which include general services (central level), investment support measures (central budget's targeted transfers to local budgets) and commodity support measures (general transfers to local budgets). Provides institutional and financing arrangements for the implementation of agricultural policies	Encompasses the parts of the State Program with focus on improving veterinary service delivery and animal recording, scaling-up the cattle farmer-centric service delivery model and improving agri-environmental policies in cattle beef sector.[26] The expenditure framework is formed by the central (republican) level budget programs for the livestock sector, which correspond to the results areas of improved veterinary services, traceability, farmer-centric model and agri-environmental policies and services. The expenditure framework also includes the local (oblast) level budget program for cattle headage payments.[27] Provides results-based policy and programmatic support focusing on export-oriented beef value chain development	
Core Activities	Policy Making Enabling environment for livestock sector development, veterinary and animal health services Affordable financial services for agricultural producers (investment support) Enabling environment for crop production Land information resources	Enabling environment for livestock sector development, veterinary and animal health services	➢ Results Area 1. Improvement of Veterinary Service Delivery and Animal Recording

[26] The State Program is being updated to include the DLI Matrix and Results Framework.

[27] Central (republican) level budget programs are the funds allocated by the State Budget for the MOA. The MOA directly implements the funding and is responsible for the results. Local (oblast) level budget programs are the fund allocated by the State Budget to the local administrations directly, through targeted and/or general transfers. Targeted general transfers (matching grants) are included in the Program (code 250). Only general transfers for headage payments (code 053) to beef producers are included in the Program expenditure framework. These payments are administered by the local administrations, while the rules and regulations are set by the MOA.

	Trainings and capacity building for promotion of productive employment in rural areas Small grants and loans for promotion of productive employment in rural areas Agricultural advisory services and knowledge transfer Targeted credit resources for agricultural producers Commodity support programs for agricultural producers	Affordable financial services for agricultural producers (matching grants for investment in fixed assets) Pastureland information resources Agricultural advisory services and knowledge transfer State support conditional to adoption of specific practices and technologies Development of beef sector related strategies, policies, M&E	➢ Results Area 2. Scale-up the Farmer-Centric Service Delivery Model ➢ Results Area 3. Implement Green Growth Policies for the Beef Sector.
Expenditure Framework	The expenditure framework is committed annually (Budget Law). The mid-term expenditure framework is approved by Government on a rolling three-year basis.	The expenditure framework is derived by combining the relevant livestock sector budgets in the current three-year expenditure framework (2020-2022) of the State Program, and the expected budget under the new State Program (2022-2027).	
Beneficiaries	All agricultural producers	Small and medium livestock farmers with interest and potential to participate in export-oriented high-value beef value chains.	
Overall Financing	US$5.6 billion	US$2.0 billion, including US$0.5 billion loan from the World Bank	

Program Results Areas

44. **Results Area 1. Improvement of Veterinary Service Delivery and Animal Recording.** This Results Area will provide results-based support to improve Government systems and services oriented at public goods elements of the export-oriented high-value beef sector by increasing the efficiency and effectiveness of delivery mechanisms for animal health and veterinary services. The Results Area 1 consists of two parts.

Results Area 1.1 Unified recording and traceability system. The Program will include institutional arrangements and budgetary allocation necessary to improving coverage, reliability, and interconnectivity of the animal recording and traceability systems. Activities supported include: (a) adopting the regulatory framework for a unified traceability system; (b) defining and mandating data confidentiality and data validation and analysis protocols; (c) strengthening the design and inter-connectivity of current animal recording systems.

Results Area 1.2. Capacity building for veterinary services. The Program will include regulatory and institutional reforms necessary to enable private sector delivery of animal health and veterinary services that improve productivity, animal health, control of production and emerging diseases and address risks from vector-borne and feed-borne diseases, which are exacerbated by climate change. Activities supported include: (a) carrying out a Performance of Veterinary Services Assessment Gap Analyses to identify regulatory and institutional issues of access of small and medium farmers to veterinary services for the control of production diseases; (b) strengthening the Borrower's policy, regulatory, and institutional framework for veterinary service provision and drafting of amendments in legislation as needed; and (c) strengthening the capacity of private veterinary service providers and provision of disease control and prevention services by eligible private veterinarians .

45. **Results Area 2. Scale-up the Farmer-Centric Service Delivery Model.** This Results Area will provide results-based support for the participation of household and individual farmers in export-oriented beef-value chains. The Results Area 2 consists of three parts:

Results Area 2.1. Knowledge and agricultural research and extension for farmers. The Program will incentivize scaling-up agricultural advisory and knowledge transfer services that promote adoption of good grassland management and animal husbandry practices. Good practices will fully integrate the principles of climate change, thus making cattle production more efficient, reduce net GHG emissions from the beef cattle farming (i.e. decouple GHG emissions from beef production and increase carbon sequestration in pastures) and improve farmers' adaptation to climate change (see section C "Program Scope" and Annex3). Activities supported include: (a) development of good grassland management and animal husbandry practices that integrate the principle of climate-smart agriculture; (b) implementation of scaled-up farmer training programs; (c) support to technical advisory services; (d) development of the national network of model farms and agricultural competency centers; (e) carrying out farmer-field-schools training programs for household farmers; and (f) provision of technical assistance to link beef cattle farmers with feedlots.

Results Area 2.2. Headage payments and matching grants to new small and medium farmers who are linked to feedlots. The Program will incentivize the scaling-up of the Farmer-Centric service delivery model and building a competitive production base. The Program will improve public service provision, including extending headage payments and matching grants to 20,000 new small and medium farmers, who will be encouraged to boost their production, register as individual farmers and establish production partnerships with feedlots. This will directly contribute to increasing the exports of beef and to linking more farmers to export-oriented high value beef supply chains. The new 20,000 small and medium farmers will be registered in the Sybaga program for importing pedigree cattle, hence benefiting from access to high-quality cattle breeds. Activities supported include: (a) provision of Headage Payments and Matching Grants to newly registered individual beef farmers to help them implement good practices, upgrade production facilities and link with feedlots and slaughterhouses and (b) provision of support to newly registered individual beef farmers to access the Sybaga Program for importing pedigree cattle.

Results Area 2.3. Access to services and land resources. The Program will address policy and institutional bottlenecks that currently prevent small and medium farmers' participation in export-oriented high-value beef supply chains. Activities supported include: (a) strengthening capacity for efficient use of land resources; and (b) strengthening of the Akimats' capacity to manage common pastureland and related water points so that farmers' access to more productive pastures is improved.

46. **Results Area 3. Implement Green Growth Policies for the Beef Sector.** This Results Area will provide results-based support for gradual transitioning to policies and State support measures that promote productivity and competitiveness of the beef sector and at the same time reduce the pressure on environment and mitigate climate impacts. The Results Area consists of two parts:

Results Area 3.1. Policies for strengthening green economy principles in the beef sector. The Program will support the policy commitments that deliver significant agri-environmental benefits. Activities supported include: (a) mainstreaming green growth and sustainability principles for beef cattle sector in the State Program for FY 2022-2026; and (b) streamlining of agricultural support regulations for promoting good practices for green growth principles in the beef sector.

Results Area 3.2. Establishment of the GHG Monitoring, Reporting and Verification System. The Program will

support institutional and budgetary arrangements for (a) updating of the Nationally Determined Contribution to include specific emission reduction targets for the beef sector; (b) adoption and funding of a new national adaptation plan for the livestock sector; and (c) establishment and operation of a monitoring, reporting and verification system for GHG emissions from the livestock sector.

Program Beneficiaries

47. **Registered individual farmers (generally with holding sizes between 10 and 500 heads of cattle) are the focus of the Program.** At least 100,000 household and small individual farmers are expected to directly benefit from improved agricultural advisory and knowledge transfer services through the interventions supported by the Program. Many more would benefit from the improved veterinary service provision and animal health services. These service improvements will extend to (unregistered) household farmers with typical small holdings of 2-5 heads of cattle. Eventually, many household farmers are expected to move up the value chain and register as individual farmers – a legal status that would allow them to fully benefit from improved public services, financing programs, and market linkages. As a result, these beneficiary farmers are expected to increase their production and become more viable cattle businesses.

48. **The Program has been designed to facilitate change in the nature and structure of public support to shift support towards small and medium registered beef farmers and to extend crucial elements of animal production and management support to unregistered beef farmers**. In this regard, the expected impact of this Program is to enhance the number, quality, and profitability of small and medium registered farmers as well as to improve production practices and commercial viability of unregistered farmers and encourage some to transition into the registered category. Relevant Program design changes/features in this regard are:

a. Public financing and provisioning of (unified) animal tracking and health management services – which will be available for unregistered farms;
b. Public financing and provision of technical information and advisory services;
c. Training in good animal husbandry and pasture/fodder management practices;
d. Expansion of private sector capacity to provide quality-assured veterinary services;
e. Re-purposing headage payments to incentivize production and management practices that enhance productivity (competitiveness) and climate benefits (sustainability);
f. Changing structure of support payment system to reward adoption of good practices by farmers, thus making support system more open and accessible (and less susceptible to capture).

49. **The Program promotes interventions tailored to address the specific needs of women.** Special trainings and demonstrations as part of the improved agricultural advisory and knowledge transfer activities will be designed and tailored for women. In addition to capacity building for good agricultural, animal husbandry, and grassland and pasture management practices, these trainings/demonstrations will address women's information gaps on State support measures, i.e. they will ensure that participating women are well informed about opportunities and incentives to develop their beef cattle business. Such trainings will be designed to reach women irrespective of assets and organization. Female farmers will be given opportunities to voice their specific needs and concerns. The Program Action Plan includes an action to address equal access of women to services and interventions supported by the Program. Monitoring for DLI 4 will be gender disaggregated and the Program will aim to increase female participation in the value chains promoted by the Program. A results indicator is included to monitor the number of women that have been included in the advisory programs designed for women (see Box 2).

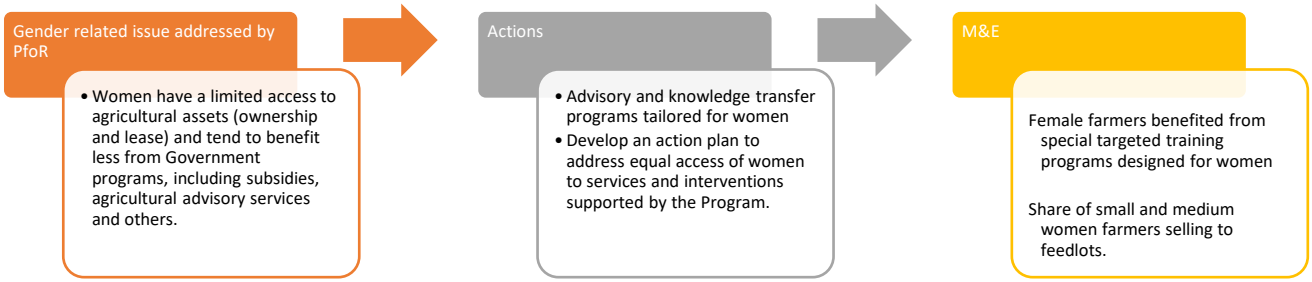
Box 2. Gender Aspects in Agriculture

Agriculture sector employment in 2015 was approximately 18 percent of the population, comprising 714,400 women and 839,000 men, while accounting for 4.8 percent of GDP. Household and individual farmers (i.e. small and medium farming sector) accounted for around 50 percent of total agricultural production and more than 70 percent of livestock production in 2018. Women's participation rates in the agricultural sector, either as self-employed or as agricultural wage workers have increased over time. While in 2001 women comprised 26 percent of employees in agriculture, in 2015 they comprised 37 percent of employees in agriculture. Such increase in women's participation in agriculture took place amid the overall decline of agricultural labor force from 2.3 million in 2001 to 1.6 million in 2015.

Two factors may have influenced the increase of women's participation in agriculture. First is the exit of men from agriculture and migration to higher paid non-agricultural activities (e.g. in minerals and oil sectors). Second is the overall growth of agricultural and agri-processing activity, which in turn attracted more women employment. Typically, agricultural and agri-processing enterprises have gender-segregated activities, and employ women in positions that are considered labor-intensive, low-skilled, low-paid and seasonal.

The Asian Development Bank recently commissioned a national study on gender equality[28] and highlighted by sector and theme all the relevant issues for gender imbalances in Kazakhstan. According to the study, data reported on women's participation in agriculture generally underrepresents the actual rates. The study highlights the following issues. First is the access to agricultural assets. As women have been historically under-represented in agricultural enterprises and collective farms, there are fewer women in management positions in agricultural enterprises. In addition, due to gender stereotypes and traditionally dominant role of men, women have been allowed lesser access to land rights (ownership and lease). Women also tend to benefit less from Government programs, including agricultural support measures, agricultural advisory services and others, unless these programs specifically target women. Women are often unaware about their opportunities on land rights, agricultural support measures and credits and do not have appropriate qualification and management skills and proper knowledge to fill out documents and procedures on getting credits. Second, while women tend to participate in agricultural associations, cooperatives or other forms of partnerships, their specific needs are less likely to be addressed, because lesser agricultural asset ownership and high demands on their time mean that they are often underrepresented. Furthermore, the lack of rural women's organization networks also limits their capacity to advocate with subnational and national Governments. Third, women earn less than men. Typically, women's farm work tends to be under-reported as they either are not the principal owners of farms or their work on family farms is not viewed as economic contribution.

The Program will incentivize interventions that will be tailored to address women specific needs (see Figure below).



[28] ADB (2018). Kazakhstan Country Gender Assessment. Source: https://www.adb.org/documents/kazakhstan-country-gender-assessment-2018

Expenditure Framework

50. **Macroeconomic risks and fiscal context.** Kazakhstan's economy grew at a higher-than-expected rate of 4.5 percent in 2019, driven by a solid growth in domestic demand. Inflation rose gradually due to higher increases in food prices. The poverty rate fell to 8.4 percent. However, the GDP growth is projected to slow down by likely 3 percent or lower in 2020,[29] as external demand for crude oil and manufactured goods fall notably and the COVID-19 quarantine significantly reduces consumer demand and investment. Prior to COVID-19 outbreak the draft budget for 2020 assumed a slight increase in the deficit, but now considering low oil prices and standstill in economic activity the deficit is likely to be significantly higher. In response to the economic crisis Government announced a fiscal stimulus package in the amount equivalent to a 10 percent of GDP. A large part of the fiscal stimulus is expected to come from Central Bank resources and SOEs (and thus not part of the central budget). The authorities announced significant measures to support agricultural and rural business activity. Towards that, Government announced an additional of 400 billion KZT of subsidized credit resources for the agri-food sector, of which 300 billion KZT will be directed to essential production sectors for food security as well as for job creation in rural areas. Inflation is likely to move up above the Central Bank target on the back of KZT depreciation, which lost almost 15 percent of its value against U.S. dollar as of March 2020. The deeper shortfall in tax revenues from economic fallout might require additional resources to be deployed. That said, Kazakhstan still has the fiscal ability to raise revenue either through external borrowing or additional transfers from the Oil Fund and fiscal buffers and international reserves remain adequate to meet public debt.

51. **In 2018, Kazakhstan spent 0.8 percent of GDP and 4.3 percent of total budget expenditures on the agricultural programs.** The spending as a share of GDP in 2018 was slightly lower than that in 2010-2014 when Kazakhstan allocated 1.0 percent of GDP on agricultural support programs. In 2018, the level of total agricultural support as share of GDP in Kazakhstan was about the same as in other non-OECD countries, but much lower as a share of gross agricultural output, indicating a lesser dependence of Kazakhstani farmers on the State support programs. During 2016-2018, the latter figure for total agricultural sector was 6 percent (compared to 18 percent in OECD countries and 14 percent in non-OECD countries[30]), and 7 percent of it for beef production. Progressing with structural reforms, including improving the targeting and efficiency of agricultural expenditures, will be important as Government moves on to stabilizing the economy after it has managed the COVID-19 outbreak.

52. **The Program expenditure framework is formed by the central (republican) and local (oblast) level budget programs[31] that target the beef cattle production within the livestock sector, which correspond to the results areas of improved veterinary services, traceability, Farmer-Centric service delivery, and agri-environmental policies and services.** Central (republican) level budget programs are the funds allocated by the State Budget for the Ministry of Agriculture. The Ministry of Agriculture directly implements the funding and is responsible for the results. Local (oblast) level budget programs funds are also allocated by the State Budget, but they are transferred to local administrations, through targeted and/or general transfers. These are the funds that are allocated to local administrations for implementing their delegated responsibilities. The rules and regulations for implementation of the programs by the local administrations are set by the central (republican) government bodies. For example, the rules and regulations for headage payments are set by the Ministry of Agriculture, while

[29] Current scenario as of June 1, 2020 projects contraction by 3 percent.
[30] These non-OECD countries are Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Israel, Kazakhstan, Philippines, Russia, South Africa, Turkey, Ukraine, and Vietnam.
[31] The distinction between central and local budgets is notional, as the revenue categorization and expenditure prioritization is done at the central level. Under the Budget Code and other laws, local governments (Akimats) depend on the central government for financial resources through a system of financial transfers based on assigned taxes and subventions.

the functions for implementation of these payments are delegated to local administrations. Targeted transfers (matching grants) are included in the Program. General transfers for headage payments (code 053) to beef producers are included in the Program.

53. **The Program results areas are funded by thirteen budget sub-programs, currently implemented by MOA, the institutions/agencies reporting to MOA (e.g., National Agrarian Scientific-Educational Center - NASEC), and local administrations (Akimats)**. In total, these comprise KZT 763.9 billion (an equivalent of US$2.0 billion) for the period of 2021-2025. The current medium-term expenditure framework is approved for the period of 2020-2022 and comprises KZT 422 billion for the Program Results Areas. For the Program expenditure framework, the projection is that the budget allocations for Results Areas for 2023 onwards will be at least at the level of 2019, i.e. the total Program expenditure framework for 2021-2025 of KZT 763.9 billion or equivalent to US$2.0 billion (Table 3).

Table 3. The current and projected financing of the State Program activities relevant to the Program

Total Government Expenditures by Results Area	**2019 [a]**	**2020 [b]**	**2021 [b]**	**2022 [b]**	**2023 [c]**	**2024 [c]**	**2025 [c]**	**Total**
Improvement of Veterinary Service Delivery and Animal Recording	28.7	21.7	28.8	28.7	28.7	28.7	28.7	**144**
Scale-up the Farmer-Centric Service Delivery Model	335.7	396.7	400.0	384.5	335.7	335.7	335.7	**1,791**
Implement Green Growth Policies for Beef Sector	15.9	16.2	19.0	19.0	15.9	15.9	15.9	**86**
Total, US$ million	**380.3**	**434.6**	**447.8**	**432.2**	**380.3**	**380.3**	**380.3**	**2,021.0**

Notes: a/ actual; b/ according to the approved Republican and Oblast Budget Programs for 2020-2022; c/for 2023 onwards, the authorities committed to keep the budget allocations at the level of the 2019 budget allocations.

54. To arrive at the expenditure framework that describes the Program boundary, the calculation used coefficients that reflect the relative size of financing to be directed to the implementation of Program Results Areas. The coefficients (see Table A3-7) were selected based on the following principles: (i) exclude procurement of goods, works, and services under high-value contracts; (ii) approximate the share of activities related to the Program Results Areas directed to the beef cattle sector; (iii) exclude any major procurement of veterinary drugs for the prevention/diagnosis of animal diseases and diagnostic services; (iv) include salaries and operational costs of MOA and relevant agency staff with focus on beef cattle sector activities corresponding to the Program Results Areas.

55. **The expenditure framework presents an adequate basis for the Program.** The detailed analysis of the expenditure framework, including the macro-economic context, financial sustainability and expenditure predictability is presented in Annex 3 – Technical Assessment, analysis of adequacy of budgeting is presented in Annex 4 – Fiduciary Systems Assessment. The assessments conclude that budgets are adequate and aggregated fiscal sustainability issues are not identified as an associated core concern. Government has a mid-term expenditure planning system. The mid-term expenditure framework for 2020-2022 was confirmed in April 2020 based on projections incorporating very low oil prices[32] and the first impacts of the COVID19 pandemic. Mid-term expenditure frameworks are approved every year for three-years on a rolling basis.

[32] Government's revised projections are based on a scenario of average oil price of US$ 20/barrel for 2020.

56. **The expenditure framework includes expenditures that are necessary for implementation of the results areas, including required scale-up of key activities.** For the scale-up of the agreed activities, the MOA will prepare operations manuals to include *inter alia* the rationale for the scale-up, implementation modalities, and expected results. The World Bank will provide support to MOA for development of the operations manuals, including through international and local technical assistance that will be funded by the Korean Green Growth Trust Fund.

57. **Starting from 2016, support to beef cattle farmers comprised headage payments and investments in fixed assets/capital formation.** By 2019, headage payments comprised around 42 percent of beef cattle support programs. The investments in fixed assets (matching grants) – a foundation for long-term growth – comprised 58 percent of cattle support programs. Based on the analyses of the Food and Agriculture Organization of the United Nations (FAO), the European Bank for Reconstruction and Development (EBRD), and task team calculations, by 2019 the investments in fixed assets that have agri-environmental outcomes (climate and economic co-benefits) constituted about 20 percent of beef sector expenditures, while only few years earlier they were close to zero.

58. **The Program aims to realign public expenditures to increase agri-environmental outcomes from the currently estimated 20 percent to 30 percent during the life of the Program.** This will be achieved by actively promoting investments in fixed assets production practices that yield agri-environmental and economic co-benefits. The Program will provide incentives to steer the State support towards greater climate, agri-environmental, and economic co-benefits. Since farmers receive reimbursements for eligible investments only after the investments have been made, they will be incentivized to invest in such activities that yield agri-environmental benefits. For example, investments in wind-powered water wells have been low, though State support measures would provide up to 80 percent matching grants, and these investments have high agri-environmental outcomes. Government will improve the procedures and conduct awareness campaigns to promote such investments. Matching grants for other types of investments, such as agricultural machinery, would be made available after the farmer complies with agri-environmental conditions of matching grants. Environmental criteria (cross-compliance) will be developed and progressively enforced as conditions to access headage payments. This will include conditionality for adopting good grazing management practices (with effects on biodiversity and GHG emissions), good animal feeding practices (with effect on GHG emissions), and good manure/waste management (with effects on water pollution and GHG emissions) adjusted to agro-ecological condition in different parts of the country. In addition, the Program will incentivize an increase in general support services, particularly in the expenditures associated with agricultural advisory and knowledge transfer services, and improved veterinary service delivery.

Climate Impacts of the Program

59. **The Program proposes to decouple GHG emissions from meat production.** This will imply a reduction of GHG emissions per unit of beef produced, including of emissions from the following sources: enteric fermentation, manure management, feed production and post-harvest emissions (see Table 4 and Annex3).

60. **In addition, the Program will enable Government to take advantage of agroecological conditions and realize its ambitions of greening the agriculture sector and reducing national GHG emissions.** Grass-based livestock production systems manage about 58 million ha of grassland in Kazakhstan and the cool climate is conducive to carbon accumulation in soils. The Program will support the gradual improvement of grassland management through improved practices and conditionality of public support, resulting in a net mitigation effect. This fits the long-term vision of Government to curb national GHG emissions (INDC unconditional target aims at

a 15 percent reduction in national GHG emissions in 2030 compared to 1990), green the agriculture sector and position Kazakhstani beef on international premium markets.

61. **The Program will support the beef sector addressing growing climate change impacts.** Individual and household farmers' cow-calf operations are grazing systems that will be directly affected by climate change, given their dependence on climatic conditions and the natural resource base, and their limited adaptation opportunities. The Program will support the adoption of animal husbandry, landscape restoration and grassland management services that improve adaptation, and the provision of services that help farmers addressing the consequences of climate change and Government action plans for addressing climate change impacts (see Table 4 and Annex3). The program will also support the collection and analysis of data on climate change impact on animal productivity and emerging diseases, to inform the provision of adapted veterinary services.

Table 4. Mitigation and adaptation benefits associated with the result areas

Result Areas	Climate Change Benefits	
	Mitigation	**Adaptation**
Results Area 1. Improvement of Veterinary Service Delivery and Animal Recording.	The animal identification and recording systems will accelerate genetic improvements. Animal breeding programs will include GHG emission intensity as one of the selection traits. Genetic improvements are important drivers to increase productivity, and hence reduce GHG emissions per unit of product. Similarly, animal disease control improves production efficiency and animal and herd levels and thus reduces GHG emissions intensity.	Development of unified information system that will enable the monitoring of emerging diseases related to climate change and impact of climate (e.g. heat waves) on animal productivity. Data will be analyzed and used to develop training and extension material to strengthen adaptation among producers. Improvement of animal health, which increases animal resilience to extreme weather events.
Results Area 2. Scale-up the Farmer-Centric Service Delivery Model.	Improvement of advisory systems will improve access to knowledge and technologies, which promote adoption of good practices that mainstream the principles of climate smart agriculture. Elements of the good practices that will generate net GHG emission reductions are: feeding management; manure management; grazing practices; energy efficiency and renewable energy generation.	Improvement of advisory systems will improve access to knowledge and technologies, which promote adoption of improved practices that mainstream the principles of climate smart agriculture. Elements of the good practices, that will generate net GHG emission reductions, are: feed storage; grazing practices; animal housing; water efficiency; introduction of live fences.
Results Area 3. Implement Green Growth Policies for the Beef Sector.	Under the Program, farmers will need to fulfill environmental criteria to access public support. These will include elements such as animal feeding, manure management landscape restoration and grassland management, which will result in GHG emission reduction. Specific mitigation targets included in the NDC and MRV system developed for their monitoring.	The Program will support the preparation and funding of a National Adaptation Plan for the livestock sector.

Note: A detailed discussion of climate adaptation and mitigation benefits of the Program is provided in Annex3 and in the separate Technical Assessment.

D. Program Development Objective(s) (PDO) and PDO Level Results Indicators

PDO Statement

62. The Program Development Objective (PDO) is to support the development of an environmentally sustainable, inclusive, and competitive beef production in Kazakhstan.

PDO Indicators

63. The PDO-Level Results Indicators are the following:

a. *Share of public expenditure in support of beef cattle production and processing that address green growth and sustainability in beef sector (sustainable).* This will measure the sustainable dimension of the PDO and aims to monitor shift in public expenditures due to proposed interventions that would lead to scale-up of good practices, improved agri-environmental outcomes of State support measures and policies. This indicator is introduced as the value-added of the Program, in that it ensures that the Program has due attention to climate sustainability as it projects increased beef production.

b. *Number of small and medium farmers selling to feedlots (inclusive).* This will be measured as an increase in the number of small and medium farmers, who participated in the Farmer-Centric programs and have sold at least ten calves per year to feedlots within the past two years. This indicator measures the inclusiveness dimension of the PDO and aims to monitor the improved linkage of small and medium farmers with markets. This indicator contributes to the high-level and long-term objective of improving rural jobs and income opportunities in rural areas.

c. *Value of beef exports (competitive).* This will be measured as the annual value of beef exported through slaughterhouses and processing enterprises. Almost all exported beef from slaughterhouses and processing facilities originates from feedlots (Program interventions will link farmers to feedlots) and, therefore, this indicator is attributable to the Program and can measure the impact of the Program interventions. The indicator measures the competitive dimension of the PDO and aims to monitor increased exports. This indicator will measure increases in quantity and quality of exports.[33] This indicator contributes to the high-level and long-term objective of diversifying exports away from oil.

E. Disbursement Linked Indicators and Verification Protocols

64. **The Program's disbursement-linked indicators (DLIs) were developed in collaboration with Government (Table 5 and Table 6).** The DLIs were selected based on their relevance to the Program objectives. They fulfill the requirements of being tangible, transparent, verifiable, and under Government's control. The DLIs were chosen to incentivize activities directly leading to achievement of the results targeted by the PDO. A detailed table of the mitigation and adaptation co-benefits associated with the proposed DLIs is included in the Technical Assessment of climate impacts and mitigation options (Annex 3).

Table 5. Disbursement Linked Indicators, their rationale, verification, and scalability

DLIs	Rationale, Verification, and Scalability	Allocated Amount, Million US$
Results Area 1: Improvement of Veterinary Service Delivery and Animal Recording		

[33] Achievement of the targets could be affected by developments in export markets beyond the control of the Program. This risk will be mitigated by Program interventions that improve competitiveness of beef production and lead to increased exports.

DLI 1. Cattle is being registered in the unified information system.	This outcome indicator is selected because of its high importance for export of beef products. It is in line with government program priorities and is verifiable. This indicator is scalable. It consists of: DLR 1.1. The Borrower shall have issued regulations for the establishment and operation of Unified Information System and such system is operational, both in form and substance satisfactory to the Bank. DLR 1.2.1. The Borrower shall, through MOA, have transferred to the Unified Information System the data of all existing registered cattle in the Borrower's animal identification systems. DLR 1.2.2. The Borrower shall have, through MOA, registered all new cattle in the Unified Information System as set forth in the Disbursement Formula.[34]	50
DLI 2. Small and Medium Farmers have access to improved and upgraded veterinary services.	This outcome indicator is included to upgrade veterinary services in accordance with OIE (World Organization for Animal Health) recommendations. Veterinary services should include support for production diseases, which can be delivered through the private network of veterinary practitioners. This indicator is measurable and verifiable. This indicator is scalable. It consists of: DLR 2.1. The Borrower shall have amended the relevant secondary legislation required by the Veterinary Law to promote private service provision, following the recommendations made by the OIE to the Performance of Veterinary Services Gap Analysis performed under the Program and in form and substance satisfactory to the Bank. DLR 2.2. The Borrower shall, through MOA, have increased the number of Veterinarians Registered and Trained in the amounts and as set forth in the Disbursement Formula.	75
Results Area 2: Scale-up the Farmer-Centric Service Delivery Model		
DLI 3. Small and Medium Farmers have been trained and certified in Good Practices in the amounts and as set forth in the Disbursement Formula.	This output indicator is selected to support Government program in modernizing agricultural advisory and knowledge transfer system, which is a necessary condition to the environmental sustainability and competitiveness of export-oriented beef value chains. This indicator is measurable, scalable, and verifiable.	100
DLI 4. The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased in the amounts and as set forth in the Disbursement Formula.	This PDO indicator supports Government program in transforming beef sector from households based unorganized production system to an organized farmer-based production system integrated to the export value chain. This indicator is measurable, scalable, and verifiable.	100

[34] Disbursement formulas are presented in Table 5 and Annex 2.

Results Area 3. Implement Green Growth Policies for the Beef Sector.		
DLI 5. Share of public expenditure in support of green growth and sustainability in the beef sector.	This PDO outcome indicator is included as a necessary condition for efficient agri-environmental policies that boost sustainable productivity growth and climate co-benefits. This indicator is measurable, verifiable and scalable. It consists of: DLR 5.1. The Borrower, through MOA, shall have amended the Agricultural Subsidy Rules to include eligibility criteria for farmers based on green growth and sustainability principles, in a manner satisfactory to the Bank. DLR 5.2. The Borrower shall have increased the share of public expenditures for Sustainable Beef Production and Processing Activities of the total of public expenditure for the beef cattle sector, in the percentages and as set forth in the Disbursement Formula.	100
DLI 6. The Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector.	This outcome indicator is selected to set targets and policy commitment towards the control of GHG emissions in the beef cattle sector. This indicator is measurable and scalable. It consists of three DLRs: DLR 6.1 The Borrower, through MEGNR, shall have approved a roadmap under the framework of the implementation of the updated nationally determined contribution (NDC) for the period of 2021-2025 that includes specific targets and actions for the cattle sector, in form and substance satisfactory to the Bank. DLR 6.2. The MRV System shall be operational in form and substance satisfactory to the Bank. DLR 6.3. The Borrower shall have incorporated in the State Program for FY 2022-2026 and funded a chapter on sustainability for the beef cattle sector based on green growth principles, in form and substance satisfactory to the Bank.	75
	Total	**500**

65. **DLI 1. Cattle is being registered in the unified information system for traceability, genetic improvement, and animal health control.** The new unified system for traceability will be operational and secure, will integrate three existing systems for genetic improvement, health control, and recording and identification of cattle, and will increase the share of cattle registered in the system to at least 95 percent. This new system and the effective (and verified) recording of animals are also required to incentivize foreign investors to enter the Kazakhstani market, with technology-promoting and market-seeking investments. An effectively functioning and integrated traceability system with high coverage levels of cattle is essential for demonstrating the country's readiness to access high-value premium export markets and to improving the genetic potential of the national herd.

The key elements to achieving DLI 1 will include the following measures:

- *Actions to ensure that the total cattle registered in the unified traceability system is accurate and is increasing, and include inter alia:* (a) assessment of the number of cattle registered, to establish a baseline, using random sampling survey techniques of all types of cattle farms, to compare the

registration system numbers with field data (reportedly, most cattle are already registered in one or the other system but this needs to be verified); (b) awareness campaigns and controls to expand the coverage of animal identification.

- *Actions to ensure that the unified system is established, operational and secure:* (a) adoption of regulation for a unified traceability system which defines and mandates data confidentiality and data validation protocols; (b) review of existing animal registration systems – used to identify all cattle, track breeding animals, health tracking and recording of veterinary health activities, such as vaccination – to assess their operational status, functionality; (c) linkage or integration of the existing separate recording systems (animal identification and movement, animal health and pedigree registry) and strengthening its unified system's design and inter-connectivity; (d) testing of system performance for functionality – inter alia to ensure data security and confidentiality, data validity , verification and analysis.

