Document of
The World Bank

Report No: ICR2395

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-47740)

ON A

LOAN

IN THE AMOUNT OF US$24.0 MILLION

TO THE

REPUBLIC OF KAZAKHSTAN

FOR AN

AGRICULTURAL COMPETITIVENESS PROJECT

January 24, 2013

Sustainable Development Department
Central Asia Country Management Unit
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective June 30, 2012)

Currency Unit = Kazakh Tenge

KZT 1.00 = US$0.0067
US$1.00 = KZT 149.4

FISCAL YEAR

January 1–December 31

ABBREVIATIONS AND ACRONYMS

ACP	Agricultural Competitiveness Project
APPAP-2	Second Agricultural Post-Privatization Assistance Project
CGS	Competitive Grant Scheme
CIMMYT	International Maize and Wheat Improvement Center
CPS	Country Partnership Strategy
ERR	economic rate of return
FAO	Food and Agriculture Organization
FSD	Financial Services Department
FY	fiscal year
GB	governing board
GDP	gross domestic product
GOK	Government of Kazakhstan
GOST	GOST standards (state standards left from Soviet times)
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
IFA	Immune Fermented Analysis
IRR	internal rate of return
ISR	Implementation Status and Results
ISO	International Standard Organization
KAI	Joint Stock Company “Kazagroinnovation”
KAM	Joint Stock Company “Kazagromarketing”
KazNAU	Kazakh National Agrarian University
KZT	Kazakh tenge
M&E	monitoring and evaluation
MIS	market information system
MOA	Ministry of Agriculture
MOF	Ministry of Finance
NPV	net present value
NRL	National Reference Laboratory
PAD	Project Appraisal Document
PCC	Project Coordination Center
PDO	project development objective
RVL	Republican Veterinary Laboratory
SPS	sanitary / phytosanitary (standards)
TA	technical assistance
TTL	task team leader
US$	United States dollar
WTO	World Trade Organization

Vice president:	Philippe Le Houérou
Country director:	Saroj Kumar Jha
Sector manager:	Dina Umali-Deininger
Project team leader:	Sandra Broka
ICR team leader:	Talimjan Urazov

KAZAKHSTAN
Agricultural Competitiveness Project

CONTENTS

A. Basic information	
Country: Kazakhstan	Project name: Agricultural Competitiveness Project (ACP)
Project ID: P049721	L/C/TF number(s): IBRD-47740
ICR date: 12/28/2012	ICR type: Core Implementation Completion Report (ICR)
Lending instrument: SIL	Borrower: Government of Kazakhstan
Original total commitment: US$24.00 million	Disbursed amount: US$14.61 million
Revised amount: US$14.70 million	Environmental category: F
Implementing agency: Ministry of Agriculture	Co-financiers and other external partners: Food and Agriculture Organization (FAO)

B. Key dates				
Process	Date	Process	Original date	Revised / actual date(s)
Concept review	07/23/2003	Effectiveness	09/18/2006	09/18/2006
Appraisal	08/10/2004	Restructuring(s)		06/30/2009 07/30/2010 10/28/2011
Approval	04/28/2005	Midterm review	04/08/2009	03/30/2009
		Closing	07/30/2010	06/30/2012

C. Ratings summary
C.1 Performance rating by ICR
Outcomes: Moderately Satisfactory
Risk to development outcome: Moderate
Bank performance: Moderately Satisfactory
Borrower performance: Moderately Unsatisfactory

C.2 Detailed ratings of Bank and borrower performance (by ICR)	
Bank	Borrower
Quality at entry: Moderately Satisfactory	Government: Moderately Unsatisfactory
Quality of supervision: Moderately Unsatisfactory	Implementing agency or agencies: Moderately Unsatisfactory
Overall Bank performance: Moderately Satisfactory	**Overall borrower performance:** Moderately Unsatisfactory

C.3 Quality at entry and implementation performance indicators			
Implementation performance	Indicators	QAG assessments (if any)	Rating
Potential problem project at any time (yes/no)	Yes	Quality at entry	Moderately Satisfactory
Problem project at any time (yes/no)	Yes	Quality of supervision	None
Development objective rating before closing or inactive status	Moderately Unsatisfactory		

D. Sector and theme codes		
	Original	Actual
Sector code (% of total Bank financing)		
Agricultural extension and research	50	60
Agro-industry, marketing, and trade	18	15
Animal production	13	
Central government administration	7	25

Crops	12	
Theme code (% of total Bank financing)		
Export development and competitiveness	29	38
Other rural development	14	22
Rural markets	14	15
Rural policies and institutions	14	
Rural services and infrastructure	29	25

E. Bank staff		
Position	**At ICR**	**At approval**
Vice president	Philippe H. Le Houerou	Shigeo Katsu
Country director	Saroj Kumar Jha	Dennis N. de Tray
Sector manager	Dina Umali-Deininger	Joseph R. Goldberg
Project team leader	Talimjan Urazov	Maurizio Guadagni
ICR team leader	Talimjan Urazov	
ICR primary author	Åsa Giertz	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The project's development objective is to increase the competitiveness of the agricultural sector in Kazakhstan. To achieve this objective, the project would facilitate access to markets by supporting measures to improve the quality and safety of agricultural products, enhance access to information, and harmonize standards. It will also help to increase the quality, quantity, and relevance of applied agricultural research and facilitate transfer of knowledge to farmers.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO indicator(s)

Indicator	Baseline value	Original target values (from approval documents)	Formally revised target values	Actual value achieved at completion or target years
Indicator 1: Increased farmers' income, particularly that of small- and medium-size farmers				
Value (quantitative or qualitative)	0	2% of all farmers	2,400 farmers	3,200 farmers
Date achieved	01/01/2005	04/29/2005	10/28/2011	06/29/2012
Comments (including % achieved)	Target value was revised to better reflect the project's contribution. Revised value was achieved.			
Indicator 2: Value of agricultural exports, including livestock products, rises compared with 2005				
Value (quantitative or qualitative)	US$800 million	US$820 million	US$1400 million	US$1850 million
Date achieved	12/30/2005	04/29/2005	10/28/2011	12/30/2011
Comments (including % achieved)	Agricultural exports increased more than target, although it this			

	is not entirely attributable to the project. The project supported the most successful technology (Conservation Agriculture/Zero Tillage) that helped to increase export.			
Indicator 3: Increased proportion of agricultural products that are tested and that meet international standards for quality and safety				
Value (quantitative or qualitative)	10	30		15
Date achieved	12/31/2004	04/29/2005		06/29/2012
Comments (including % achieved)	25% achieved. Even if 60 labs were equipped according to international standards, some project activities related to this indicator were not implemented (such as construction of the National Reference Laboratory and survey of laboratories).			
Indicator 4: Satisfaction of potential direct and indirect beneficiaries of the project				
Value (quantitative or qualitative)	0	20		99
Date achieved	12/31/2004	04/29/2005		06/29/2012
Comments (including % achieved)	Fully achieved. Interviews of 209 grant beneficiaries were completed with the following overall evaluation: very good = 16%; good = 84%; some 'Bad' evaluations on specific issues did not result in any negative overall evaluation.			

(b) Intermediate outcome indicator(s)

Indicator	Baseline value	Original target values (from approval documents)	Formally revised target values	Actual value achieved at completion or target years
Indicator 1: 7 technical regulations, each consisting of number of individual standards, are harmonized				
Value (quantitative or qualitative)	0	7		7
Date achieved	12/31/2004	04/29/2005		06/29/2012
Comments (including % achieved)	This indicator was fully achieved.			
Indicator 2: 60 laboratories are equipped according to international accreditation standards				
Value (quantitative or qualitative)	0	60 laboratories receive international accreditation	60 laboratories are equipped according to international accreditation standards	60
Date achieved	12/31/2004	04/29/2005	10/28/2011	06/29/2012
Comments (including % achieved)	Original target of receiving international accreditation was unattainable due to lengthy process of accreditation. Revised target was achieved.			
Indicator 3: At least 140 market-oriented subprojects implemented under the CGS				
Value (quantitative or qualitative)	0	140	140	58
Date achieved	12/31/2004	04/29/2005	10/28/2011	06/29/2012
Comments (including % achieved)	40% achieved. MOA planned to implement a 5th round of CGS mainly for marketing projects However, the 5th round was not supported by the MOF and the actual number of market-oriented subprojects was therefore lower than expected with higher average size.			
Indicator 4: At least 600 applied research and				

extension subprojects implemented under the CGS				
Value (quantitative or qualitative)	0	600		470
Date achieved	12/31/2004	04/29/2005		06/29/2012
Comments (including % achieved)	80% achieved. The actual number of projects approved under four rounds was 523, with slightly larger subprojects; 53 subprojects did not sign contracts for various personal reasons.			
Indicator 5: At least 40 scientists under age of 40 receive advanced education				
Value (quantitative or qualitative)	0	40		52
Date achieved	12/31/2004	04/29/2005		06/29/2012
Comments (including % achievement)	This indicator was fully achieved			
Indicator 6: Governing Board, Project Coordination Center, and a roster of independent peer reviewers established and oprating, as demonstrated through minutes of the meetings				
Value (quantitative or qualitative)	0	10		10
Date achieved	12/31/2004	04/29/2005		06/29/2012
Comments (including % achieved)	This indicator was fully achieved.			

G. Ratings of Project Performance in ISRs

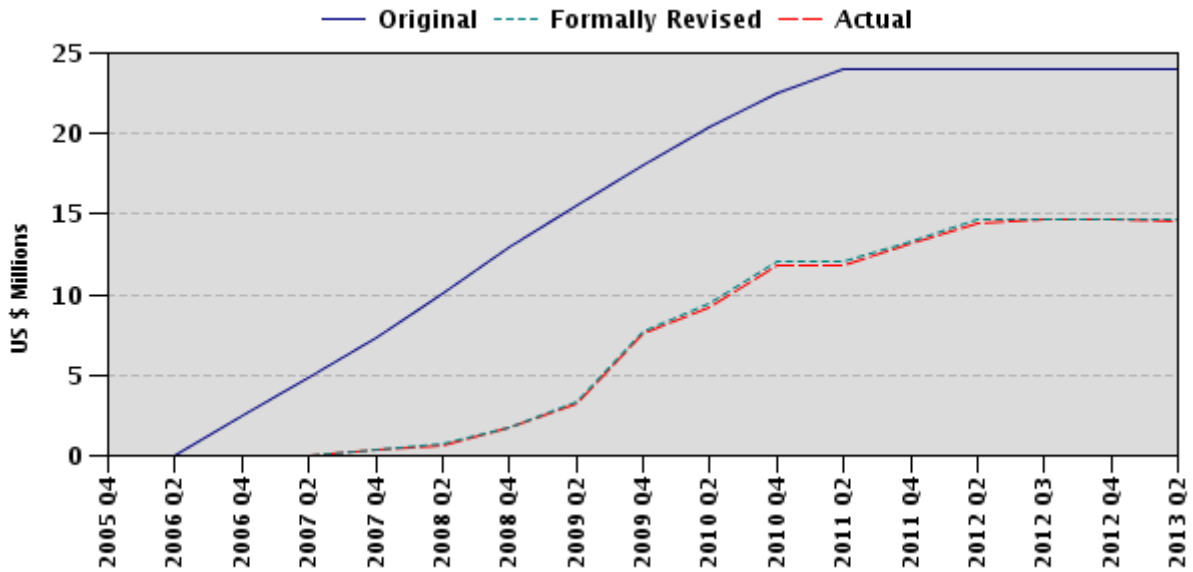
Number	Date ISR archived	DO	IP	Actual disbursements (US$ million)
1	05/21/2005	Satisfactory	Satisfactory	0.00
2	05/26/2006	Moderately Satisfactory	Unsatisfactory	0.00
3	01/09/2007	Moderately Unsatisfactory	Unsatisfactory	0.00
4	04/06/2007	Moderately Satisfactory	Moderately Unsatisfactory	0.00
5	08/02/2007	Moderately Satisfactory	Moderately Unsatisfactory	0.33
6	12/20/2007	Moderately Satisfactory	Moderately Unsatisfactory	0.63
7	05/30/2008	Moderately Satisfactory	Moderately Satisfactory	1.38
8	08/29/2008	Moderately Satisfactory	Moderately Satisfactory	2.76
9	11/03/2009	Moderately Satisfactory	Moderately Satisfactory	8.64
10	06/30/2010	Moderately Satisfactory	Moderately Satisfactory	11.84
11	12/22/2010	Moderately Satisfactory	Moderately Unsatisfactory	11.84
12	06/27/2011	Moderately Satisfactory	Moderately Unsatisfactory	13.21
13	11/20/2011	Moderately Satisfactory	Moderately Unsatisfactory	14.40
14	01/28/2012	Moderately Satisfactory	Moderately Satisfactory	14.40
15	06/24/2012	Moderately Unsatisfactory	Moderately Unsatisfactory	14.67

H. Restructuring (if any)

Restructuring date(s)	Board approved PDO change	ISR ratings at restructuring	Amount disbursed at	Reason for restructuring and key changes made

		DO	IP	restructuring (US$ million)	
06/30/2009		MS	MS	7.54	The project was streamlined to focus more narrowly on the project objectives. As a result, subcomponents 2.1 (except the CGS) and 4.2 were discontinued, and implementation arrangements under subcomponent 3.2 were changed.
07/30/2010	N	MS	MS	11.84	The project was extended until June 30, 2012, to allow time to disburse grants already approved (part C 2(iii) of the project) and to complete the design of a new building for the National Reference Laboratory in part A.2 of the project description (schedule 2 of the Loan Agreement).
10/28/2011	N	MS	MU	14.40	The project was restructured to (a) carry out a partial cancellation of loan funds in the amount of US$9.3 million initially allocated for construction of the NRL; (b) amend the Loan Agreement, deleting the reference to the NRL construction in part A.2, and (iii) revise the monitoring and evaluation framework to reflect changes in the project costs and financing and remove discrepancies with the Project Appraisal Document.

I. Disbursement profile



1. Project Context, Development Objectives, and Design

1.1 Context at appraisal[1]

1. **At the time of project appraisal, agriculture contributed 8 percent of Kazakhstan's gross domestic product (GDP) and employed 32 percent of its economically active population.** Agricultural output contracted sharply following independence, but the sector recovered steadily after 1998, with average real annual growth of 6 percent. Important reforms were implemented in the years before project appraisal, including liberalization of input markets, a new land code, and a shift in agricultural support mechanisms (including price mechanisms, credit support, and production-oriented subsidies). Following these reforms, there was a significant increase in the amount of cropland under cultivation (from about 16.5 million hectares in 2000 to 21.5 million hectares in 2009–10), in agricultural intensification, and in the use of fertilizers (from virtually nothing in 2000 to 30–40 kilograms per hectare in 2005–08), albeit not to the levels at the time of independence. These improvements occurred mainly in northern Kazakhstan's grain-producing regions. Despite the limited availability of private credit for farmers, investments in fixed assets increased fivefold from 2003 to 2009. For the Government of Kazakhstan (GOK), agricultural growth was a means to reduce dependence on extractive industries and to bring visible benefits to poor rural areas. Yet despite the reforms, significant challenges prevented the sector from reaching its potential, including access to markets, the transfer of know-how and technology to farmers, and the availability of financial services for small farmers. There was also a need to diversify the agriculture sector away from traditional crops such as wheat and cotton and to focus more on high-value products.

2. **Problems in complying with international food safety standards limited the access of Kazakh agricultural products to international markets.** In 1996 Kazakhstan applied for membership in the World Trade Organization (WTO) and began harmonizing its food safety institutions and legal framework with the WTO Sanitary and Phytosanitary (SPS) Agreement. At the time, only 17 of 152 agro-food national (GOST) standards had been harmonized with international standards.

3. **Access to technology and know-how was another challenge for development of the sector, in particular for smaller farmers.** As a result of the post-Soviet privatization of agricultural holdings, the number of peasant (or individual) farms doubled between 1998 and 2005 to 121,500 farms. Arable land cultivated by this group of farmers climbed from 19 percent to more than 42 percent in the same period. Peasant and household farms produced more than a third of all grain, well over 50 percent of meat, and more than two-thirds of raw cotton. However, many peasant farms and household plots were managed by people with limited experience in farming and limited access to modern technology.

[1] In addition to the Project Appraisal Document (PAD), this section is based on findings in M. Petrick, J. Wandel, and K. Karsten, *Farm Restructururing and Agricultural Recovery in Kazakhstan's Grain Region: An Update,* Discussion Paper 137 (Halle, Germany: Leibeniz-Institute of Agricultural Development in Central and Eastern Europe, 2011).

4. **The system of research, technological development, and dissemination that had served farmers during the Soviet era collapsed and was not replaced by a system capable of meeting the needs of increasing numbers of small farmers.** Agricultural research was carried out by 10 centers employing some 1,200 scientists. The system was underfunded. However, the main shortcoming was the lack of a system for disseminating the findings of agricultural research to farmers and for facilitating the adoption of technology by farmers and agro-processors. This shortcoming was not compensated for by the private sector, which constituted a mere 10 percent of total investment in agricultural research in Kazakhstan.

5. **The GOK recognizes the importance of agriculture for the growth of a more diversified economy and has committed significant financial resources to support its growth.** The budget of the Ministry of Agriculture (MOA) rose from KZT 11.5 billion in 2000 to KZT 80 billion in 2005, an increase of about 300 percent in real terms. The GOK did not request financial support from the World Bank but rather help establishing adequate policy, legal, and regulatory frameworks and adopting and disseminating technical innovations.

1.2 Original project development objectives (PDO) and key indicators

6. **The project sought to improve the competitiveness of the agriculture sector in Kazakhstan.** It sought to facilitate access to world markets by improving the quality and safety of agricultural products, enhancing access to information, and harmonizing standards. It also sought to improve the quality, quantity, and relevance of applied agricultural research and facilitate the transfer to and adoption of knowledge by farmers.

7. **The following were the project's original targets for key indicators of outcome:**

- Increase farm income, particularly for small and medium-size farmers
- Increase the value of agricultural exports, including livestock products, compared with 2003
- Increase the proportion of agricultural products that are tested and meet international standards for quality and safety
- Satisfy potential direct and indirect beneficiaries of the project.

8. **The following were the project's original targets for the key indicators of output:**

- Harmonize seven technical regulations, each consisting of several individual standards
- Obtain international accreditation for 60 laboratories
- Implement at least 140 market-oriented subprojects under the Competitive Grant Scheme (CGS)
- Implement at least 600 applied research and extension subprojects under the CGS
- Educate at least 40 scientists below the age of 40
- Establish an institutional structure for research and extension services.

1.3 Revised PDO and key indicators and reasons or justification

9. **Key indicators were revised during the 2011 restructuring to clarify the indicators and their targets and to correct inconsistencies in the original project documentation**.[2] Specifically, the Supplemental Letter was revised to be consistent with the Project Appraisal Document with regard to the number of projects to be implemented under the CGS. In 2011, it became clear that the PDO might not be fully achieved, and the Bank and the Ministry of Agriculture discussed revising it. However, because the approval procedures in Kazakhstan would take more than a year to complete, such a revision was not possible.

1.4 Main beneficiaries

10. **Although the project did not target a specific group of farmers, individual farmers (usually small and medium size, family farms, and commercial farmers) were the main beneficiaries.** These farmers benefited from the improved outreach of extension services, training in agricultural practices, creation of a market information system (MIS), improved food safety institutions, CGS opportunities, and the dissemination of applied research. Corporate farms, which did not need public services and public investments to the same extent, benefited largely from the investments in food safety institutions. Research institutions and researchers also benefited from the CGS and from training and study tours. The public SPS and food safety laboratory network benefited from investment in new equipment and training.

1.5 Original components (total project cost US$83.1 million: IBRD US$24 million, GOK US$46.8 million, beneficiaries US$12.3 million)[3]

Component 1, Quality and Safety Management of Agricultural Products (US$33.4 million: IBRD US$12.7 million, GOK US$19.3 million, beneficiaries US$1.4 million)[4]

11. **This component sought to strengthen the capacity to control food safety and certify quality along the value chain.** It had two subcomponents.