Verification protocols. For DLR 1.1, the third-party independent verification agency (hereafter IVA) will monitor the share of total cattle registered in the unified system through annual statistics of cattle farms to compare the system data against facts on the ground, by conducting spot checks at farm level. The data of the unified traceability system will be audited for accuracy, reliabiltiy and validity to ascertain that the share of the cattle registered corresponds to the reported percentage. For DLR 1.2, the IVA will audit of the system to provide assurance that the system is unified (i.e. includes animal identification, movement control, animal health, genetic information), is able to validate data to secure data. The IVA will verify that the new unified system is being supplemented by adequate technical capacity, including IT infrastructure, digital technologies and tools, as well as human resources. The IVA will also verify that the new system is fully recording all newborn and imported cattle.

66. **DLI 2. Small and Medium Farmers have access to improved and upgraded veterinary services.** This incentivizes improvements in delivery of public services for improved animal health, including emerging diseases, and food safety with a focus on veterinary service delivery. The DLI will improve service delivery of animal health and veterinary services for addressing production diseases by promoting the creation of a private, rural veterinary sector. Access to quality veterinary services by small and medium farmers is a condition for improving animal health and productivity and helping farmers participate in the export-oriented value chain. The DLI will improve animal health and thereby the productivity of beef cattle. This indicator contributes to improved competitiveness of the Kazakhstani beef sector and to increased high-value beef exports. Adoption of training by veterinarians and access to improved veterinary services by beef farmers will be regularly evaluated and, at the mid-term review, be used to underpin future disbursements under these DLIs.

The key elements to achieving DLI 2 will include the following measures:

- *Actions to ensure that Borrower has amended veterinary legislation to promote private service provision, following the recommendations made by the World Organization of Animal Health (OIE) to the Performance of Veterinary Services Gap Analysis performed under Results Area 1.2(a) of the Program, and in form and substance satisfactory to the Bank:* (a) provision of technical assistance to make amendments in the legislation[35] to ensure it facilitates the goal of promoting private veterinary services; (b) draft amendments to the relevant secondary legislation of the Veterinary Law to be reviewed by OIE and confirmed as meeting international standard, sent to Parliament for approval. The specific

[35] Law on Veterinary #339-II as of July 10, 2002.

amendments in the legislation will be formulated and proposed after OIE conducts the PVS[36] Gap Analysis and Legislation workshops, which are agreed with Government. Government has been actively pursuing international harmonization of the veterinary legislation, including introducing private veterinary service provision, and has been seeking OIE support in providing advice for such harmonization

- *Actions to ensure that the Borrower has increased the number of Veterinarians Registered and Trained in the amounts and as set forth in the Disbursement Formula:* (a) awareness raising through appropriate channels (veterinary institutes, social media, etc.) to inform and attract persons with appropriate veterinary training about the training program and the accompanying Government program to create a network of private sector veterinary services; (b) training programs and manuals are reviewed to ensure meet the program goals and integrate results from emerging diseases and climate impact monitoring; (c) training of trainers at veterinary schools; (d) two-week training courses of qualified veterinary school graduates in relevant skills and methods is implemented; (e) course graduates are tested and receive a certificate upon passing; certificate holders are offered logistics support and equipment; (f) veterinarians are deployed to rural areas and begin working with farmers on production diseases and other issues; (g) private veterinarians are organized in a National Statutory Body, which ensures quality control and professional development of veterinarians.

Verification protocols. (a) the Veterinary Committee at MOA submits lists of names to IVA which include: (i) course applicants; (ii) course takers; (iii) course takers who successfully passed the test and received a certificate; and (iv) new veterinarians who are eligible to provide services; (b) IVA records the number of veterinarians and their locations and compares it against the target for the Program year. Before submitting its report, the third-party verification agency confirms that the following milestones are met: (a) the Action Plan to transition to private veterinary service provision is being executed, with explicit responsibilities for animal health control being handed over to private veterinary service providers, starting with a pilot and (b) private veterinarians are effectively organized in a National Statutory Body, which ensures quality control and professional development of veterinarians.

67. **DLI 3. Small and Medium Farmers have been trained and certified in Good Practices in the amounts and as set forth in the Disbursement Formula.** This incentivizes access to advisory services by greatly expanding the number of farmers able to receive training in good practices, and extension of services to household farms raising cattle. Farmers improve productivity and adopt good agricultural practices inter alia through access to knowledge and services. DLI 3 incentivizes expanded access to knowledge and significantly boosts the agricultural advisory and knowledge transfer programs in Kazakhstan. This important achievement would lead to increased climate-smart practices by farmers with a focus on climate resilience, improved pasture and grassland management, environmental sustainability and mitigation of GHG emissions from beef cattle. It is expected that the Program will quadruple the agricultural advisory programming that delivers capacity building for animal husbandry, manure management, and pasture improvement practices for small and medium beef cattle farmers. Farmers will be incentivized to adopt good practices and climate smart agricultural, pasture and grassland management and animal husbandry practices through the conditional State support. Initial adoption of training by farmers will be evaluated at a mid-term review to underpin future disbursements under these DLIs.

The key elements to achieving DLI 3 will include the following measures:

- *Actions to ensure that farmers trained on good practices:* (a) MOA signs contract with the selected service

[36] Performance of Veterinary Services

provider (e.g. NASEC, KazNAU and/or associations, other universities) to deliver training; (b) technical assistance to develop training curriculum and manuals on animal husbandry, manure management, and pasture improvement; (c) training of trainers – three high level international/national experts will train national service advisory instructors/trainers within the NASEC network and relevant institutions of agricultural institutes; (d) outreach through existing networks to beef cattle farmers and entrepreneurs interested in investing in cow-calf operations who meet predetermined criteria to inform them of the training; (e) training of 100,000 farmers conducted, both in-class and onsite (at demonstration farms); (f) training course participants receive certificates and for three mandatory trainings and training satisfaction rates are at least 80 percent; (g) farmers register in the Sybaga program (optional); (h) one year after training completion, independent consultant conducts survey of training participants to obtain information on adoption rates[37], training effectiveness, lessons learned, etc.

Verification protocols. (a) MOA, through selected advisory service providers, collects evidence of achievement in the form of data on training: registration of trainees; survey results, certifications, etc.; (b) MOA Program Management Office consolidates database and accompanying records (physical or electronic); (c) PMO M&E staff reviews data and stores records; (d) MOA notifies IVA of achievement of DLI and requests verification; (e) IVA conducts audit of relevant progress reports of selected service providers and provides assurance of the number of eligible farmers (as per criteria will be outlined in the Program Operational Manual) participating in the advisory services programs; (f) IVA assesses results and compares them with annual targets; (g) IVA discusses with implementing agencies and resolves any outstanding issues and compiled achievement confirmation report from IVA is submitted back to the MOA; (h) IVA conducts spot checks (via farmer surveys) to confirm that participants were trained according to program design; (i) IVA conducts remote sensing to estimate number of farmers implementing good practices in pasture management and manure management.

68. **DLI 4. The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased in the amounts and as set forth in the Disbursement Formula.** This incentivizes the scaling-up of the Farmer-Centric service delivery model and building a competitive production base. It helps Government to transform the beef sector from a household-based unorganized production system to an organized, farmer-based system integrated with export-oriented value chain production. The increase in number of farmers selling to feedlots will be supported through DLI 1, DLI 2, and DLI 3 by improving the health and productivity of their herds, building farmer capacity to produce high quality animals that are registered and traceable. It will lead to improved public service provision for small and medium farmers, who will be encouraged to boost their production, register as individual farmers and establish production partnerships with feedlots. This will directly contribute to increasing the exports of beef and to linking more farmers to export-oriented high value beef supply chains.

The key elements to achieving DLI 4 will include the following measures:

- *Actions to ensure that new small and medium farmers are established and selling to feedlots:* (a) technical support and follow-up provided to household and individual farmers (during the initial stages of new or growing production activities) for those who took training, to help them implement good practices, gain access to conditional State support (headage payments and matching grants); (b) support is provided to farmers to purchase pedigree or high-performance calves, bulls and/or heifers through the Sybaga

[37] Adoption will be measured in the M&E system as a feedback loop for improved advisory service delivery and knowledge transfer. In addition, adoption of good practices is embedded in the DLI 5 as a pre-condition for fully achieving DLI 5.

program; (c) facilitation of linkages with feedlots and slaughterhouses; (d) farmers register in the Sybaga program and their data are available and is being regularly updated on the online portal; (e) monitoring data of farmers' sales of calves to feedlots; (f) review of the current land access policies for beef cattle farmers; (g) implementation of measures to improve the capacity and awareness of local government administrations on managing the common pastureland and water resources.

Verification protocols. (a) IVA, through data audits and spot checks, verifies the number of registered farmers in the Sybaga program to establish a baseline; (b) IVA conducts annual audits of Sybaga program reports and provides assurance of the number of eligible farmers (as defined in the Program Operations Manual - POM) who are registered and who have sold at least ten calves to feedlots in each of the past two years, and compares the total against annual targets.

69. **DLI 5. Share of public expenditure in support of green growth and sustainability in the beef sector**. This incentivizes public expenditures that are conducive to positive agri-environmental outcomes of the sector. It will increase the share of public expenditure in support of beef cattle production and processing that address environmental performance to 30 percent. The Program will address issues of sustainable grassland management (landscape restoration), biodiversity conservation (grassland management), pollution control (manure management on feedlots and slaughterhouse waste management), and mitigation of net GHG emissions for the beef sector. To this effect, the Program will instigate a switch to new and efficient agri-environmental-targeted State support measures, support GHG monitoring, verification and reporting system, and scale-up good animal husbandry and grassland management practices. This DLI contributes to the objective of limiting GHG emissions increases from a growing beef cattle production and is a condition for efficient agri-environmental policies that boost sustainable productivity growth and climate co-benefits.

The key elements to achieving DLI 5 will include the following measures:

- *Actions to ensure that public expenditures in support of beef cattle production and processing that address green growth and sustainability in beef sector:* (a) MOA and Ministry of Ecology, Geology and Natural Resources (MEGNR) collaborate on the development and enforcement of criteria; (b) MEGNR conducts an Environmental Impact Assessment and issues Environmental Permits for the opening/expansion of production units, if required; (c) MOA develops criteria and good-practice guidelines which farmers must comply with in order to access State support measures (headage payments, matching grants); (d) MOA adopts a guidelines (in form and substance satisfactory to the Bank) that introduces good agricultural practices guidelines for beef producers and terms and conditions of expenditures in support of beef cattle production and processing that directly address environmental performance; (e) after adoption of the guidelines, MOA revises its relevant rules for provision of agricultural support measures (subsidy rules); (f) MOA conducts awareness raising campaigns to sensitize producers about environmental stewardship and on consumers' demand for sustainable production; (g) MOA conducts a detailed public expenditure of the beef sector to identify the share of expenditures that directly address environmental performance as the share of total Headage Payments and Matching Grants set forth in the Program Expenditure Framework, in the percentages and as set forth in the Disbursement Formula; (h) the Program instigates a switch to new and efficient agri-environmental-targeted support measures, support GHG monitoring, verification and reporting system, and scale-up good animal husbandry and grassland management practices.

Verification protocols: (a) MOA adopts guidelines and updates its rules and relevant regulatory documents; (b)

MOA submits report on public expenditures to IVA; (b) IVA conducts an ex-post audit of actual public expenditures by reviewing report; (c) IVA cross-verifies the reported expenditure data with spot check to ensure that those farmers receiving State support comply with the environmental criteria.

70. **DLI 6. The Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector**. This incentivizes policy commitments for control of GHG emissions and adaptation to climate change in the beef sector, including the commitment to develop a roadmap for livestock GHG emission reductions in Nationally Determined Contribution (NDCs), formulation of and commitment to a national adaptation plan related to the beef sector and establishment of a MRV system. The MRV system is expected to cover GHG emissions related to livestock production and land-use patterns (except forestry). The monitoring of changes in on-farm practice will be embedded in the improved technical advisory services and in compliance monitoring using environmental criteria for the attribution of State support. This will involve digital technology, such as remote sensing and connected sensors on production units. Currently, Kazakhstan's beef cattle production sector is supported by a system of support measures, which, at best, add to production but seldom contribute to productivity, environmental sustainability and competitiveness. There is widespread agreement in Government on the need to gradually shift to support measures that are more efficiently managed and more conducive to the targeted farmer-centric approach and climate-smart growth of the sector. For the goal of becoming a regional beef export powerhouse, Kazakhstan would need to shift to such support measures in a way that, along with increased competitiveness of the beef sector, it would bring agri-environmental benefits and improve climate change mitigation and adaptation outcomes. Monitoring GHG emissions in the beef cattle value chains is needed to ensure that the climate mitigation target can be met (PDO objective). It is also necessary to signal to export markets that Kazakhstan is approaching the development of its beef sector with care and is a responsible global player when it comes to mitigating climate impacts of emitting industries. This DLI also contributes to the objective of limiting GHG emissions increases from a growing beef cattle production.

The key elements to achieving DLI 6 will include the following measures:

- *Actions to ensure that the Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector:* (a) develop a roadmap for NDC which includes targets for livestock sector and a related roadmap is developed and funding secured by Government, all to the Bank's satisfaction; (b) technical assistance to support background analyses and stakeholder consultations to ensure broad buy-in; (c) emission reduction targets proposed for the NDC based on cost-effectiveness analysis of GHG emission reduction options, and modeling of mitigation scenarios; (d) technical assistance provided to ensure that MRV becomes operational;, in form and substance satisfactory to the Bank; (e) a chapter describing a program to enhance sustainability for the beef cattle sector based on green growth principles has been incorporated in the State Program for 2022-2026, and funded (details to be elaborated in the Program Operations Manual).

Verification protocols: (a) IVA verifies the roadmap and budget allocation by reviewing the approved legal and regulatory documents; (b) IVA verifies whether the MRV system is fully operational in form and substance satisfactory to the Bank.

Table 6. Disbursement Linked Indicators and Disbursement Formula[38]

DLI	Total Value (US$ Million)	Disbursement Formula	2021	2022	2023	2024	2025
DLI 1. Cattle is being registered in the unified information system for traceability, genetic improvement and animal health control.	50	US$10 mln for DLR 1.1, and US$20 mln for DLR 1.2.1, and subsequently US$2 mln for each additional 60,000 cattle registered in the unified system.	DLR 1.1. The Borrower shall have issued regulations for the establishment and operation of Unified Information System and such system is operational, both in form and substance satisfactory to the Bank.	DLR 1.2.1. The Borrower shall, through MOA, have transferred to the Unified Information System the data of all existing registered cattle in the Borrower's animal identification systems.	DLR 1.2.2. The Borrower shall have, through MOA, registered all new cattle in the Unified Information System as set forth in the Disbursement Formula.		
					360,000	180,000	60,000
			US$10 mln	US$20 mln	US$12 mln	US$6 mln	US$2 mln
DLI 2. Small and Medium Farmers have access to improved and upgraded veterinary services.	75	US$5 mln for DLR 2.1, and subsequently US$5 mln for every 500 veterinarians trained and contracted.	DLR 2.1. The Borrower shall have amended the relevant secondary legislation required by the Veterinary Law to promote private service provision, following the recommendations made by the OIE to the Performance of Veterinary Services Gap Analysis performed under the Program and in form and substance	DLR 2.2. The Borrower shall, through MOA, have increased the number of Veterinarians Registered and Trained in the amounts and as set forth in the Disbursement Formula.			
				1,000	2,500	4,000	7,000

[38] The Loan will be in Euros with exchange rate of April 30, 2020.

			satisfactory to the Bank.				
			US$5 mln	US$10 mln	US$15 mln	US$15 mln	US$30 mln
DLI 3. Small and Medium Farmers have been trained and certified in Good Practices in the amounts and as set forth in the Disbursement Formula	100	From the Baseline of 0, for each additional 5,000 farmers trained and certified, US$ 5,000,000 will be available for withdrawal, up to US$ 100,000,000	15,000	30,000	50,000	75,000	100,000
			US$15 mln	US$15 mln	US$20 mln	US$25 mln	US$25 mln
DLI 4. Number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots	100	From the Baseline of 0, for each additional 1,000 farmers selling animals to feedlots, US$ 5,000,000 will be made available for withdrawal, up to US$ 100,000,000	0	5,000	10,000	15,000	20,000
			0	US$25 mln	US$25 mln	US$25 mln	US$25 mln
DLI 5. Share of public expenditure in support of green growth and sustainability in the beef sector.	100	US$ 10 mln for DLR 5.1, subsequently from the Baseline of 20 percent, for each additional 0.5 percent increase of the share of public expenditure, US$ 4,500,000 will be made available for withdrawal, up to 90,000,000	DLR 5.1. The Borrower, through MOA, shall have amended the Agricultural Subsidy Rules to include eligibility criteria for farmers based on green growth and sustainability principles, in a manner satisfactory to the Bank.	DLR 5.2. The Borrower shall have increased the share of public expenditures for Sustainable Beef Production and Processing Activities of the total public expenditure for the beef cattle sector, in the percentages and as set forth in the Disbursement Formula.			
			US$10 mln	22.5 percent	25 percent	27.5 percent	30 percent
				US$22.5mln	US$22.5mln	US$22.5mln	US$22.5mln

DLI 6. The Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector.	75	US$25 mln for each DLR paid upon completion and verification. DLRs are time-bound and should be completed by the end of the respective calendar year.		DLR 6.1 The Borrower, through MEGNR, shall have approved a roadmap under the framework of the implementation of the updated nationally determined contribution (NDC) for the period of 2021-2025 that includes specific targets and actions for the cattle sector, in form and substance satisfactory to the Bank.	DLR 6.2. The MRV System shall be operational in form and substance satisfactory to the Bank.	DLR 6.3. The Borrower shall have incorporated in the State Program for FY 2022-2026 and funded, a chapter on sustainability for the beef cattle sector based on green growth principles, in form and substance satisfactory to the Bank.	
				US$25 mln	US$25 mln	US$25 mln	
TOTAL	**500**		**40**	**117.5**	**119.5**	**118.5**	**104.5**

III. PROGRAM IMPLEMENTATION

A. Institutional and Implementation Arrangements

71. **The Program Management Office (PMO) will be housed in MOA.** It will be responsible for the overall implementation and coordination of the Program as well as for M&E. The PMO Director will report directly to the Vice Minister of Agriculture, (s)he will coordinate procurement and supervision of verification activities, as well as consolidation of the Program reports, and serve as the main counterpart for the World Bank. The PMO will be funded through the general MOA operational budget, the staff of the PMO will be civil servants and short-term consultants. The PMO will ensure that the 2021-2025 state budget requests include operational costs (M&E, third-party independent verification, technical experts, required audits and others) for the Program implementation. Specialized technical experts would be hired as part of the PMO team, if required. The MOA Livestock Department will prepare and submit budget requests related to Government support to beef producers and remain the main unit in the Ministry of Agriculture responsible for policy formulation in the livestock/beef sector. The MOA, through its Veterinary Committee will continue supervision of general services related to animal health, including those to be delivered by private veterinarians and coordinate training and licensing of private veterinarians under overall OIE guidance.

72. **The institutional arrangements of the proposed Program include a Program Coordination Council,** which will be established within three months from the effectiveness of the Loan Agreement and will be headed by the Vice Minister of Agriculture and comprised of representatives of the MOA, including Committee for Veterinary Control and Supervision, NASEC and any applicable subsidiary, and selected Akimats, MEGNR, as well as relevant stakeholders such as the National Chamber of Entrepreneurs Atameken, education and research institutions, industry associations and farmer unions, responsible for strategic oversight and guidance under the Program, all under terms and conditions acceptable to the Bank and as set forth in the POM. The cost tables for the operational costs of the Program implementation are included in the Program Operations Manual.

73. **MOA will select a service provider(s) implementation of advisory services and knowledge transfer activities.** Such service providers could be NASEC, KazNAU and or other institute or organization, and they will use existing training facilities and educational centers in the regions to organize trainings. Advisory services policy and budget allocation will continue to be managed by Strategy Department in MOA.

74. With regards to Unified Information System, Information Technology Department in MOA will operate state owned databases related to animal registry including pedigree animals' identification and registration and delivery of state services in agriculture.

75. **The MOA and Government (where applicable) will sign Memoranda of Understanding** with the Akimats (legally autonomous entities) setting forth the Program technical, fiduciary and environmental and social requirements that are to be complied with by the Akimats, including the relevant provisions of the Program Action Plan. Specifically, for implementation of Results Area 2.2 and 2.3 and for achievement of DLI 4 and DLR 5.1, the MOA will adopt good practices guidelines for beef producers and will update its subsidy rules, to include conditions of access to support measures that directly address environmental performance. Under the Budget Code and other laws, local administrative bodies (Akimats) depend on the central government for financial

resources through a system of financial transfers based on assigned taxes and subventions.[39] Hence, the rules and regulations for relevant local-level expenditures, such as headage payments and matching grants are set by the central Government or MOA.

76. **Government agreed to third-party verifications of all DLIs**. The PMO will ensure that the third-party verification is included in the annual plan of the Ministry of Agriculture, including appropriate budget for verification for the period of the Program. The MOA will hire the independent verification agent no later than three months after the effectiveness of the Loan Agreement. The verification protocols are summarized in Annex 2. A detailed Program Operations Manual is prepared that details the verification protocols and mechanisms, as well as the proposed terms of reference for the third-party independent verification agency. The budget request to be submitted by the Ministry of Agriculture to the Ministry of Finance will include operational costs for Program implementation (M&E, external verification, technical experts, required audits and others).

Table 7. Key Entities

Results Area/DLI	Institution responsible or implementation	Partners
Results Area 1. Improvement of Veterinary Service Delivery and Animal Recording.		
DLI 1. Cattle is being registered in the unified information system for traceability, genetic improvement and animal health control.	Ministry of Agriculture	Private data service providers, digital platforms (e.g. Qoldau.kz)
DLI 2. Veterinary services addressing production diseases made available to small and medium farmers.	Committee for Veterinary Control and Supervision (*hereafter* Veterinary Committee) under the Ministry of Agriculture	NASEC, KazNAU, others
Results Area 2. Scale-up the Farmer-Centric Model		
DLI 3. Small and Medium Farmers have been trained and certified in Good Practices in the amounts and as set forth in the Disbursement Formula.	Ministry of Agriculture	Atameken (Chamber of Entrepreneurs), Unions and associations, Universities
DLI 4. The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased in the amounts and as set forth in the Disbursement Formula.	Ministry of Agriculture	Akimats, NASEC, Atameken (Chamber of Entrepreneurs), Unions and associations, Universities
Results Area 3. Implement Green Growth Policies for the Beef Sector.		
DLI 5. Share of public expenditure in support of green growth and sustainability in the beef sector	Ministry of Agriculture, Akimats	MEGNR
DLI 6. The Borrower has made	MEGNR,	NASEC, Universities and Research

[39] According to Kazakhstan's current territorial-administrative structure and system of local governance, local governments (Akimats) are directly subordinate to the central government. Akimats play an important role in providing both national and sub-national services. They are responsible for the reporting and control of an extensive number of services, including basic utilities (water, gas, electricity, heat supply, waste management, sewage, etc.), environmental protection, employment creation, public order and security. Local governments are also responsible for delivering agricultural support measures (headage payments and matching grants) and various programs that are funded by the central budget transfers.

commitments for the control of GHG emissions and adaptation to climate change in the beef sector.		Institutes

B. Results Monitoring and Evaluation

77. **The Results Framework provides key measures of the Program achievements against its stated objective, indicates the Program's contribution to achievement of Government's higher-level objectives, and provides evidence for decision making and policy formulation.** The PMO will have the overall responsibility for Program results monitoring and evaluation. The PMO will aggregate M&E data from relevant sources, the Veterinary Committee, and Akimats (collecting for their level) providing evidence of progress on the Results Framework indicators, with emphasis on results related to DLIs, and compliance with Program Action Plan requirements.

78. **MOA is expected to face challenges with results M&E and technical assistance would be required throughout the Program implementation to be able to track the Program results.** MOA publishes annual reports on the implementation of the State Program. However, these reports are often published late and do not provide sufficient evidence for decision making and policy formulation. Several activities are underway to modernize and digitize MOA's M&E system. These activities, financed through the State Program, include establishment of a digital platform for monitoring agriculture sector performance and a digital land information system. However, results-based monitoring of the programs has been limited. As such, capacity building and technical assistance will focus on strengthening results-based monitoring, improving MOA's digital platform, building analytical capacity for results-based monitoring and evaluation. The Technical Assessment (Annex 3) provides a detailed description of the technical capacity and assistance needs for the M&E activities.

C. Disbursement Arrangements

79. **The Program will rely on the existing treasury management and funds flow arrangements applicable to Government program.** The Program's funds will be disbursed upon achievement of the DLIs. Evidence of achievement will be based on MOA's and/or the other implementing agencies' respective technical documentation and will be verified by the IVA following the Verification Protocol. The Bank will review the documentation submitted and will reserve the right for further due diligence on the robustness of data as needed. After the Bank formally considers the DLI(s) met, it will then issue an official letter to Government confirming the achievement of the DLI targets and the value of disbursement. For the disbursement of the respective amount, MOA then will submit a Withdrawal Application (WA), accompanied by the Bank confirmation letter on achievement of the DLIs. The transfer of the Program funds by the Ministry of Finance (MOF) to Program implementing entities will be conducted following the standard state budget execution procedures, applied under the ongoing government program, through which the implementing agencies receive respective funds on their accounts in the treasury and banks. It was noted that during last few years under observation overall the budget release is made by MOF timely as per the approved budget throughout the fiscal year.

80. The achievement of time-bound DLIs must happen by the deadline for achievement as outlined in the DLI matrix in the PAD. For non-scalable DLIs, the Bank will disburse the DLI value only upon full achievement of the DLI targets. For scalable DLIs, the World Bank will disburse against the formulas as set out in the DLI matrix.

D. Capacity Building

81. **The Program is expected to contribute to capacity building of the implementing institutions in three ways.** The first is capacity building for improved programming and program management in the implementing institutions. The implementing institutions are expected to considerably increase the scope of their activities. This would entail both expanding the knowledge transfer and agricultural advisory service provision to a considerably higher number of small and medium farmers, as well as improving and updating the agricultural advisory curriculum with content on climate-smart agricultural, landscape restoration, pasture and grassland managements, and animal husbandry management practices. The second is capacity building for improved monitoring and evaluation of programs. MOA would upgrade its capacities for better program management, including using modern technologies for M&E. The third is capacity building for improved expenditure management and budget planning. The Program is expected to improve overall planning and results monitoring, which will improve budgeting and expenditure management. As a result, the agricultural public expenditures would be more streamlined and targeted, they would more efficiently contribute to achieving higher-level objectives.

IV. ASSESSMENT SUMMARY

A. Technical (including program economic evaluation)

82. **The technical assessment has established the Program boundary and expenditure framework.** The strategic relevance of the Program is that it will foster improvements in public service delivery and management of the expenditure framework, which will unlock and support growth potential of the export-oriented beef sector to address high-level Government priorities of export diversification and improved rural incomes and rural job creation. Through shifts in policies and public expenditures, improved service delivery as well as capacity development, the Program will enable the development of an inclusive and environmentally sustainable beef sector. The Program is not geographically targeted and includes the entire country. The Program was designed by drawing on recent analyses of the livestock sector in Kazakhstan, on a critical assessment of the Program boundary, on a detailed quantitative assessment of climate change impacts of the Program, as well as of Government's implementation and monitoring capacities (see Annex 3).

83. **The expenditure framework presents an adequate basis for the Program.** Budgets are adequate and aggregated fiscal sustainability issues are not identified as an associated core concern. The mid-term expenditure framework for 2020-2022 was approved on January 5, 2020. Mid-term expenditure frameworks are approved every year for three-years on a rolling basis. The current State Program runs until the end of 2021. According to the Law on Budget System, Government is required to enact a new State Program after the current State Program is completed. Hence, the next State Program will enter into force in 2022. In the meantime, Government has initiated an update of the current State Program to incorporate the Program Results Areas and DLIs in the State Program results framework. As such, the Program will contribute to the design of the State Program 2022-2026.

84. **Government's implementation capacities were assessed and found adequate.** Government has been actively supporting the development of export-oriented agricultural sectors, including the beef sector. Recent substantial growth in beef exports as well as growth in revealed comparative advantage of Kazakhstani beef, demonstrate adequate implementation capacity of Government. As assessed by OIE, Government has strong

implementation capacity of the veterinary services, whereby Government's efforts have been successful in containing a number of zoonotic and transboundary diseases. Government has also established an adequately functioning veterinary network that is able to address animal health emergencies. Government has been successful in introducing a traceability system. While currently, several systems (animal health, movement, genetics) are functioning separately, the investments in technology, design and human resources for the operation of the traceability system allow Government to provide basic public functions (health and safety of animals, movement controls, registrations).

85. **Government M&E systems, while strong in selected areas, will need technical assistance to support the tracking and achievement of Program indicators.** A review of selected agency M&E systems and processes identified as strengths: (i) a strong culture of data collection; (ii) a wide range of data collected; (iii) good record keeping systems; and (iv) good public access to data. However, significant weaknesses also exist: gaps in data, especially related to number of households raising cattle and weight of cattle in different cohorts; data validity – whether numbers represent what they purport to represent; data reliability, as illustrated by a wide range of officially reported numbers for beef exports; and use of data for evaluation. For these reasons, an improved M&E system for public expenditures and their impacts on competitiveness, inclusion and environmental performance will be a key element of the Program's M&E system.

86. **Government will need support in developing a program for monitoring, verification, and reporting of GHG emissions.** This support will be provided by the Bank as part of the technical assistance for the Program. Government committed to establishing the MRV system. Currently, Government has limited capacity for MRV, which it uses in the energy sector. By establishing an MRV system for the beef sector, it is expected that Government's capacity in other sectors will be improved via cross-fertilization and knowledge sharing.

87. **The economic analysis identifies benefit streams from farms, feedlots, and economic returns of avoided GHG emissions.** It focuses on the five years of the Program and beef value chains. The analysis is also extended over 10 years, because it is assumed that the benefits generated during the five years of the Program will persist beyond the Program. The estimated net present value (NPV) of the Program is US$2.9 billion (Annex 3). This projection is based on the creation of 20,000 new farms over the Program period, which is considered more realistic than Government's projection of 40,000 for that period. It assumes a reasonable expansion of existing cattle farm production by 5 percent per year and adoption of good practices – by farmers that receive the training – by 40 percent of existing individual farms, 25 percent of existing household farms, and the economic benefits of avoided emissions. The analysis assumes the changes in the system to occur over the five years of the project, but the benefits to extent for another five years following completion (i.e. for a total of 10 years). The estimate also includes the economic benefits of reduced GHG emissions (US$384 million).

88. **The Program will have a measurable impact on the average individual farmer** through improved State support measures and extended public service provision. This impact is summarized in Table 8.

Table 8. State Support Received by Individual Farmers

Categories of support provided to an individual farmer	***Before the Program***	***After the Program***
Veterinary Services	Production diseases: de-facto not available to small farmers	Production diseases: well covered

	Zoonotic/transboundary diseases: well covered	Zoonotic/transboundary diseases: well covered
Headage payments	Accessible on a first-come-first-served basis (depends on access to information, ability to prepare applications, etc.) No impact on efficiency gains and environmental performance. Average liveweight of cattle sold = 170 kg ~10,000 farmers accessing the payment scheme, on average US$ 3,500 payment per farm	Accessible to farmers who comply with environmental practices criteria. Productivity and environmental performance increased. Average liveweight of cattle sold =220 kg All eligible farmers accessing the payment scheme with on average US$ TBD payment per farm.[40]
Matching grants	Investments are eligible a first-come-first-served basis (depends on access to information, ability to prepare applications etc.). Not targeted to environmental and economic co-benefits ~20,000 farmers accessing matching grants, with on average US$ 8,300 payment per farm.	Accessible to farmers who comply with environmental practices criteria. Additional types of investments are eligible (e.g. biogas) Targeted to environmental and economic co-benefits All eligible farmers accessing matching with on average US$ TBD payment per farm.
Agricultural Advisory and Knowledge Transfer	Low coverage (<5,000/year) and not focused on adoption of good practices.	Scaled-up coverage of (20,000/year) and focused on adoption of good practices.
Market Access	Local markets and limited marketing to feedlots.	Enhanced access to local market and higher value/export markets through contracts with feedlots.
Credit	Available as part of Government Sybaga Program	Available as part of Government Sybaga Program
Genetic Improvement	Accessible on a first-come-first-served basis (depends on access to information, ability to prepare applications etc.). Marginal impact on efficiency gains and environmental performance. 7,000 farmers benefit from the program, with US$ 11,000 payment per farmer.	Accessible to farmers who comply with environmental practices criteria. Productivity and environmental performance increased. All eligible farmers benefit from the program, with US$ TBD payment per farmer.
Access to Land	Pasture plots allocated by Local Government	Not covered by Program

B. Fiduciary

89. **The Program fiduciary assessment concludes that the Program fiduciary systems, in general, provide reasonable assurance that the financing proceeds will be used for intended purposes, with due attention to**

[40] 'TBD' values will be monitored throughout the Program implementation

the principles of economy, efficiency, effectiveness, transparency, and accountability, subject to implementation of the recommended fiduciary actions as outlined in the Program Action Plan. The assessment scope covered Program's institutional framework and anti-corruption aspects, systems and fiduciary capacity of the key institutions directly responsible for the Program implementation: Ministry of Agriculture, Veterinary Committee, the State-Owned Enterprises, namely the National Agrarian Scientific-Educational Center and its subsidiaries; as well as local government bodies (oblast Akimats). The Fiduciary Systems Assessment (FSA) includes a summary of identified key risks and respective mitigation measures, together with institutional strengthening actions reflected in the Program Action Plan (Annex 6).

90. **Several fiduciary risks were identified during the assessment, which include the following main risks**: (i) potential underfunding of the Program due to large variances between the budget requests and approved budgets; (ii) high share of single source method (around 80 percent) applied by government implementing agencies in the total annual procurement.

91. **It is not expected that large contracts valued at or above the Operational Procurement Review Committee thresholds are envisaged under the Program.**

92. **To address the possible cases of fraud and corruption associated with the Program implementation,** the Program will rely on the respective country systems, and the MOA will be the main responsible agency for the implementation of the Program anti-corruption measures in cooperation with other agencies such as the MOF and Anti-Corruption Agency. The Program implementation will be aligned to the Anti-Corruption Guidelines (ACG) applicable to PforR operations.

93. **The MOA, MEGNR and MOF will provide full support to the country's anti-corruption agencies and the World Bank when carrying out investigations related to fraud and corruption allegations made during the Program implementation.** The MOA will promptly inform the World Bank on all credible and material allegations or other indications together with the investigative and other actions that the Borrower proposed to take with respect thereto. The Protocol for Fraud and Corruption Reporting for the Program will be agreed with MOA and included in the Program Operations Manual. The World Bank will retain a right to investigate allegations, and the Borrower will provide the World Bank the necessary access to needed persons and information applicable to the Program.

C. Environmental and Social

94. **The Environmental and Social Systems Assessment (ESSA) assesses the Program systems for managing environmental and social aspects.** Key assessment areas include: (i) identifying the key environmental and social (E&S) risks, that may affect the achievement of the development outcomes; (ii) assessing the capacity of Government's existing environmental and social management systems that are the legal, regulatory, and institutional frameworks guiding the Program; and (iii) defining and recommending measures to strengthen the system, and integrates these measures into the overall Program to manage E&S risks. The key environmental and social systems actions are included as part of the Program Action Plan (Annex 6).

95. **The ESSA has been prepared by the Bank and provides a summary of environmental and social risks and benefits associated with activities for achieving the PDO** and an assessment of the extent to which the borrower's environment and social management systems are consistent with the six-core environment and social

principles of the World Bank Policy.[41] The Program is expected to have environmental and social benefits as well as risks. Results areas identified under the program are expected to largely result in positive effects in the beef cattle sector and the rural economy. The potential environmental and social risks are assessed to be Substantial. Therefore, mitigation measures, as spelled out in the Program Action Plan, must be undertaken in order to prevent significant, lasting harm to the environment as well as irreversible adverse environmental and social impacts.

96. **Environmental Risk is rated Substantial.** Potential environmental risks are mainly associated with increased amount of cattle that will result in (i) increased territories of land occupied by monoculture to meet demand for feed/forage (particularly in winter time) thus reducing biodiversity; (ii) increased uptake of fresh water use for irrigation and cattle watering; (iii) increased demand for pastureland resulting in pressure on steppe ecosystem and soil; and (iv) increased amount of manure and other biological wastes (blood, bones, hooves etc.) that, without proper treatment, emit greenhouse gases and pollute the environment. Environmental sustainability is included as a key element in the PDO and is being mainstreamed throughout the Program. Therefore, environmental risks are expected to be mitigated through close attention at all levels by Program Management and oversight by Government. The Program will provide capacity building to ensure that mitigation occurs. The environmental risks associated with the Results Areas and DLIs, include typical impacts from adoption of new regulations, guidelines, training programs, scaling-up small and medium beef cattle farms, etc., are largely Low to Moderate. However, as the Program may result in an increase of GHG emissions, a substantial increase in the number of cattle sold to feedlots, and increased capacities of slaughterhouses, the overall Program environmental risk level is rated Substantial.

97. **Social Risk is rated Substantial.** Given that this Program will be operating country wide, the Program covers a highly diverse and heterogeneous stakeholder profile across the country[42] - beef cattle farmers, agriculturists, farm scientists, veterinarians, traders, marketers, feedlot operators, processors and packers, exporters, transporters, and several segments of authorities. The stakeholder analysis has been the key instrument for assessing the social system and comprised: identifying stakeholders at different levels (national, regional, district and village); demonstrating their expectations and the related issues/ concerns; and assessing risks and impacts. The analysis reveals that, from social perspective, the key program elements relate to: (i) enabling conditions for new small and medium farmers to benefit from access to better public agricultural services and being registered in the Sybaga program; (ii) developing effective out-reach to the existing small and medium beef cattle farmers; and (iii) provision for ensuring appropriate and adequate enabling support and effective public service providers, including but not limited to agricultural advisory and knowledge transfer service providers. The Program's social risk is rated as Substantial as several key issues will need to be monitored over the program implementation. As many agencies play important role in implementation, their capacity to intermesh and contribute towards accomplishing the objective will become known only as implementation advances.

98. **Citizen Engagement and Grievance Redress.** Given that the proposed Program will be nationwide and comprise multi-sectoral activities among various actors and agencies, the Program's interface with a variety of stakeholders and direct beneficiaries will need to be well planned and implemented and cover: (i) information dissemination to enable fuller awareness about the Program; (ii) timely response to queries and facilitation of services; (iii) grievance redress mechanism (GRM); and (iv) beneficiary feedback. Kazakhstan's legal framework

[41] Annex 5 describes the six principles and provides details of the ESSA.
[42] 7,031 rural settlements, 35 villages, 84 cities, 175 administrative districts, 2 republican cities and 14 regions.

provides for these through the Law on Access to Information, Law on State Services, and Law on Procedures for Considering Appeals of Individuals and Legal Entities. Systems and procedures developed in accordance with these laws are functioning satisfactorily in and around urban areas and could be augmented to fit the Program. Ensuring outreach in the rural areas will be challenging due to remoteness, inaccessibility, and illiteracy. The Program will use the available 360 one-stop public service centers throughout the country which can liaise between the citizens and the Program (MOA), receive complaints from local people relevant to the Program and pass them on to the PMO. Also, Public councils, headed by the local Akims and comprising non-government agencies/individuals, would serve as forums for dissemination and receiving complaints/queries.

99. **Grievances.** Communities and individuals who believe that they are adversely affected as a result of a Bank supported Program operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit http://www.inspectionpanel.org.

V. RISK

100. **The overall risk of the Program is assessed as Substantial.**

101. **Political and Governance risk is rated Moderate.** In the face of economic shocks both in the world and in the country due to COVID-19 and low oil prices, Government's ability to continue with and implement the Program may be limited. With a significant decline in price of oil and reduction of budget revenues Government may shift its focus to and prioritize social spending as it has happened in the past economic downturns. On the other hand, the Program is expected to become even more relevant for the country since it supports the diversification of exports, and Government position on its importance and support to the Program are not expected to change. The potential for corruption will be mitigated by the application of clear and transparent roadmaps for implementation of the various Program activities.

102. **Macroeconomic risk is rated Moderate,** as it is assessed that even after the economic downturn, Government has the fiscal space for counter-cyclical measures supported by improved tax administration, relatively low public debt to GDP ratio, and increased assets of the National Oil Fund.

103. **Sector policies and strategies risk is rated Moderate.** There is strong Government commitment to the sector development, but there are still weaknesses in the consolidated approach to more efficient policies and targeted interventions. The main residual risks stem from the vested interests in the sector, which may weaken the reform agenda and Government's commitment to the Results Areas. In addition, climate vulnerability, which affects agricultural output, as well as Kazakhstan's relative inexperience with the high-end export markets may slow sector growth and therefore weaken the incentives and focus for the sector development.

104. **Technical design risk is rated Substantial.** The substantial risk rating stems from two factors. The first

relates to uncertainties regarding the adoption of good animal husbandry and grassland management practices by cattle farmers. The adoption of such practices is at the core of the Program's theory of change and determinant to achieving the PDO, i.e. to improve the competitiveness and environmental sustainability of the livestock sector and to enable a broad participation of individual farms in export markets. To mitigate this risk, adoption of good practices will be supported by three Program design elements : (i) the expansion of agricultural advisory and knowledge transfer services; (ii) introduction of good-practices adoption conditionality for farmers who wish to access State support; and (iii)access to export markets for competitive producers. Farmers do, however eventually make their own decision regarding production activities, and experience shows that fostering practice change on a large scale often remains a challenge.

105. The second factor relates to uncertainties regarding the implementation of policy measures of the overall State Program and addressing the risks that are outside of the PforR Program boundary. As described in Table 1, most risks for beef sector development are addressed either through the State Program, the PforR or other investments, while there continue to remain uncertainties on how certain critical elements would develop, particularly fodder production, availability of commercial financing for farmers, downstream market logistics, availability of suitable and accessible land, and overall export market access. These are important elements of the overall State Program and they play important role for the beef sector development. These elements may also impact the results of the Program, especially those related to new 20,000 small and medium farmers. While these risks are mitigated by engagement of Government with ADB on increasing livestock sector financing, analytical support on agriculture logistics, as well as Government's measures to increase the transparency of land allocation and use, their impact on the Program poses a substantial risk.

106. **Fiduciary Risk is assessed as Substantial.** Several fiduciary risks were identified during the assessment, which include the following main risks: (i) potential underfunding of the Program due to large variances between the budget requests and approved budgets; (ii) high share of single source method (around 80 percent) applied by government implementing agencies in the total annual procurement. These risks are addressed through introducing Program Action Plan actions.

107. **Environmental Risk is assessed as Substantial.** Environmental risks are mainly associated with pressure on biodiversity, fresh water sources, steppe ecosystem and soil, and increased emission of greenhouse gases leading to increased environmental pollution, resulting from increased amount of cattle. As environmental sustainability is a key element in the PDO and is being mainstreamed throughout the Program, this risk will be mitigated through Program actions aimed at adoption of good environmental practices.

108. **Social Risk is assessed as Substantial.** Social risks are associated with the ability of small and medium farmers to benefit from access to better public agricultural services due to remoteness and lack of access to information; potential for expropriation of land to accommodate 20,000 additional small and medium farmers; and potential for appropriation of Program by large/rich farmers. To mitigate these risks, several actions are included in the PAP: (i) Development and implementation of an effective and inclusive information, education and communication campaign for the Program linked to Advisory Services; (ii) Development and implementation of "Single Windows" for small and medium farmers at Akimat level; and (iii) measures to ensure land assigned to farmers are unused and are free from prior claims and incumbrances. Also, GRM provided for in national legislation and public councils, headed by the local Akims will be available for complaints/queries.

ANNEX 1. RESULTS FRAMEWORK MATRIX

Results Framework

COUNTRY: Kazakhstan

Sustainable Livestock Development Program For Results

Program Development Objective(s)

The proposed Program Development Objective is to support the development of an environmentally sustainable, inclusive, and competitive beef production in Kazakhstan

Program Development Objective Indicators by Objectives/Outcomes

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Support development of an environmentally sustainable, inclusive, and competitive beef production.								
Share of public expenditure in support of beef cattle production and processing that address green growth and sustainability in beef sector (sustainable). (Percentage)	DLI 5	20.00	22.50	25.00	27.50	30.00	30.00	30.00
Number of small and medium farmers selling to feedlots increased (inclusive). (Number)	DLI 4	20,000.00	25,000.00	30,000.00	35,000.00	40,000.00	40,000.00	40,000.00

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Share of small and medium women farmers selling to feedlots. (Percentage)		26.00	26.00	26.00	35.00	35.00	45.00	45.00
Value of beef exports (competitive). (Amount(USD))		90,000,000.00	120,000,000.00	180,000,000.00	240,000,000.00	240,000,000.00	300,000,000.00	300,000,000.00

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Intermediate Results Indicator by Results Areas

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Improvement of Veterinary Service Delivery and Animal Recording								
The unified traceability system is established, operational and secure. (Yes/No)	DLI 1, 1.1	No	No	Yes	Yes	Yes	Yes	Yes
Share of total cattle registered in the unified system. (Percentage)	DLI 1.2, 1.3	0.00	0.00	45.00	75.00	95.00	95.00	95.00
Small and medium farmers have access to improved and upgraded veterinary services that address major production diseases and guarantee quality service provision. (Percentage)	DLI 2	0.00	0.00	0.00	50.00	50.00	75.00	75.00
Veterinary legislation is amended to promote private service provision and private veterinarians are provided facilities and tools to effectively provide services to small and medium farmers. (Yes/No)	DLI 2.1	No	No	Yes	Yes	Yes	Yes	Yes
The National Statutory Body (Veterinary		No	No	No	Yes	Yes	Yes	Yes

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Chamber) is fully functional and conducts quality review of practicing veterinarians. (Yes/No)								
Number of new veterinarians (registered in the National Statutory Body) are trained for production diseases and provide services. (Number)	DLI 2.2	0.00	0.00	1,000.00	2,500.00	4,000.00	7,000.00	7,000.00
Scale-up the Farmer-Centric Service Delivery Model								
Farmers adopting improved agricultural technology (CRI, Number)		0.00	0.00	12,500.00	20,000.00	35,000.00	35,000.00	35,000.00
Farmers adopting improved agricultural technology - Female (CRI, Number)		0.00	0.00	4,000.00	9,500.00	15,000.00	15,000.00	15,000.00
Farmers adopting improved agricultural technology - male (CRI, Number)		0.00	0.00	6,000.00	11,500.00	20,000.00	20,000.00	20,000.00
Farmers are trained and certified in good practices by the improved advisory system. (Number)	DLI 3	0.00	15,000.00	30,000.00	50,000.00	75,000.00	100,000.00	100,000.00
Number of women farmers benefiting from special targeted training programs		0.00	5,000.00	10,000.00	15,000.00	20,000.00	20,000.00	20,000.00

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
designed for women (Number)								
Increase in live-weight of cattle per hectare per year in participating farms (Percentage)		0.00	0.00	0.00	15.00	15.00	20.00	20.00
Implement Green Growth Policies for the Beef Sector								
GHG emissions from livestock supply chains are being monitored, reported and verified (Yes/No)		No	No	No	No	Yes	Yes	Yes
Net GHG emissions from beef cattle sector (Tones/year)		36,500,000.00	36,300,000.00	36,300,000.00	35,500,000.00	35,500,000.00	34,400,000.00	34,400,000.00
Nationally Determined Contribution (NDC) includes a roadmap for the period of 2021-2025 with specific targets and actions for the cattle sector (Yes/No)		No	No	No	Yes	Yes	Yes	Yes
Policy commitments and instruments for the control of GHG emissions and adaptation to climate change in the beef sector. (Yes/No)	DLI 6	No	No	No	No	No	Yes	Yes
The State Program incorporates a chapter on sustainability for the beef cattle sector based on		No	No	Yes	Yes	Yes	Yes	Yes

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
green growth principles. (Yes/No)								

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Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Share of public expenditure in support of beef cattle production and processing that address green growth and sustainability in beef sector (sustainable).	This PDO outcome indicator is included as a necessary condition for efficient agri-environmental policies that boost sustainable productivity growth and climate co-benefits. This indicator measures the sustainable dimension of the PDO and aims to monitor shift in public expenditures due to proposed interventions that would lead to scale-up of good practices, improved agri-environmental outcomes of state support measures and policies. This indicator is introduced as the value-added of the Program, in that it ensures that the Program has due attention to climate sustainability as it projects increased beef production.	Annual	Annual public expenditure reviews	Annual public expenditure reviews and audits of agricultural public expenditures in support of beef production. Conducted by the third-party independent verification agency.	Ministry of Agriculture and the third-party independent verification agency.

Number of small and medium farmers selling to feedlots increased (inclusive).	This will be measured as an increase in the number of small and medium farmers that have been registered as suppliers to feedlots and have sold at least ten calves to feedlots in each of the past two years (cumulative) over the baseline of December 31, 2020. This indicator measures the inclusiveness dimension of the PDO and aims to monitor the improved linkage of small and medium farmers with markets. This indicator contributes to the high-level and long-term objective of improving rural jobs and income opportunities in rural areas. This indicator will be gender disaggregated.	Annual	Farmers that supply to feedlots are expected to be registered in the Sybaga system.	Sybaga.kz is the Ministry of Agriculture's online program that registers those farmers, who participate in breed improvement programs and supply high-quality calves to feedlots. The system database will be audited and spot-checks may be conducted, to verify the accuracy of data by the third-party independent verification agency. The baseline will be taken as of December 31, 2020.	Ministry of Agriculture.
Share of small and medium women farmers selling to feedlots.	This supplemental sub-indicator will measure the share of women beef cattle farmers, who sell to feedlots and benefit from the government support programs. The baseline will	Bi-annual	Surveys	Review of Sybaga.kz website and the relevant database to identify participating women farmers. Random surveys of or interviews with participating	Ministry of Agriculture

	be re-confirmed after a survey.			women farmers, who are selling cattle to feedlots.	
Value of beef exports (competitive).	This will be measured as annual value of beef exported through slaughterhouses and processing enterprises. Since almost all exported beef from slaughterhouses and processing facilities comes from feedlots, this indicator is fully attributable to the Program and will measure the impact of the Program interventions. This indicator measures the competitive dimension of the PDO and aims to monitor increased exports. Program interventions that improve competitiveness of beef production will lead to increased exports. This indicator contributes to the high-level and long-term objective of diversifying exports away from oil.	Annual data as reported by National Statistics Service and internation al statistics (UN Comtrade).	National Statistics Service and UN Comtrade statistics	Ministry of Agriculture data will be reconciled with National Statistics Service and UN Comtrade data	Ministry of Agriculture

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
The unified traceability system is established, operational and secure.	The unified system is established, operational and secure.	Once and continuous	Ministry of Agriculture	The third-party verification agency will audit the unified system and will ascertain that it corresponds to the agreed definition and complexity of the system. The system design elements and verification protocols will be described in the Program Operations Manual.	Ministry of Agriculture
Share of total cattle registered in the unified system.	This indicator measures improved cattle traceability. It is expected that after the animal registration system is improved, unified and fully operational, all cattle in Kazakhstan will be gradually registered in this unified system.	Annual	Unified information system of the Ministry of Agriculture	Unified information system data records to be audited and verified by the third-party-independent verification agency.	Unified information system operator and Ministry of Agriculture
Small and medium farmers have access to improved and upgraded veterinary services that address major production diseases and guarantee quality service provision.	This indicator refers to policy, institutional and legal improvements that are agreed and implemented as part of the	Mid-term and end of the Program	Random survey at the mid-term and end of the Program to	Report of the Ministry of Agriculture and the State Veterinary Committee to be verified by the third-party independent	Ministry of Agriculture and State Veterinary Committee through a specialized survey company.

	Veterinary Services Improvement Plan and OIE PVS Gap Analysis assessment to be defined before the effectiveness. The indicator measures the satisfaction of small and medium farmers with the quality of veterinary service provision.		assess farmer's satisfaction with the improved veterinary services.	verification agency.	
Veterinary legislation is amended to promote private service provision and private veterinarians are provided facilities and tools to effectively provide services to small and medium farmers.	Amendments in the veterinary legislation have been adopted and are in compliance with recommendations from OIE PVS Gap analysis.	Once and continuous	Ministry of Agriculture, World Bank implementation support missions	Information provided by the Ministry of Agriculture to be verified by the third-party independent verification agency.	Ministry of Agriculture, State Veterinary Committee
The National Statutory Body (Veterinary Chamber) is fully functional and conducts quality review of practicing veterinarians.	The indicator measures the progress in establishment of the National Statutory Body (Veterinary Chamber), that is fully functional and supports quality control and professional development of veterinarians.	Annual	Ministry of Agriculture, National Statutory Body (Veterinary Chamber), World Bank Implementation Support Missions.	Information provided by the National Statutory Body (Veterinary Chamber).	National Statutory Body (Veterinary Chamber)
Number of new veterinarians (registered in the National Statutory Body) are trained for production diseases and provide services.	This indicator will measure the cumulative number of veterinarians who will be trained in production	Annual	Data from the Ministry of Agriculture and State	Annual review of the list of veterinarians that participate in the Program.	Ministry of Agriculture and State Veterinary Committee.

	diseases and service provision for small and medium farmers, and who will be engaged by the Ministry of Agriculture to provide such services to farmers.		Veterinary Committee, reviewed and audited (including spot-checks) by the third-party independent verification agency.		
Farmers adopting improved agricultural technology	This indicator measures the number of farmers (of agricultural products) who have adopted an improved agricultural technology promoted by operations supported by the World Bank. NB: "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber and non-timber forest products. Adoption refers to a change of practice or change in use of a technology that was	Annual	Annual surveys of farmers who participate in the agricultural advisory and knowledge transfer programs. Surveys will be conducted in collaboration with the selected advisory service providers and will be	Data will be collected through annual surveys that measure the adoption of good agriculture, pasture and grassland management, animal husbandry practices. Adoption of at least two of these practices will be considered for the satisfactory achievement of the indicator.	Ministry of Agriculture and selected advisory service providers.

	introduced or promoted by the project. Technology includes a change in practices compared to currently used practices or technologies (seed preparation, planting time, feeding schedule, feeding ingredients, postharvest storage/ processing, etc.). If the project introduces or promotes a technology package in which the benefit depends on the application of the entire package (e.g., a combination of inputs such as a new variety and advice on agronomic practices such as soil preparation, changes in seeding time, fertilizer schedule, plant protection, etc.), this counts as one technology. Farmers are people engaged in farming of agricultural products or members of an agriculture related business (disaggregated by men and women) targeted by the		mainstreamed in their feedback loop.		

	project.				
Farmers adopting improved agricultural technology - Female		Annual	Surveys	Data will be collected through annual surveys that measure the adoption of good agriculture, pasture and grassland management, animal husbandry practices. Adoption of at least two of these practices will be considered for the satisfactory achievement of the indicator and a satisfactory implementation of the agricultural advisory and knowledge transfer program. Data will be sex-disaggregated. Female farmers will be targeted as part of the agricultural advisory and knowledge transfer programs.	Ministry of Agriculture and selected advisory service providers.
Farmers adopting improved agricultural technology - male		Annual	Surveys	Data will be collected through annual surveys that measure the adoption of good agriculture, pasture and	Ministry of Agriculture and selected advisory service providers.

				grassland management, animal husbandry practices. Adoption of at least two of these practices will be considered for the satisfactory achievement of the indicator and a satisfactory implementation of the agricultural advisory and knowledge transfer program. Data will be sex-disaggregated. Female farmers will be targeted as part of the agricultural advisory and knowledge transfer programs.	
Farmers are trained and certified in good practices by the improved advisory system.	At least 100,000 small and medium farmers are expected to be reached by the improved advisory system.	Annual	Annual records of national level selected advisory service providers, aud ited by the third-party independent verification	Selected service providers will register all eligible small and medium farmers who participate in the improved agricultural advisory and knowledge transfer programs that promote good agricultural, pasture and grassland management	Ministry of Agriculture and selected advisory service providers.

			agency.	and animal husbandry practices. Training programs and the content will be developed by the effectiveness of the Program.	
Number of women farmers benefiting from special targeted training programs designed for women	The Program will incentivize interventions that will be tailored to address women specific needs. Specifically, part of the agricultural advisory and knowledge transfer activities would be designed and tailored for women. The Program Action Plan will include an action to address equal access of women to services and interventions supported by the Program. A results indicator is included to monitor the number of women that have been targeted by advisory programs designed for women.	Annual	Annual records of selected advisory service providers.	Selected advisory service providers will register all eligible women farmers who participate in the training programs specially designed for women.	Ministry of Agriculture and selected advisory service providers.
Increase in live-weight of cattle per hectare per year in participating farms	This indicator will measure the increase in productivity in participating farms, and	Mid-term and end-of-Program	Survey	Data will be collected at the mid-term and at the end of the Program	Ministry of Agriculture.

	will encompass productivity at animal, herd and pasture level. The productivity improvements are expected to be achieved due to adoption of good practices.	evaluations .		through a sample survey of participating farmers.	
GHG emissions from livestock supply chains are being monitored, reported and verified	This indicator measures the establishment and full functioning of the Monitoring, Reporting and Verification system.	This indicator is expected to be achieved by the second year of the Program.	Ministry of Ecology, Geology and Natural Resources in collaboration with the Ministry of Agriculture. Data will be provided by the MRV system.	System operation will be reviewed and assessed as part of the World Bank Implementation Support Mission	Ministry of Ecology, Geology and Natural Resources in collaboration with the Ministry of Agriculture. Data will be provided by the MRV system.
Net GHG emissions from beef cattle sector	The indicator includes all main emissions along the value chain: (i) feed production, processing and transportation, (ii) enteric fermentation, (iii) manure management, (iii) animal transportation and (iv) slaughtering and chilling. It also includes changes of carbon stock in grasslands	Bi-annual	Monitoring, reporting and verification system	Data will be collected by the Monitoring, reporting and verification system (MRV). The MRV methodology is being prepared and will form part of the Program Operations Manual.	Ministry of Ecology, Geology and Natural Resources in collaboration with the Ministry of Agriculture. Data will be provided by the MRV system.

	and replacement of fossil fuel energy with renewables. GHG included are methane, nitrous oxide and carbon dioxide, all expressed in CO2-eq.				
Nationally Determined Contribution (NDC) includes a roadmap for the period of 2021-2025 with specific targets and actions for the cattle sector	Ministry of Ecology, Geology and Natural Resources will approve a roadmap under the framework of the implementation of the updated nationally determined contribution (NDC) for the period of 2021-2025 that includes specific targets and actions for the cattle sector.	This indicator is expected to be achieved by the second year of the Program.	Ministry of Ecology, Geology and Natural Resources in collaboration with Ministry of Agriculture.	Ministry of Ecology, Geology and Natural Resources in collaboration with Ministry of Agriculture provide report on the adoption of the roadmap.	Ministry of Ecology, Geology and Natural Resources in collaboration with Ministry of Agriculture.
Policy commitments and instruments for the control of GHG emissions and adaptation to climate change in the beef sector.	The monitoring indicator tracks the overall policy commitments for control of GHG emissions and adaptation to climate change in the beef sector, including the commitment to include beef cattle GHG emission reductions in NDCs, formulation of and commitment to a national adaptaption plan related to the beef serctor and	Once	Ministry of Agriculture and World Bank implementation support missions.	Review of the government documents, including the updated State Program and relevant policies and regulations. Specific commitments and actions will be formulated in the Ministry of Agriculture's subsidy rules, which will include environmental conditionalities for	Ministry of Agriculture

	establishment of a monitoring, reporting and verification (MRV) system			accessing state support measures	
The State Program incorporates a chapter on sustainability for the beef cattle sector based on green growth principles.	Chapter on sustainability for the beef cattle sector based on green growth principles is included in the State Program, has funding commitments and describes implementation modalities.	Once	Ministry of Agriculture and World Bank implementation support missions.	Review of the State Program and relevant policies.	Ministry of Agriculture

ANNEX 2. DISBURSEMENT LINKED INDICATORS, DISBURSEMENT ARRANGEMENTS AND VERIFICATION PROTOCOLS

Disbursement Linked Indicators Matrix				
DLI 1	Cattle is being registered in the Unified Information System.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	No	Yes/No	50.00	10.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		50.00	
DLI 1.1	The Borrower shall have issued regulations for the establishment and operation of Unified Information System and such system is operational, both in form and substance satisfactory to the Bank.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	10.00	2.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		10.00	

DLI 1.2	The Borrower shall, through MOA, have transferred to the Unified Information System the data of all existing registered cattle in the Borrower's animal identification systems.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	Yes	Yes/No	20.00	4.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		20.00	

DLI 1.3	The Borrower shall have, through MOA, registered all new cattle in the Unified Information System as set forth in the Disbursement Formula.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	Yes	Number (Thousand)	20.00	4.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	0.00			
2021-2025	600,000.00		20.00	$2m for each 60000 heads registered

DLI 2	Small and Medium Farmers have access to improved and upgraded veterinary services.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	No	Yes/No	75.00	15.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		75.00	

DLI 2.1	The Borrower shall have amended the relevant secondary legislation required by the Veterinary Law to promote private service provision, following the recommendations made by the OIE to the Performance			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	25.00	5.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		25.00	

DLI 2.2	The Borrower shall have increased the number of Veterinarians Registered and Trained in the amounts and as set forth in the Disbursement Formula.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	Yes	Number	50.00	10.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	0.00			

2021-2025	7,000.00		50.00	$5m for 500 trained/contracted.

DLI 3	Small and Medium Farmers shall have been trained and certified in Good Practices in the amounts and as set forth in the Disbursement Formula.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	Yes	Number	100.00	20.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	0.00			
2021-2025	100,000.00		100.00	$5m for every 5000 trained/certified.

DLI 4	The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots shall have increased in the amounts and as set forth in the Disbursement Formula.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	Yes	Number	100.00	20.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	0.00			
2021-2025	20,000.00		100.00	$5m for each 1,000 registered.

DLI 5	Share of public expenditure in support of green growth and sustainability in the beef sector.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	Yes	Percentage	100.00	20.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	20.00			
2021-2025	30.00		100.00	

DLI 5.1	The Borrower, through MOA, shall have amended the Agricultural Subsidy Rules to include eligibility criteria for farmers based on green growth and sustainability principles.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	10.00	5.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		10.00	

DLI 5.2	The Borrower shall have increased the share of public expenditures for Sustainable Beef Production and Processing Activities of the total of public expenditure for the beef cattle sector			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	Yes	Percentage	90.00	18.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	20.00			

2021-2025	30.00		90.00	$4.5 mln for each 0.5% increase

DLI 6	The Borrower shall have made commitments for the control of GHG emissions and adaptation to climate change in the beef sector.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	75.00	15.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		75.00	

DLI 6.1	The Borrower, through MEGNR, shall have approved a roadmap under the framework of the implementation of the updated nationally determined contribution (NDC) for the period of 2021-2025.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	25.00	5.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		25.00	

DLI 6.2	The MRV System shall be operational in form and substance satisfactory to the Bank.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	25.00	5.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**

Baseline	No		
2021-2025	Yes	25.00	

DLI 6.3	The Borrower shall have incorporated in the State Program for FY 2022-2026 and funded, a chapter on sustainability for the beef cattle sector based on green growth principles.			
Type of DLI	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	25.00	5.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
2021-2025	Yes		25.00	

Verification Protocol Table: Disbursement Linked Indicators	
DLI 1	Cattle is being registered in the Unified Information System.
Description	The new unified system for traceability will be operational and secure, will integrate three existing systems for genetic improvement, health control, and recording and identification of cattle, and will increase the share of cattle registered in the system to at least 95 percent. This new system and the effective (and verified) recording of animals are also required to incentivize foreign investors to enter the Kazakhstani market, with technology-promoting and market-seeking investments. An effectively functioning and integrated traceability system with high coverage levels of cattle is essential for demonstrating the country's readiness to access high-value premium export markets and to improving the genetic potential of the national herd.
Data source/ Agency	Ministry of Agriculture
Verification Entity	Third-party independent verification agency
Procedure	Verification procedures are designed for each DLR and are presented separetely.
DLI 1.1	The Borrower shall have issued regulations for the establishment and operation of Unified Information System and such system is operational, both in form and substance satisfactory to the Bank.
Description	This DLR measures as to whether the unified system has been fully established and is operational.
Data source/ Agency	Ministry of Agriculture
Verification Entity	Third-party verification agency
Procedure	*Actions to ensure that the unified system is established, operational and secure:* (a) adoption of regulation for a unified traceability system which defines and mandates data confidentiality and data validation protocols; (b) review of existing animal registration systems – used to identify all cattle, track breeding animals, health tracking and recording of veterinary health activities, such as vaccination – to assess their operational status, functionality; (c) linkage or integration of the existing separate recording systems (animal identification and movement, animal health and pedigree registry) and strengthening its unified system's design and inter-connectivity; (d) testing of system performance for functionality – inter alia to ensure data security and confidentiality, data validity , verification and analysis.

DLI 1.2	The Borrower shall, through MOA, have transferred to the Unified Information System the data of all existing registered cattle in the Borrower's animal identification systems.
Description	The DLI will ensure that the existing databases are transferred to the unified system and that the unified system is fully operational with all the existing information.
Data source/ Agency	Ministry of Agriculture
Verification Entity	The verification will be conducted to audit the data in the unified traceability system and to ascertain that the cattle registered corresponds to the reported numbers.
Procedure	The IVA will monitor the share of total cattle registered in the unified system through annual surveys of cattle farms to compare the system data against facts on the ground, by conducting spot checks at farm level. Data would be reconsiled with the data reported in the Yearbook of National Statistics Committee.The data of the unified traceability system will be audited for accuracy, reliabiltiy and validity to ascertain that the share of the cattle registered corresponds to the reported percentage.
DLI 1.3	The Borrower shall have, through MOA, registered all new cattle in the Unified Information System as set forth in the Disbursement Formula.
Description	Number of new cattle (new born and imported) registered in the unified traceability system.
Data source/ Agency	Ministry of Agriculture
Verification Entity	The verification will be conducted to audit the data in the unified traceability system and to ascertain that the number the cattle registered corresponds to the reported number.
Procedure	The IVA will conduct both system audits and spot checks to ascertain that the data on newly registered cattle is accurate (taking into account acceptable error levels).
DLI 2	Small and Medium Farmers have access to improved and upgraded veterinary services.
Description	This outcome indicator is included to upgrade veterinary services in accordance with OIE recommendations. Veterinary services should include support for production diseases, which can be delivered through the private network of veterinary practitioners.
Data source/ Agency	Ministry of Agriculture
Verification Entity	Third-party independent verification agency.