12. **Subcomponent 1.1, Harmonization and Development of Standards,** proposed establishing an expert group on harmonization of regulations and standards of quality for agricultural products. It also sought to provide technical assistance and training on the introduction of regulations and standards.

13. **Subcomponent 1.2, Quality and Safety Monitoring, sought to improve certification by rationalizing the system for testing and monitoring quality and safety.** It proposed to establish and equip a public Veterinarian Testing Center (microbiology, radiology, toxicology, biochemistry, virology) and a Plant Protection Testing Center (entomology, phytopathology, virology, microbiology), to train approximately 200 staff in various areas related to food safety,

[2] This included (a) dropping the indicator on profitability of beneficiary farmers, (b) lowering the ambitions for the regional laboratories to focus on upgrading laboratory equipment rather than aiming for accreditation, and (c) raising the number of marketing-oriented projects from 120 to 140 to make it consistent with the PAD (for more details, see sections 1.6 and 3.2).
[3] Including contingencies.
[4] The amount actually disbursed was US$10.4 million.

to modernize laboratories for testing seeds and inputs, and to provide training and incentives for accrediting line laboratories as needed along the value chain (through the CGS, with 25–60 percent cost sharing). Finally, it proposed to implement quality assurance schemes in selected agro-enterprises.

Component, Agricultural Marketing (US$7 million: IBRD US$1.5 million, GOK 2.9 million, beneficiaries US$2.6 million)[5]

14. **Component 2 sought to improve the private sector's ability to assess and access agricultural markets.** To achieve this, it (a) facilitated access to market knowledge, (b) identified bottlenecks and provided incentives to overcome them, and (c) promoted exports by improving the international image of Kazakh agriculture. It had two subcomponents.

15. **Subcomponent 2.1, Strengthening the Market Information System (MIS), sought to strengthen the country's MIS.** It proposed to do this by improving the quality and frequency of data reporting, using enhanced media for publishing information, and issuing analytical reports.

16. **Subcomponent 2.2, Development of Market-Oriented Infrastructure, sought to provide financial incentives for developing marketing associations and partnerships.** It sought to co-finance up to 40 percent of the cost of post-harvest infrastructure such as milk collection points, slaughterhouses, storage areas, and distribution networks for priority commodities in the northern and southern economic corridors. Grants were for projects with a technical assistance component, an innovative aspect, a plan for disseminating results, or public benefits beyond the farm. They were awarded to farmers in cooperatives, not individuals.

Component 3, Applied Agricultural Research and Extension (US$36.5 million: IBRD US$9.0 million, GOK US$19.2 million, beneficiaries US$8.3 million)[6]

17. **This component sought to improve the agricultural research and extension system in Kazakhstan.** It proposed to create a competitive funding mechanism for applied research and extension and to create a structure for training and supporting new extension agents. It had two subcomponents.

18. **Subcomponent 3.1, Applied Research, sought to improve research capacity.** Specifically, it proposed to provide technical assistance to reorganize the core agricultural research system, to finance higher education for 40 young scientists, both domestically and internationally, and to fund applied research.

19. **Subcomponent 3.2, Agricultural Extension, sought to establish a government-funded system for providing extension services to agricultural entities.** The MOA pledged to expand its presence in rural areas, employing at least one extension agent per district and one extension supervisor per oblast. The project also sought to establish a system of support for extension agents, including help hiring and training agents and monitoring output; 400 private

[5] The amount actually disbursed was US$3.5 million.
[6] The amount actually disbursed was US$27.6 million.

extension agents were to be trained and certified under the project. Finally, the CGS was to finance around 450 extension and training projects averaging US$25,000. Public and private organizations could apply, including scientific centers and academic organizations, individual researchers, and farms and companies.

Component 4, Institutional Development and Agricultural Policy (US$6.2 million: IBRD US$0.8 million, GOK US$5.4 million)[7]

20. **This component sought to support the MOA's capacity in various areas.** Specifically, it sought to (a) implement project activities; (b) improve the legal framework; (c) monitor the effects of policy changes; (d) train staff on policy analysis, management, economics, agricultural trade and WTO accession, agricultural knowledge and information systems, and participation in regional agricultural fairs and conferences; and (e) monitor and evaluate project activities. It had three subcomponents.

21. **Subcomponent 4.1, Institutional Structure, proposed establishing an institutional structure for managing the project.** A Governing Board would be responsible for defining the strategic guidelines, including funding systems under the three components. A Project Coordination Center (PCC) would act as secretariat of the project and be responsible for implementing the policies agreed by the Governing Board and reflected in the Project Implementation Plan and *Operational Manual*. Finally, a rotating roster of independent national and international experts (not a permanent institution) would be responsible for the technical review of proposals submitted under the CGS.

22. **Subcomponent 4.2, Agricultural Policy Development, financed technical assistance to support project evaluation.** A consulting firm was hired to produce two evaluations per year, with the results presented directly to the Governing Board.

23. **Subcomponent 4.3, Project Monitoring and Evaluation, sought to strengthen the capacity of the public sector to analyze, monitor, and develop agricultural policies.** An expert group on agricultural policy was to be established, and the project was to provide technical assistance, including training and study tours, to develop a system for monitoring indicators of state support.

1.6 Revised components

24. **The construction of a National Reference Laboratory under component 1 was canceled in 2011 at the request of the government.** A complicated tender process delayed implementation of this activity beyond the point where it could be completed before the project closed. The Bank approved the cancellation, but the borrower did not countersign the amendment. Therefore, even though the activity was canceled by mutual agreement, the agreement was not formalized.[8]

[7] The amount actually disbursed was US$4.5 million.

[8] The Bank approved the cancellation on November 8, 2011. The Ministry of Finance responded in a letter dated January 10, 2012, that the "General Conditions Applicable to Loan and Guarantee Agreements for Single Currency

25. **Furthermore, the original goal of accrediting 60 laboratories as complying with international standards was determined to be unrealistic.** This indicator was therefore modified to say, "The laboratories [will] be equipped according to international accreditation standards."

1.7 Other significant changes

26. **Overall, the project was restructured three times: in 2009, 2010, and 2011.** The first changes were introduced immediately after the midterm review in June 2009 when components 2.1 (except for the CGS) and 4.2 were discontinued. These changes were intended to streamline the structure and allow the project to focus its resources. Other changes included revising the implementation arrangement for component 3.2 (Agricultural Extension) by replacing the implementing agency, Kazagromarketing (KAM), with Kazagroinnovation (KAI). The scope of this activity was also revised to stop supporting state extension agents and start giving more support to innovative training facilities and call centers.

27. **An extension of the project was granted in July 2010, changing the closing date from July 30, 2010, to June 30, 2012, in order to allow time for implementing the approved subprojects and designing a new NRL building.** The project was formally restructured a second time in October-November 2011 to (a) cancel funding for constructing the NRL building; (b) amend the Loan Agreement to exclude the laboratory construction activity, and (c) revise the results framework to sharpen the targets and correct for inconsistencies in the original documentation. Part of the government co-financing was also canceled.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project preparation, design, and quality at entry

28. **The project was strategically relevant, and the technical justification was rigorous.** A thorough economic and financial analysis estimated an economic rate of return of 23.5 percent and a net present value of US$51 million. These estimates assumed that the price of products would rise as a result of higher standards of food safety and quality, that farm productivity would improve as a result of extension and advisory services, and that cost recovery would be higher as a result of improved lab services and slaughterhouses. A social assessment and an environmental review were also conducted, helping to identify potential risks and challenges. Several technical background notes, economic and sector work, a wheat study by the Food and Agriculture Organization (FAO), and a cotton study prepared under a PHRD preparation grant informed the technical design of the project.

29. **The technical design was influenced by the fact that the GOK was interested in**

Loans" made it possible to cancel a loan amount without amending the Loan Agreement. The Bank's legal team confirmed in an e-mail dated November 11, 2012, that the cancellation was effective as of the date of the Bank's receipt of the request from the borrower. However, for the changes to take effect, the borrower had to sign the Amendment Letter (which complements the Supplemental Letter). This was not done.

obtaining knowledge and experience, not financing, and in upgrading the existing laboratory network. At the same time the GOK decided not to use loan proceeds for consulting services. Due to the importance of advisory and technical assistance in the project, this resulted in a relatively small loan in an otherwise large project.[9] The project was comprehensive in its approach to improving competitiveness, but it was overstretched, encompassing diverse aspects of production and marketing. This resulted in a complex project with many activities that proved difficult to coordinate. In addition, many activities required a needs assessment, which was not conducted for every subcomponent (nor done prior to project appraisal). Specifically, the first component lacked both proper feasibility studies for construction of the NRL and a needs assessment for Kazakhstan's laboratory infrastructure.

30. **Although the project had many activities, the loan proceeds were allocated only to purchase laboratory equipment, construct the NRL, and co-finance competitive grants.** This split financing arrangement had not been used before (except in a APPAP II project that was on a parallel preparation track), creating new challenges. While the project team supported the project in its entirety, advising the PCC counterparts and issuing no objections irrespective of the source of funding, the non-Bank-financed activities had less weight in defining the project implementation ratings and were less of a priority for the Bank's internal audience.

31. **Lessons learned in other countries were used to design competitive grants and training activities.** The project was prepared in partnership with several government agencies, the private sector, and civil society. This collaboration served to strengthen linkages between the client, FAO, and the Codex Alimentarius Commission. The institutional arrangements were well thought through, with responsibility for implementation being assigned to the PCC, including fiduciary responsibilities such as financial management and procurement under IBRD funds. To speed implementation, legislation for the implementing arrangements was drafted during project preparation, and the Loan Agreement arranged for the project unit to receive government funding even before the agreement went into effect.

32. **The GOK commitment to the project was unanimous and remained strong, as reflected in stable budget allocations.** However, this support was not enough to avoid bottlenecks, speed up bureaucratic procedures, or enable the allocation of additional ministerial staff when needed.