Procedure	A step-by-step plan to transition to private veterinary service provision is being executed, with explicit responsibilities for animal health control being handed over to private veterinary service providers, starting with a pilot. Private veterinarians are effectively organized in a Veterinary Chamber, which ensures quality control and professional development of veterinarians. Capacity development programs exist.
DLI 2.1	The Borrower shall have amended the relevant secondary legislation required by the Veterinary Law to promote private service provision, following the recommendations made by the OIE to the Performance
Description	Veterinary legislation is updated in compliance with recommendations of OIE PVS Gap analysis
Data source/ Agency	Ministry of Agriculture, Veterinary Committee
Verification Entity	Third-party verification agency
Procedure	Review of the government procedure and ascertain that the veterinary legislation is amended and is in compliance with OIE PVS Gap analysis recommendations.
DLI 2.2	The Borrower shall have increased the number of Veterinarians Registered and Trained in the amounts and as set forth in the Disbursement Formula.
Description	The DLI will measure the number of veterinarians that have been trained and certified
Data source/ Agency	Ministry of Agriculture and Veterinary Committee
Verification Entity	Third-party verification agency
Procedure	(a) the Veterinary Committee at MOA submits lists of names to IVA which include: (i) course applicants; (ii) course takers; (iii) course takers who successfully passed the test and received a certificate; and (iv) new veterinarians who are eligible to provide services; (b) IVA records the number of veterinarians and their locations and compares it against the target for the Program year. Before submitting its report, the third-party verification agency confirms that the following milestones are met: (a) the Action Plan to transition to private veterinary service provision is being executed, with explicit responsibilities for animal health control being handed over to private veterinary service providers, starting with a pilot and (b) private veterinarians are effectively organized in a National Statutory Body, which ensures quality control and professional development of veterinarians.

DLI 3	Small and Medium Farmers shall have been trained and certified in Good Practices in the amounts and as set forth in the Disbursement Formula.
Description	This output indicator is selected to support the Government program in modernizing agricultural advisory and knowledge transfer system, which is a necessary condition to the environmental sustainability and competitiveness of export-oriented beef value chains.
Data source/ Agency	Ministry of Agriculture
Verification Entity	Third-party independent verification agency
Procedure	MOA, through selected advisory service providers, collects evidence of achievement in the form of data on training: registration of trainees; survey results, certifications, etc.; (b) MOA Program Management Office consolidates database and accompanying records (physical or electronic); (c) PMO M&E staff reviews data and stores records; (d) MOA notifies IVA of achievement of DLI and requests verification; (e) IVA conducts audit of relevant progress reports of selected service providers and provides assurance of the number of eligible farmers (as per criteria will be outlined in the Program Operational Manual) participating in the advisory services programs; (f) IVA assesses results and compares them with annual targets; (g) IVA discusses with implementing agencies and resolves any outstanding issues and compiled achievement confirmation report from IVA is submitted back to the MOA; (h) IVA conducts spot checks (via farmer surveys) to confirm that participants were trained according to program design; (i) IVA conducts remote sensing to estimate number of farmers implementing good practices in pasture management and manure management.
DLI 4	The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots shall have increased in the amounts and as set forth in the Disbursement Formula.
Description	This output indicator supports the Government program in transforming beef sector from households based unorganized production system to an organized agile farmer-based integrated to the export value chain production system.
Data source/ Agency	Sybaga program of the Ministry of Agriculture
Verification Entity	Third-party independent verification agency
Procedure	(a) IVA, through data audits and spot checks, verifies the number of registered farmers in the Sybaga program to establish a baseline; (b) IVA conducts annual audits of Sybaga program reports and provides assurance of the number of eligible farmers (as defined in the Program Operations Manual - POM) who are registered and who have sold at least ten calves to feedlots in each of the past two years, and compares the total against annual targets.

DLI 5	Share of public expenditure in support of green growth and sustainability in the beef sector.
Description	This outcome indicator is included as a necessary condition for efficient agri-environmental policies that boost sustainable productivity growth and climate co-benefits.
Data source/ Agency	Ministry of Agriculture
Verification Entity	Third-party independent verification agency
Procedure	Ex-post audit of actual public expenditures. Eligibility will be defined in the Program Operations Manual.
DLI 5.1	The Borrower, through MOA, shall have amended the Agricultural Subsidy Rules to include eligibility criteria for farmers based on green growth and sustainability principles.
Description	MOA develops environmental criteria which farmers must comply with in order to access state support measures (headage payments, matching grants); MOA revises the rules (in form and substance satisfactory to the Bank) that introduces good agricultural practices guidelines for beef producers and terms and conditions of expenditures in support of beef cattle production and processing that directly address environmental performance; (e) MOA conducts awareness raising campaigns to sensitize producers about environmental stewardship and on consumers' demand for sustainable production.
Data source/ Agency	Ministry of Agriculture
Verification Entity	IVA or other entity agreed with the Bank
Procedure	(a) MOA adopts guidelines and updates its rules and relevant regulatory documents; (b) MOA submits report on public expenditures to IVA; (b) IVA conducts an ex-post audit of actual public expenditures by reviewing report; (c) IVA cross-verifies the reported expenditure data with spot check to ensure that those farmers receiving state support comply with the environmental criteria.
DLI 5.2	The Borrower shall have increased the share of public expenditures for Sustainable Beef Production and Processing Activities of the total of public expenditure for the beef cattle sector
Description	The Program instigates a switch to new and efficient agri-environmental-targeted support measures, support GHG monitoring, verification and reporting system, and scale-up good animal husbandry and grassland management practices
Data source/ Agency	Ministry of Agriculture
Verification Entity	IVA

Procedure	(a) MOA submits report on public expenditures to IVA; (b) IVA conducts an ex-post audit of actual public expenditures by reviewing report; and IVA cross-verifies the reported expenditure data with spot check to ensure that those farmers receiving state support comply with the environmental criteria.
DLI 6	The Borrower shall have made commitments for the control of GHG emissions and adaptation to climate change in the beef sector.
Description	This outcome indicator is selected to set targets and policy commitment towards the control of GHG emissions in the beef cattle sector.
Data source/ Agency	Ministry of Agriculture and Ministry of Ecology, Geology and Natural Resources
Verification Entity	Third-party independent verification agency or other entity agreed with the Bank.
Procedure	The verification will be based on the review of the relevant regulations and secondary legislation, as well as on the assessment of functions of the MRV system to be established under the Program.
DLI 6.1	The Borrower, through MEGNR, shall have approved a roadmap under the framework of the implementation of the updated nationally determined contribution (NDC) for the period of 2021-2025.
Description	Roadmap developed to include targets for beef cattle sector under the framework of implementation of NDC.
Data source/ Agency	Ministry of Ecology, Geology and Natural Resources in collaboration with the Ministry of Agriculture.
Verification Entity	Third-party independent verification agency or other entity agreed with the Bank.
Procedure	(a) IVA verifies the relevant legislation and budget allocation by reviewing the approved legal and regulatory documents.
DLI 6.2	The MRV System shall be operational in form and substance satisfactory to the Bank.
Description	MRV system is established, fully operational and funded. Data are being reported on a regular basis and constitutes main data for monitoring GHG emissions from beef cattle sector.
Data source/ Agency	Ministry of Ecology, Geology and Natural Resources in collaboration with the Ministry of Agriculture.
Verification Entity	Third-party independent verification agency or other entity agreed with the Bank.
Procedure	IVA verifies whether the MRV system is fully operational and funded.

DLI 6.3	The Borrower shall have incorporated in the State Program for FY 2022-2026 and funded, a chapter on sustainability for the beef cattle sector based on green growth principles.
Description	Chapter on sustainability and green growth principles for the beef cattle sector is part of the State Program (committed and fully funded)
Data source/ Agency	Ministry of Agriculture in collaboration with the Ministry of Ecology, Geology and Natural Resources.
Verification Entity	Third-party independent verification agency or other entity agreed with the Bank
Procedure	IVA verifies the State Program, any relevant legislation and budget allocation by reviewing the approved legal and regulatory documents.

ANNEX 3. (SUMMARY) TECHNICAL ASSESSMENT

Strategic relevance

The Program addresses two strategic development issues for Kazakhstan: economic diversification and income growth in rural areas. The Program will foster improvements in public service delivery and management of expenditure frameworks, which will mobilize growth potential in the livestock sector to address high-level Government priorities. Through shifts in policies and public expenditures, as well as capacity development, the Program will enable the development of inclusive and environmentally sustainable livestock value chains that can link the vast land and water resources of Kazakhstan to neighboring beef markets (See Box A3-1 for an overview of the production systems and farm types).

The meat sector has a large potential for growth and can promote job creation and income opportunities in rural areas if expansion is inclusive. Large neighboring markets of China (at US$2.6 billion worth of beef imports, growing), the Middle East (US$1.8 billion, growing), and Russia (US$1.3 billion, contracting) represent sizeable opportunities for Kazakh beef producers, provided they improve in competitiveness.[43] On the supply side, grassland resources are currently underutilized, and significant potential exists to expand livestock production through both sustainable intensification and expansion of rangeland utilization.[44] The country also produces grain surpluses that can be used as feed on feeding operations. Furthermore, livestock value chains and meat value chains in particular are labor-intensive, which represents a substantial business opportunity for the large number of household farms and individual farms owning cattle or ready to invest in that activity.

Public investment is required to facilitate the sector's transition towards inclusive and environmentally sustainable export-oriented development. Public investments are needed to set up the traceability and food safety regulations required to access international markets; to repair and expand equipment and infrastructure to better use pastures; to level the economic playing field so individual and household farms can participate in and benefit from the sector's growth; and to formulate and implement the regulatory and incentive systems required to channel growth on an environmentally sustainable path.

Box A3-1. Beef farming and farm structure in Kazakhstan

Kazakh beef production mostly relies on grazing systems. Currently, these systems are estimated to use ca. 60 million ha of grassland (including also sheep and dairy production) and produce 500 thousand tons of carcass weight, mostly sold on domestic market. Production growth potential is vast, both through expansion (120 to 130 million ha are estimated to be suitable for grazing), and productivity gains at animal and grassland level, both being relatively low compared to grazing systems in similar agro-ecological conditions. The value chains are mostly informal, with a limited number of calves sold to feedlots (ca. 260,000 out of a national population of 7.2 million cattle).

Individual farms, the core target of the Program, is a farm category that emerged after the transition to the market economy. They are registered as legal enterprises, generally employ workers, use private or leased land, and benefit from various tax privileges. Individual farms vary significantly in size and about 27,000 own beef

[43] IFC (2019): Kazakhstan: The Beef Sector. Presentation given at the WBG, Washington D.C.
[44] Hankerson, B. et al. (2019): Modeling the spatial distribution of grazing intensity in Kazakhstan. PloS one 14.1.

cattle, with an average herd size of 72 head of cattle.

Household farms, also addressed by the Program, constitute the largest category of farms and are characterized by low productivity levels, and commercial or non-commercial/subsistence farming. They are not registered. Most of the national cattle herd is owned by household farmers: around 2-5 heads of local dual-purpose breeds per unit. Household farms typically use public grazing land and purchase grain and hay for winter feeding. Beef is not the primary production among household farms but rather a coproduct of milk production.

A third category is comprised of the largest farms, which are normally registered as ***agricultural enterprises*** and have legal status of limited liability partnerships or joint stock companies. The number of cattle on these farms decreased tenfold during the 90's, to about 5 percent of the cattle herd, mostly for dairy production.

Technical soundness

The Program design is based on recent analyses of the livestock sector in Kazakhstan, as well as on detailed assessments of the Livestock Strategy, the State Program of Agro-Industrial Complex Development, and national implementation and monitoring capacities.

A comprehensive review of existing literature and studies was conducted to inform the preparation of the Program. The main sources consulted include: A recent review of public programs in the agriculture sector prepared by the Joint Economic Research Program that identifies the main shortcomings of current programs, and proposes specific recommendations for adjustments to the current system of agricultural support measures that were taken into consideration in the preparation of the Program.[45] Further studies, carried out by IFC, the World Bank and Texas A&M University confirmed the potential for sustainable growth in the livestock sector and the opportunity for Kazakhstani beef to be competitive on international markets, provided productivity gains and economies of scale are achieved in the primary production sector.[46] Other analytical work carried out by Hankerson et al. and the World Bank pointed at the potential to improve pasture productivity.[47] These results validate Government's strategic focus to develop export-oriented beef value chains and were instrumental in designing the Program. The Program design also drew on a recent study on the adoption of climate technologies in Kazakhstan's agri-food sector, proposing specific interventions for livestock.[48]

Specific analyses were also carried out to underpin the technical soundness of the Program, as presented in the following sections. These analyses were performed to assess selected feasibility issues, environmental implications, and capacity development needs related to the State Program of Agro-Industrial Complex Development and the Livestock Strategy. The results from these analyses were used to formulate a technically sound Program. Table A3-1 presents a summary of the technical data and

[45] World Bank Group Joint Economic Research Program. 2018. Public Programs and the Agricultural Sector in Kazakhstan.
[46] The Norman E. Borlaug Institute for International Agriculture & Development. 2019. Site Assessment and Evaluation for Establishing a Multi-Protein Export Roadmap for Kazakhstan: 2019-2044. Phase 1: Developing a Viable and Sustainable Beef Cattle & Poultry Industry for Kazakhstan; IFC. 2019. Kazakhstan: The Beef Sector. Presentation given at the WBG, Washington D.C.; and Joint Economic Research Program, Government and World Bank. 2014. Kazakhstan's Livestock Sector – Supporting Its Revival.
[47] World Bank. 2014. Review of Grassland and Pasture Production; Hankerson, Brett R. et al. 2019. Modeling the Spatial Distribution of Grazing Intensity in Kazakhstan. PloS one 14.1.
[48] EBRD/FAO. 2018/ Adoption of Climate Technologies in Kazakhstan's Agrifood Sector. European Bank for Reconstruction and Development, Food and Agriculture Organization of the United Nations.

assumptions about the estimated meat sector's transformation achieved through the Program, that were used to prepare the technical assessment (see technical assessment document for more details).

Table A3-1. Technical and marketing impacts achieved under the Program

	2019	2025, with Program
Animal numbers		
National herd of cattle - total (head)	7,150,000	9,638,000
National herd of beef cattle (head)	2,341,684	5,451,684
Farm numbers and size		
Individual farms with cattle	27,000	47,000
Individual farms selling calves to feedlots	14,000	34,000
Average herd size on the individual farms (heads)	48	77
Production		
Average live weight at slaughter on feedlots	500	550
Capacity of feedlots (animal places *2 cycles)	450,000	940,000
Marketing		
Total beef produced (tons carcass weight)	477,000	525,000
Total beef sold on export market (tons carcass weight)[49]	30,000	130,000
Production practices		
Individual farms implementing good animal and grassland management practices (number)	1,350	32,400
Land use		
Grassland requirements (ha per head)	8.0	6.2
Area of grassland under improved grazing management (thousand ha)	734	2,737

Source: World Bank, based on several published data sources and interviews.

Results Area 1: Improvement of veterinary service delivery and animal recording.

Cattle is being registered in the unified information system (DLI 1).

To prevent food safety and animal disease transmission issues, importing countries are increasingly demanding regarding the traceability of meat and live animals. Building a traceability system, therefore is essential for Kazakhstan to grow its exports. Past efforts have been successful in developing an animal registration system, which is now functional and includes most of the country's cattle. Kazakhstan also invested in developing various other traceability systems, for breeding animals, health tracking and recording of veterinary health activities, such as vaccination. However, the MOA assesses that much of

[49] Average export price is estimate at US$3,000 per ton.

the potential benefits from these systems remains unutilized, due to a lack of animal coverage, integration and analytical capacities.

In this regard, the MOA has developed a vision for a unified animal identification and registration system, tracking animals and their products from farm to fork / export and its implementation will be supported through the Program. The vision is ambitious, and the Program will ensure adequate planning, institutional arrangements and budgetary allocation necessary to improving the coverage, reliability and interconnectivity of these systems.

Animal recording systems in support of animal traceability, animal health information and animal performance recording are currently managed under three separate information systems under separate services of the MOA. By connecting them, the Program will yield synergies between information systems (e.g. cross-analysis of animal health and animal performance) and decrease management costs. The performance of the individual information systems will also be improved under the Program. First, performance recording of breeding animals is currently limited to imported breeds and thus doesn't allow identification of potential pedigree animals in the national herd. This limits the effectiveness of breed development efforts and hinders owners of animals belonging to national breeds (e.g. the Kazakh whitehead) to access breeding programs. The recording system will also include animal specific GHG emission information for the purpose of genetic selection. The Program will support awareness raising and data collection to extend coverage and include local breeds. Second, livestock market visits have revealed that a share of the animals are only identified by their breed when they are ready to be sold, and not at birth. The Program will support awareness campaigns and controls to expand the coverage of animal identification.

Small and Medium Farmers have access to improved and upgraded veterinary services (DLI 2).

Despite significant achievements that Kazakhstan has made in reducing the risk of zoonotic and transboundary diseases, the World Organization for Animal Health (OIE) Performance of Veterinary Services (PVS) evaluation of 2018 reports the limited capacity of public veterinarians to address the needs of producers regarding production diseases (Box A3-2). This results in efficiency and financial losses, especially among individual and household farms who do not have on-site animal health practitioners and do not have access to private service providers given their very limited number.

The most direct benefit of production diseases control is to improve productivity and income. These veterinary services are thus to be provided through the private or public sector veterinarians on a fee-for-service basis.[50] In fact, this is the adopted model of veterinary service delivery in virtually all high-income countries where commercial beef cattle production is an important economic activity. Government has declared that it intends to move in this direction and wishes to create the enabling environment and provide required tools, resources, and training to existing public and private sector veterinarians or para-veterinary professionals so that they can gradually expand their services to cover production diseases for individual and household cattle farms. The Program will thus enable private veterinary service

[50] Umali, D.L., G. Feder, and C. de Haan. 1994. Animal Health Services: Finding the Balance between Public and Private Delivery. The World Bank Research Observer, vol. 9, no. 1: 71-96.

development for an improved delivery of animal health services for individual and household farms for the control of production diseases.

As Kazakhstan does not have a strong experience with private sector-oriented veterinary service delivery, the transition to such a delivery model will require some changes in the regulatory framework. The Program will support the development of legislation that recognizes and protects private veterinary practice, and which includes provisions for interested veterinarians to deliver official Government veterinary interventions as well as on-demand interventions for farmers under contract with Government.

The Program will also support training of 5,000 veterinarians in line with OIE standards and help strengthen the veterinary statutory body by ensuring that there is a legal basis for its proper establishment and operation. In addition, support will be provided to interested private and public veterinarians, who would like to qualify for the service provision for individual and household farms, including: business skills training, financial assistance to purchase the necessary basic equipment for private practice and, contracting by Government with private veterinarians to provide Government services.

Under the Program, private and public veterinarians, who are licensed and qualified according to standards set by the national veterinary statutory body, will provide a range of services to individual and household farms, including: reproductive management; herd health management that includes vaccination, deworming, improved husbandry and welfare practices; better record keeping and information management; and nutritional counseling. These interventions will increase the number of successful pregnancies, the number of calves born, the average daily weight gain of animals and the number of calves marketed as a result of reduced disease and mortality.

Box A3-2: Development of the veterinary services in Kazakhstan

The recent OIE PVS Mission in April 2018 confirmed the strong progress of veterinary services of Kazakhstan, in terms of institutional development and control of major transboundary and zoonotic diseases. As a result, out of 47 evaluated positions Kazakhstan improved its scores in 14 positions (epidemiological surveillance, laboratory services, efficiency in disease centers eradication, internal coordination, etc.), kept high scores in 30 positions; recommendations were made for improving 3 positions (training, employee loyalty, ethical treatment of animals). In recent years, Kazakhstan has made considerable advances in the control of key zoonoses and transboundary animal diseases, which are summarized in the table below.

The following are key achievements of veterinary services in Kazakhstan in combating zoonotic diseases recognized by OIE in the last decade.

Key milestones	**Achievements as confirmed by OIE**
2015, 83rd OIE General Session	FMD-free country without vaccination in 9 oblasts (Akmola, Karaganda, Pavlodar, Kostanay, North Kazakhstan, West-Kazakhstan, Aktyubinsk, Atyrau, Mangystau oblasts).
2016, 84th OIE General Session	African Horse Sickness status disease free status.
2017, 85th OIE General Session	FMD-free country with vaccination in 5 oblasts (Almaty, East-Kazakhstan, Zhambyl, Kyzylorda, South-Kazakhstan oblasts).

2018, 86th OIE General Session	Successful overcome of nodular dermatitis outbreak; Contagious Bovine Pleuropneumonia- free status throughout the country.
2019, 87th OIE General Session	African Swine Fever disease free status for 5 zones without vaccination split across the territory of 9 oblasts without vaccination; Highly Pathogenic Avian Influenza disease free status.

Results Area 2: Scale-up the farmer-centric service delivery model.

Small and Medium Farmers have been trained and certified in Good Practices (DLI3).

Agricultural advisory and knowledge transfer services relevant to the livestock sector in Kazakhstan are provided by three types of providers. *The first* and largest advisory service provider is the National Agrarian-Science and Education Center (NASEC) – a national holding organization of all major public agricultural research and education institutions. Institutions within NASEC develop content, knowledge materials and demonstration programs for agricultural advisory services. In this setup, institutions within NASEC play the role of the knowledge service provider, supplying trainers, knowledge, facilities, farmer contacts, equipment, etc., whereas Atameken is the organization in charge of logistics, linking with farmers, and knowledge needs analyses. Kazakhstan National Agrarian University (KazNAU) is the largest agricultural university of Kazakhstan. It is independent from NASEC, and is also involved in agricultural advisory services, especially in terms of content development. *The second* type of advisory service providers are national breeding associations (e.g. Hereford, Angus, Kazakhstani White-headed cattle etc.) and the union/association of farmers. These associations organize breed-specific training and capacity building programs for their members. In most cases, the members are farms that are registered as breeding farms. *The third* type of advisory service providers are private firms or individuals, which are contracted by mostly large farmers or at times by associations to provide specific, demand-based advisory services. While advisory programs by NASEC are entirely free of charge, the programs through associations and private service providers can be on a fee basis.

Current extension, advisory, and knowledge transfer programs are largely inadequate. The current approach is criticized to rely on one-off in-door lectures, use outdated training material, and schedule at dates conflicting with the agricultural calendar. In addition, the current system only reaches a limited part of the farms: Jointly with the National Chamber of Entrepreneurs (Atameken), NASEC delivers advisory services (trainings, demonstrations, consultations) to nearly 6,000 individual and household cattle farms per year. The demand for such advisory services was confirmed by a survey conducted during preparation (over 80 percent of interviewed beef producer express interest), as well as by exit surveys conducted by NASEC and other services providers. The main issue is the relevance or the curriculum and training methods, as well as the ability to reach out to more farmers and fulfil the demand despite the geographical spread of producers.

The Program will support the quality improvement, and scale-up agricultural advisory and knowledge transfer programs for the beef sector. The Program will provide resources and technical assistance to revise curriculums on animal husbandry (including: animal housing, feed management and feed ration balancing, on-farm biosecurity and production disease management, herd and reproduction management, animal welfare, manure management) and grassland management (including: timing and

pressure of grazing, paddock management, fodder harvesting and storage practices, water infrastructures, introduction of live-fences and landscape restoration[51]) and integrate state-of-the art knowledge in these areas. The knowledge transfer and technical advisory system will rely on the good practices developed for grassland management and animal husbandry. National research and development capacity available at NASEC, KazNAU and other institutions such as private sector organizations will be mobilized towards the development of the good practices and monitoring of their effectiveness in view of their continuous improvement. The Program will also provide the resources to pull relevant international experience in the development of sustainable beef systems. Technical assistance will also be mobilized to revise the approaches to technical and advisory service delivery, shifting to more flexible, participatory and hands-on approaches. Differentiated approaches will be established for the three subcategories of farmers included in the DLI target of 100,000 farmers trained: new individual farms (20,000 – to benefit from intensive technical coaching tailored to the initiation/expansion phase of their business), existing individual farms (about 27,000 – to benefit from periodic technical support tailored to cow-calf operations) and household farms (about 53,000 – receiving training on specialized beef farming and support to planning investment in that activity and related technical transition). A pool of fifty trainers selected from NASEC, KazNAU and other research organizations will represent the backbone of the knowledge transfer system and will be trained to that effect, by national and international reference scientists. The Program will also support the development of the national network of model farms and agricultural competency centers that will host the trainings, as well as the implementation of farmer fields schools for household farms. Revisions to current advisory services programs will be made to ensure that female farmers equally benefit from the improved services and their provision. The selected advisory service providers will also partner with l associations (for example: Atameken, Rural Women's Association, Green Coalition, breeder associations and others) in order to better address farmers' expectations and needs and have access to interested farmers. The Program will also introduce feedback loops to measure the satisfaction and adoption of the received training and knowledge transfers. These will be used to further improve training content and delivery. Adoption will also feature as a pre-condition for access to other parts of the state program (also see DLI 5).

The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased (DLI4).

In the current context, investors wanting to establish new individual farms of expand their production units face issues of access to land, finance, and advisory services. Individual and household farmers are typically not apt to solve land access issues and to navigate the complex administrative processes to apply for public support, that is provided on a first-come first-served basis. As a result, State support programs and subsidies have traditionally not effectively contributed to implementing Government's farmer-centric approach. An analysis of payments made to cattle farmers in 2019 shows that the payments reached only few farmers -- no more than 12,000 (including large agri-enterprises) in 2019, out of an estimated 230,000 individual farms, and 1.6 million household farms owning cattle (see Technical Assessment).

The Program will support activities that facilitate individual and household farms' investments in the meat sector. Awareness raising campaigns will be financed to improve knowledge about the Program and

[51] The improved practices will be tested under the World Bank/FAO Landscape Restoration GEF Project.

financial viability of export-oriented animal production. Public support programs will be amended to offer options better suited to individual and household farmers, and clearer and more transparent application and selection processes will be developed. Under the Program, tailored business development and technical advisory systems will also be provided to new and expanding individual farms.

The Program will not augment public support provided to feedlots and slaughterhouses but leverage private sector investment in this type of operations. Under the Program, the provision of public services and financial support will benefit individual and household farms, in line with Government's farmer-centric approach. The financial viability of these production units depends on their capacity to sell calves to feedlots and thus connected to export-oriented meat value chains. The Program will however not, however, provide direct subsidies to downstream activities such as feedlots, slaughterhouses and meat packing operations. It will remove the main identified barriers to large-scale private investment in these facilities: enable access to international market (traceability system and delivery of export certificates) and enable access to a reliable source of healthy and high genetic quality calves. For example, Tyson Foods, the U.S. meat producer, has announced it will enter the sector and invest in slaughtering and marketing facilities. It has asked for improvements in the traceability and health certificates systems – to be supported by the Program. In December 2019 the firm signed an agreement with Government of Kazakhstan to build a beef plant in the form of a 2,000 head-per-day slaughterhouse.[52]

The Program will ensure that increase in land use for beef cattle farming is done sustainably. At national level, 56 million ha of pastures are under use as private property or through leasing arrangements, and 17 million ha under use as common lands. It is estimated that between 120 to 130 million ha of pastures lands could be usable if drinking water for the livestock can be made available. This provides an expansion potential of ca. 47 to 57 million ha (or by 64 to 78 percent). Although the reliability of data is uncertain, the available grassland reserve is largely located in semi-desert to desert areas, which raises concerns on competitiveness and sustainability. Through the Program, national beef production is expected to increase by 47 percent. To manage the environmental impacts of this growth, pasture area expansion will be conducted judiciously and combined with sustainable, productivity enhancing measures on existing production areas (key elements for productivity increases described below). A complementary World Bank/FAO Landscape Restoration Project (US$4.2 million) financed by the GEF and implemented by the Forest Committee and the MOA will pilot agroforestry and landscape restoration on pastures to increase pasture productivity in a sustainable manner and will provide valuable information for this project.

The Program will promote the adoption of good practices on new and existing farms, to enable increased yields and improved environmental management on grasslands and animals. The Program will address the five main constraints to productivity gains: inadequate feeding and access to water (the most important issues being ration balancing, fodder quality and winter feed supply), pasture productivity (currently due to poor grazing management practices), animal genetics, reproduction management, and animal health.[53,54] This is expected to reduce the land area that would be required for new operations by

[52] *Financial Times.* December 10, 2019. Tyson Foods signs deal for beef plant in Kazakhstan
[53] Petrick, M., and D. Oshakbaev. 2015. Kazakhstan's Agricultural Development Constraints: Evidence from the Wheat, Beef and Dairy Sectors. Transition to agricultural market economies: the future of Kazakhstan, Russia, and Ukraine: 15-26.
[54] FAO. 2010. Sub-Sectoral Cross-Cutting Features and Issues. Highlights on Four Livestock Sub-Sectors in Kazakhstan. FAO Investment Centre, Rome.

16 to 20 percent and thus reduce need to expand overall pasture area (especially in remote and low fertility areas), and still achieve the targeted growth in meat production. The good practices will mainstream environmental stewardship, especially as they relate to GHG emissions, landscape restoration by adding trees and shrubs to the landscape (as windbreaks, or to protect streams, or to provide fodder), biodiversity, nutrient-based pollution and water cycles, in line with the principles of sustainable livestock management.[55]

Results Area 3: Implement Green Growth Policies for the Beef Sector.

Share of public expenditure in support of green growth and sustainability in the beef sector (DLI5).

In 2019, about 126 billion Kazakhstani Tenge (KZT) (US$332 million) were spent in agricultural support measures and payments to cattle farmers, with some consideration in promoting an environmentally sustainable growth of the sector (see technical assessment for detailed information). About 20 percent of the State support for the cattle subsector development can be directly related to positive environmental outcomes, through efficiency gains in production (improving natural resource use efficiency), improved grazing management, and waste management (see Technical Assessment for details). Measures that promote expansion without productivity gains mostly result in negative environmental outcomes since they will result in an increase of natural resource use and emissions that is proportional to the growth of production (contrary to productivity gains that typically allow to decouple production from natural resource use and emissions).

To strengthen the environmental outcomes, the Program will support the development of environmental criteria and the development of new lines of support measures. Environmental criteria will be developed and progressively enforced as conditions to access public support. They will address grazing management practices (with effects on biodiversity, climate change adaptation and net GHG emissions), animal feeding practices (with effect on GHG emissions), and manure/waste management (with effects on water pollution and GHG emissions). The criteria will initially be enforced on larger and new farms, then on smaller and existing farms. They will ensure that, progressively, all farms benefiting from public support will comply with basic management criteria that generate climate change adaptation and mitigation co-benefits. In addition, the Program will support the establishment of new lines of policies to incentivize investments and practice changes not addressed by the criteria above; for example: the adoption of energy efficient equipment on farms, live fences and tree plantations in grazing lands, biogas and other manure management/processing on feedlot operations and late harvest of fodder to preserve wild birds nesting.

Commitments for the control of GHG emissions and adaptation to climate change in the beef sector (DLI6).

[55] World Bank and FAO. 2019. Guide to Investing in Sustainable Livestock. Available at: www.sustainablelivestockguide.org

The program will support the mainstreaming of livestock sector in climate adaptation and mitigation policies. This will include the revision of the INDC and the development of a National Adaptation Plan for the livestock sector.

Kazakhstan's Intended Nationally Determined Contribution (INDC) sets an economy-wide unconditional target of 15 percent reduction in GHG emissions by 2030, compared to the base-year of 1990. GHG emissions in the early 1990s were rather low due to the economic recession, but picked up in the 2000s, as economy started growing. As a result, estimates provided by the Ministry of Ecology, Geology and Natural Resources (MEGNR) indicate that in 2019, the country's emissions already exceeded the INDC emission target for 2030. Although the 17.53 million tons of CO_2eq of direct emissions from livestock[56] account for only about 8 percent of the total national GHG emissions (but 80 percent of national agriculture), an increase in emissions from the sector would further jeopardize Kazakhstan's capacity to achieve its target.

The Program will thus support a roadmap for targeting livestock specific mitigation for through Nationally Determined Contribution (NDC). Drawing on trust fund resources[57], the Program will support the preparation of ex-ante modelling of mitigation options and mitigation costs towards the definition of livestock specific targets.

Monitoring and reporting of net GHG emissions will also be supported by the Program. To date, no specific system is in place to report emissions from the livestock sector on a periodical basis, and with a level of granularity that allows to reflect improvement in management practices (i.e. IPCC Tier2). Drawing on the trust fund resources described above, the Program will support the development of a specific MRV system for the livestock sector. This activity is ongoing at the time of preparation and should be completed during the first year of Program implementation. Using that system, the Program will monitor emissions and sequestration throughout implementation as part of the M&E plan. The data and monitoring system to be used to demonstrate net mitigation of the Program will further form the basis to update the NDC and develop the related road map.

Climate change mitigation and adaptation

Mitigation of GHG emissions

The Program will support climate change adaptation and mitigation throughout the three result areas. The Program will essentially shift sector's growth from the current purely expansion-based approach described in Government's long-term Livestock Strategy towards an efficiency-based approach that will reduce area expansion, control GHG emission increase and foster carbon sequestration.

Through these measures, the Program is estimated to contribute to net mitigation of GHG emissions from the livestock sector in Kazakhstan, by 5.6 million tons CO_2eq over the five years (see Technical

[56] According to IPCC categorization – see Technical Assessment for full discussion.

[57] A grant from the Korea Green Growth Trust Fund was secured with the objective to mainstream Green Growth in the proposed Program. The grant will contribute to increase awareness of Green Growth for livestock development, shift Government expenditures towards 'green' support measures, and promote public and private investments with positive environmental externalities and climate co-benefits.

Assessment for detailed computation). This is achieved by combining three emission mitigation approaches supported by the Program (see Table A3-2 for a description of mitigation co-benefits by DLI, and Table A3-3 for a description of how good practices will contribute to net GHG emission reduction).