33. **The identification of critical risks was comprehensive at appraisal.** Attempts were made to mitigate the risks associated with cumbersome bureaucratic procedures. Others, especially complications in project implementation resulting from the 2005 budget code, were not possible to predict at project appraisal. However, critical risks related to the project's overall complexity and capacity constraints were not addressed and materialized later on.

2.2 Implementation

[9] The original IBRD loan amount was 34 percent of total project financing (the IBRD loan was US$24 million; total project costs, including contingencies but excluding beneficiary contributions, were US$70.8 million).

(a) Systemic factors affecting project implementation

34. **Delayed effectiveness of the Loan Agreement was systemic and affected most components of the project.** For example, the project became effective in September 2006, more than one year after project approval.

35. **The rigidity of the government's internal rules made implementation of the project overly complex and slow.** The project's feasibility study was a government-approved equivalent of the PAD, and any changes to the project or implementation arrangements, including minor ones, had to be reflected in the feasibility study and approved by the Ministry of Economy.[10] Since the project required several changes and obtaining approval for changes was slow, implementation of the amendments was delayed.

36. **Poorly drawn lines of responsibility among the ministries contributed to the slowdown.** Although the Loan Agreement clearly stated that the MOA was responsible for implementing the project, the Bank's aide-mémoires noted that continued micromanagement by the ministries of finance and economy caused inordinate delays at early stages of implementation.

(b) Project-specific factors affecting implementation

37. **Weak capacity of the implementation agency led to slow development and poor quality of project documentation at the beginning.** Qualified local professionals were unwilling to work in the PCC for the approved remuneration rates, and staff shortages existed in the ministries of agriculture and finance.[11] These shortages caused significant delays in important activities, including the procurement of laboratory equipment and implementation of competitive grants, which resulted in some activities never being fully implemented, even after the project was extended. The World Bank team noted the shortcomings early on and provided practical advice on how to solve implementation constraints, such as shortening the procurement process.

38. **The project's relatively complex design involved a large number of planned activities, which complicated implementation and coordination.** By the time of the midterm review, it was clear that the implementing agency was mired in numerous small consultancy contracts and would not be able to implement all activities as planned. The decision was made to focus on a few key areas (competitive grants, training, extension, laboratory equipment, and standards) and to eliminate activities that were unlikely to succeed, such as those related to the MIS, image enhancement, and policy development.

39. **The project budget was inadequate for some key activities.** Due to strong economic growth in 2004–07, prices in the construction sector rose significantly, and the budget allocated for constructing the National Reference Laboratory (US$5 million) was not adequate for the

[10] The procedure was streamlined later on, and the need to obtain approval from the Ministry of Economy was removed, although approval procedures inside the MOA remained complicated.

[11] The project had to clear all documentation in different departments of the MOA and MOF, which assigned only one person per department to deal with this in addition to his or her regular job.

proposed scale. This caused significant delays in procurement, as construction had to be retendered, and eventually led to cancellation of the subcomponent.

40. **Management of the Ministry of Agriculture changed during the last year of project implementation, leading to a critical revision of project activities.** This affected several aspects of the project: (a) the PCC was reorganized as of January 1, 2012, which halted implementation in 2012, and (b) construction of the NRL was suspended.

41. **Proper background analysis was not conducted for certain activities.** The list of equipment for the food safety and veterinary laboratories was finalized without assessing the need for medium- to long-term testing and had to be revised several times during implementation. Initially, the MOA requested broad investments in laboratory infrastructure (including expensive automated equipment), and the request was eventually met. However, the new management of the MOA questioned the need for expensive equipment and stressed other types of testing. The list of equipment should have been tailored to the needs of each oblast; in many cases, the equipment purchased was underused, particularly in oblasts with a small number of livestock.

42. **Many innovative projects were undertaken.** Untested approaches posed challenges to the implementation of certain activities (the extension system) but were highly successful in others (the Competitive Grant Scheme).

43. **The extension system envisaged contracting some 200 consultants to support farmers with extension services, but weak capacity of the implementing agency (KAM), coupled with conflicts of interest between public and private sides of the organization, produced uneven results.** Even though the presence of extension agents in the field generated benefits, the system was expensive and inefficient. A new contract was signed in 2009 with KAI, a newly created holding that united all agricultural research institutes in the country. The activity became more focused on group training, which succeeded in obtaining MOA support and was financed under a specific budget line (separate from the budget line of the project).

44. **The novelty of the CGS was met with skepticism among beneficiaries but produced tangible results.** Additional marketing efforts were needed to overcome initial skepticism; in particular, dissemination activities were obligatory, and broadly published calls for proposals led to heightened interest in the CGS. The CGS brought tangible results on the ground. Strong technical support and close supervision by FAO specialists and Bank team members ensured timely response to operational "glitches" and allowed the activity to grow.

45. **The financial crisis of 2008 caused the bankruptcy of the BTA Bank, a financial agent for the CGS.** Nationalization of this financial institution and frequent staff rotation had a negative impact on the program; as a result, delayed payments, lack of financial monitoring, and lack of informational support caused resentment on the part of some beneficiaries. Both the team and the implementing agency were of the opinion that if financial services had been well implemented, the CGS could have achieved even better and quicker results.

2.3 Monitoring and evaluation (M&E) design, implementation, and utilization

46. **The M&E system failed to capture all aspects of all components, partly due to the broad objective and complex design of the project.** The project objective—to increase competitiveness of the agriculture sector—was difficult to measure directly. Instead, achievement of the objective was monitored with regard to several indicators. Access to the market was measured by changes in the value of exports; quality and food safety were measured by the proportion of agricultural products tested and meeting international food safety standards; and harmonization was measured by the number of technical regulations harmonized. Increasing the access to information was not measured. Also, increasing the quality, quantity, and relevance of applied agricultural research was measured by outputs instead of outcomes, making it difficult to evaluate. The transfer of knowledge to farmers was measured by the increase in farmers' incomes and in the value of exports, which are affected by many factors beyond the scope of the project.

47. **The M&E system was not continuously maintained, and the impact of project activities was not assessed on a regular basis.** A consultancy firm was hired to evaluate project impacts, but the firm's final impact assessment report fell short of expectations due to miscommunication between the contractor and the PCC as well as weak capacity of the contractor. The final report reviewed the performance of the PCC and implementation arrangements, but not the project's impacts and long-term effects. Instead, additional resources had to be spent to assess the project's impacts properly. Activities conducted by KAI were an exception. KAI closely monitored the impacts of training and other services and reported results to the MOA.

48. **The information collected was used mainly to assess project performance.** Use of the information for future budget allocation was limited mainly to KAI, which used training data to evaluate the impact of its program and to request more resources for future training activities.

2.4 Safeguard and fiduciary compliance

49. **Two safeguards were triggered under the project: Environmental Assessment (OP/BP 4.01) and Pest Management (OP 4.09), although no large-scale, significant, or irreversible negative impacts were likely.** The main concern was the CGS: given the demand-driven nature of the scheme, it was difficult to predict the exact impacts. Otherwise, the food safety component was expected to have direct positive impacts on the environment, particularly the development and enforcement of food safety legislation, although the rehabilitation of laboratories could have a negative environmental impact because of the use of chemicals and reagents.

50. **To safeguard against negative environmental impacts, manuals were developed on laboratory operations, a special environmental review document was written specifying the environmental assessment rules and procedures to be applied for supported grants, and training was provided in pest management.** The manuals and environmental review document proposed procedures for designing and implementing mitigation measures for subprojects that had the potential to damage the environment.

51. **Overall, the project was implemented in compliance with the Bank and national environmental assessment rules and procedures as well as existing environmental requirements.** By developing and enforcing food safety legislation, the food safety component had direct positive environmental effects. Similarly, the CGS generated significant positive effects (see sections 3.2 and 3.5c).

52. **About 25 CGS subprojects generated some adverse, but temporary and localized, environmental impacts, including wastewater, emissions, solid waste, and soil erosion.** Environmental assessment documents, along with information about all supported subprojects, described their main activities; potential environmental impacts, both negative and positive; level of environmental risks; environmental category; and measures for mitigating environmental impacts. The environmental permits and authorizations requested were disclosed on the project website, making this information available to all interested parties.

53. **The procurement performance under the project was mixed, with the majority of contracts awarded according to schedule and a few suffering delays due to low capacity of the initial implementing agency.** As recommended by the Bank, the implementing agency hired a qualified procurement specialist with experience in international procurement, with positive results. A detailed *Grant Recipient Handbook* was prepared for implementation of the grant program. The procurement and filing system was adequate, and no major issues were noted. Four ex post reviews of procurement were conducted. In each case, the recommendations were implemented properly before the next ex post review mission.

54. **The physical inspection of grants under the project was inadequate.** As a result of staff shortages, the PCC did not visit grant recipients on a regular basis and the financial agent underperformed. This was partly compensated by regular visits of the FAO implementation support team. The project was also subject to an independent procurement review in March–April 2010. This review concluded, "The quality of borrower's procurement management has been generally good, but progress should be made in some areas like better contract management (i.e., enforcement of contract conditions and remedies) and more rational assessment of the actual needs of the end users of goods. The quality of Bank's procurement oversight has also been generally adequate, with some minor inconsistencies." The findings and recommendations were discussed as part of the last procurement ex post review mission in February 2011.

55. **Overall the project was in compliance with the financial management covenants during implementation.** The Financial Services Department (FSD) of the MOA and the PCC were responsible for managing the project's finances, including budgeting and planning, accounting and reporting, internal controls, flow of funds, staffing arrangements, and external auditing. Those arrangements were reviewed regularly during project implementation and found to be generally acceptable to the Bank. The MOA controlled the flow of funds and maintained accounting records, while the Project Coordination Center was responsible for financial monitoring. A *Financial Management Manual* guided the work of the PCC in this respect. Acceptable quarterly reports were submitted to the Bank on time. Although there were some delays in the submission of audit reports during project implementation, the implementing agency had little influence over the process, as the MOF is responsible for hiring auditors in

Kazakhstan. The annual audit reports were found to be acceptable to the Bank and contained unmodified (clean) opinions.