- First, the adoption of better feeding practices, reproduction management, improved breeds, breeding selection for low GHG emission traits, improved animal health and the offtake of animals having reached optimum slaughtering weight will generate productivity gains at animal and herd levels and decrease GHG emission intensity (i.e. emissions per unit of product).
- Second, increased soil carbon sequestration will be achieved through the adoption of improved grazing management and landscape restoration practices, which allow more reactive management of grazing pressure (in time and space), that contributes to improving grass growth.[58] Abundant literature quantifies the potential to sequester carbon in soils through improved grazing management.[59] Literature also points to a risk of reversal if improved practices and discontinued, and to the potential saturation of soils that may not be able to accumulate additional carbon after decades of implementation of the good practices. The improved grazing management practices promoted under the Program generate productivity gains and greater financial returns to farmers, so it is assumed that continuous will be continuing (see economic analysis).
- Third, the adoption of energy efficient equipment on farms and production of renewable energy, that reduce and displace fossil fuel energy consumption.

Table A3-2. Mitigation and adaptation co-benefits associated with the DLIs

Disbursement-Linked Indicator	Climate Change Benefits	
	Mitigation	**Adaptation**
Cattle is being registered in the unified information system. (**DLI 1**).	The animal identification and recording systems will accelerate genetic improvements. The information system will include recordings of animal specific GHG emission performance that will be used for breeding purpose. Genetic improvements are also important drivers to increase productivity, and hence reduce GHG emissions per unit of product. [60]	A unified animal identification and recording system provides information on extreme heather events and emerging diseases related to climate change. The data is analyzed and used for the development of adaptation strategies and for the training of veterinarians.
Small and Medium Farmers have access to improved and upgraded veterinary services. (**DLI 2**).	Animal disease control improves production efficiency and animal and herd levels and thus reduces GHG emissions per unit of product.[61] Small-scale farmers are those with highest potential for	Small-scale farmers are often the most vulnerable to climate change and will particularly benefit from improved animal health services and existence of emergency and contingency plans. Veterinarians access

[58] Lal, R. 2009. Sequestering Carbon in Soils of Arid Ecosystems. Land Degradation & Development, 20(4): 441-454.
[59] Conant, R., C. Cerri, B. Osborne, and K. Paustian. 2017. Grassland Management Impacts on Soil Carbon Stocks: A New Synthesis. Ecological Applications, 27(2): 662-668; IPCC. 2006. 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4: Agriculture, Forestry and Other Land Use, Chapter 6: Grasslands.
[60] de Haas, Y., E. Wall, P. Garnsworthy, B. Kuhla, E. Negussie, and J. Lassen. 2018. Where Have We Come with Breeding for Methane Emissions – Update from International Collaborations. *Proceedings of the World Congress on Genetics Applied to Livestock Production* Challenges-Environmental: 810.
[61] Gerber, P.J., B. Henderson, C. Opio, A. Mottet, and H. Steinfeld. 2013. Tackling Climate Change through Livestock – A Global Assessment of Emissions and Mitigation Opportunities. FAO, Rome.

	productivity increase through improved animal health.	specific information on the control of emerging diseases and stress caused by extreme weather events.
Small and Medium Farmers have been trained and certified in Good Practices. (**DLI 3**).	Improvement of advisory systems will improve access to knowledge and technologies, which promote adoption of improved practices. The practices disseminated, if adopted, will directly contribute to net emission reduction: improved feed balancing and feed digestibility (reduced enteric methane); improved manure management (reduced methane and nitrous oxide emissions); improved grazing practices and restoration of degraded soils (carbon sequestration); and adoption of energy efficient equipment and renewable energy generation (reduced fossil fuel use); improved storage and reduced food and feed losses (reduced waste-related losses).	Improvement of advisory systems will provide access to knowledge and technologies for climate change adaptation and building climate resilience. The advisory systems will share information on climate smart pasture management, increased landscape connectivity and biodiversity conservation through live fences, soil conservation and management practices; improved animal health practices, strategies for enhanced preparedness and contingency plans for climate-related disasters (e.g. establishing early warning systems, feed stockpile etc.), fodder harvesting and conservation, management of waterpoints in pastures, offtake of young males for fattening in feedlots.
The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased. (**DLI 4**).	New farms are expected to have higher adoption rates of improved practices than trained existing farmers given the intensive training and conditionality of public support. Effect of practices on mitigation is as described above.	New farms are expected to have higher adoption rates than trained existing farmers given the intensive training and conditionality of public support. Effect of practices on adaptation is as described above.
Share of public expenditure in support of green growth and sustainability in the beef sector. (**DLI 5**).	Under the Program, farmers will need to fulfill environmental criteria to access public support. They will include elements such as animal feeding, manure management and grassland management, which will result in GHG emission reduction. Some new lines of support measures, e.g. for manure management and plantation of live fences will also contribute in net GHG emission reduction.	
The Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector. (**DLI 6**).	Strengthens and formalizes national commitment to mitigation in the livestock sector, e.g. NDC, MRV, roadmap.	The Program will develop the preparation of a National Adaptation Plan for the livestock sector.

Table A3-3. Climate and other environmental benefits addressed by the good grassland management and animal husbandry practices.

	Climate change benefits		**Other environmental benefits**
	Mitigation	**Adaptation**	

Good grassland management practices	· Rotational grazing that increases carbon sequestration. [62] · Live fences that sequester carbon above and below ground. · Use of renewable energy sources for grazing equipment and water points.	· Rotational grazing that improve organic matter content in pastures and thus nutrient and water retention. · Live fences that provide shelter to livestock.	· Rotational grazing and avoided land degradation contribute to maintain grassland biodiversity. It also increases vegetation cover, with benefits for water-cycles. · Live fences and plantation of trees and shrubs in pasture (landscape restoration) provide shelter for biodiversity, limit wind erosion and reduce water runoff.
Good animal husbandry practices	· Feed management to improve digestibility and balancing of the ration. · Covered manure management and manure application systems. · Use of biogas and other renewables to generate energy on farm are substitute fossil fuel use.	· Hay harvesting and storage facilities to improve winter feeding. · Concentrate feed storage and use to improve winter feeding and animal conditions. · Water efficient irrigation and drinking systems.	· Proper manure collection, storage, processing and application reduce nutrient-based soil pollution as well as ammonia emissions. · Improved feed conversion ratio to limit the amount of land and water used per unit of production, thereby reducing the relative land and water footprint of the sector.

Table A3-4 summarizes the estimated effect of these mitigation approaches: (i) adopting productivity increase practices reduces GHG emission growth by 39 percent compared to an expansion scenario; (ii) soil carbon sequestration resulting from the adoption of good grazing management practices can more than entirely offset the GHG emission increase from production growth; and (iii) the adoption of energy use efficiency and renewable energy technology can reduce emission, but by a very modest proportion.

*Table A3-4. Summary of GHG emissions and carbon sequestration assessment under the Program, and in the **baseline scenario***

Year	2021	2022	2023	2024	2025	Total
	(million tons CO_2-eq)					
Program						
Growth in GHG emissions	0.6	1.2	1.8	2.4	3.1	9.2
Carbon sequestration	1.0	2.1	3.1	4.1	5.2	15.5
Fossil fuel displacement	0.01	0.03	0.04	0.05	0.07	0.20
Net emissions under the Program	*-0.4*	*-0.9*	*-1.3*	*-1.7*	*-2.1*	*-6.4*
Program compared to baseline						
Net emissions baseline	1.0	1.9	2.9	3.9	4.8	14.5
Net emissions Program	-0.4	-0.9	-1.3	-1.7	-2.1	-6.4
Net Emission reduction (Program versus baseline)	*1.4*	*2.8*	*4.2*	*5.6*	*7.0*	*20.9*

Note: detailed computations and assumptions are provided in the separate Technical Assessment document.

[62] Increasing SOC stocks under perennial grasses relies mainly on enhancing C inputs from plant roots and residues. Ranchers may achieve this by managing plant biomass removal from grazing or increasing forage production. For improving productivity and soil condition on grazing lands, the Program will promote the adoption of in intensive grazing practices employing high animal stocking rates for short durations, from a few hours to a few days, on an area of pasture, with frequent movement of animals and relatively long "rest periods" for the vegetation between grazing events. *Adapted from - Paustian, Larson, E., Kent, J., Marx, E., Swan, A. 2019. Soil C Sequestration as a Biological Negative Emission Strategy. Frontiers in Climate, 1, 8.*

Adaptation to climate change

The beef value chain is vulnerable to climate change. Individual and household cow-calf operations are grazing systems that will be directly affected by climate change, given their dependence on climatic conditions and the natural resource base, and their limited adaptation opportunities (limited access to information, technology and capital).[63]

- Direct impacts related to the climate change prediction in Kazakhstan include increased frequency of extreme weather events; increased frequency and magnitude of droughts and floods; productivity losses resulting from physiological stress due to higher temperature, change in water availability, which is anticipated in the region.[64]
- Predicted indirect impacts of climate change on cow-calf farms include: the alteration in fodder quality and quantity related to the changing climatic conditions and change in host-pathogen interaction resulting in an increased incidence of emerging diseases.
- Feedlot operations will also be affected. Shifting agriculture zones, crop land degradation related to reduced soil moisture, heat stress and drought, and increased incidence of pests and diseases are likely to reduce average grain yields and increase variability of production.[65] This will affect prices and thus production costs at feedlots, where feed typically represents over 70 percent of production costs.

As shown in Table A3-2, Program activities in support of all six DLIs will directly or indirectly contribute to adaptation of the beef value chain to climate change. Adaptation will be achieved through more effective public support systems, and improvements in pasture productivity, feed management and feed storage, and capacity to manage emerging diseases. Adaptation strategies will be developed at three levels:

- Individual and household farms: adoption of good practices that improve resilience and adaptation (see Table A3-3).
- Service provision: improvement of animal recording system, and development of unified information system that will enable the monitoring of emerging diseases related to climate change and provide information to train and support veterinarians in their activities. Improvement of animal health, which increases animal's resilience to extreme weather events.
- Preparedness and policies: adoption and funding of National Adaptation Plan for the beef sector as part of the State Program.

Implementation arrangements

Government's implementation capacities were found generally adequate. Government has been actively supporting the development of export-oriented agricultural sectors, including the beef sector. Recent growth in beef exports demonstrate adequate overall implementation capacity of Government. As assessed by OIE, Government has strong veterinary network that is able to address animal health

[63] FAO climate smart source book, available at: *http://www.fao.org/climate-smart-agriculture-sourcebook/production-resources/module-b2-livestock/chapter-b2-1/en /*
[64] USAID. Climate risk profile. Kazakhstan.
[65] USAID. Climate risk profile. Kazakhstan.

emergencies. Government has also been successful in introducing a traceability system. While currently, several systems (animal health, movement, genetics) are functioning separately, the investments in technology, design and human resources for the operation of the traceability system allow Government to provide basic public functions.

The Program management office (PMO) will be housed in the MOA. It will be responsible for the overall implementation and coordination of the Program as well as for M&E (see section below). The PMO will be funded through the general MOA's operational budget, the staff of the PMO will be civil servants. The PMO will ensure that its 2021-2025 state budget requests include operational costs (M&E, external verification, technical experts, required audits and others) for the Program implementation. The PMO Director will report directly to the Vice Minister of Agriculture, (s)he will coordinate procurement and supervision of verification activities, consolidate Program reports, and serve as the main counterpart for the World Bank. Specialized technical experts could be hired as part of the overall PMO team, if required.

The Program will provide resources for PMO capacity building. Development areas will focus on the management element of the PMO responsibilities (e.g. preparation of workplans and budget, M&E, reporting) as well as on the technical elements (e.g. international beef value chains and market trends, climate smart agriculture) and analytical methods (e.g. statistical analysis, ex-ante and ex-post policy analysis). A grant from the Korea Green Growth Trust Fund secured with the objective to mainstream Green Growth in the proposed Program, is available to support early initiation of theses capacity development activities.

MOA will be responsible for overall coordination of training activities. Selected national-level training providers will use existing training facilities and educational centers in the regions to organize trainings. Advisory services policy and budget application will continue to be managed by Strategy Department in MOA. Information Technology Department in MOA will operate state owned databases related to animal including pedigree animals' identification and registration and delivery of state services in agriculture. The cost tables for the operational costs of the Program implementation are included in the Program Operations Manual.

Program expenditure framework

Macroeconomic risks and fiscal context. Kazakhstan's economy has been growing at steady pace since 2017. In 2019, GDP grew by better-than-anticipated 4.5 percent due to strong domestic demand, expansionary fiscal policy, and robust performance in services sector. The deficit of Government budget as a percentage of GDP, is expected to rise to 1.8 percent in 2019 from 1.4 percent in 2018 but remains lower than 2.7 percent in 2017. The stock of public debt to GDP was relatively modest, 19.8 percent during half-year of 2019. The growth scenario for 2020 and 2021 depends on the full impact of the COVID-19 and post-outbreak recovery and will be affected by lower oil price and the global economic crisis associated with the spread of Covid-19. Government has the fiscal space for counter-cyclical measures supported by improved tax administration, but there is high likelihood for shortfall in tax revenues. The public debt to GDP ratio is relatively low. Government may need to tap in the National Oil Fund and borrowings to meet full budgetary needs. Since the Program supports the diversification of the economy, it is expected to become an important element of Government's anti-crisis and recovery strategy.

In 2018, Kazakhstan spent 0.8 percent of GDP and 4.3 percent of total budget expenditures on the

agricultural programs. The spending as a share of GDP in 2018 was slightly lower than that in 2010-2014 when Kazakhstan allocated 1.0 percent of GDP on farm support programs. In 2018, the level of total agricultural support as share of GDP in Kazakhstan was about the same as in other non-OECD countries, but much lower as a share of gross agricultural output, indicating a lesser dependence of Kazakhstani farmers on the State support programs. During 2016-2018, the latter figure for total farm sector in Kazakhstan was 6 percent (compared to 18 percent in OECD countries and 14 percent in non-OECD countries[66]), including 7 percent for beef production. Progressing with structural reforms, including improving the targeting and efficiency of agricultural expenditures, will be important as Government moves on to stabilizing the economy after it has managed the COVID-19 outbreak.

The most State support measures comprised direct payments to farmers. In 2018 they accounted for 74 percent of total support and included the support for production, productivity enhancement, investments, on-farm services, and other measures. The general support services accounted for 26 percent of total support and included the programs on research and development, infrastructure, advisory services, inspections, and marketing promotion.[67] The importance of the general support services would need to increase in Kazakhstan to achieve the objectives of the State Program of Agro-Industrial Complex Development. The recent World Bank research emphasized a critical importance of such programs for long-term agricultural growth and for sustainability of food systems.[68]

The Program expenditure framework comprises the central (republican) and local (oblast) level budget programs that target the beef sector, which correspond to the results areas of improved veterinary services, traceability, support for beef cattle farm investments, and agri-environmental policies and services**.** Consequently, the results areas of the Program are funded by thirteen budget subprograms, implemented by the MOA, the institutions/agencies reporting to MOA (e.g., NASEC), and local governments. In total, these comprise KZT 422 billion (equivalent to around US$1 billion) for the period of 2020-2022, for which the current medium-term expenditure framework is approved. Projecting that the budget allocations for these subprograms for 2023 onwards will be at least at the level of 2019 brings the total Program expenditure framework for 2021-2025 to KZT 763.9 billion or US$2.02 billion. The details of the program are presented in Table A3-6.

To arrive at the expenditure framework that describes the Program boundary, the calculation was conducted using coefficients that reflect the relative size of financing that would be directed to the implementation of activities within the Program boundary. The coefficients (see Table A3-7) were selected on the basis of the following principles: (i) exclude procurement of goods, works, and services under high-value contracts, (ii) approximate the share of activities related to the Program Results Areas directed to beef cattle sector; (iii) exclude any major procurement of veterinary drugs for the prevention/diagnosis of animal diseases and diagnosis services; (iv) include salaries and operational costs of MOA and relevant agency staff including the Veterinary Committee with focus on beef cattle sector activities corresponding to the Program Results Areas.

[66] These non-OECD countries are Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Israel, Kazakhstan, Philippines, Russia, South Africa, Turkey, Ukraine, and Vietnam.
[67] The share of the general support services in total agricultural public expenditures in Kazakhstan was about the same as the average in OECD countries (24 percent) but smaller than the average in non-OECD countries (39 percent).
[68] World Bank. 2020. Harvesting Prosperity. Technology and Productivity Growth in Agriculture. Washington, D.C.

The expenditure framework includes expenditures that are necessary for implementation of the three results areas. For the scale-up of the activities, to expand the share of beneficiaries participating in the Program within the existing budget programs, the MOA will prepare operations manuals, which will include the rationale for scale-up, implementation modalities, and expected results. The World Bank will provide support to MOA for development of the operations manuals through the technical assistance that in part will be funded by the Korean Green Growth Trust Fund.

Financial sustainability and expenditure predictability. Since 1993, Government adopted a total of eight Agricultural State Programs, each implemented over five years. As required by law, each new State Program was enacted immediately after the completion of the previous State Program and there were no gaps between them. The current State Program for agriculture was adopted in 2017 and is called State Program of Agro-Industrial Complex Development for 2017-21 (hereafter, the State Program 2017-2021). The next State Program for Agriculture will be prepared by 2021 and start in 2022. Given the increased priority of agriculture and rural development in Kazakhstan's development strategies, no delay is anticipated to enact the next State Program for 2022-2027.

The funding for all livestock sector programs has been between 15 and 17 percent of total agricultural public expenditures. In recent years more resources have been shifting to beef cattle subsector, due to its high potential for contributing to economic growth, exports, and job creation. Due to the increased public funding, Kazakhstan has made considerable advances on veterinary systems and animal health, service delivery for genetics, feed and fodder sectors, and promotion of private investments in beef value chains.

The total funding earmarked for the implementation of the State Program 2017-2021 is KZT 1,854 billion, including KZT 1,181 billion from the central budget and KZT 673 billion from local budgets. The relevant expenditures, which form part of the Program, reflect the same expenditure execution pattern as the rest of agricultural expenditures.

The expenditures under the State Program 2017-2021 were well executed, without overruns. In 2017 and 2018, the allocated budget was fully used. No budget sub-programs had more than 10 percent deviation between approved budget allocation and actual expenditures (see Table A3-5).

Table A3-5. Execution of the State Program, 2017-2018 (KZT billion)

	2017	Execution %	2018	Execution %
Central budget	238.4	99.5%	193.8	99.9%
Local budget	144.2	99.9%	147.5	99.8%
Total	**382.6**	**99.7%**	**341.3**	**99.9%**

The following expenditure codes and relevant budget programs were prioritized for scale-up as part of the PforR (see Table A3-6 below for the expenditure framework)**:**

- *Agricultural advisory and knowledge transfer services* (code 267-100) as is currently funded will be able to cover knowledge transfer services for only 5,000 farmers per year. DLI 3 aims at substantially increasing the number of farmers covered and improving the quality of the advisory services (see sections above). The operational manual will be approved by the time of Program

effectiveness and Government has agreed to allocate sufficient resources to start implement training programs as of January 1, 2021.

- *Monitoring, Reporting and Verification system of GHG emission*s will be included under the code 267-101. Additional financial resources are estimated to be limited and Government has agreed to allocate them once the MRV system is developed.
- *Development and continuous improvement of good practices for animal husbandry and grassland management* will be included under the code 267-101.
- *The sourcing of international Technical assistance for the various activities to be supported by the Program* will also be included under the code 267-101 and 249-100.

Alignment of the policy objectives, selected priorities, and intended results established in Government's strategies. According to the Law on Budget System of Kazakhstan, the State Program 2017-2021 is a Level 2 Program. This implies that the State Program is the primary document that guides agricultural policies, State support measures, and development priorities of the sector. The State Program directly contributes to Government's high-level strategic objectives for economic development, such as an increase in incomes, decent jobs, and export of non-oil products, and has the primary objective to increase agricultural productivity and exports by 2.5 times in five years. These objectives of the State Program are fully aligned with the higher-level Government policy objectives and the President's identified priorities for economic development.

Monitoring and Evaluation Capacities

The PMO will be responsible for coordination and M&E. All agencies engaged under the Program (Sybaga, NASEC, Veterinary Committee) will be responsible for collecting data related to the indicators for their respective results areas. They will submit data to the MOA M&E unit, which will review data for quality and validity, and make it available to the independent verification agency. Databases will be stored by the MOA IT department. A third-party will be hired by the PMO for the verification of all DLIs.

MOA's M&E systems, while strong in selected areas, will need technical assistance in order to ensure confidence in the tracking and achievement of Program indicators. A review of M&E systems and processes at agencies involved in Program implementation identified as strengths: (i) a strong culture of data collection; (ii) a wide range of data collected; (iii) good record keeping systems; and (iv) good public access to data. However, significant weaknesses exist in: (i) data gaps, especially related to number of households raising cattle, weight of cattle in different cohorts, and amount of calves currently sold to feedlots; (ii) data validity – whether numbers represent what they purport to represent; data reliability, as illustrated by a wide range of officially reported numbers for beef exports; and (iii) use of data for evaluation. The MOA publishes annual reports on the implementation of the State Program. However, these reports are published late and often do not provide sufficient evidence for decision making and policy formulation. Several activities are underway to modernize and digitize the MOA's M&E system, including the establishment of a digital platform for monitoring agriculture sector performance and a digital land information system. However, results-based monitoring of national policies and programs has been limited.

Publicly available databases suffer from reliability issues, discrepancies, and data gaps. Data on private sector activities and on the technical, financial and environmental performance of businesses along the value chains is often not collected. For example, technical and financial parameters are either unavailable

or unreliable, and the data required to compute Tier2 GHG emission inventories in the livestock sector is also missing. There are also concerns that, while administrative does not always match facts on the ground.

Capacity building will be provided, and stronger data collection systems developed to track progress on Program goals. The PMO will include a dedicated M&E expert, and the focus of implementation support missions will be in supporting the client to develop and implement an effective M&E system. M&E capacity building will focus on data quality, data coverage and analytical capacity. Because of questions surrounding the reliability and accuracy of data provided to MOA by local level entities (at Akimat level), the Program will institute additional data control and verification measures. These measures will involve running surveys, using stratified random sampling to authenticate the data used to inform Program indicators. A key focus area would be on adoption rates, and factors which encourage or discourage adoption. Specific data collection at start of program for benchmark indicators to fill in missing values will be outsourced. The Program will also support capacity development at the central level (e.g. in the area of sampling and survey design, statistical analysis, evaluation and reporting).

Table A3-69. Program Expenditure Framework (in million KZT)

Budget Program code	Budget Sub-Program code	Title of the program or sub-program	PforR Results Area	2019	2020	2021	2022	2023	2024	2025
				Actual	*Plan*	*Plan*	*Projection*	*Projection*	*Projection*	*Projection*
001	**Services for planning, regulation, management in the area of agriculture and land resources use**			**1,763.1**	**1,761.3**	**1,779.8**	**1,762.1**	**1,763.1**	**1,763.1**	**1,763.1**
	104	Information systems and information technology support of the state body	RA1	304.8	204.3	205.2	207.0	304.8	304.8	304.8
	123	Current administrative costs	RA1, RA3	1,346.9	1,523.9	1,528.2	1,555.1	1,346.9	1,346.9	1,346.9
	111	Capital expenditures of the MOA	RA1	111.5	33.2	46.4	-	111.5	111.5	111.5
249	**Enabling environment for development of livestock and production, processing, sale of livestock products**			**9,772.0**	**7,213.6**	**9,871.2**	**9,872.0**	**9,772.0**	**9,772.0**	**9,772.0**
	100	Diagnostic studies of livestock	RA1	5,668.4	2,731.6	5,380.4	5,380.4	5,668.4	5,668.4	5,668.4
	101	Anti-epizootic measures, elimination of foci of acute and chronic infectious diseases of animals and birds	RA1	3,773.2	4,005.6	4,014.4	4,015.2	3,773.2	3,773.2	3,773.2
	102	Reference studies on diagnosis of animal diseases, epizootic monitoring and management of the National Microbial Strain Collection	RA1	202.8	334.8	334.8	334.8	202.8	202.8	202.8
	103	Diagnostic on food safety for livestock products	RA1	127.6	141.6	141.6	141.6	127.6	127.6	127.6
250	**Improving the availability of financial services**			**78,273.0**	**95,103.8**	**96,195.8**	**89,970.8**	**78,273.0**	**78,273.0**	**78,273.0**
	102	Matching grants for investments in fixed assets	RA2	33,265.5	33,265.5	33,265.5	33,265.5	33,265.5	33,265.5	33,265.5
	106	Matching grants for investments in cattle livestock, machinery, and other technology	RA2	45,007.5	61,838.3	62,930.3	56,705.3	45,007.5	45,007.5	45,007.5
259	**Improving the accessibility and the information on pasture, grazeland and other land resources**			**3,715.5**	**4,262.0**	**4,175.5**	**3,835.5**	**3,715.5**	**3,715.5**	**3,715.5**
	100	Compilation of data in of the State Land Cadastre	RA2	3,715.5	4,262.0	4,175.5	3,835.5	3,715.5	3,715.5	3,715.5

267	**Improvement of accessibility to knowledge and research**			**6,352.5**	**5,638.9**	**6,704.6**	**6,704.6**	**6,352.5**	**6,352.5**	**6,352.5**
	100	Knowledge transfer and advisory services for agricultural producers	RA2	1,007.2	293.6	293.6	293.6	1,007.2	1,007.2	1,007.2
	101	Program-based financing for agricultural research	RA3	5,345.3	5,345.3	6,411.0	6,411.0	5,345.3	5,345.3	5,345.3
	053	Support for development of pedigree livestock farming, and improvement in productivity and quality of livestock production	RA2	**43,883.4**	**50,289.0**	**50,540.4**	**51,225.0**	**43,883.4**	**43,883.4**	**43,883.4**
		Total in KZT million		**143,759**	**164,269**	**169,267**	**163,370**	**143,759**	**143,759**	**143,759**
		Total in US$ million		380.3	434.6	447.8	432.2	380.3	380.3	380.3

Table A3-7. Coefficients Applied for estimation of the Program Expenditure Framework

Budget Program code	Title of the program	Average of coefficient applied
001	Services for planning, regulation, management in the area of agriculture and land resources use	0.15
249	Enabling environment for development of livestock and production, processing, sale of livestock products	0.40
250	Improving the availability of financial services	0.63
259	Improving the accessibility and the information on pasture, grazeland and other land resources	0.50
267	Improvement of accessibility to knowledge and research	0.72

The Program will develop a monitoring and reporting system to track net GHG emissions in the livestock sector. The Program will support Government in developing such system, characterized by (i) the technical and institutional arrangements to collect data on emissions and mitigation actions; (ii) documentation of methodologies, assumptions and data used to estimate emissions; and (iii) standardized reporting templates, protocols and procedures that are aligned with IPCC Tier2 approach and can be used to verify the accuracy of GHG emissions quantifications. This capacity will be developed within NASEC, where most detailed knowledge on livestock production systems is available. Development is initiated during Program preparation, with support of the Korea Green Growth Trust Fund and is planned to be completed by effectiveness.

Program economic evaluation

The economic analysis identifies benefit streams from cow-calf farms, feedlots, beef exports and economic returns of avoided GHG emissions. It focuses on the five years of the Program and meat value chains. The analysis is also extended over 10 years, as it is assumed that the benefits generated during the five years of the Program will m beyond the Program. The net present value of the Program at 10 years amounts to US$912.7 million (12 percent discount rate), and to US$1.307 billion when the economic benefit from reduced GHG emissions is added (see detailed computation in Technical Assessment).

Kazakhstan beef export competitiveness

An IFC value chain analysis assessing the costs of production (COP) of the Kazakhstan beef sector found that the industry can be competitive in the long run.[69] The analysis is based on an assessment of the national industry advantages and disadvantages and comparing costs of production in Kazakhstan with other beef exporting countries. According to the IFC, challenges facing the sector include Kazakhstan's remoteness and landlocked geography, shorter growing season because of cold climate, fragmentation of production, and lack of export-capable beef processing. Advantages include large quantities of low-cost suitable pastureland, well-educated and relatively low-cost labor force, and low-cost key ingredients for fodder. The study concluded that the net effect would depend on specific trade arrangements and transport costs with China, the beef sector's largest potential market.

Technical risks

The overall risk of the Program and of the technical design of the operation is assessed as Substantial. This is in view of the technical complexity of the Program, the limited implementation capacities at MOA, the limited technical capacity at NASEC and the technical challenges related to developing an export-oriented meat sector out of a sector which in its current form is essentially dominated by household farms operating at low productivity level and producing for domestic markets. The sections below discuss the primary technical risks related to achieving each of the DLIs and activities that will be undertaken to address these risks.

DLI 1. Cattle is being registered in the unified information system for traceability, genetic improvement and animal health control. Main risks relate to the reluctance of farmers to register animals in the system,

[69] IFC. 2019. Kazakhstan: The Beef Sector. Presentation given at the WBG, Washington D.C.

and to the limited enforcement capacity of MOA in a context where production units are dispersed over a vast and poorly connected territory. Through advisory service providers and livestock market staff, the Program will raise awareness among farmers about the relevance of registering animals to improve performance the national livestock herd and export-oriented value chains. Furthermore, access to agricultural support measures and marketing of calves to feedlots will be made conditional on the identification of all livestock on the production unit.

DLI 2 Small and Medium Farmers have access to improved and upgraded veterinary services. Risk is the lack of willingness to pay for veterinary services among individual and household farmers. To address this risk, the Program will support the development legislation that recognizes and protects private veterinary practice, appropriate training of veterinarians and a veterinary statutory body which establishes competency examinations for veterinary graduates. In addition, incentives will be provided to private veterinarians and could include business skills training; subsidized loans to purchase basic equipment; and, contracting by Government to provide Government services.

DLI 3. Small and Medium Farmers have been trained and certified in Good Practices. Risks relate to the need to substantially improve over current advisory systems (quantity- and quality-wise) and to the lack of national capacity to implement such change. The Program will provide technical assistance to revise curriculums on animal husbandry and grazing management practices. Technical assistance will also be mobilized to revise the approaches to technical and advisory service delivery. The Program will also finance the development of demonstration farms, where producers can attend revolving trainings and participate in peer-to-peer learning.

DLI 4. The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased. Access to land and willingness to invest in livestock farming are the main sources of risk. The Program will facilitate awareness raising campaigns will be carried out to inform potential investors about investment opportunities in the livestock sector and new investors will be supported in the development of business plans. The Program will also facilitate technical support in the initial phases of their new/growing production activities.

DLI 5. Share of public expenditure in support of green growth and sustainability in the beef sector. Main risks stem from the potential discontent among producers who will need to comply with new criteria, and from the need for MOA and MEGNR to collaborate on the development and enforcement of criteria. The Program will support ex-ante analysis of costs of compliance with criteria to ensure feasibility and facilitate expert groups from both Ministries to ensure coordination. Under the Program, MOA will also conduct awareness raising campaigns to sensitize producers about environmental stewardship and on international consumers' demand for sustainable production.

DLI 6. The Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector. The roadmap for including livestock sector relevant targets in the NDC will require the support of MEGNR and Government endorsement. To ease this process, the Program will support background analyses and stakeholder consultations to ensure broad buy-in. Emission reduction targets proposed for the NDC will be based on cost-effectiveness analysis of GHG emission reduction options, and modeling of mitigation scenarios. Particular attention will also be paid to ensuring the proper timing of this policy work with regard to national policy and strategy making processes.

Access to technical assisstance will be essential to a succesful Program implementation, as explained above for activities under all three result areas. A grant from the Korea Green Growth Trust Fund was secured with the objective to mainstream Green Growth in the proposed Program. The grant will contribute to increase awareness of Green Growth for livestock development, shift Government expenditures towards 'green' support measures, and promote public and private investments with positive environmental externalities and climate co-benefits. The grant will finance the following technical assistance: development of the MRV system; development of good practices; upgrade of the technical advisory systems and; capacity development among PMO members.

ANNEX 4. (SUMMARY) FIDUCIARY SYSTEMS ASSESSMENT

Fiduciary Assessment Scope and Conclusions

The fiduciary systems assessment (hereinafter referred to as FSA or assessment) has been carried out in accordance with the Bank Policy Program-for-Results[70], and the Bank Directive Program-for-Results[71], to determine whether the Program fiduciary (procurement and financial management) systems and governance framework are adequate to support the implementation of the proposed Kazakhstan Sustainable Livestock Development Program for Results (hereinafter referred to as the Program).

The assessment scope covered Program's institutional framework and anti-corruption aspects, systems and fiduciary capacity of the key institutions directly responsible for the Program implementation: the Ministry of Agriculture (MOA), the Veterinary Committee of the MOA, the State Owned Enterprises (the SOEs), namely National Agrarian Scientific-Educational Center (hereinafter referred to as NASEC) and its subsidiaries; as well as local government bodies (oblast Akimats). The FSA includes a summary of identified key risks and respective mitigation measures, together with institutional strengthening actions reflected in the Program Fiduciary Action Plan.

The assessment concludes that the Program fiduciary systems identified during the assessment, in general, provide reasonable assurance that the financing proceeds will be used for intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability, subject to implementation of the recommended fiduciary actions as outlined in the Program Action Plan.

A. Risk Assessment

The Program's Fiduciary risk rating is Substantial. The analysis took into consideration, the Bank's knowledge of the agriculture sector, information provided by Government's institutions responsible for the Program implementation, information available on public domains, reviews of audit reports, the results of field visits undertaken during the assessment, as well latest PEFA 2018, and MAPS 2019 assessment of Public Procurement System of Kazakhstan.

Several fiduciary risks were identified during the assessment, which include the following main risks: (i) potential underfunding of the Program due to large variances between the budget requests and approved budgets; (ii) high share of single source method (around 80 percent) applied by government implementing agencies in the total annual procurement.

B. Review of Public Financial Management Cycle

The Program involves the following fiduciary systems: the national (central and local) Public Financial Management System (PFM) as well as the systems of participating SOEs.