56. **However, the FSD experienced problems in managing the designated account.** The documentation of expenditures was irregular, and the account was inactive for up to 16 months, even though the disbursement letter stipulated that withdrawals should be made at least quarterly.

2.5 Postcompletion operation/next phase

57. **While there is no confirmed follow-up project with the MOA at this stage, the project generated a dialogue that may result in the continuity of Bank support.** Further, innovations brought to the country under the project have been replicated by other institutions and are expected to continue beyond the life of the project:

(i) Codex Alementarius (WTO)–compliant food safety standards and technical regulations developed under the project for seven key commodities (including meat and milk products, fruits and vegetables, and grains) were adopted by government resolution and continue to be used by the industry. They are essential if Kazakhstan is to trade with WTO members. Some of the standards were adopted for use by the Russian Federation. Due to Kazakhstan's accession to the Customs Union, these standards will be overwritten by the general Customs Union standards, but it is expected that the new general standards will be based on technical standards elaborated under the project.

(ii) The extension services will be funded under the regular state budget and thus continue after project closure. There are plans to establish four more training centers by 2014 to extend the geographic coverage of training facilities and the outreach of extension services.

(iii) The Ministry of Education and Science is using the experience gained under the CGS to implement the Technology Commercialization Project, a larger-scale program using a methodology similar to that developed under the project.

58. **One negative operational aspect should also be mentioned.** Although the IBRD loan closed at the end of June 2012, agreement was reached with the MOA to continue financing some activities from the budget, notably competitive grants, several training activities, and the design of the NRL, through December 31, 2012. It was also agreed that steps would be taken to strengthen the capacity of laboratories to use the new equipment. Although the MOA formally requested that the MOF extend project activities, the MOF did not give explicit approval, but only hinted at the possibility of using existing budgetary allocations. This allowed the MOA to use funds allocated under the 2012 budget, but the MOA considered the response insufficient. Consequently, all GOK financing was discontinued as of June 30, 2012, and all activities, including operation of the PCC, were abruptly stopped, leaving the activities unfinished.

3. Assessment of Outcomes

3.1 Relevance of objectives, design, and implementation

Rating: Relevant

59. **The project's objectives were well aligned with the World Bank's Country Partnership Strategy (CPS) 2012–2017.** The project was an integral part of Pillar 2 of the CPS, "Building an Appropriate Role of the Government to Promote Competitiveness." The CPS expected some key activities, such as the promotion of research and development, support for innovative pilots in the agriculture sector, and improved food standards, to contribute directly to economic development in Kazakhstan.

60. **They were also well aligned with the government's Strategic Plan for Development 2020, which gives priority to diversifying the economy through industrialization and sees the agro-industrial complex as instrumental to this goal.** The government's strategic plan seeks to encourage domestic innovation by increasing research and development spending and investments in knowledge, which is in line with the focus on applied research under the project.

61. **The project was well designed, with logical connections among its components and their expected contribution to the project's objective.** Each component was designed to address specific problems that remain relevant. Component 1 would have benefited from a more thorough analysis of the country's need for food safety infrastructure. The design and implementation of the CGS alone was extremely demanding, and adding food safety and quality made project implementation excessively challenging.

62. **Implementation was difficult, mostly due to the complexity of the project and long duration of implementation.** Eventually, some activities were dropped, and about 35 percent of the project cost was canceled. The original implementation period of five years was overly optimistic (requiring a two-year extension). In summary, despite shortfalls in design and implementation, the project's objectives were highly relevant.

3.2 Achievement of project development objectives

Rating: Moderately satisfactory

63. **The objectives of the project—to increase the competitiveness of the agriculture sector by facilitating access to markets and knowledge—were achieved.** Although the building and accreditation of the NRL were not completed and the investments in regional and local laboratories were not optimal, the investments in public and private food safety infrastructure along with the reforms in food safety regulations significantly improved the quality and safety of Kazakh agricultural products and expanded market access for them. Further, the project increased the relevance of public and private investments in applied agricultural research and extension as well as knowledge transfer. The CGS and extension services are now institutionalized, as is the measurement of project objectives through four key indicators.

64. **Did the income of farmers, particularly small and medium-size farmers, increase?** An estimated 3,200 farmers increased their incomes compared with the 2005 level as a result of the project. Essentially all project components contributed to this outcome: (a) the number of grant beneficiaries (572); (b) dissemination campaigns that induced many farmers to adopt

technologies tested or demonstrated with grants (1,100); and (c) training and extension services financed with the project (1,500). This outcome exceeded the end-of-project target of 2,400 farmers. The economic analysis, done at farm level in a sample of 14 grant beneficiaries, estimated that the incremental annual net benefits thanks to the project were US$308,000 per grant. Although some grants provided benefits to one farm, other farms benefitted indirectly by adopting the demonstrated technology, or by improving milk processors who buy from many small farmers, or by the services provided by private laboratories (indirect benefits). (For more economic analysis, see section 3.3 and annex 3.)

65. **Did the value of agricultural exports, including livestock products, increase compared with 2005?** The value of agricultural exports increased 130 percent between 2005 and 2011, from US$0.8 billion to US$1.85 billion. This exceeded the target of US$1.4 billion and food price inflation. World food prices rose during the period 98 percent in nominal terms.[12]

66. **Did the proportion of agricultural products being tested and meeting international standards for quality and safety increase?** The 2004 baseline for this indicator was 10 percent of agricultural products tested, and the end-of-project target was 30 percent of products. At the end of the project, only about 15 percent of agricultural products were tested for international quality and safety. The negative impact of not building the NRL was partly mitigated by the MOA's own activities, as discussed in section 4. The private sector investments in food safety measures and laboratory equipment under the CGS helped laboratories to upgrade their equipment and methods, and anecdotal evidence shows that the number of tests and the precision of the tests improved significantly as a consequence. However, the project's monitoring system did not capture the exact results from these investments.

67. **Were potential direct and indirect beneficiaries satisfied with the project?** The end-of-project target for satisfaction was exceeded.[13] The direct beneficiaries were those whose grant proposals were approved under the CGS, whereas the indirect beneficiaries were those whose grant proposals were rejected (but who could indirectly benefit by replicating grant demonstrations, or using lab services funded under the project). Based on 209 interviews (face-to-face or via telephone or e-mail), about 16 percent rated the CGS activity as "very good" and about 84 percent rated it as "good." This indicator is relevant because the CGS sought to increase the relevance of applied research and to facilitate the transfer of knowledge, two principal objectives of the project. Moreover, the government wanted its support to the sector to be highly visible among the farming community. In addition to the CGS, KAI conducted satisfaction surveys, which showed that 71 percent of participants had used the technical skills acquired in KAI's training events.[14]

68. **Is farming more profitable in real terms compared with 2005 levels (revised for peasant and family farms)?** Profitability was originally included in the results framework as a

[12] World Bank, "Responding to Higher and More Volatile World Food Prices," Economic and Sector Work Report 68420-GLB (Washington: World Bank, 2012).
[13] The satisfaction rate of 99 percent was recorded toward the end of the project, before some of the grant beneficiaries experienced delays related to payment of the final 10 percent.
[14] The survey was conducted among 857 beneficiaries, with more than 600 responding.

measure of competitiveness, but was dropped in 2011. However, the indicator was measured until 2010, and 63.9 percent of peasant and family farms were profitable at that point compared with 37.2 percent in 2004. This exceeded the target of 50 percent of peasant and family farms covered by the project.

69. **Did the number of specific grant subprojects achieved?** The number of marketing grants was 58 compared with the target of 140. However, the size of grants was larger than expected, increasing from the expected maximum of US$40,000 to an average of more than US$50,000 due to inflation and depreciation of the U.S. dollar in 2006–08. The number of approved marketing grants was 66; eight projects did not sign contracts. The number of research and extension grants was 470 compared with the target of 600. The actual number of projects approved in four rounds was 523, the size of grants being slightly larger; 53 grantees did not sign contracts for various personal reasons. Therefore, the expected outcomes were partially achieved.

70. **Other areas also supported the project's development objectives: competitive grants, extension activities, and training.** Under the CGS, contracts were signed with 585 beneficiaries (572 grants proceeded to implementation) in six areas: modernization of private laboratories, development of agricultural marketing infrastructure (slaughterhouses, storage facilities), image enhancement of agricultural products (development of new design for packaging, rebranding), applied agricultural research (test of new varieties and breeds), extension work, and introduction of technology. Notably, CGS supported the adoption of conservation agriculture (contributing to the rapid expansion of cropped area under no-till conditions), testing of new methods of animal disease control, and construction of new facilities that beneficiaries are maintaining and planning to use beyond the project. The "KazNan" national brand for bakery products was developed and has great potential to support Kazakhstan's export of flour and other processed grain products. Applied research produced numerous patents and publications and the broad adoption of new technologies. On-farm demonstrations led to rapid adaptation of new technology among other farmers. Also important, dissemination was mandatory under the CGS, which allowed these investments or techniques to be replicated beyond the direct beneficiaries. (For further details, see annex 2.)

71. **Training under KAI contributed to the wider adoption of new conservation technologies that were tested with competitive grants.** Nine training centers were established around Kazakhstan, and training was provided to about 7,800 farmers. While mainly organized by KAI, these centers also provided facilities for dissemination events led by local farmers. KAI also provided on-farm services and established an innovative call center for answering farmers' queries. The World Bank encouraged KAI to improve its internal monitoring and evaluation, and a structured system was developed for this purpose. As part of Bank supervision, FAO expertise also assisted and closely monitored KAI-led extension.

72. **The education of young scientists had a positive impact on the institutional capacity of research organizations.** Around 160 specialists and scientists (including teachers from the Agricultural Institute) received training in the United States, China, Russia, Germany, the Czech Republic, Thailand, and Belarus. The training targeted scientists and specialists under 40 years of age in order to strengthen future research capacity in Kazakhstan.