The national PFM system in Kazakhstan is considered overall adequate, with many aspects regulated by the Budget Code, dated December 4, 2008, revised in October 28, 2019, Law on State Audit and Financial Control enacted in November 2015, Law on State Property dated March 1, 2011 as amended in December

[70] November 10, 2017
[71] June 20, 2019

26, 2018, Public Procurement Law (PPL) dated December 4, 2015 as amended October 28, 2019 and Law on Combating Corruption, dated November 18, 2015 as amended August 1, 2019.

In general, the credibility of the central budgets is overall adequate with less than 7 percent of deviation of actual expenditures from originally approved budgets, except for FY2017 with 29 percent deviation (Sources: *the MOF budget execution reports and PEFA 2018*) mostly due to the support needed for the country's distressed banking sector recovery. In the meantime, the analysis (Data Source: *The MOF and MOA*) of the FY2017 and FY2018 budget allocations for those sub-programs of the Agro-Industrial Complex Development state program that are supported by the P4R indicate considerable favorable variances between the original and revised budgets (details are provided in *Planning and Budgeting* section). The observed variances also affect a proper procurement planning and efficiency of subsequent bidding process since the procurement plans should be modified along with the revised budget allocation.

Budget execution is facilitated by adequate Integrated Information System of Treasury (IIST), with overall adequate internal and commitment controls exercised by the central treasury system. Starting 2018 all the local government systems are connected to Treasury-Client information system. Considering the adequacy of the state treasury system, starting 2015 all the Designated Accounts of the World Bank financed projects have been operating in the state treasury system.

Government is making progress in the adoption and application of International Public Sector Accounting Standards (IPSAS), taking steps in transition from cash accounting to full accrual accounting. Preparation of a consolidation of public sector financial statements (including SOEs) is targeted to commence in 2020. Some work on the valuation of non-financial assets has been undertaken in preparation for this, but it is recognized that completion of this task will take a considerable time.

Although the Program control environment poses challenges, the country's laws and regulations overall provide for a comprehensive control framework with implementation of process automation and with greater reliance on "ex-post" controls exercised by public auditors, which in general operate objectively and are assessed as an overall reliable detection and reporting system for the Program.

Public internal and external audits coordinated by Committee for Internal Public Audit (hereinafter referred to as CIPA) of the Ministry of Finance (hereinafter referred to as the MOF) and Accounts Committee for the Control Over Execution Over Republican Budget (hereinafter referred as to Accounts Committee) are overall satisfactory using a risk-based audit approach and has an acceptable level of completing of planned audits and follow-up on audit recommendations. Meanwhile the external public audit is not fully independent. It is independent from Government in the performance of its audit wok, while its budget is controlled by Government. Public internal audit is functioning since 2017 with separate internal audit units existing in line ministries, including the MOA, and oblast Akimats. The participating SOEs have their own adequately functioning internal audit units, and they are also subject to public audits exercised by the state audit authorities, as well as independent external private auditors.

The legal procurement framework is relatively well established, with an adequate hierarchy and corresponding precedence levels (PPL, regulations, instructions, standard templates), all of which are freely accessible at the public procurement web portal www.goszakup.gov.kz. Government has also developed a public procurement web portal (a full-fledged single-window e-procurement system), which has allowed for increased transparency in the disclosure of procurement documents, procurement notices and Government's main decisions with respect to procurement. This open public platform, with free access to the most recent public procurement rules and regulations, is a major step towards achievement

of the PPL's principle of transparency in public procurement. The legal framework provides a broad description of permissible procurement methods and their procedural requirements. Tender documentation available through the portal includes model procurement documents and standard contracts for all types of procurement except consulting intellectual services.

C. Procurement Exclusions

The largest share of the program expenditures (85.7 percent) will be allocated to support activities under farmer-centric service delivery model and will represent affordable financial services for agriculture producers in form of matching grants for investment assets as well as cattle headage payments[72], which as per Government budget classification is referred to as subsidies[73], which are provided through oblast Akimats. The procurement profile of the Program is specified in procurement planning section below.

Based on the analysis of the procurement profile of the Program specified in procurement planning section below, no large contracts valued at or above the Operational Procurement Review Committee (OPRC) thresholds are envisaged under the program.

D. Planning and Budgeting

D.1. Adequacy of Budgets

The assessment confirmed that the existing budgeting and planning arrangements at the central, local (oblast Akimats) government and SOE levels, are in general in compliance with applicable budget legislation and rules and procedures and are expected to be executed overall in an orderly manner.

The Program cost is established to be around US$2.02 billion. The Expenditure Framework specifies that the Bank funds will support Government program that is financed mainly from the republican budget. The analysis of economic classification of the Program expenditures indicate that the majority (85.7 percent) of the Program expenditures will be subsidies through oblast Akimats. Another largest share (around 10.9 percent) of the Program expenditures are for services. Goods constitute around 2.3 percent, while the salary and associated taxes and charges are 1.2 percent.

By the time of the assessment, the Program has not yet been identified in the state budget and is expected to be done after it is effective. The Program budget will be reflected in Government budget as a separate line in the revenue side, while its expenditures will be consolidated along with the existing budget lines of the MOA's programs that are supported by the Program. The respective revenue and expenditure amounts under the Program relevant to SOEs and local government bodies will be reflected in their respective budgets as soon as those are included into the republican budget.

The planning and budgeting process of the republican budget is formed on the basis of the country's social-economic development forecasts, the budget law, and in compliance with the requirements of the Budget Code. The original budget is prepared based on budget requests and is subject to revisions twice a fiscal year. The budget allocation requests are prepared by line ministries and other administrators of budget programs and included in the republic budget to be approved by the Parliament after it is agreed with the MOF. The Parliament approves the annual budget as well as the rolling budget for subsequent two years. The 3-year budget for 2020-2022 is not yet aligned with Program budget and will be revised

[72] As referred in *Table 2. Program Boundary Definition* of the Program Scope above.
[73] The FSA uses Government terminology (subsidy) through the assessment text when referring to the above matching grants and cattle headage payments.

after the Program effectiveness.

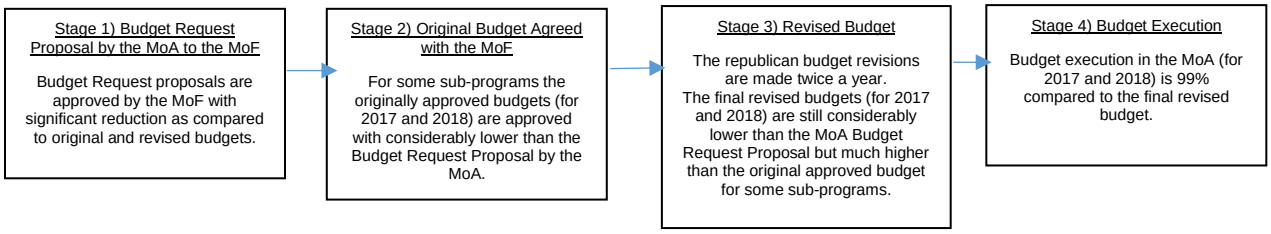
The planning and budgeting process of local budgets is overall in compliance with the requirements of the Budget Code and respective regulations. The budget requests for subsidy transfers and veterinary services and vaccines are prepared based on the local government bodies' (oblast Akimats) proposals, which however is grounded on availability of funding from the republican budget rather than on the actual demand, in particularly for investment subsidies in agriculture.

At SOEs level the budget allocation requests are prepared by relevant departments of SOEs, verified by budget committees, and approved by the SOEs management. The approved budget allocation requests are channeled to the MOF via the MOA and are included in the republican budget for financing the MOA's respective budget programs to be implemented by the SOEs.

In general, the credibility of the central budgets is overall adequate with less than 7 percent of deviation of actual expenditures from originally approved budgets, except for FY2017 with 29 percent deviation (6.7 percent in 2016, 29 percent in 2017 and 4.1 percent in 2018. Sources: *MOF budget execution reports and PEFA 2018*) mostly due to the support needed for the country's distressed banking sector recovery.

The analysis (*Data Source: The MOF and MOA)* shows a considerable adverse variance between the final budgets agreed with the MOF as compared to the initial budget request proposal submitted by the MOA. In particular, the variance for FY2018 was 25 percent, for FY2019 is 19 percent, for 2020 is 45 percent, 2021 is 54 percent (*Data Source: The MOA*). On the other hand, the analysis of the FY2017 and FY2018 budget allocations for those budget programs of the Agro-Industrial Complex Development state program that are supported by the P4R indicates considerable favorable variances between the original and revised budgets; i.e. revised budgets are higher than the original budgets. In particular, large outturns were observed under financing of knowledge and research (increased by 79 percent in 2018, and by 42 percent in 2017), and subsidy payment (No. 250 and 053) budget programs (11.8 percent in 2018 and 76 percent in 2017). Similar trend was observed under budget program No 249 (which includes veterinary services) in 2017, when the variance was 42 percent, with almost no variance (0.1 percent) in 2018. This observation indicates that the MOF provides limited allocations during the original budget approval stage, while increases the funding later during the subsequent budget revisions based on availability of additional funds and prioritization. Some additions, particularly relating to subsidies, are made during the budget revision in the second half of the year considering the actual level of demand at that time, thus putting a time pressure on the utilization of the funds. In the meantime, although the above trends indicate relatively low degree of predictability of budgets in agro-industrial complex, it is noteworthy to indicate that there are no material variances between the revised approved final budget and the released funds during the above period.

Among the potential reasons for such material variances are the country's changing priorities, insufficient level of budget revenues, as well as improper planning. The latter was specifically commented by public audit authorities, who in particular indicate a lack of systemic approach for needs' planning in veterinary drugs and vaccines.



The above observations may constitute a potential risk for insufficient level of the funding for the proposed Program.

D.2. Procurement Planning

D.2. 1 Procurement planning under the public fiduciary system

Public Procurement legal and regulatory framework allows for a relatively realistic preparation of annual procurement plans based on budget allocations. The MOA prepares its plan in two stages: a preliminary procurement plan upon receipt (by October every year) of information about their indicative annual budget allocation, and then the final procurement plan upon receipt of final budget allocation approval (by the following January). Once the budget is committed under an activity, the MOA may start procurement. **This confirms the strong linkage between the approved and released budget and the final annual procurement plan.** Funds for the MOA public procurement contracts are secured from the state budget by the MOF Order through which the annual procurement plan is approved. The e-procurement information system (*www.goszakup.gov.kz*) is well integrated with the public financial system and the budget process.

In preparing the procurement plan, the MOA collects information with regard to the needs of the various departments within the Ministry and its structural divisions at the local level. Procurement plan contains information in line with the requirements of the PPL, i.e. including the subject matter of procurement and its reference number, estimated value, method of public procurement procedure. The procurement plan is published on the web Portal. The structural agencies subordinate to the MOA, local governments (Akimats) as well as some SOEs (including NASEC and its subsidiaries) follow the same procurement rules and regulations of the PPL.

D.3. Procurement Profile of the Program

The share of procurable items under this Program is about 13.2 percent (10.9 percent services and 2.3 percent goods) of the total amount of the Program Expenditure Framework. The share of possible procurable items under this Program is about 13.2% (10.9% services and 2.3% goods) of the total amount of the Program Expenditure Framework. The Program will include procurement of the following activities: (i) products and attributes for veterinary use for identification of farm animals; (ii) creation and or publication of agricultural GIS maps; (iii) maintenance of the information systems; (iv) knowledge dissemination services for agribusiness entities and scientific research. It is to highlight that this identified procurement profile was financed and implemented by the existing Government Program for the years 2017-2019. The detailed analysis of the procurement conducted through a competition (open tender, auction) for this last three years shows that the majority (about 90 percent for goods and about 80 percent for services) contracts for procurement categories to be financed under this Program are below US$1.0 mln.

Table A4.1 – Share of procurement by contract size for 2017-2019 excluding direct contracts established by PPL

Contract type	Contract size	Number	Share
Goods	< 1 $US million	46	88%
Goods	> 1 $US million	2	12%
Sub-total:		*48*	
Services	< 1 $US million	7	78%
Services	> 1 $US million	2	22%
Sub-total:		*9*	
Total:		**57**	

In addition, the detailed analysis of the confirmed procurement profile for 2020 and planned procurement profile for 2021-2025 shows the same trend: the majority (about 90 percent for goods and about 80 percent for services) of contracts for procurement categories under the Program are below US$1.0 mln.

Table A4.2 – Share of procurement by contract size for 2021-2025 excluding direct contracts established by PPL

Contract type	Contract size	Number	Share
Goods	< 1 $US million	70	87%
Goods	> 1 $US million	10	13%
Sub-total:		*80*	
Services	< 1 $US million	12	80%
Services	> 1 $US million	3	20%
Sub-total:		*15*	
Total:		**95**	

The result of the analysis shows that high portion (about 45 percent) for the last three years of contract awarded through direct contracting following the applicable provisions of the PPL (Article 39 (3)(27)), which states that “acquisition of goods, works, services by a state body from joint stock companies and economic partnerships, one hundred per cent of voting shares (portions in the authorized capital) of which belongs to the state, whose corresponding powers are determined by laws of the Republic of Kazakhstan, State Orders of the President of the Republic of Kazakhstan”. Thus, application of the direct contracting is technically justified by using the other law and state orders regulating Animal Disease Diagnostic government system.

Table A4.3—Share of procurement methods by number

Procurement method	2020-2025	2017	2018	2019
Open tender/ Auction	58%	55%	55%	55%
Direct Contracting	42%	45%	45%	45%

The review of the signed contracts for the last three years shows that 97 percent of contracts were awarded to the national suppliers.

Table A4.4 –Share of local and foreign suppliers/contractors by number

Residency		2017	2018	2019
Local companies		97%	97%	97%
Foreign companies		3%*	3%*	3%*

*the contracts were signed through direct contracting by applying the relevant PPL provisions after a failed competitive auction process.

E. Budget Execution

E.1: Treasury Management and Funds Flow

Budget execution, including cash planning and monitoring has been considerably facilitated by adequate Integrated Information System of Treasury (e-minfin), with overall adequate internal and commitment controls exercised by the central treasury system. The automated information system has a module for treasury in which all expenditure and revenue are registered as transactions take place, and which prevents the execution of any payment, which is not provided for in the budget. Starting 2018 all the local government systems are connected to Treasury-Client information system. The Treasury Single Account (TSA) of the MOF is maintained at the National Bank of the Kazakhstan (NBK), which holds the budget accounts for central and local government bodies, including the MOA and Akimats. In the meantime, the SOEs maintain their accounts in commercial banks. Considering the adequacy of the state treasury system, starting 2015 all the Designated Accounts of the World Bank financed projects have been operating in the state treasury system. The information on SOEs accounts held at commercial banks is available at Bank-Client systems of respective commercial banks, which is not linked to the state treasury system, and given this, the SOEs accounts are not traced in the treasury system.

In the past few years, the local financial services sector had been experiencing distress, which resulted in bankruptcy of a number of commercial banks. One of the major challenges in the sector is considerable level of non-performing loans (NPL), amounting to KZT 1,016.3 billion or 7.4 percent of the loan portfolio, with some improvement from the previous year level of 9.3 percent of the loan portfolio (*Data Source: NBK*). The NPL level in agriculture sector financing is between 6-8 percent.

NBK takes some steps to improve the banking sector situation in the country. In particularly the Assets Quality Review (AQR) has recently taken place at 14 largest banks that constitute about 87 percent of the assets of the country's banking sector. The objectives of the review were: (i) to ensure the transparency of the entire banking system via improving the quality of accessible information on the major banks' financial status; (ii) to reinforce financial stability via developing and introducing corrective measures aimed to improve the banks' financial status (if necessary); and (iii) to increase the investors' and clients confidence via demonstrating reliability of the Kazakhstan-based banks.

The Program will rely on the existing treasury management and funds flow arrangements applicable to Government program. The Program's funds will be disbursed upon achievement of the DLIs. Evidence of achievement will be based on the MOA's and/or the other implementing agencies' respective technical documentation and will be verified by the IVA following the Verification Protocol. The Bank will review the documentation submitted and will reserve the right for further due diligence on the robustness of data as needed. After the Bank formally considers the DLI(s) met, it will then issue an official letter to Government confirming the achievement of the DLI targets and the value of disbursement. For the

disbursement of the respective amount, the Borrower will submit a Withdrawal Application (WA), accompanied by the Bank confirmation letter on achievement of the DLIs. The transfer of the Program funds by the MOF to Program implementing entities will be conducted following the standard state budget execution procedures, applied under the ongoing government program, through which the implementing agencies receive respective funds on their accounts in the treasury and banks. It was noted that during last few years under observation overall the budget release is made by the MOF timely as per the approved budget throughout the fiscal year.

The achievement of time-bound DLIs must happen by the deadline for achievement as outlined in the DLI matrix in the PAD. For non-scalable DLIs, the Bank will disburse the DLI value only upon full achievement of the DLI targets. For scalable DLIs, the World Bank will disburse against the formulas as set out in the DLI matrix.

E.2: Accounting and Financial Reporting

The assessment confirmed that in general the central government's accounting and financial reporting systems are overall adequate with adequate records to be maintained for the Program. Government agencies, Akimats and the SOEs utilize automated accounting software, which are overall adequate for the Program accounting and financial reporting. The central government is making progress in the adoption and application of International Public Sector Accounting Standards (IPSAS), taking steps in transition from cash accounting to full accrual accounting, meanwhile PEFA notes that public accounting and reporting system still needs to be improved especially in terms of completeness and full compliances with IPSAS. Preparation of a consolidation of public sector financial statements (including SOEs) is targeted to commence in 2020. Improvement of the financial statements has been and remains a priority of MOF. The annual financial statements published by each line-ministry are regulated by MOF Order 468 of 1 August 2017. These annual financial reports comprise a budget execution report, balance sheet including long-term liabilities, a cash flow statement and a statement of changes in net assets together with explanatory notes.

The accrual basis accounting has consistently been applied since 2018, and most mandatory information has been provided including notes to the financial statements. Meanwhile Government's annual budget execution reports include only the details of revenue and expenditure required to comply with IPSAS. The reports cover also transfers to de-centralized units, local government as well as SOEs. Actual figures are compared with budgets annually. The explanations for significant variations from budget are required and are provided at the end of each fiscal year. Meanwhile, the emphasis is placed upon comparisons of actual figures with the revised budget rather than the originally approved budget.

In-year budget execution reports published by the MOF on a monthly basis show the breakdown of revenue and expenditure comparable with the budget in terms of administrative, functional, economic and programmatic classification. Government annual and in-year execution reports are prepared timely. The annual report is submitted to Accounts Committee by 25th of March of the subsequent years, with no delays.

The accounting and financial reporting arrangements at the SOEs, participating in the Program are also overall adequate, with financial reports prepared and submitted timely. The SOEs prepare financial statements in accordance with International Financial Reporting Standards (IFRS) and are audited by private sector auditors applying International Standards on Auditing (ISA). NASEC Holding's annual audited financial statements are available publicly, while its subsidiaries do not disclose this information.

The Bank would encourage making public disclosure of those audited financial statements as well.

The local government's (oblast Akimats) accounting and financial reporting systems are also in general satisfactory with adequate records to be maintained for the Program. Akimats provide regular reporting to the MOF and the MOA on the utilization of funds received from the republican budget. The financial reports are submitted on time. The processes for acceptance of applications for agricultural subsidies and payment are automated through specialized web-based portal with minimal human interaction.

For purposes of the Program accounting and financial reporting, the Bank will rely on the existing accounting and financial reporting systems, which allows consolidation of Government, SOE and Akimats information, and the Livestock department of the MOA will be responsible for consolidation of Program annual financial statements. Considering the different financial reporting frameworks and standards applied by Government agencies and the SOEs, the Program financial statements will be prepared on a cash basis.

The Program annual financial statements will include: (i) a summary of Program funds received (separately indicating those received under each DLIs) and a summary of Program Expenditures under the Program headings, both for the current fiscal year and accumulated to-date; and (ii) Notes, comprising a summary of significant accounting policies and other explanatory notes.

E.3: Procurement Processes and Procedures

E.3.1. General Government Procurement System

Procurement Legal and Regulatory Framework: The legal framework consists of the PPL, as the primary legal act, and the main secondary legislation in the form of Public Procurement Regulations (PPR). Other operational documents forming the framework include manuals, technical instructions, user guides and contracting documents. Procurement regulations and manuals are updated regularly by the Public Procurement Legislation Department (PPLD) of the MOF. Once a procurement contract is signed, it is governed by the Civil Code. The regulatory framework is organized in adequate hierarchical order and is comprehensive in identifying formal procurement rules and procedures. All laws, regulations and relevant documents are freely accessible on the web portal www.goszakup.gov.kz.

Procurement Web Portal operated the Single Public Procurement Operator (e-Finance Center): The web portal, under the responsibility of the e-Finance Center, serves as a centralized and integrated public procurement information system providing up-to-date information that is easily accessible to all interested parties at no cost. The web portal is widely used at all levels of government, down to the local level. It provides access to all Government's procurement plans along with the procurement method, tender documents, technical specifications, clarifications, preliminary and final bid evaluations reports, details of the winning contract, amendments to the contract and complaints resolution decisions. The system is also integrated with many other systems for interoperability, including the tax, licensing, commercial banking, debarment and justice systems. The e-Finance Center is mandated to provide the required training on the use of the system for procurement staff of procuring entities. The framework requires all government procurement to be conducted through the Procurement Web Portal. All open tenders are published through the portal and available to all potential bidders free of charge. The regulatory framework adequately describes rules on advertisement of tender notices, minutes of bid opening and evaluation, and notification of contract awards, along with respective timelines. Similarly, the requirements for bid submission, receipt and opening, and the content of procurement documents

(tender documents, templates of minutes of bid opening, evaluation and decision on contract award, standard contract conditions) are clearly defined and allow suppliers to understand what is required of them and how the procurement process is to be carried out.

The assessment has confirmed the existence of serious risks in the Procurement Web Portal, which constitute a barrier to participation of potential foreign bidders. One of these risks is due to requirement posed on foreign bidders that in order to participate in bidding through e-procurement system they need to obtain a digital certificate which in turn require them to register with Tax authorities in Kazakhstan to be physically present in the country. Other risks are posed in the requirement for foreign bidders to obtain and submit an e-bid security issued by a local commercial bank only. These requirements contradict the PPL's provisions on eligibility, which questions open eligibility for all bidders, and thereby depriving the procuring entities participating in the implementation of the proposed Program from the benefits of greater competition and a better chance for achieving the program results with value for money.

Procurement methods, procedures and conditions for use: The public procurement framework provides for a description of the permissible procurement methods and their procedural requirements. It provides for competitive and non-competitive procurement methods for goods, works and services, which are: tender (open tender, prequalification tender, two-stage tender), auctions, single source procurement and commodity exchanges. The PPL authorizes the contracting authorities to decide on the most appropriate method of procurement. However, it does not mandate open tender as the default method. The conditions for the use of these procurement methods are described in the PPL and with more details in the PPR. The standards for open tender procedures are overall in accordance with international standards.

The procurement web portal allows the procuring entity to select and document procurement methods at the planning stage, as well as to make changes before bidding is launched to the public in accordance with the provisions of the PPL. Information on the procedures for bid submission, receipt and opening are provided and clearly described in the procurement documents on the portal. Bid submission, receipt and opening are done electronically, with a relatively fair level of transparency.

The analysis of the procurement statistics obtained from the Web-portal indicates a high share (by value) of single source method (around 80 percent - *the Source: Web-portal*) applied by government implementing agencies in the total procurement for FY2018.

Model bidding documents: The PPL defines a minimum, exhaustive list of documents that constitute the tender documents. Use of standard bidding documents is obligatory for each procurement process. Model procurement documents and contracts are included as part of tender documentation for goods and works and services available on the web portal, except for consulting intellectual services. The content of the standard and mandatory clauses and templates of the standard contract conditions is consistent with internationally accepted practice and contains a description of technical specifications, including the required functional, technical, qualitative and operational characteristics of the goods, works and services; as well as evaluation criteria for the bid, based on price and non-price items. All standard tender documents include a draft contract with standard contract conditions. The tender documentation does not refer to any brand names, or catalogues numbers or names of manufacturers. General conditions of the tender documentation include number and names of the lots, qualification requirements, technical specifications, agreement on participation, information on qualification, cost estimate for the tender. Model forms of the documents are available in the public procurement regulations. To seek feedback from potential bidders and give them an opportunity to request clarifications, the regulatory framework is the mandatory public discussion of the draft tender documents. This process may result in the draft

tender documents being revised. As a matter of good practice, the early engagement with potential suppliers ensures the relevance of tender documents to the current market, the neutrality of the technical specifications, and the objectivity and proportionality of the qualification requirements and evaluation.

Evaluation process: The stipulated evaluation criteria provide for some limited and inadequate form of use of price and non-price attributes for bids evaluation. The evaluation method based on discounting bid prices, the application of anti-dumping measures, although currently applicable to services only, is not consistent with international evaluation practices, which consider value for money, relevant costs and benefits, risks, and non-price attributes and/or life cycle costs in determining the most advantageous bid. For example, keeping the application of anti-dumping measures to services could lead to the selection of a high-risk bidder that has offered an abnormally low bid without due examination, as long as it pays an extra performance security fee. The PPR establishes the right of potential suppliers who have submitted tenders to view the tender applications of other potential bidders, except for the price quotations. In absence of clear instructions on the marking of sensitive and confidential information, this rule implies that the procuring entity cannot withhold access to any part of a bid, including technical information. Although the PPL has tried to limit the access to this information to the bidders that have passed the preliminary examination, this practice is not consistent with international standards, including the obligation to safeguard the confidentiality of bids' information and protect confidentiality of bid's content throughout the tender process and avoid allowing for the disclosure of sensitive information.

Contract Management: The legal framework covers contract management and stipulates the minimum requirements of the draft contract in terms of form, conditions, amendments, and provisions for dispute resolution in connection with contract performance. However, the legal framework lacks clarity regarding the organization of contract management function. It does not provide a direct definition of contract management, or clearly define the roles of the procuring unit and the end user/beneficiary in contract management. Detailed instructions on the organization of the contract management function also are not addressed in the regulations and implementing rules, and no written procedures on the subject are available. Despite some integration between the e-procurement system and the treasury system, information on the time between the submission of an invoice and the issuance of payment is not available on the portal. The legal framework could benefit from more detailed instructions under the regulations and implementing rules. This could include strengthening the regulatory requirements for measuring contract implementation performance and setting requirements for disclosing information on contracts management through the web portal.

The Bank conducted Procurement performance indicators analysis of 175 sample contracts including the timeliness of payments (source: e-procurement web portal) for period of 2017-2019. The assessment of current procurement practices of government implementing entities shows that the mandatory use of e-procurement system has contributed to improve transparency of the procurement process and a relative fair performance. The FSA has selected some key procurement KPIs that will be used to monitor the performance of the Program procurement system as presented in the Implementation Support Section.

E.4. Procurement Complaints Handling Mechanism

E.4.1 General Government

The public procurement legal framework establishes the potential bidders' right to challenge the decisions or actions of a procuring entity. According to Article 47 of the PPL, a "potential supplier" has the right to

appeal to the CIPA a decision, action or inaction of the procuring entity, public procurement organizer or operator, committee or expert, "if their actions (inactions) or decisions infringe the potential supplier's rights and lawful interests." The complainant needs to refer to any violation of PPL itself. The appeals mechanism is managed through the Web portal, including publication of decisions and supporting documents, and real-time status of the review of complaints. The CIPA is required to respond to the complaint within 10 working days from the day it is received. There is a period between the notification of results and conclusion of the contract similar to a "standstill" period, although the purpose of the standstill and its length are not properly described in the PPL. In 2018 the MOA has received 23 complaints. All complaints have been reviewed, assessed and the decisions of their handling have been posted in the publicly accessible Web portal. Out of 23 complaints, 4 cases (17%) were upheld and 19 cases (83%) dismissed.

F. Internal Control Systems, Public Internal and External Audits

F.1: Internal Controls Systems

Although the Program control environment poses challenges, the country's laws and regulations overall provide for a comprehensive control framework with implementation of process automation and with greater reliance on "ex-post" controls exercised by public auditors, which in general operate objectively and are assessed as an overall reliable detection and reporting system for the Program. The public internal control system over budget expenditures is established by the Budget Code identifying the controls during budget preparation and execution processes, expenditure classification framework. Those are also detailed in Rules No. 540 of the MOF on Budget Execution and Cash payments dated December 4, 2014. The Budget Code also outlines the accounting and financial reporting systems for public bodies and specifies the use of Treasury Single Account for budget execution.

It should be noted that at Government level there are specific internal controls that relate to procurement, including those exercised via authorization and approval mechanisms as well as monitoring via procurement web-portal. It should also be noted that while controls exercised are adequate for risk mitigation, those sometimes result in longer decision-making processes.

At SOE level the control framework is stipulated by the Law on Public Property as well as by corporate specific regulations, accounting, financial management, procurement, risk management, auditing procedures and practices, which is overall adequate.

Internal control procedures in respect of payroll in public sector and SOEs are adequate. Post-payment procedures are applied including checks made with treasury data. There are adequate links between the approved budget, personnel records and payroll records, with payroll payments properly authorized via automated system. During the last 3 years, various limited payroll audits, as part of wider audits rather than specific payroll audits, have been carried out by internal audit of the MOA, the CIPA and the Accounts Committee. No major systemic issues are identified by public auditors relating to payroll. This was also confirmed by the sample salary review conducted by the Bank team during the assessment at the MOA and selected SOEs, with no issue identified. The review also confirmed that salaries are paid timely.

Payments financed through the republican and local budgets are processed through the Treasury system e-minfin. For a payment to be executed it must be covered by a budgetary allocation and cash availability. Commitments are controlled through an automated module of the system (Treasury-Client), which requires funds to be allocated before an order can be placed. The payments posted to the treasury system

are paid in general within a timeframe as per treasury rules and contract terms. The public procurement web portal does not include complete information on contract payments making difficult to trace the time lag between the acceptance and payment. During the assessment selected payments under sample contracts at the MOA, Veterinary Committee and selected SOEs were reviewed by the Bank team with no delays between the acceptance of the deliverable and the payment observed. In general, there are overall sufficient controls over public non-payroll expenditures.

The public audit reports identified a need for full integration of information systems of the MOA, which among other necessary functions, would enable automation of veterinary certificates and reports issuance and registration. This would reduce the level of human interreference into the veterinary document issuance processes, and reduce the potential for corrupt practices, as the auditors identified instances of issuance of false certificates not supported by required documents. This would also establish a proper registration and traceability system for veterinary documents. Government is taking steps to address the auditors' recommendations and is in the process of automation with some veterinary forms already available through the electronic web-portal. The auditors also recommended linking the MOA's systems to the Statistics Committee's system to avoid discrepancies between official statistics data on headcount of farm animals and the data recorded in the electronic system of animals' registration; as per the auditors' observations there is up to 3 percent discrepancy between the data in those systems. Other areas of concern raised by the public auditors relate to lack of systemic approach for needs' planning in veterinary drugs and vaccines as well as reliability of results of monitoring by veterinary services of epizootic situation in regions.

The main observations/recommendations at local level concerning to the P4R Program made by public auditors relate to insufficient level of monitoring over program implementation. Some cases of improper registration of animal diseases, issues with veterinary preventive activities, as well as animal registration are also noted. Until recently the control/inspection function over veterinary services was over Akimats, while recently it has been shifted to Veterinary Committee of the MOA. With this move it is expected that the Veterinary Committee will exercise greater control over those services in place.

The Program will also support agro-industrial investment and pedigree livestock development subsidy payments, which are financed from the central (targeted transfers for subsidies under budget program 250) and local budgets (under budget program 053, which is financed mostly through funds of general transfers from republican budget with some additional funds provided from the local budgets). The overall responsibility over the subsidy approval, payment and monitoring processes is on oblast Akimats. The transfers for subsidies are channeled to beneficiaries through oblast Akimats.

Previously, the public auditors' reports indicated corruption risks in the agricultural subsidy scheme. Several cases of corrupt practices included overstating of agricultural production quantities, approval of subsidies based on incomplete set of documentation and delayed approval processes. In addition, cases of insufficient monitoring over intended use of subsidized assets were observed. Those include cases when some farmers' breached conditionality clauses such as maintaining at least one year of pedigree animals after the purchase date, as those are sold or slaughtered before the end of the conditional period. Also, cases of inconsistency of animals' actual identification numbers with those recorded in the purchase-acceptance acts were observed.

Currently several systemic issues relating to subsidies have already been addressed by Government, which has taken major efforts to digitalize the subsidy approval and payment processes and hence to reduce the level of the above corruption risks and enhance controls over subsidies as well as to ensure timely

provision of subsidy funds. Until recently all the subsidy application submissions and approvals were processed manually, while starting 2019 it is mostly implemented through submission of electronic applications via *subsidy.plem.kz* portal.[74] The electronic system is enabled to automatically verify some of the data such as animal registration data as indicated in the application with same data in the animal registration database.

The subsidy regulatory framework has also been improved to update subsidy specific rules, which reflect the electronic submission of the applications and its processing and approval steps. The subsidy rules have overall sufficient and comprehensive details on the funds flow of as well as controls over subsidy payments. Currently the subsidy system indicates specific deadlines and responsible staff for each processing step. The payments are processed via Treasury-Client system. The automation has significantly reduced the paperwork and the degree of human interaction. The system registers subsidy applications on first-come first-served basis, which impedes possibility for privileged treatment of some farmers over others. The subsidy applications can be accepted from farmers, as well as from financial institutions (FIs). In case the subsidies are provided to compensate the cost of the loans received by the farmers from the financial institutions those are processed as part of the loan issuance commercial practice, which is overall acceptable.

In the meantime, when reviewing a subsidy' rules (No 108 dated March 15, 2019) on "Subsidizing Livestock, Improvement Productivity and Quality of Livestock Production (hereinafter referred to as the Rules) approved by the order of the MOA, it was observed that there is some inconsistency relating to a specific requirement in the Rules and its practical application: the Rules stipulate that the subsidy payment be no more than 50 percent of the animal purchase cost and up to the subsidy maximal rate as specified in the Rules. Meanwhile in practice when making the subsidy payment, the animal purchase cost is not considered, and the payment is made exactly at subsidy maximal rate. This inconsistence was discussed with the MOA, which confirmed the acceptability of the current practice, given that the MOA conducts regular monitoring of pedigree animal prices, and founded out that the actual cost of such animals in the market is more than the two times the subsidy payment maximal rate, which eliminates a need for verification of the purchase cost. Meanwhile the MOA also recognizes the existence of above inconsistency of the practice with the Rules. The Bank recommendation is to respectively revise the Rules to make it in line with the current practice. The recommendation will be discussed further and agreed with the MOA during the appraisal.

Recommendation (to the Program Action Plan): The MOA will revise the Rules (No 108 dated March 15, 2019) on "Subsidizing Livestock, Improvement Productivity and Quality of Livestock Production" in order to improve the effectiveness, targeting and consistency of the allocation of agricultural support measures, including headage payments and matching grants.

F.2. Public Internal and External Audits.

Despite the challenging control environment, the country's internal and external audit functions in general operate objectively and are assessed as an overall reliable detection and reporting system for the Program. The Law of the Republic of Kazakhstan on State Audit and Financial Control specifies the controls that are carried out by responsible public external and internal audit and control bodies. Unlike in

[74] For remote areas with limited internet access it is allowed for submission of the subsidy applications with the help of State Corporation "Government for Citizens" who help the farmers to enter the application to the web portal.

generally accepted practices, the internal and external public audits as well as financial controls are covered by a single law, with no proper separation of functions and objectives. The institutions, policies and procedures as defined in the Law are in place and operational. The Law stipulates that the system of state audit and financial control includes the following agencies: (i) Accounts Committee for Control over the republican budget execution and National Funds as the supreme financial control body; (ii) Revision Commissions at local level (regions and cities); (iii) authorized body for Public Internal Audit (Committee for Internal Public Audit [CIPA] of the MOF); and (iv) Internal Audit Services (hereinafter referred to as IAs) of central state bodies (e.g. line ministries), local executive bodies of regions and cities. According to the legislation, the authorized body on Internal Audit bears the key responsibility for compliance audit, including compliance with the Public Procurement Law, and for desk/online reviews that mostly cover compliance with procurement procedures.

The procedures/standards for compliance and performance audits for public audit and financial control are described in the Rules on External Public Audit and Financial Control and Procedural Standards for External Public Audit and Financial Control approved by the Normative Decrees of the Accounts Committee and Rules for Public Internal Audit and Financial Control approved by the Decree of Government. These documents refer to Financial and Compliance Audits, the Performance audit standards and norms are still in the process of being developed.

The internal control/audit mechanisms are in place, including proper reporting to management on compliance, effectiveness and efficiency. The Law prescribes clearly the reporting lines of internal and external audit. The Internal Audit function is reporting to Government, while the External Public Audit is reporting to the legislature and the President.

The existing control framework overall adequately covers procurement operations, meanwhile it should also be noted that in practice public procurement audit is conducted as part of the compliance and performance audit but not separately. The large portion of procurement audits are conducted through desk/online review of the Portal by the staff of the CIPA. In addition, it is the only public internal audit body that is authorized to conduct unplanned audits/reviews of complaints received.

Audit reports prepared by the Accounts Committee are subject to quarterly review by the Parliament and are mandatory for implementation. Implementation of recommendations is monitored permanently. In some cases, special meetings of working groups, or so-called “hours with Government” are conducted.

Audit recommendations are communicated in the form of resolutions and orders, with specified deadlines for implementation. Before issuance, audit recommendations and implementation deadlines are discussed and agreed with an audited entity’s representatives. All recommendations are included into so-called “control list” of the public audit bodies to be monitored constantly. Audit, both internal and external, is conducted based on the List of Entities to be Audited that is prepared on the assessed risks basis annually. Thus, it can be the case that an audit of one and the same entity can be conducted once in several years, unless it is assessed as a risky one (the agricultural sector is recognized by the public auditors as high-risk sector). However, the CIPA has the right to conduct unplanned audits/reviews based on complaints or orders received.

In the process of implementing recommendations, an entity is reporting on appropriate actions taken and supports this by relevant documentation. Provided information is reviewed by the public audit bodies to evaluate quality of implementation based on completeness, reliability and adequacy of information

provided. As soon as a recommendation is found to be implemented completely and with due quality, a decision is taken to remove it from the "control list".

Vast majority of audit recommendations issued by the Accounts Committee, CIPA and internal auditors are implemented timely. The MOA internal audit department performed 35 audits during 2018-2019, as a result of which around US$5.7 million was recovered to the state budget, 31 officials were subject to administrative proceedings, 4 cases of misconduct were sent to Anti-Corruption Agency and 5 cases were submitted to the CIPA for further administrative actions.

Akimats are regularly audited by the public external auditors (regional Revision Commissions) and based on the risk level those are also audited by CIPA and Accounts Committee. The Revision Commissions', CPIA's and Accounts Committee's audits cover the funds provided from the republican funds. While the Akimats internal audit units' audits cover the funds provided by the local budget. It can be noted that the vast majority of audit recommendations relating to recovery of misused funds are implemented timely, with large number of officials held accountable.

There is overall adequate capacity and qualification at the public internal audit units (the MOA's and oblast Akimats) considering the robust public certification process implemented by the Accounts Committee. This is confirmed by the periodic assessment of public audit and control bodies' performance, which as of the first semester of 2019 are assessed as effective with assigned high ratings for the MOAs' and Akimats' public audit functions, except for Akmola oblast Akimat.

Since the Law of State Audit and Financial Control was adopted in 2015 and requires that the internal auditors take professional trainings at least once a 3-year period. Considering that the internal audit is fully functioning since 2017, majority of public auditors have not yet taken trainings since certification. Having trainings only once in a 3-year period may result in outdated professional knowledge as some regulations, professional standards may change more frequently.

There is overall satisfactory internal audit function with overall adequate capacity and qualification at the SOEs' internal audit functions. All the internal auditors have local certification in internal audit, some with international qualification (such as ACCA, CAP/CIPA, etc.). The review of the selected SOEs latest internal audit reports and external auditor's management letters did not identify any critical systemic issue.

Considering the risks relating to subsidy payment schemes previously identified by the public auditors (as described in the above section), and subsequent improvements of the subsidy system made by Government via automation of the application and processing of subsidies, the Bank team will monitor the progress made in subsequent reports of the public auditors. In addition, during the appraisal, the Bank will discuss and agree with the MOA the involvement of its Internal Audit unit to conduct the review of the subsidy processing and payment system under the Program to determine whether the system is functioning as intended with specific focus on addressing the corruption risks identified in the public auditors' reports. This task is to be implemented within 1,5 year after the Program effectiveness.

Recommendation (to the Program Action Plan): The MOA will conduct a review of the subsidy processing and payment system under the Program, to determine whether it is functioning as intended and improve the system where necessary, to ensure that the system is able to effectively address the corruption risks identified in the public auditors' reports.

F.3. Access to Information.

It should be noted that during the assessment of the P4R Program's fiduciary systems to access to some internal information of the implementing entities' fiduciary systems required for the FSA took considerable efforts and time of the Bank team. This still has been identified as a substantial risk, as such information is necessary to be reviewed not only during the Program assessment but also during the Program implementation (for monitoring of the performance of the Program's fiduciary systems), and it is important that the MOA supports the Bank fiduciary team to get access to such an information during the whole period of the Program implementation.

Recommendation (to the Program Action Plan): To ensure proper monitoring of the Program's fiduciary systems by the Bank team, during the Program supervision missions, the MOA should ensure that the Bank team has access to the Program implementing entities' internal documentation relevant to the Program fiduciary systems' monitoring and supervision. The Bank will review the documents and provide respective recommendations, as necessary, to be implemented by the entities.

G. Program Anti-Corruption Arrangements

The anti-corruption activity in Kazakhstan is governed by the Law on Combatting Corruption in the Republic of Kazakhstan, with the Anti-Corruption Agency being as an authorized anti-corruption body. The Anti-Corruption Agency has territorial branches in all 14 oblasts and 3 large cities of Kazakhstan. Its mandate is to fight corruption, develop and implement anti-corruption policy of Kazakhstan and coordinate activities in the area of combatting corruption, as well as finding, preventing, disclosing and investigating corruption cases.

Kazakhstan is ranked 113th out of 180 countries according to Transparency International Corruption Perceptions Index 2019.[75] This is apparent improvement from the previous year ranking of 124th out of 180 countries. The progress update of fourth round of monitoring under the OECD Istanbul Anti-Corruption Action Plan (2018)[76] indicates that the country has made progress in implementing OECD recommendations in Public Participation, Comprehensive Anti-Corruption Policy, Raising of Awareness, Anti-Corruption Screening, Administrative Procedures, Integrity of Judiciary and Public Prosecution Bodies, etc. Significant progress was observed in Policy Documents and Monitoring, Assessment of Corruption, Integrity in the Civil Service and Public Procurement. On the other hand, lack of progress was observed in other recommendation such as on Integrity of political officials and Access to information. Also, cooperation between the authorities and civil society remains limited and arrangements for monitoring the impact of Government's anti-corruption strategy are ineffective.

The National Report on Combating Corruption (2018)[77] refers to the agricultural sector as one of the areas with high corruption. The Report describes the main risks in the sector such as illegal issuance of permits to import the agricultural produce (including meat), high corruption risks in the area of agriculture subsidies as well as land relations. The Anti-Corruption Monitoring Report issued by the Anti-Corruption Agency for 9 months of 2019 places the agricultural sector among sectors with high level of fraud and corruption at both central and local government level with 22 cases at central and 46 cases at local levels identified during the reporting period. The report specifies that most fraud and corruption cases related

[75] *https://www.transparency.org/cpi2019*
[76] *https://www.oecd.org/corruption/acn/OECD-ACN-Kazakhstan-Progress-Update-2019-ENG.pdf*
[77] *http://anticorruption.gov.kz/ru/kategorii/nacionalnyy-doklad-o-protivodeystvii-korrupcii*

to bribery of veterinary specialist and specialists of phyto-sanitary control posts for issuance of fake veterinary certificates and unchecked passing of quarantine and phyto-sanitary control posts without proper conduct of veterinary control and quarantine procedures.

The MOA developed and approved the Action Plan for Implementation of the Anti-Corruption Strategy of Kazakhstan for 2015-2025, Combating shade economy and mitigation of corruption risks. The ministry issues semi-annual reports on implementation of the Action Plan. The most recent report refers to 16 actions, ten of which were implemented, and other 6 being under implementation. The implemented actions include actions taken to improvements in the agriculture subsidy regulatory framework as well as automation of subsidy provision processes. Also, the MOA regularly (on quarterly basis) monitors and analyzes corruption cases committed by the MOA and its subordinate agencies staff.

The MOA's anti-corruption arrangements involve the Internal Audit Department. The Internal Audit is responsible for issuing semi-annual reports on measures taken to implement the anti-corruption strategy of the MOA. All administrative cases are reported to the CIPA, while the criminal cases are reported to the Anti-Corruption Agency.

The fraud and corruption related complaint handling mechanism on the national level is implemented through e-government web portal *www.egov.kz*, which is a single access point on the web providing the ability to file complaints and appeals from citizens and legal entities, including farmers on any issues of interaction with Government. This electronic service is implemented in accordance with the Law "On the Procedure for Considering Appeals of Individuals and Legal Entities" dated January 12, 2007, updated December 26, 2018. A detailed step-by-step user manual for this electronic service has been published on this resource. These appeals are not anonymous and require preliminary registration on the e-gov web portal and obtaining an electronic digital signature on the free base. The complaint filling-out form allows choosing any government body or SOE from the drop-down list. This list includes all the key institutions participating in the Program (the MOA, NASEC holding and its subsidiaries, Akimats, etc.), as well as all state supervisory authorities, including Anti-Corruption Agency, CIPA, Accounts Committee, National Bank, etc. Given that the e-gov web portal is integrated with electronic document management systems of all government bodies and SOEs, the filed complaint is immediately received by the recipients and the system informs about the status of the complaint. Applicants are promptly notified of the results of their complaints in their personal accounts. The complaints and respective replies are publicly available. This portal also provides for summary statistics on the handling of complaints and appeals of citizens and legal entities. By the time of the assessment the portal indicates around 316 thousand appeals cumulatively received with 298 thousand replied to, of which 230 thousand were published on the portal. However, the portal does not provide aggregate statistics to specific sectors to a public user, while this information is possible to be generated for registered users.

To address the possible cases of fraud and corruption associated with the Program implementation, the Program will rely on the respective country systems, and the MOA will be the main responsible agency for the implementation of the Program anti-corruption measures in cooperation with other agencies such as the MOF and Anti-Corruption Agency. The Program implementation will be aligned to the Anti-Corruption Guidelines (ACG) applicable to PforR operations, and will include the below measures:

Sharing of debarment list of firms and individuals. The Program participating agencies will use the World Bank's List of Debarred and Cross-Debarred firms and individuals to ensure that persons or entities debarred or suspended by the Bank are not awarded contracts under the Program during the period of such debarment or suspension. The list can be accessed on the World Bank's website

(*www.worldbank.org/debarr*). The compliance with this requirement would be monitored by the MOF and be checked by the Program's auditor. The alternative solution would be for the part related to Government Fiduciary system, is to rely on the e-procurement system of Government and agree with MOF to place a simple filter for the award contract under the Program which will check automatically the status of the firm recommended for award on the WB debarment list and gives alert to the procuring entity that the bidder recommended for award is debarred. This would allow to do an advanced preventive and real-time check at the level of e-procurement system.

Sharing of information on fraud and corruption allegations. Annually the MOA will generate from the egov.kz portal and consolidate information on all complaints on fraud and corruption under the Program and share with the World Bank. For these purposes the MOA will coordinate with the Anti-Corruption Agency and get necessary access to the portal. The final arrangements will be discussed and agreed during the appraisal. The World Bank will be also informed about the actions and decisions taken by the relevant institutions to address the matter raised in the complaint.

Investigation of fraud and corruption allegations. The implementing agencies will provide full support to the country's anti-corruption agencies and the World Bank when carrying out investigations related to fraud and corruption allegations made during the Program implementation. The MOA will promptly inform the World Bank on all credible and material allegations or other indications together with the investigative and other actions that the Borrower proposed to take with respect thereto. During the appraisal, the Protocol for Fraud and Corruption Reporting for the Program will be discussed and agreed with the MOA. The signed protocol will be a part of the Negotiations minutes. The World Bank will retain a right to investigate allegations, and the Borrower will provide the World Bank the necessary access to needed persons and information applicable to the Program. Other pillars of the Program Anti-Corruption system include use of independent auditors/verifiers for the audit/verification of the Program. The auditors will be appointed from the list of auditors acceptable to the Bank.

Recommendation (to the Program Action Plan): The MOA will consolidate and annually share with the World Bank information on all credible and material complaints on fraud and corruption under the Program and actions taken or being taken.

H. Program Auditing

During the last several years, with the Bank support, some reforms were initiated to enhance the public audit function in Kazakhstan, particularly in the areas of annual audit planning, compliance and financial audit methodology development, audit workflow automation as well as legislative changes were introduced. However, a progress in the consistent quality of performance and financial audit is yet to be achieved. No audit opinion is issued on the budget execution reports as a whole nor for individual ministries, departments and agencies. In practice, the bodies of Public Audit do not consistently follow international auditing standards, despite they have financial and compliance audit methodology developed based on international standards and good practices. Considering the above, the Bank does not rely on the existing public audit arrangements for conducting audits of the Bank-financed projects' financial statements, and all the financial audits of the projects in the World Bank portfolio in the country are conducted by private auditors acceptable to the Bank.

Historically, there has been a lack of clarity between the nature of "ex-ante" internal financial control and

genuine internal audit which provides independent advice to top management on the performance of systems and the efficiency of service delivery. So-called "internal auditors" have in practice been playing "ex-ante" roles, which have made them part of the systems that internal audit is expected to audit. This contradiction has been implicitly acknowledged by Government in the 2015 Law on State Audit and Financial Control, and internal audit is now active in almost all government agencies. Meanwhile, unlike in generally accepted practices, the internal and external public audits as well as financial controls are covered by a single law, with no proper separation of functions and objectives.

All public-sector entities are subject to oversight by the country's Supreme Audit Institution (SAI) – the Accounts Committee as well as the CPIA. The Accounts Committee annually submits to the Parliament and the President a report on execution of the Republican budget along with their opinion. The CPIA is responsible for financial audits, as well as for conducting desk reviews of procurement compliance. Some audit reports are published on Accounts Committee's and CPIA's websites, while those not always disclose sufficient details on the findings and recommendations.

The SOEs are subject to external auditing conducted by independent private auditors. The NASEC holding's and its subsidiaries' audits are conducted by a local auditor not from the Bank list. The auditor issued qualified opinion on the holding's latest (2018) consolidated financial statements, which are posted on the MOF's depositary[78] of financial statements. Meanwhile, no such audit reports on the NASEC subsidiaries were available publicly. No critical issues were reflected in the NASEC holdings' latest management letter.

While for monitoring purposes and well as for assessing the internal control risks under the Program the Bank will rely on the audits conducted by the Accounts Committee, CIPA and the Revision Commissions, as well as on Anti-Corruption agency's reports, the Program financial audit arrangements will rely on the existing independent auditing arrangements under the Bank-financed on-going projects implemented in Kazakhstan. By the time of the assessment there were no due audits under those projects. And no major issues were raised in the management letter of those projects.

The audit of the Program annual financial statements will be conducted (i) by independent private auditors, acceptable to the Bank, on the Terms of Reference (with extended scope for testing procurement controls) acceptable to the Bank and procured by the MOF, and (ii) according to the International Standards on Auditing (ISA) issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC). The audited financial statements of the Program will be presented to the Bank within six (6) months after the end of each reporting period, also at the end of the Program. The Borrower will disclose the audit reports for the Program within one month of their receipt from the auditors and acceptance by the Bank, by posting the reports on the MOA web site. Following the Bank's formal receipt of those reports from the Borrower, the Bank will make them publicly available according to World Bank Policy on Access to Information.

I. Program Fiduciary Capacity

Public sector financial management capacity in agricultural sector is overall adequate. The Finance Department of the MOA consists of two divisions: (i) the budget development and consolidation division and (ii) division for budget execution monitoring, consolidation of budget and financial reports. In general, the FM/accounting staff of the MOA and the Veterinary Committee are equipped with qualified staff.

[78] *https://opi.dfo.kz/p/ru/dfo-search/opi-search*

Similarly, there is adequate FM/accounting staffing in place at oblast Akimats level. The capacity of public internal auditors in the MOA and Akimats is also overall adequate. The public internal auditors have the national certificates confirming their qualification.

The FM/accounting staffing capacity at the SOEs level is overall satisfactory. However, the frequent turnover of FM/accounting staff as well as internal auditors is observed, which exposes to the risk of losing institutional memory at those agencies. The SOEs should have the longer terms contractual relationship with FM/accounting staff and internal auditors to improve staff loyalty.

Program participating government agencies have sufficient capacity to perform the procurement operational activities. During the assessment, it is found that in general all the participating agencies are adequately staffed by qualified procurement specialists. Unified e-procurement system helps to improve the capacity of staff to conduct procurement activities within the proposed program.

J. Program Systems and Capacity Improvements Mitigation Measures

A summary of key Fiduciary risk and mitigation measures identified at the assessment are described in the below table.

Table A4.5 – Summary of key fiduciary risks and mitigation measures

Risk	Mitigation Measure	Timing	Type of Action (PAP, DLI, etc.)	Outcomes
Challenging control environment under the Program.	The MOA should ensure that the Bank team has access to the Program implementing entities' internal documentation (including the external and internal audit reports and management letters) relevant to the Program fiduciary systems' monitoring and supervision.	During the Program supervision missions.	PAP	The Bank will review the provided information and propose respective recommendations, as necessary.
Risk of unattended non-procurement related complaints under the Program.	The Bank will monitor the effective application of grievances mechanism on fraud and corruption under the Program.	No later than six months after the end of each fiscal year.	PAP	The MOA will share with the World Bank information on all credible and material complaints and actions taken or being taken on complaints and grievances received on fraud and corruption under the Program.

Non-application of Bank debarment/temporary suspension lists which may result in unacceptable contract awards to contractors, consultants and/or suppliers under temporary suspension or cross debarment by the Bank or any other Multilateral Development Banks.	Ensuring that persons or entities debarred or suspended by the Bank are not awarded a contract by verifying the same prior to award under the Program during the debarment or suspension period. TOR for audit firms will include the requirement to assess on randomly basis whether any contract has been awarded to a suspended or debarred firm and no parties debarred or suspended by the Bank shall benefit from the program funds.	During the Program implementation	PAP	The compliance with this requirement would be implemented by the MOA, monitored by the MOF and be checked by the Program's auditor.
Risk of inconsistency between the requirements of subsidy Rules with the current practice when determining the subsidy amount to be paid	The MOA will revise the Rules (No 108 dated March 15, 2019) on "Subsidizing Livestock, Improvement Productivity and Quality of Livestock Production" in order to improve the effectiveness and targeting and consistency of the allocation of agricultural support measures, including headage payments and matching grants.	Within one month from the Program effectiveness	PAP	The Rules will be revised.
Risk of inefficiency of subsidy processing and payment control system.	The MOA will conduct a review of the subsidy processing and payment system under the Program, to determine whether it is functioning as intended and improve the system where necessary, to ensure that the system is able to effectively address the corruption risks identified in the public auditors' reports.	Within 1.5 years after the Program effectiveness	PAP	The MOA will share with the Bank the Internal Audit unit's findings and recommendations.

K. Implementation Support

During the Program implementation the Bank's fiduciary team will:

- review the implementation progress and working with the task teams to examine the achievement of Program Legal Covenants, and Action Plan that are of a fiduciary nature;

- help the Borrower to resolve implementation issues and carry out institutional support;
- monitor the performance of fiduciary systems (including via the Procurement and FM KPIs) and audit reports, including the implementation of the legal covenants and PAP; and provide recommendations to enhance efficiency and effectiveness.

The selected key procurement and financial management KPIs that will be used to monitor the performance of the Program fiduciary system during implementation as presented in the tables below.

Table A4.6 – Program Procurement Performance Indicators

	Indicator	**Measure**	**Target**	**Baseline**
1	Procurement lead time	Number of days between date of invitation to bid and date of signing the contract	Not more than 50 days	Open tender/auction method – 54 days
2	Average number of bids received	Competition level	More than 5 bids	5 bids
3	% of contracts implemented within the original contract period	Procurement planning efficiency	90%	84%
4	% of cost overrun in completed contracts	Efficiency of design and contract management	Less than 15%	1%
5	Average % time overrun	Efficiency of contract implementation	Less than 10%	2%

Table A4.7 – Program FM Performance Indicators

	Indicator	**Measure**	**Frequency/Target**	**Baseline**
1	Variance: budget allocated by Government vs budget requested by implementing agencies	Ratio: Allocated (confirmed)funds/requested funds (%)	90%	81%
	Variance: Originally approved (or revised) annual republican funding the Program vs the level of the respective actual budget execution for FY2019	Originally approved (or revised) annual republican funding the Program is set at least at a level of the respective actual budget execution for FY2019	Annual	KZT143,759,000,000
3	Quality and timeliness of annual financial statements for the Program	Completeness and timeliness of annual reports	Audited annual financial statements of the Program with unmodified (clean) opinion be submitted to the	Nil. Implementing entities do not prepare Program annual financial statements

			Bank no later than 6 months after the end of the fiscal year.	
4	Follow-up on Audit recommendations	Evidence of timely and adequate follow-up by the Program management on audit recommendations	Annual/ All audit recommendations are implemented	Audit Recommendations are seriously followed up by the Implementing Agencies

ANNEX 5. SUMMARY ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT

The Environmental and Social Systems Assessment (ESSA) is prepared to assess the Program Systems for managing environmental and social aspects. The purpose of the ESSA includes[79]: (i) identifying the key environmental and social risks that may affect the achievement of the development outcomes; (ii) assessing the capacity of Government's existing environmental and social management systems including the legal, regulatory, and institutional frameworks guiding the Program; (iii) defining and recommending measures to strengthen the system; and (iv) integrating these measures into the overall Program to manage and mitigate environmental and social risks.

This ESSA has been prepared by the World Bank for the proposed Program and provides a summary of environmental and social risks and benefits associated with activities for achieving the PDO; and an assessment of the extent to which the borrower's environment and social management systems are consistent with the six-core principles of the World Bank Policy. These six Core Principles focus on mitigation of risks around the following: #1 - Environment and Social Management Systems; #2 - Natural Habitats and Cultural Resources; #3 - Public and Worker Safety; #4 - Land Acquisition; #5 - Vulnerable Groups; and #6 - Social Conflict.

The ESSA analyzes the system for environmental and social management that are relevant for the Program with regards to each of these principles. The proposed actions to fill gaps identified through the ESSA process directly contribute to the Program's results. The ESSA analysis presents a description of the Program activities and the baseline conditions for existing environmental and social management systems. The ESSA draws on baseline information and presents an analysis of the existing system with regards to the core principles for environmental and social management in the World Bank Policy and Directive for Program-for-Results Financing and presents a Program Action Plan that will be incorporated into the overall Program documentation.

The ESSA is prepared through a combination of reviews of existing materials and available technical literature, and consultations with key stakeholders including officials of various government departments, representatives of the regional and district authorities, representatives of the research institutions as well as universities, farmers and farmer unions, NGOs, related bi-lateral and multi-lateral development agencies, and other subject matter experts. Two consultancies were engaged to assist in preparing the ESSA: 1) Kazakhstan's legal framework relating to 'land'; and 2) functioning of the 'land management systems' at the regional/district levels. Several field visits were made to understand Government's functioning and service delivery mechanisms. Several rounds of consultations were held with various stakeholders at national, regional, district, and village levels. The methodology in the preparation of the ESSA was participatory involving intensive and extensive consultations with various stakeholders. All these allowed the identification of critical gaps and risks as well as the development of mitigation measures described in the Program Action Plan.

[79] Bank Guidance "Program-for-Results Financing Environmental and Social Systems Assessment" effective since July 1, 2019.

Assessment of Borrower's Systems

Overall Assessment. The Results Areas identified under the Program are expected to largely result in positive effects in the livestock sector and the rural economy. However, some environmental and social gaps have been identified in the system, particularly in terms of understanding and enforcing laws and regulations at the Akimat level, as well as service delivery, gender, and citizen engagement. The potential environmental and social risks are assessed to be Substantial. Therefore, mitigation measures, as spelled out in the ESSA Plan of Action, must be undertaken in order to prevent lasting harm to the environment as well as irreversible adverse environmental and social impacts. Table A5-1, below, summarizes the assessment conducted.

Table A5-1: Environmental and Social Systems Assessment

DLIs	Environment and Social Systems Assessed	Environmental and Social System Gaps and Risks	Environmental and Social Benefits
Results Area 1: Improvement of Veterinary Service Delivery and Animal Recording.			
DLI 1: Cattle is being registered in the Unified information system for traceability, genetic improvement, and animal health control.	• Veterinary Committee. • MOA Statistics and Record Keeping.	• Gaps in record keeping and availability of statistics under the recently adopted preliminary national system for the domestic (as opposed to imported) herd.	• Improved animal health and genetic quality due to improved record keeping and traceability. • Unified recording systems allows for better emergency planning. • Better records keeping results in improved genetics which is an important driver in increased production and income with reduced GHG emissions.
DLI 2 Small and Medium Farmers have access to improved and upgraded veterinary services.	• Veterinary Committee. • Akimat level veterinary services. • Ministry of Agriculture extension services.	• Gap between regulations and enforcement on veterinary medical waste and animal disposal. • Risk of increased pollution due to inappropriate disposal of veterinary medical waste, animal byproducts, and culled animals. • Risk of inadequate veterinary capacity thus poor services.	• Improved animal health due to provision of upgraded veterinary services. Thus, potential decrease in GHG emissions per unit of product. • Improved animal health and emergency/contingency plans will reduce vulnerability to climate emergencies.
Results Area 2: Scale-up the Farmer-Centric Service Delivery Model.			
DLI 3 Small and Medium Farmers have been trained and	• Ministry of Agriculture	• Gap in the capacity of	• Better environmental

certified in Good Practices.	extension Services. • National Agrarian-Scientific and Educational Center (NASEC).	MOA and NASEC to deliver extension services to the numbers of farmers expected under the Program.	management on farms. • Net GHG emissions due to improved diet, improved manure management, and improved grazing practices. • Increased carbon sequestration and biodiversity (i.e. improved pasturing, live fencing, late fodder harvesting).
DLI 4 The number of Small and Medium Farmers participating in the Sybaga Program and selling cattle to feedlots has increased.	• Ministry of Agriculture extension Services. • NASEC. • National and Akimat legal frameworks related to land; and National and Akimat Land Management Systems.	• Gap between regulations and enforcement on operation of feedlots and slaughterhouses. • Risk of land degradation due to overgrazing and poor pasture management as farm numbers increase. • Risk of improper use of pesticides in feed lots, silage production, and silage storage.	• More land under management using sound environmental practices. In particular, new farmers are expected to have higher rates of adopting new practices that reduce overall GHG emissions, improve farm level carbon sequestration, better manage pesticide use, and other positive impacts.
Results Area 3: Implement Green Growth Policies for the Beef Sector.			
DLI 5 Share of public expenditure in support of green growth and sustainability in beef sector.	• State Program • National statistics on GHG emissions including review of NDCs and NAMAs. • Ministry of Agriculture extension Services. • NASEC.	• Gap in current public spending on environmentally and climate friendly policies. • Gaps in monitoring and reporting on environmental and social compliance. • Gaps in knowledge about available statistics	• Improved environmental regulation and enforcement in the cattle beef sector. • Improved knowledge of sound environmental practices, particularly among farmers. • New subsidies will lower GHG emissions for the

		regarding GHG emission in the cattle beef sector. • Risks related to disease and husbandry of imported species once delivered to farmers. • Risk of point source pollution from manure management and waste disposal at increasing number of feed lots and slaughterhouses. • Risk of biodiversity loss due to expansion of grazing areas into critical habitats (rangeland expansion for increased herd into Saiga Antelope habitats). • Risk of improper pollution control and waste management in related industries (tanning, glue and gelatin production).	sector through improved animal health, grazing practices, farm management, and manure management.
DLI 6 The Borrower has made commitments for the control of GHG emissions and adaptation to climate change in the beef sector.	• State Program • National statistics on GHG emissions including review of NDCs and NAMAs. • Ministry of Agriculture extension Services. • NASEC.	• Gap in knowledge and statistics regarding GHG emission in the cattle beef sector. • Risk that farmers, feed lot managers, and production facilities/slaughterhouses do not adopt to policy changes.	• Decreased net GHG emissions. • Increased carbon sequestration. • Increased linkages and knowledge on how the cattle beef sector relate to GHGs and the NDCs.

Legal and Regulatory Framework. Government of The Republic of Kazakhstan has enacted a range of laws, regulations, and procedures relevant to the management of environmental and social effects of the proposed Program. The legal and regulatory framework at the National and Sub-national levels provide an adequate and appropriate enabling framework for implementing the key activities to be taken up under the Program. Citizen Engagement and public accountability are required by the legal framework at different levels. The ESSA finds that the existing legal and regulatory framework addresses the identified direct, indirect, induced, and cumulative social and environmental effects for the planned Program. While the MOA shoulders key responsibility for managing this Program, it will have to liaise with different agencies including the Ministry of Ecology, Geology, and Natural Resources (MEGNR), in order to ensure compliance of the relevant laws and regulations. The capacity for enforcing those laws and regulations among respective agencies and at the Akimat level is rather mixed and will require strengthening.

Environmental Management System Assessment. The Republic of Kazakhstan has a well-defined legal and regulatory framework and institutional responsibilities to meet the environmental, community health and safety, animal health (veterinary) requirements and perform permitting/licensing procedures. However, the institutional capacity to enforce and implement legal requirements and procedures for environmental and social protection needs to be strengthened, particularly via and internal institutional procedures and communication to the clients (farmers).

Based on the initial screening of the national legislation and regulation framework, the environmental management system is well defined, covering all aspects related to sound prevention, mitigation and management of potential environmental impacts (e.g. permitting and licensing, waste management, veterinary services provisions, etc.) and institution/authority in charge. However, the borrower's, implementing and partner institutions' organizational capacity can be further strengthened to effectively manage environmental and social effects in accordance with the Core Principles.

The MOA will have overall responsibility for the delivery of the Program and will host the Program Management Office (PMO). The PMO will request budget, coordinate procurement, supervise verification, consolidate reporting, and serve as the main counterpart for the World Bank. A high level of coordination is required between the responsible and partner institutions that will participate in implementation of the DLIs in order to achieve the PDO successfully. Therefore, the institutional arrangement will include the creation of the Program Coordination Council, which will be headed by the Vice Minister of Agriculture and comprised of representatives of responsible and implementing agencies (NASEC, Veterinary Committee) and other relevant stakeholders (e.g. MEGNR, Akimats, representatives of industry associations and farmer unions).