3.3 Efficiency

Rating: Satisfactory

73. **For the project as a whole, including loan proceeds and government co-financing, the economic rate of return (ERR) and the net present value (NPV) at completion were an estimated 29.2 percent and US$70.6 million, respectively, assuming constant prices and an opportunity cost of capital of 12 percent.** A sensitivity analysis assessing the effect of variations in benefits and costs revealed that a fall of 20 percent in total project benefits and an equivalent increase in total project costs would reduce the base case ERR to about 26 percent. The switching value is about 72 percent for total project benefits and approximately 255 percent for project costs.

74. **The economic and financial analyses looked at the key quantifiable benefits—higher incomes for farm and rural nonfarm enterprises—resulting from extension services and CGS subprojects.** The total value of the CGS projects—US$31 million—was based on data gathered from visits to 14 completed grant projects and a review of 104 final reports for implemented grants. NPVs for the sample ranged from US$25,000 to US$5.7 million. Internal rates of return (IRRs) ranged from 19 percent to more than 1,000 percent. Both the actual IRR and the NPV were higher than those projected at project appraisal (23.5 percent and US$51 million, respectively). The analysis confirmed that the project played an important role in the introduction and expansion of conservation agriculture technologies.

75. **Benefits in the area of food safety were confirmed by an analysis of two private laboratories for which the number of tests conducted substantially increased (45,000 additional tests per year for the last two years) as a result of investments in new equipment.** However, the exact value of these benefits is difficult to estimate due to lack of reliable data, and a comprehensive analysis of the economic impacts of the investments in food safety infrastructure was therefore not done for this ICR.

76. **Information gained during the visits to 14 grant projects was also used to estimate financial costs and benefits.** The financial analysis found the following: (a) overall, gross, and net returns increased substantially; (b) benefit-cost ratios rose, demonstrating the attractiveness of the investments; and (c) the level of profitability varied between activities. NPVs for the sample ranged from US$15,000 to US$2.5 million. Financial rates of return ranged from 16 to 780 percent. Favorable cash flows from the investments indicate that the CGS will continue to operate successfully after project closure. (For further details on the economic and financial analysis, see annex 3.)

3.4 Justification of overall outcome rating

Rating: Moderately satisfactory

77. **Recurrent difficulties in implementation, failure to implement or complete several activities, and underutilized resources made some results fall short of expectations.** Nevertheless, the economic analysis found greater than expected returns to the project. Based on

the relevance, achievement of development objectives, and efficiency, the project's overall outcome is regarded as moderately satisfactory.

3.5 Overarching themes, other outcomes, and impacts

(a) Poverty impacts, gender aspects, and social development

78. **Although women benefited under the project, no activity specifically targeted women and data were not disaggregated by gender.** Anecdotal evidence shows that female-headed enterprises did receive competitive grants and training. For example, female scientists pointed out that the project gave them the opportunity to conduct field work and interact with the beneficiaries of their research in ways that were not possible before.

(b) Institutional change and strengthening

79. **The project contributed to institutional changes in the design and implementation of extension services and in the dissemination of research among farmers**. It helped to strengthen KAI, exposed trainers and trainees to international best practices, provided innovative ways for farmers to access extension advice, and introduced the principles of competition in awarding grant funds. Important investments were also made in equipment for research institutions. If appropriate funding continues, these investments will continue to provide benefits in the future.

80. **Both sides mentioned strengthening the linkages between the farming community and academia as an important achievement**. Almost all grants required scientists to conduct their research on the land of farmers, not in a lab. Collaboration between farmers and scientists continued well beyond the project activities. Farmers started to consult with scientists they had met on other issues, and scientists became bolder in suggesting new agricultural practices.

(c) Other unintended outcomes and impacts (positive or negative)

81. **The project tested several innovative technical and institutional mechanisms.** The implementing agency will continue to use competitive selection through evaluation, which was part of the CGS. The peer review process created a pool of specialists to be used for other purposes (like evaluation of the ministry's other programs).

82. **The CGS scaled up new technologies.** Kazakhstan is one of the largest grain producers in the world, and about 180 grants focused on "resource-saving" or conservation agriculture technologies. While some work on conservation agriculture was started before the project, demonstrations under the project's CGS contributed to the remarkable increase in cropland under no-till conditions: from virtually zero in 2001 to about 500,000 hectares in 2007 and 1.85 million hectares in 2012.[15] Having seen its benefits, such as positive yields and cost savings, grant

[15] "State of Conservation Agriculture in Kazakhstan, Agenda, Recommendations, and Potential", CIMMYT report, 2012.

beneficiaries gradually expanded the area of their farms using this technology, and many other farmers emulated their practices.

83. **The project fostered cooperation between local and central governments, academia, and producers (cooperatives).** Following the collapse of the Soviet Union, highly individualistic production methods developed. The project was initiated within this environment and made a significant contribution to promoting collaborative mechanisms at all levels. This involved more and better cooperation between local and central governments, academia, and producers (cooperatives), development of a value chain approach, and collaboration among farmers. International institutions involved in project activities also began to cooperate with the technological sector in the country. The project helped to integrate Kazakh scientists into international networks by enabling them to participate in international and regional events (such as the Network for Siberian Wheat Production).

84. **The project introduced technologies to improve resilience to climate change.** Many of the practices promoted for soil conservation, tillage, irrigation, and improved pastures, among others, are known to reduce carbon dioxide emissions and, at the same time, to improve the resilience of the agriculture sector to climate variability. This is particularly true for the sector's most vulnerable participants—small farmers. With the spread of no-till technology, Kazakhstan now sequesters about 1.8 million tons of carbon dioxide annually.[16]

85. **The project upgraded the capacity of the consulting sector in the country**. Several contractors involved in the project (Turan Profi Academia and KAI) noted that assignments under the project were new to them and helped them to grow professionally. By organizing logistics for training abroad, Turan Profi increased its exposure to international educational organizations and created a valuable network that it continues to use on other projects. Training also strengthened the networking of farmers and scientists.

3.6 Summary of findings of beneficiary survey and stakeholder workshops

Not applicable.

4. Assessment of Risk to Development Outcomes

Rating: Moderate

86. **The risk to development outcomes is assessed as moderate overall, but varies across components.** Significant risk is associated with the quality and safety management of agricultural products, because the project did not succeed in constructing the National Reference Library. Furthermore, equipment purchased to support safety management is likely to remain underutilized. Still, this risk is partly mitigated by the significant investment that the MOA has made in this area as well as in upgrading the Republican Veterinary Laboratory to the status of a reference laboratory. The risk for outcomes achieved under other components is classified as low because significant investment is planned for extension and agro-sciences. KAI created a viable

[16] FAO mission estimate, October 2012.

network of training centers that, although reliant on government financing, is planned to reach financial self-sufficiency. Marketing infrastructure built under the project is highly likely to continue, as investment in the livestock sector is expected to continue.

5. Assessment of Bank and Borrower Performance

5.1 Bank performance

(a) Bank performance in ensuring quality at entry

Rating: Moderately satisfactory

87. **As discussed in section 2.1, all aspects of the project were well thought out, and the project's components were designed to address key challenges for the sector.** Previous and current CPS and government strategy confirm that the objective continues to be relevant. A shortcoming of quality at entry was the complexity of the project and the fact that some activities did not include a proper needs assessment or strategy. Incorporating this assessment in the design of the project would likely have improved the outcomes of component 1, in particular those related to laboratories.

(b) Quality of supervision

Rating: Moderately unsatisfactory

88. **The World Bank team made a significant effort to ensure timely implementation of project activities.** The mission aide-mémoires provided detailed guidance on steps for each of the activities and how to minimize the administrative burden of government procedures. Implementation support missions were conducted semiannually, with a final mission carried out in November 2012, after the loan closed, to supervise the implementation of final activities under the project. Fiduciary and safeguard policies were also supervised on a regular basis.

89. **The outcomes achieved under the CGS and component 3 were the result of significant support from the World Bank/FAO team, and these activities would not have succeeded without this support.** In addition to the regular resources allocated to supervision, the FAO sometimes added extra staff weeks to support the CGS. However, several shortcomings in the quality of supervision affected implementation of the project, particularly related to component 1. A food safety specialist should have been a core team member throughout the project. While discussion with the World Bank team revealed difficulties in finding such specialists given constraints within the budget for supervision, proper supervision of such highly technical activities could not be conducted without technical experts, as the situation with the laboratory equipment confirms. Further, as noted by the team itself, the NRL construction activity could have been dropped at an earlier stage. Even though the government was eager to construct the new building, it should have been clear at the time of the extension that this could not be completed before the project was closed. Instead, to support the objective and results framework of the project, this activity could have been redesigned to support accreditation of existing facilities. Although still under a tight implementation schedule, this could have been

achieved with proper support for implementation. The team could also have advised the government to implement these activities in parallel, since much of the accreditation process is not dependent on facilities. While the quality of supervision was high overall, these shortages are considered too fundamental to justify a rating higher than moderately unsatisfactory.

(c) Justification of rating for overall bank performance

Rating: Moderately satisfactory

90. **The rating is based on the moderately satisfactory rating on the quality at entry and moderately unsatisfactory rating on project implementation.** It also takes into account the moderately satisfactory rating on the project outcomes.

5.2 Borrower performance

(a) Government performance

Rating: Moderately unsatisfactory

91. **The project came about as a result of a strong interest from the government in promoting diversification in the economy and improving competitiveness in the agriculture sector.** Government agencies including the ministries of finance and economy supported the project, including the proposed budgets. The project budget was approved on an annual basis even during the financial crisis of 2008–10.

92. **Delays with ratification and effectiveness of the Loan Agreement, which were attributed to systemic issues in the project approval mechanism and could not be avoided by this particular project, had a negative effect on the project's momentum.** It is commendable that the GOK recognized the problem and was willing to work with the Bank to develop a long-term solution. Micromanagement by the Ministry of Finance was another factor that negatively affected the pace of implementation in the early stages. For example, approval of the consultants' terms of reference, purchase of computers for the PCC, and even connection to a phone line required clearance from the MOF. These interventions were aggravated by the numerous contracts to be processed. However, the MOF was open to discussing these difficulties and streamlined the clearance process by eliminating several steps (including clearance of terms of reference). This helped to accelerate project implementation, and the pace was mostly regained by the third year of implementation, except for a few activities outside of government control.