MOA currently does not have any structural department and/or staff dedicated to environmental issues, nor does it have any interim procedures for assessment of environmental risks and impacts of policy developments. Current legislation regarding environmental protection related to the Program (sustainable pasture management, preventing water pollution, biological waste/manure management, and greenhouse gas emissions) gives the MEGNR responsibility for screening the activities that may pose environmental risks.

As environmental sustainability is included as a key element in the PDO, it is being mainstreamed throughout the Program; therefore, environmental risks are expected to be mitigated through close attention at all levels by Program Management and oversight by Government of Kazakhstan. The Program will provide Capacity Building to ensure that mitigation occurs. The environmental risks associated with

individual activities supported by the Program, include typical impacts from adoption of new regulations, guidelines, training programs, and small-scale civil works (scaling-up small and medium size cattle farms, etc.), are largely Low to Moderate.

However, as the Program may result in the increase of emissions of greenhouse gases due to increase of the number of cattle, and a substantial increase of the number of animals being fattened in feedlots and processed in slaughterhouses, the overall Program environmental risk level rated Substantial. As such, potential environmental risks are mainly associated with increased amount of cattle. Those risks include: (i) increased territories of land occupied by monoculture to meet demand for feed/forage (particularly in winter time) thus reducing biodiversity; (ii) increased uptake of fresh water use for irrigation and cattle watering; (iii) increased demand for pastureland resulting in pressure on steppe ecosystem and soil; (iv) increased amount of manure and other biological wastes (blood, bones, hooves etc.) that, without proper treatment, emit greenhouse gases and pollute the environment; and (v) failure of farmers and other stakeholders (veterinarians, feedlots, slaughterhouses, etc.) to adopt environmental and greenhouse gas (GHG) centered policy changes.

The level of environmental risk is also justified by the existing gaps between the Core Principles and the borrower's systems ability to minimize, mitigate and manage environmental risks (see Table A5-2 for details):

- Capacity of the implementing institutions to enforce legal and regulatory frameworks guiding environmental management, especially feedlot and slaughtering house operations remains low.
- There is currently little coordination between MOA and MEGNR and the types of activities, including feedlots and slaughterhouses, being financed by private sector and other Government programs, rarely get the attention of the regulatory authorities in the Division on State Environmental Control, or the Division on State Environmental Expertise and Permits.
- The MOA and other Program implementing entities have internal audit departments that deal with corruption issues, but not other compliance issues like those related to environment and social laws and regulations. There are also no staff charged with follow-up on environmental and social issues.

Social System Assessment. Given that this Program is a country wide operation, the program portrays a highly diverse and heterogeneous stakeholder profile across the length and breadth of the country[80] - livestock farmers, agriculturists, farm scientists, veterinarians, traders, marketeers, processors and packagers, exporters, transporters, and several segments of authorities. The stakeholder analysis has been the key instrument for assessing the social system. It comprised: identifying stakeholders at different levels (national, Akimat, district, and village); evincing their expectations and related concerns; and assessing risks and impacts. The analysis reveals that the key program elements, from social perspective, relate to: (i) expansion of the cattle beef sector through small and medium farms; (ii) developing effective outreach to the existing small and medium livestock farms; and (iii) provision for ensuring appropriate and adequate enabling support and effective service providers.

As envisaged by the overall government program, expansion of the sector entails making available land to new farmers/entrepreneurs; provision of capital and interest subsidy; and assistance on input supplies and output marketing. The Program has 'inclusion' as a central theme. Towards accomplishing this, within the Program boundary, the new 'commercial beef farmers' are expected to emerge from: (i) existing

[80] 7,031 rural settlements, 35 villages, 84 cities, 175 administrative districts, 2 republican cities and 14 regions.

individual farmers who are engaged in crop or dairy production; (ii) current household farmers, who are interested in becoming registered commercial beef producing farmers; (iii) students from agricultural universities; and (iv) the general public, youth, in particular.

Currently, the institutional arrangements required to accomplish these goals are spread across several agencies, such as MOA, Regional Akimats, District Akimats etc. making the bureaucratic processes difficult to navigate, particularly for new and potential farmers. Additionally, ensuring gender parity when implementing the Program may prove to be a challenge as women interviewed expressed apprehensions around access to resources like livelihood amenities and infrastructure facilities as well as fear of workload increases when farm responsibilities are combined with traditional female roles. Overall, the following have been identified as gaps to accomplish inclusive development (see Table A5-2 for details):

- Knowledge regarding available land for assignment to new small and medium farmers, who intend to become commercial beef producers;
- Complementary production support such as credit, grants, subsidy and infrastructure services;
- Universal and efficient access to information, appeal and grievance redressals; and
- Gender roles and women participation.

Social Risk. The Program operation's social risk is rated as Substantial as there are several key risks that need be addressed, such as: potential expropriation of land to accommodate new farms; access to credit and insurance for small and medium farmers; rich farmers benefiting more than small and medium sized farmers under the Program; and women not benefitting equally from the Program.

Table A5-2: Environmental and Social Gaps, Risks, and Mitigation

Results Areas	Environmental and Social Gaps and Risks	Potential Mitigation Measures
Results Area 1: Improvement of Veterinary Service Delivery and Animal Recording.	• Gaps in record keeping and availability of statistics under the recently adopted preliminary national system for the domestic (as opposed to imported) herd. • Gap between regulations and enforcement on veterinary medical waste and animal disposal. • Risk of increased pollution due to inappropriate disposal of veterinary medical waste, animal byproducts, and culled animals. • Risk of inadequate veterinary capacity thus poor services.	• Implementation of standard veterinary medical waste disposal procedures, including incinerators for larger facilities. • Implementation of standard disposal procedures for animals culled due to disease or potential exposure to disease. • Increased veterinary health standards including treatment of healthy animals (breeding, vaccines, etc.). • Increased veterinary inspections, record keeping of those inspections, and follow-up on deficiencies noted. • Capacity building for veterinarians and veterinary students included in the Program.
Results Area 2: Scale-up the Farmer-Centric Service Delivery Model.	• Gap in the capacity of MOA and NASEC to deliver extension services to the number of farmers expected under the Program.	• Mechanisms in place to ensure that all land allocated under the Program is currently unallocated and/ or unused, and without prior claims

	• Gap in the level and amount of extension services reaching individual farmers. • Gap in the knowledge regarding available land for assignment to new small and medium farmers. • Gap in statistics available on women farmers. • Risk of potential expropriation of land to accommodate 20,000 additional small and medium farmers. • Risk of non-availability of institutional credit and/or insurance for small and medium farmers. • Risk that program will be appropriated by large/rich farmers rather than benefitting small and medium sized farmers. • Risk that women farmers will not benefit equally from the Program. • Risk of land degradation due to overgrazing and poor pasture management as farm numbers increase. • Risk of improper use of pesticides in feed lots, silage production, and silage storage. • Risk that quality and accessibility of land for new farms is not adequate. • Risk that bureaucracy at national and Akimat levels prevents timely application for and assignment of land to new farmers.	and encumbrances. • Development of "one stop service centers" in each Akimat for land allocation, assistance with identifying financing, insurance, etc. particularly for new small and medium farmers. • Mechanisms in place to ensure that land allocated to new farmers is accessible, fertile, and environmentally favorable for raising beef cattle. • Increased extension services: ○ on new pasturing techniques ○ on developing effective pesticide alternatives, particularly for feedlots and silage production; ○ on pesticide management, particularly in feedlots and silage storage; and ○ developing on farm and feedlot pesticide management practices. • Ensure compliance with the conditionality criteria for new subsidies for agri-environmental practices (i.e. pasturing, windbreaks, live fences, and watershed protection). • Keeping regulations on pesticide use and management up to date. • Development of clear criteria for eligibility for land allocation to new small and medium farmers. • Develop clear systems and eligibility criteria to ensure gender equity in selection of new small and medium farmers to participate in the Program. • Proactive planning to prevent expansion of sector into critical habitats or protected areas.
Results Area 3. Implement Green Growth Policies for the Beef Sector.	• Gap in current public spending on environmentally and climate friendly policies. • Gaps in knowledge about available statistics regarding GHG emission in the cattle beef sector.	• Stronger licensing and inspection procedures at the Akimat levels for new and existing facilities. • Upstream planning around necessary environmental regulation for potential expansion of related

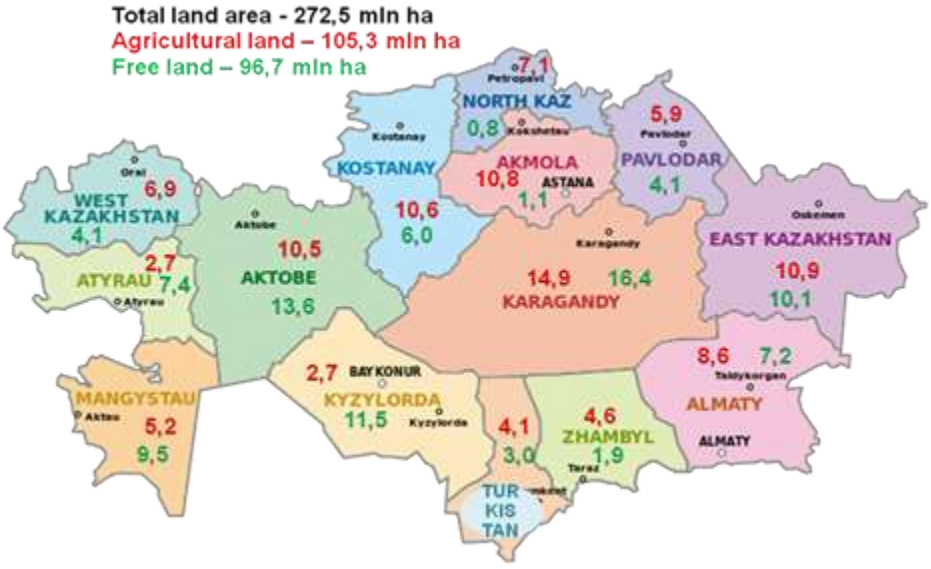
	• Risks related to disease and husbandry of imported species once delivered to farmers. • Risk of point source pollution from manure management and waste disposal at increasing number of feed lots and slaughterhouses. • Risk of biodiversity loss due to expansion of grazing areas into critical habitats (rangeland expansion for increased herd into Saiga Antelope habitat). • Risk of improper pollution control and waste management in related industries (tanning, glue and gelatin production). • Gap in knowledge and statistics regarding GHG emission in the cattle beef sector. • Risk that farmers, feed lot managers, and production facilities/slaughterhouses do not adopt to policy changes.	industries related to value added from byproducts. • Extensive and on-going training and outreach to all segments of the cattle beef sector to ensure uptake of new technics and policies. • Quarterly monitoring and reporting on condition of imported cattle for the first 18 months in country. • GIS Mapping to include protected areas in relationship to cattle farming in order to ensure planning and land allocation excludes activities that might endanger protected areas or critical habitats.

Land Availability.[81] A key input/ intervention for the expansion of beef production lies in making available land. Government envisages some 20,000 new/expanded small and medium farms, each at about 100 ha which aggregates to at least 2 million ha. Given the land scenario in Kazakhstan, the environmental and social system assessment (ESSA) reveals that it is relatively straightforward to secure the lands.

Kazakhstan is the ninth largest country in the world by its territory 272,5 million ha located in the center of the Eurasian continent and is more than twice the combined size of the other four Central Asian states and 60 percent larger than Alaska. The total land area is 262.5 million ha[82],184 million population; and population density of 6.80/sq. km[83]. As per the MOA (Committee of Management of Land Resources), reserve or free lands is estimated at around 96.7 million ha or 36.8 percent of the total land[84] (Figure-A5-1). Most lands belong to Government and are leased out for a specific purpose with an agreed set of terms and conditions.

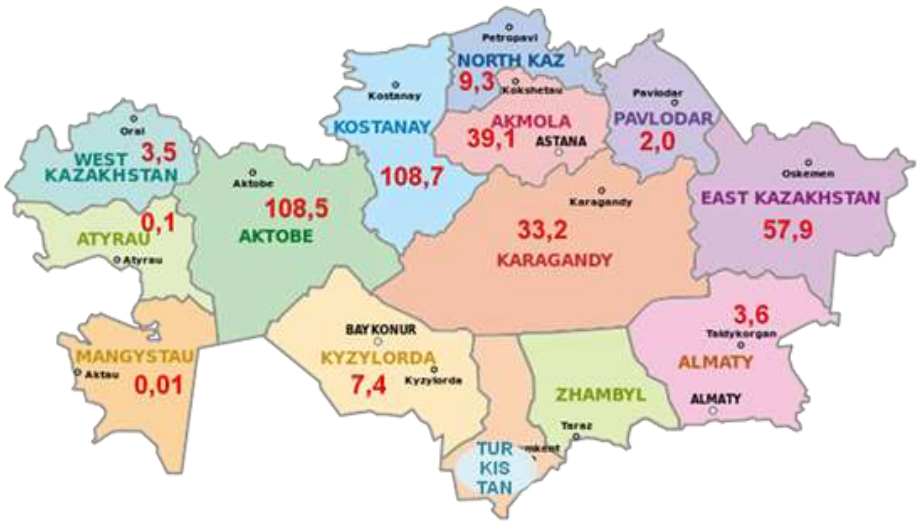
[81] Land related results are drawn from two analytical studies: one, legal perspective, a collaborative effort with the CA Country Lawyer; and other, land management issues, financed under a Trust Fund.
[82] *Consolidated analytical report on land resources for 2018, CMLR*
[83] https://www.worldatlas.com/webimage/countrys/asia/kazakhstan/kzlandst.htm
[84] *(*http://www.aisgzk.kz/aisgzk/en/content/14/*).*

Figure A5-1. Reserve land estimates per oblast (million ha).



However, as per ESSA, in the context of Core Principle 4, all the 96.7 million ha can be considered as 'free' and could be made use of. This gains ground as Kazakhstan's legislation provides for appropriation of lands, if the lands are: (i) not used for the purpose it is meant for; (ii) un-utilized; and (iii) under-utilized. Kazakhstan government has laid out elaborate processes to ensure that appropriations are appropriate and justified. This includes: (i) ground truthing with on-site assessments by the district Aikimat's office; (ii) issuance of notices to the assignees; (iii) providing ample opportunity for the affected land assignees not only to make their case but also offer time to set right things, if required; (iv) if the situation does not improve, then, move the cases to courts; (v) each case is discussed and deliberated in the court; and (vi) ultimately decrees issued by the Judiciary. Following this process, GOK has, during the past 4-5 years, appropriated about 374,000 ha (Figure A5-2)

Figure A5-2. Land appropriations in the past 5 years (thousand ha)



However good the appropriation processes are, ESSA recommends that the program should exclude any land which is currently used or occupied by people (with or without formal or legal claims) as well as those appropriated by the authorities. Reasons for this are twofold: (i) appropriation of lands without due compensations and attention of impacts on livelihoods could mean involuntary acquisition; and (ii) enough lands, which have not been assigned so far and/ or not being occupied/ used by anyone, exists abundantly. So, all it is required for the Program is to ensure that lands used are indeed totally 'free' from any/ all encumbrances. To ensure this, the due processes have been drafted and agreed with Government and are included in the Program Action Plan.

Gender. There has been important progress in promoting women's empowerment in public life, achieving important results over the last decade. Kazakhstan has almost reached gender parity for access to education, and women represent the majority of students at higher education institutions making up sixty-four percent of those studying for masters' degrees and fifty-eight percent of those pursuing doctoral studies. Despite the higher education levels of women compared to men, the majority of the female labor force is predominantly concentrated in traditional sectors such as education, health, and services. There is significant underemployment and unemployment and women remain underrepresented in key decision-making posts while traditional gender roles continue to dominate education and employment decisions. Efforts are required to address gender inequalities in the public sphere and ensure equal outcomes for women and men in political, economic, and social sectors. Finally, gender gaps in respect of the farmer-centric interventions can be gauged only during implementation. Major apprehensions expressed by women include: access to resources, livelihood amenities and infrastructure facilities in/ around new farms, workload increases, and loss of social networks as a result of moving to new farmland.

Citizen Engagement and Grievance Redressal Mechanism (GRM). Given that the proposed Program will be nationwide and comprise multi-sectoral activities among various actors and agencies, the Program's interface with the stakeholders, in general, and direct beneficiaries, in particular, will need to be well planned and implemented. That engagement should cover four broad areas: (i) information dissemination to enable fuller awareness about the Program; (ii) timely response to queries and facilitation of services;

(iii) grievance redress mechanism (GRM); and (iv) beneficiary feedback. Kazakhstan's legal framework provides for these through the Law on Access to Information, Law on State Services, and Law on Procedures for Considering Appeals of Individuals and Legal Entities. Systems and procedures developed in accordance with these laws are functioning satisfactorily in and around urban areas and may also be augmented to fit the Program. But, ensuring out-reach in the rural areas will be a challenge due to remoteness, inaccessibility and illiteracy. So, the Program will bring into its ambit the 360 one stop public service centers established throughout the country.[85] These centers can liaise between the citizens and the Program (Ministry of Agriculture), receive complaints from local people relevant to the Program and pass them on to the PMO. Also, Public councils, headed by the local Akims and comprising chiefly non-government agencies/individuals, can also serve as forums for dissemination and receiving complaints/queries. The GRM and community outreach will be essential to ensuring the program uses only land that is currently unallocated and/or unused, and without prior claims and encumbrances.

Recommendations and Proposed Actions

ESSA preparation was chiefly based on consultations with a variety of stakeholders. These engagements enabled gauging expectations against the related environmental and social risks and the identification of possible mitigation measures to alleviate those risks. Based on those mitigation measures, the ESSA Action Plan proposes eleven actions across four main areas: governance; advisory services, training, and farm-based innovation; communications and outreach; and mapping, records, and reporting. Of these actions, six are also included in the Program Action Plan, which will be part of the Loan Agreement governing the Program. The ESSA Action Plan, including timeline and responsible agencies, is detailed below in Table A5-3. The eleven actions in this ESSA Action Plan are critical to the successful delivery of the Program and it is incumbent upon the PMO to ensure they are carried out. Actions two, four, seven, eight, nine, and ten (in bold below) are particularly important; therefore, they are also included in the Program Action Plan, which will be part of the overall Legal Agreement governing the Program.

ESSA Disclosure and Public Consultations

ESSA preparation was chiefly based on consultations with a variety of stakeholders.[86] These engagements enabled gauging expectations and the related issues/ concerns emanating from a variety of stakeholders. These have been fed into preparing the draft ESSA.

A disclosure workshop was organized on March 5, 2020 in Nur Sultan by the Green Coalition, a women-centric NGO, at the request of the Bank. It was attended by a group of 40 diverse stakeholders from across Kazakhstan. Notes from the workshop and a complete list of participants are found as Annex 6. The workshop participants included farmers, academics, government representatives, civil society, private sector, international donor agencies, and representatives of nongovernment organizations. Major feedback received from the public consultation was incorporated into the final ESSA.

[85] The Public Service Centers (PSC) ((ЦОН - Центр обслуживания населения)) were introduced in 2007 to provide a wide variety of state services to all citizens in the country through a "single window" system. This has helped in eliminating barriers and bureaucracy and has the following positive qualities: (i) helps all sections of the population to receive equal access to public services; (ii) provides an opportunity to carry out all necessary procedures and sign all documents in one place; (iii) excludes any contacts between the executors of documents and citizens who want to receive them (which eliminates bureaucracy).To improve the performance of PSCs in 2011 it has been completely modernized and integrated with e-Gov.

[86] While full details are available in the World Bank's Country Office in Nur Sultan, a summary is annexed to the ESSA.

The final ESSA will be translated into Russian and Kazak and will be disseminated in hard copy and electronically to all Akimats as well as published on the MoA and World Bank websites.

Table A5.3—Proposed ESSA Action Plan (actions with bold text are included in the Program Action Plan)

Recommended Action	Results Area	Due Date	Implementing Entity	Indicator/Completion measurements
Governance				
A1. Appoint a focal person responsible for (1) communication and outreach, (2) outreach to Akimats to ensure compliance, and (3) environmental and social risks mitigation, monitoring, and reporting at the PMO. And develop Environmental and Social Guidelines for the Implementing Institutions of the Program.	1, 2, and 3	At the start of the Program (when POM is due)	PMO PMO	Focal Point Appointed Guidelines included in the POM.
A2. Ensure land assigned to farmers are unused and are free from prior claims and incumbrances.	**2 and 3**	**On going**	**MOA; Akimats**	**Government, through the Akimats, make available maps indicating available plots for new and expanding small and medium farms (see Action 10 for mapping).[87]**
A3. Strengthening Environmental and Veterinary certification and inspection systems within the MOA and at Akimat level (farms, feedlots, slaughterhouses, etc.).	1, 2, and 3	Template (when POM is due) On going	MOA, through Veterinary Committee; MEGNR; and Akimats Verification by Independent verification agency	Reporting template included in the POM Annual Program Implementation Reports
Advisory services, Training, and Farm-Based Innovation				
A4. Development, strengthening, and implementation of programs to offer advisory services specifically aimed at Program objectives including expanding veterinary services; GHG reduction through better feeding practices; GHG reduction through better pasture and land management; biodiversity protection through changes harvesting and planting; modern	**1, 2, and 3**	**On going**	**MOA; Akimats; PMO** **Verification by Independent verification agency**	**Advisory services Delivered** **Annual Program Implementation Reports**

[87] Results Area 2.3 will focus on (a) review and improvement of land access policies; and (b) strengthening of the Akimats' capacity to manage common pastureland and related water points so that farmers' access to more productive pastures is improved.

integrated pest management; etc.				
A5. Ensure compliance with the conditionality criteria for new subsidies for agri-environmental practices. These will include carbon sequestration through live fences, wind breaks, watershed protection, and pasture management.	2 and 3	On going	MOA; Akimats; PMO Verification by 3rd Party Agent	Scheme implemented Annual Program Implementation Reports
Communications and Outreach				
A6. Bring the existing One Stop Citizen Service Centers into the arena of the program for enabling easier information, appeal and redressal.	1, 2, and 3	6 months after the start of the Program Operational throughout Program Implementation	MOA; Akimats; PMO Verification by 3rd Party Agent	Offices Established in each Akimat Annual Program Implementation Reports
A 7. Development and implementation of "Single Window" program assistance for small and medium farmers at Akimat level with links to MOA's PIU.	**1, 2, and 3**	**6 months after the start of the Program Operational throughout Program Implementation**	**MOA; Akimats; PMO Verification by 3rd Party Agent**	**Offices Established in each Akimat Annual Program Implementation Reports**
A8. Undertake a quick and rapid appraisal and identify entry points to strengthen female participation in the Program.	**2,2,3**	**6 months after the start of the Program**	**MOA**	**Assessment completed. Results incorporated into the program. Annual Program Implementation Reports**
A9. Development and implementation of an effective and inclusive Information, education and communication campaign for the Program linked to Advisory Services, including guidelines and best practices (access to land; access to credit and grant programs; access to improved veterinary services; pasture management; tree planting for windbreaks, live fences, and watershed protection; manure management; pest management; etc.).	**1, 2, and 3**	**6 months after the start of the Program Operational throughout Program Implementation**	**MOA; PMO**	**Campaign Developed Annual Program Implementation Reports**
Mapping, Records, and Reporting				

A10. Ensure continuous access to GIS Mapping for rangelands, grasslands, and pastures that includes layers for: assignment; registered use; actual use; size of farms; transport routes; production infrastructure; ecosystems (water courses, lakes, wetlands, drylands, etc.); ecosystem services schemes (water course protection, wind breaks, orchards and other tree planting schemes, etc.); protected areas; and critical habitats.	**2 and 3**	**Continuous throughout Program Implementation**	**MOA; Akimats; PMO**	**GIS Maps developed and published**
A11. Development and implementation of a program to include statistics related to the Program in National Statistic Reporting, including environmental and social statistics as well as those related to NDC and National Action Plan for Adaptation (GHG/carbon sequestration).	1, 2, and 3	1 year after the start of the Program Reported annually	MOA; PMO	Annual reports by National Statistics Agency Annual Program Implementation Reports

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ANNEX 6. PROGRAM ACTION PLAN

Action Description	Source	DLI#	Responsibility	Timing		Completion Measurement
Advisory system Chapter to scale-up the knowledge transfer is incorporated in the State Program.	Technical	DLI 3	Ministry of Agriculture	Due Date	31-Dec-2021	Chapter developed, public consultation conducted, Ministry of Agriculture endorses the chapter and incorporates it in the draft State Program, including estimates of financing requirements.
The Ministry of Agriculture through its Council of Science and Technology working group, develops and adopts the Methodology for agricultural knowledge advisory and knowledge transfer activities for the beef sector.	Technical		Ministry of Agriculture	Due Date	30-Jun-2021	Ministry of Agriculture hosts a Council of Science and Technology comprised of scientists and experts. The MOA will develop a methodology for agriculture advisory and knowledge transfer service delivery and activities, to be adopted by the Council.
Advisory system survey conducted	Technical	DLI 3	Ministry of Agriculture	Recurrent	Yearly	Annual surveys to measure advisory system satisfaction and good practice adoption as well as to conduct annual evaluation of advisory programs.
GAP, GAHP and GGMPs guidelines and technical packages are defined and adopted.	Technical	DLI 3	Ministry of Agriculture	Due Date	01-Apr-2021	GAP, GAHP and GGMP guidelines are defined and adopted by the Ministry of Agriculture following design and consultations with key stakeholders. These guidelines help define the advisory services and training programs.
Improved delivery mechanisms for GAPs, GAHPs and GGMPs are funded and implemented by Ministry of	Technical	DLI 3	Ministry of Agriculture	Recurrent	Yearly	Agricultural Advisory and Knowledge Transfer programs are adequately funded. Model farms and agricultural competency centers are resourced and scaled-up as per

Agriculture or NASEC every year.						the adopted agricultural advisory and knowledge transfer strategy.
Adopt minimum requirements for accessing state support measures, which are based on the condition of cross-compliance with guidelines for GAPs, GAHPs and GGMPs	Technical	DLI 5	Ministry of Agriculture	Recurrent	Continuous	The Ministry of Agriculture's resolution (decision) requiring adoption of two of GAP, GAHP and GGMP as an eligibility criteria for accessing state support measures.
Develop and implement Action Plan to target eligible small and medium farm-owner women in the state programs, including agricultural advisory and knowledge transfer, subsidized credit and other subsidies.	Technical	DLI 3	Ministry of Agriculture	Recurrent	Continuous	Measured by increasing participation of eligible women farm-owners in the export-oriented high-value beef supply chains.
Conduct public expenditure review to assess the share of state support measures for green growth and sustainable performance of the beef sector.	Technical	DLI 5	Ministry of Agriculture	Recurrent	Yearly	Public expenditure reviews could be either separate or part of the verification process.
Conduct training programs and awareness campaigns to inform Small and Medium Farmers about land lease and land ownership rules and regulations.	Technical	DLI 4	Ministry of Agriculture	Recurrent	Continuous	Regular training and awareness campaigns are conducted by the Ministry of Agriculture through advisory and knowledge transfer services.
Ensure open public access to GIS Maps	Environmental and Social Systems	DLI 4	Ministry of Agriculture, Akimats	Recurrent	Continuous	GIS Maps for grasslands and pastures with layers: assignment; registered use; actual use; size of farms; transport routes; infrastructure; ecosystems;

						protected areas; critical habitats.
Ensure land assigned to farmers are unused and free from prior claims and incumbrances.	Environmental and Social Systems	DLI 4	Ministry of Agriculture	Recurrent	Continuous	The Ministry of Agriculture through the Akimats, make available maps indicating available plots for new and expanding small and medium farmers.
Develop and implement “Single Window” program assistance for small and medium farmers at Akimat level with links to MOA’s PMO.	Environmental and Social Systems	DLI 4	Ministry of Agriculture, Akimats	Due Date	30-Jun-2021	Offices Established in each Akimats. Operational throughout implementation. Annual Program Implementation Reports and verified by the IVA.
The Bank will monitor the effective application of grievances mechanism on fraud and corruption under the Program.	Fiduciary Systems		MInistry of Agriculture	Recurrent	Semi-Annually	The MoA will share with the World Bank information on all complaints and actions taken or being taken on complaints and grievances received on fraud and corruption under the Program.
Ensure that the Bank team has access to the Program implementing entities’ internal documentation relevant to the Program fiduciary systems’ monitoring and supervision.	Fiduciary Systems		Ministry of Agriculture	Recurrent	Yearly	To ensure proper monitoring of the Program’s fiduciary systems by the Bank team, the MOA should ensure that the Bank team has access to all internal documentation relevant to Program fiduciary systems’ monitoring and supervision.
Ensure that persons or entities debarred or suspended by the Bank are not awarded a contract by verifying the same prior to award under the Program during the debarment or suspension period. TOR for audit firms will include the requirement to	Fiduciary Systems		Ministry of Agriculture	Recurrent	Continuous	The compliance with this requirement would be implemented by the MoA, monitored by the MoF and be checked by the Program’s auditor.

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Revise the Rule No 108 of March 15, 2019 on "Subsidizing Livestock, Improvement Productivity and Quality of Livestock Production" in order to improve the effectiveness, targeting and consistency of the allocation of agricultural support measures.	Fiduciary Systems		Ministry of Agriculture	Due Date	31-Mar-2021	The Rules will be revised.
Review the subsidy processing and payment system, to determine whether it is functioning as intended and improve the system to ensure that the system is able to effectively address the corruption risks identified in the public auditors' reports.	Fiduciary Systems		Ministry of Agriculture	Due Date	30-Jun-2022	The MOA will share with the Bank the Internal Audit unit's findings and recommendations

ANNEX 7. IMPLEMENTATION SUPPORT PLAN

The Program will require intensive implementation support and a continuous dialogue with Government of Kazakhstan. The World Bank's implementation support strategy combines regular supervision with timely technical support and policy advice. Implementation support will include: (a) reviewing implementation progress (including that of the Program Action Plan) and achievement of Program results and DLIs; (b) providing support on resolving emerging Program implementation issues and on building institutional capacity; (c) monitoring the adequacy of systems performance, and monitoring compliance with legal agreements; and (d) supporting Government in monitoring changes in risks. The team has received a Korean Green Growth Trust Fund, which will be used to strengthen the design of the Program as well as advance the capacity building for climate mitigation and adaptation measures and green growth principles during the first year of implementation.

It is expected that the early implementation phase could face implementation challenges, which will be addressed through the following actions:

(a) **Implementation support strategy.** This will be largely built on dialogue and partnership. The implementation support team will have continuous interaction with all stakeholders of the Program. This will require consistency in the composition of the core implementation support team, technical expertise, and familiarity with country/local situations.

(b) **Capacity building of the implementation agencies.** Support will be required for the implementation of results areas and in terms of fiduciary and environmental and social compliance management. At the level of implementation of results areas, the support will include reviewing and providing substantive inputs for the development of new policies, including where necessary, through specialized technical assistance. Korean Green Growth Trust Fund will be used to provide support in developing new good practices guidelines, organizing study tours and in-country seminars on policy issues related to agri-environmental policies, climate-smart investments, green growth strategies.

(c) **Monitoring and Evaluation.** It is expected that the client will face difficulties with the M&E system at the early stage of the Program implementation. Therefore, the Implementation support team will include a dedicated M&E expert, and the focus of ISM missions will be in supporting the client to develop and implement an effective M&E system.

(d) **Fiduciary.** During the Program implementation the Bank's fiduciary team will: review the implementation progress and working with the task teams to examine the achievement of Program Legal Covenant and Action Plan that are of a fiduciary nature; help the Borrower to resolve implementation issues and carry out institutional support; monitor the performance of fiduciary systems and audit reports, including the implementation of the legal covenant and PAP; and provide recommendations to enhance efficiency and effectiveness.

The following implementation support plan reflects the preliminary estimates of skill requirements, timing, and resource requirements over the life of the Program Considering the required flexibility in addressing the issues that may arise during the Program implementation, the plan will be updated periodically to ensure that it continues to meet the implementation support needs of the Program.

Focus of Implementation Support

Time	Focus	Skills Needed	Resources Estimate
First twelve months	• Program start and adoption of the Operations Manual • Results monitoring and verification • Policy and regulatory improvement processes • Review of public expenditure review • Update of the State Program for Agro-Industrial Complex Development • Results monitoring and verification arrangements.	• Core team • Monitoring and Evaluation expert • Agricultural public expenditures and agricultural policy formulation expert • Climate-smart livestock production expert • Veterinary systems and traceability policy experts	US$200-250K
12-48 months	• Results verification, compliance with agreed results targets and disbursement as per DLIs • Monitoring and evaluation • Adoption of regulations, scale-up of the agricultural advisory and knowledge transfer programs • Dialogue on agri-environnemental policies	• Core team • Monitoring and Evaluation expert • Agricultural public expenditures and agricultural policy formulation expert • Climate-smart livestock development policies expert	US$150-200K/year

Task Team Skills Mix Requirements for Implementation Support

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task team leader	12/year	4/year	Field-based staff
Climate-smart livestock development policies expert	10/year	4/year	Field-based staff
Procurement Specialist	4/year	4/year	Field-based staff
FM specialist	4/year	4/year	Field-based staff
Monitoring and evaluation expert	10/year	4/year	Washington-based staff
Agricultural public expenditures and agricultural policy formulation expert	6/year	2/year	Consultant
Veterinary systems experts	10/year (first two years)	2/year	Consultant and support from OIE
Traceability expert	6/year (first two years)	2-3/year	Consultant

Role of Partners in Program Implementation

Name	Institution/Country	Role
Development of good practice guidelines for access to credit by small and medium farmers. Assistance to ACC in targeting small and medium farmers	Asian Development Bank	Advisory and funding
Veterinary systems assessment, OIE PVS GAP analysis	OIE	Advisory
“Greening” Livestock Sector support measures	Korean partner institutions	Advisory and funding