(b) Implementing agency or agencies performance

Rating: Moderately unsatisfactory

93. **The departmental staff members of the MOA and the PCC who were responsible for the project were actively involved in the preparation and implementation process.** They met regularly with the Bank's project team and were often its only contact point. However,

although the project components cut across different subsectors of agriculture, departments in the MOA showed little ownership of project activities. Component 1 particularly suffered from lack of leadership and accountability for the investments in laboratories. This lack of clear leadership is the main reason for the failure of this component. Individual oblast- and rayon-level laboratories complained about the lack of response from the ministry when communicating their problems and needs.

94. **The PCC was dissolved as of June 30, 2012, without any follow-up on the two activities that were still ongoing**. These were the review of the laboratories and the collection of final reports and final payments to the 241 CGS beneficiaries whose subprojects were not closed by June 30, 2012. Although it did not involve any IBRD loan funds, the fact that several grants awarded under the project will not be paid out in full violates the contractual agreement with the beneficiaries and poses serious reputational risk for both the World Bank and the government. The NRL design contract was similarly terminated, wasting work done in this regard.

95. **Further, significant delays in project implementation occurred because procurement activities took four to eight months, about 30 percent longer than usual.** Some units of the implementing agency, notably the legal department, reportedly failed to provide constructive support and presented considerable bureaucratic impediments to implementation.

(c) Justification of rating for overall borrower performance

Rating: Moderately unsatisfactory

96. **The borrower's performance is considered moderately unsatisfactory.** This rating recognizes the government's effort and commitment to the project and the results achieved, while taking into account avoidable factors affecting implementation and the failure to complete project activities.

6. Lessons Learned

97. **Project complexity should be geared to the capacity of the implementing agency and enabling environment.** Complex projects with activities in different subsectors are difficult to coordinate and prone to slow implementation. A pilot phase of six or even 12 months would probably have been justified, after which adjustments and restructuring could have been made, mitigating or avoiding the shortcomings that eventually occurred.

98. **The size of successful activities was too small for a country like Kazakhstan.** In retrospect, the larger CGS pool could have had a greater influence on sector development. The size of the grants was based on experience with similar programs in countries like Albania, Armenia, and Azerbaijan, but even small and medium enterprises in Kazakhstan have very different financial needs. Thus, to make a difference and attract interest from businesses and generate larger impacts and more visibility, the grants pool should have been larger and other activities should have been smaller to keep the overall project manageable.

99. **A thorough needs assessment should be done before investments are committed to physical infrastructure (lab-related activities under the project).** This would have allowed precise justification for purchases of lab equipment and NRL construction. For example, one possible approach might have been to provide support for methods of accrediting local laboratories through a step-wise approach rather than through construction of a new NRL. The idea of constructing the NRL was too ambitious from the start, and although it was difficult to predict the challenges during the design phase, it was, according to the team, clear fairly quickly that the activity would not be completed. Further, even upgrading existing laboratory infrastructure was likely beyond the needs of an adequate modern food safety infrastructure. A needs assessment would have enabled this component to be tailored to actual needs.

100. **Significant budget co-financing poses operational challenges that require attention.** Specifically, (a) connection between progress toward achievement of the PDO and disbursement was elusive, as not all disbursement was visible in the Bank system, and (b) the fact that the Loan Agreement became a de facto project agreement was underappreciated. No activities should be planned beyond the Loan Agreement closure date, as closure of the Loan Agreement leads to project closure, even if some of the activities financed by the state budget have not been completed.

7. Comments on Issues Raised by Borrower, Implementing Agencies, and Partners

7.1 Borrower and implementing agencies

101. Borrower supported moderately satisfactory rating of the project results and noted positive impact of some project activities (grant program, extension, etc.) on the competitiveness of the agricultural sector in Kazakhstan. MOA asked for the Bank technical assistance to conduct a needs assessment of the IFA laboratory equipment. Such assistance may be provided in the framework of the follow-up project preparation.

7.2 Co-financiers

102. **No co-financiers were involved in this project, other than the government and the grant beneficiaries.**

7.3 Other partners and stakeholders

103. **The FAO partnered through all phases of the project.** Such collaboration went beyond the traditional Cooperative Program and was crucial for the results achieved under the CGS and extension activities. Partnership with the FAO and collaboration with the International Center for Maize and Wheat Improvement (CIMMYT) were fundamental to achieving the large-scale adoption of conservation agriculture technology and assessing its impact.

Annex 1. Project Costs and Financing

Table A1.1 Project Cost, by Component (in US$ million equivalent)

Components	Appraisal estimate (US$ million)	Actual/latest estimate (US$ million)	% of appraisal
Quality and safety management of agricultural products	31.0	10.4	33.5
Agricultural marketing	4.4	3.5	79.5
Applied agricultural research and extension	28.2	27.6	97.9
Institutional development and agricultural policy	6.2	4.5	72.6
Total baseline cost	69.8	46.0	65.9
Physical contingencies	1.00	0.00	0.00
Price contingencies	0.00	0.00	0.00
Total project costs	70.80	46.00	65.0
Front-end fee PPF	0.00	0.00	0.00
Front-end fee IBRD	0.00	0.00	0.00
Total financing required	70.80	46.00	65.0

Table A1.2 Project Cost, by Source of Funds

Source of funds	Appraisal estimate (US$ million)	Actual/latest estimate (US$ million)	% of appraisal
Borrower	46.8	31.3	66.9
IBRD	24.0	14.7	61.25
Local beneficiaries	12.3	12.3	100.0

Annex 2. Outputs by Component

The project's outputs are summarized in following table.

Table 2A.1. Outputs, by Component

Activity	Component 1 Food Safety and Quality Management	Component 2 Marketing	Component 3 Research and Extension
Core activities	**7** technical regulations were developed and adopted. **34** state standards were harmonized. **6** guidelines for the introduction of food products safety management systems were written. **23** private food-processing companies received grants for the introduction of the food products safety management systems. **6** types of lab equipment were delivered with project support into 18 oblast and 60 rayon branches of the RVL and 4 oblast phytosanitary labs.	About **160** specialists and young scientists received training abroad. About **170** training sessions on marketing were held domestically throughout the project. More than **2,500** people received basic knowledge about agricultural marketing and the marketing information system.	A state extension system was created and supported under the project. Extension training centers supported under the project provided training to about **7,800** farmers.
CGS	**636** grants were approved under **4** rounds; **572** grants were implemented.[a]		

a. Of those, about 70 grants did not complete their operations by the time of project closure; 241 completed their activities, but the beneficiary's final report or final payment of 10 percent is pending.

Component 1, Quality and Safety Management of Agricultural Products, supported the development of seven technical regulations (meat and milk products, fruits and vegetables, grains, and others). This included developing technical regulations, harmonizing 34 state standards, and drafting six guidelines for the introduction of safety management systems for food products. All of them were completed and approved or adopted by government resolutions. The project also financed the translation of 115 standards. These standards are being used in practice, especially for inspecting plants and crops and animal production at the farm level.

In addition, the project supported the introduction of new food product safety management systems in 23 private food-processing companies. Regarding animal health, the MOA purchased six types of modern lab equipment with project funds and delivered them to nine oblast branches and 60 rayon branches of the Republican Veterinary Laboratory network. Laboratory managers and technicians were trained to use this equipment. In addition, 25 grants for modernization of private laboratories were financed through the CGS.

In addition to strengthening the network of laboratories, the project supported research projects related to animal health, particularly *Echinococcosis*, a parasitic disease that affects both humans and horses (and other mammals, such as sheep). Advances with regard to diagnosis, treatment, and disease surveillance improved the safety and quality of horse

products. As a result of these contributions, seven related patents were registered. This is one of several examples reported for animal health and food safety and quality.

Component 2, Agricultural Marketing, provided training in various areas. About 160 various specialists (including 52 young scientists) received training abroad on subjects related to agricultural marketing and competitiveness. Two training modules were prepared on the development of a marketing and information system, and training was provided to about 570 farmers and staff members of the MOA, KAM, and other government agencies. Overall, about 170 training sessions on marketing were held domestically during the project implementation period. As a result, more than 2,500 farmers and entrepreneurs received basic knowledge in agricultural marketing and the marketing information system. Complementing the training provided, the project awarded 77 competitive grants: 58 for developing marketing infrastructure and 19 for improving the image of agricultural products.

A successful example of project-promoted image enhancement is the "Kaznan" brand. Kaznan was developed to increase the export potential of Kazakh flour and pasta by integrating domestic producers under one national brand. The image, developed through a project grant, associates Kazakhstan with "bread" and is intended to distinguish Kaznan products from competing brands. The Ministry of Industry has used this approach to develop other brands for Kazakh products.

Component 3, Applied Agricultural Research and Extension, initially established a state extension and knowledge dissemination system within KAM by financing a network of rayon-level extension agents. In 2009, the activity was modified to provide technical and financial support for establishing nine training centers (all equipped with call centers) in agriculturally important locations in North and South Kazakhstan under the aegis of KAI. Overall, 23,757 consulting services were provided, including 674 training seminars with more than 7,800 participants. A "subscription" service was introduced, whereby farmers received a minimum package of information and consultation, under which 2,828 contracts were signed. The project also supported creation of a database of agricultural producers and their main products, registering 56,807 producers, as well as a database containing information on 3,014 research results. Under this component, the CGS financed applied agricultural research (test of new varieties and breeds), extension, and technology introduction.

The involvement of academia was important for testing new technologies and accelerating the adoption of new technologies in crop and animal sciences. One of the cases highlighted is the relation of the project with Kazakh National Agrarian University (KazNAU), one of the project's main partners. KazNAU develops research projects and lines covering major technological gaps. In 2007–12, researchers from KazNAU were awarded and implemented 27 subprojects with funding from the CGS. These subprojects provided new equipment, materials, and operating funds to conduct adaptive research related to the following areas:

a) Increasing the productivity of rice in saline soils
b) Introducing resource-saving technologies of cultivation of agricultural crops
c) Developing technology for growing horticultural crops
d) Implementing crop fertilization systems using micronutrients
e) Developing commercial methods of producing compost by means of vermiculture
f) Developing modern agro-processing technologies

g) Adopting measures to combat animal diseases
h) Developing new machinery and equipment
i) Improving the design of agricultural machinery
j) Encouraging farmers and farms to adopt intensive technologies.

Conducting research on "beneficiary" farms rather than at research stations improved the dissemination and impact of subprojects. This methodology allowed farmers to adopt technologies quickly and enabled researchers to verify their technical and economic viability in the field. Every proposal had to include the name and location of the farm where testing and adaptation of the research would be conducted.

The implementation of subprojects in the National Academy of Sciences of the Republic of Kazakhstan involved 46 senior professors, 88 associate professors, 12 doctoral students, and 29 master's degree students. An impressive 18 patents were registered, demonstrating the high value and innovative approach of grants financed by the project.

Among many important contributions was the work of Dr. N. Sh. Suleymenova (KazNAU). Dr. Suleymenova developed resource-saving technologies for cultivating soybean and rapeseed in southeast Kazakhstan, finding that the 11 beneficiary farms increased their yields between 0.2 and 0.4 ton per hectare. The testing and dissemination of cultivation techniques demonstrate the importance of the MOA's continuing support for work initiated by the project.

As a result of increases in the price of vegetable oils, Kazakhstan has been expanding the production of oil crops since 2008. Through research and demonstration grants, the project disseminated information on the production of sunflower, cotton, soy, safflower, maize, lint, and rapeseed (canola). As an example, two companies are developing 28,000 and 15,000 hectares, respectively, for the production of oil crops. According to survey data, 30 percent of producers have adopted the new technologies in certain areas of Kazakhstan.

One subproject produced 13 scientific contributions, which were presented in international and regional conferences and subsequently published in peer-reviewed scientific and technical journals. Developed by Dr. G. S. Shabdarbayev, KazNAU, the research on piroplasmosis in horses, on the identification of blood parasites, antigens, and antibodies, on diagnosis, on enzyme immunoassays, and on food safety, among other topics, helped Kazakhstan to optimize the technology for preparing diagnostic kits and thus contributed to applied solutions for industrial and innovative development of the horse industry.

The project contributed to establishing an adequate extension system in Kazakhstan, by supporting the MOA in mandating KAI to establish an outreach network (at regional and district levels). With project support, KAI created a program demonstrating the importance of disseminating knowledge and developing educational, information, and consultancy activities to reach different areas of the country. KAI constitutes an efficient mechanism for transferring information on best practice technologies from experts to farmers.

KAI established regional extension centers and plans to expand its branch network into all regions of Kazakhstan. The expansion is financed by the government budget and includes holding scientific and practical seminars and expanding the means of dissemination (Internet,

web-enabled library for farmers, interactive forms of knowledge transfer, and distance learning). Eight regional centers existed in 2008 and nine in 2011; five more are planned by 2015.

The assistance provided by international experts financed by the project and FAO contributed to the current structure of KAI. The system consists of (a) training KAI entities in the practical use of modern technologies and (b) consulting with KAI entities on technological issues. The extension system is financed by two lines within the MOA budget, one of them directly linked to the project. Direct MOA financing is dedicated largely to extension centers for farmers, while project support helped KAI to organize mobile extension services (online, on-farm consultation, and others).

More than 400 grants were oriented toward new technologies and related extension activities, with an impact on developing models of sustainable agricultural production, specifically with regard to farming practices and incomes, food safety and quality, market access, and exports through image enhancement. These grants improved efficiency and profitability in the agriculture sector, particularly for small and medium-scale agribusinesses. Beneficiaries specifically mentioned that the grants allowed them to hire new personnel to carry out the proposed activities. New technologies were focused on achieving efficiency and profitability, adding accountability and accounting skills to agribusiness. Available statistics indicate a positive trend in production and income (except during the 2012 drought). The project made an important contribution through its support for the adoption of new technology.

The adoption of new wheat varieties eventually should improve human health by providing more nutritious food. Some of the contributions were focused on improving the amount of zinc and iron in wheat varieties, which are important elements for human consumption.

Of the wide spectrum of technologies promoted by the project, the testing and expansion of zero tillage or conservation agriculture are the most relevant, with considerable impacts on the country's principal production systems. In northern Kazakhstan, zero-tillage technology has the potential to increase wheat and grain productivity by 20–50 percent above current levels. In addition to testing and adapting technology to local conditions, this technology requires farmers to adopt new production practices, invest in machinery, and change the organization of farms. The project supported this process, awarding funds for adaptive research and helping small and medium farmers to migrate gradually from conventional tillage to full zero tillage. Without this support, the access to equipment, organizational adaptation, and changes at the farm level would have taken much longer or would not have occurred at all. The area under zero tillage is increasing every year. Although the total area varies, at least 1.8 million hectares are under zero tillage in the country. In the short run, at least 40 percent of the area devoted to cereal crops (around 4 million hectares) could be transformed, producing at least 1 million additional tons of wheat per year.

The project demonstrated the advantages of zero tillage, helping larger farms to improve their organization and technology and smaller farms to improve their knowledge and skills and acquire equipment. Many measures were demonstrated through training events, consultations with experts, and service provided by major research centers, which enabled quick, broad dissemination of best practices. Members of the Farmers Foundation of Kazakhstan and

the Production Center of Grain Farming consider that the project generated solid information about new technology and its economics, especially with regard to capital investment, costs of production, financial returns of conservation tillage compared to conventional systems, as well as input requirements and production methodologies (seed rates, sowing time, herbicide, rotation crop, fallow, mechanical weeding, snow trapping). Seven years ago zero tillage was a new technology in Kazakhstan; in the recent growing season, 150,000 hectares of conservation agriculture for spring wheat were planted, 50 percent with direct support through CIMMYT. In the severe droughts of 2010 and 2012, spring wheat did not suffer as much as traditional wheat because it is much better adapted to severe drought conditions. Suppliers of machinery and technology for traditional agriculture are beginning to serve the needs of the conservation agriculture market. Zero tillage also has well-recognized benefits for soil conservation, biodiversity, and water management.

The project facilitated the testing and expansion of nontraditional crops, including soybean, sorghum, and cotton, as well as pastures to expand livestock production and promote diversification from cropping. Examples are the introduction of new breeds of sheep and cattle and the improvement of slaughtering facilities and production of milk from horses and camels. The testing and introduction of *Agropyron* is a significant new technology, resulting in an increase in the supply of animal fodder, a reduction of grazing in areas close to villages, a reduction of land degradation, and the use of alternative sources of energy (solar) to provide water in remote areas. There is a clear link between the Agricultural Competitiveness Project and the recently completed World Bank–financed Dryland Management Project, which tested this technology in the Shetsky Rayon and is now expanding it to other regions of the country.

Farmers and researchers mentioned important advances in the use of water. Water has traditionally been considered a limiting factor for production in some areas of the country. During recent decades, demand for irrigation has been growing. Through research and demonstration supported by the project, technologies such as drip irrigation have been adopted and are expected to have an impact on new crops in dry areas.

The project also supported other technologies through research, training, or grants:

- Use of legumes to increase soil fertility to improve the consumption of protein by the rural population
- Production of grapes and berries
- Pest control
- Forestry production
- Production of camel milk, ostrich farms, fisheries and hatcheries, and poultry
- Improved breeding stock (horses, cattle, sheep)
- Seeds and sowing implements
- Post-harvest and marketing, including grain cleaning and transportation, refrigeration, and storage for agricultural products.

Table 2A.2 presents the total number of grants by type of activity.

Table 2A.2. Number of Grants, by Type

Type	Planned	Actual
Total	800	572

Laboratories (private)	20	25
Market-oriented infrastructure	140	58
Image enhancement	30	19
Applied research	180	98
Extension and demonstration	430	372

Component 4, Institutional and Agricultural Policy Development, created the institutional architecture to implement the project's activities and helped the MOA to establish policy, M&E, and institutional frameworks to improve the competitiveness of the country's agriculture sector.

Annex 3. Economic and Financial Analysis

The key quantifiable benefit resulting from project investments is the incremental income from improved productivity and profitability of farm and nonfarm enterprises resulting from extension services and grant projects supported through the CGS. The appraisal also expected to find benefits from improved quality and safety of agricultural products and more effective marketing. However, such benefits are difficult to estimate due to a lack of reliable data. Nevertheless, two private laboratories were analyzed and found to be conducting substantially more tests for quality (45,000 additional tests per year for the last two years).

The analysis focused on grant beneficiaries, rather than on macro considerations such as export earnings. Therefore, only benefits generated by the CGS were included in the analysis of total project costs. The analysis sought to evaluate the viability of project activities at the farm or enterprise level. An optimum number of representative grantees was identified to reflect the wide variations within the country while achieving a sensible degree of precision. Information was collected during field visits, discussions with grantees, and a review of available reports from the PCC. The results were compared with those projected at appraisal. Finally, a sensitivity analysis was carried out to assess the impact of various parameters on financial and economic returns.

Economic Analysis

Farmers and entrepreneurs implemented 572 (out of 585 signed) grant projects amounting to about KZT 2.656 billion (US$22 million). Projects were in the following areas: modernization of private laboratories, development of agricultural marketing infrastructure (slaughterhouses, storage facilities), image enhancement of agricultural products (development of new design for packaging and websites, rebranding), applied agricultural research (test of new varieties, breeds, conservation agriculture), and extension and technology introduction. By regions, the highest percentage of grantees was in South Kazakhstan Oblast (14.9 percent), followed by Almaty City (14.4 percent), Almaty Oblast (11.3 percent), and Karagandy Oblast (9.6 percent).

Of all grant projects implemented, 104 final reports for completed projects were reviewed, or 18 percent. Visits were made to 21 grant projects, confirming the reliability of data. These grant projects were selected on a random basis to cover all the CGS windows and both the southern and northern corridors. Seven of the projects visited were considered to have good potential, yet to be at a very initial stage of implementation and not generating full incomes; these were not included in the analysis. As a result, 14 grant projects located in South-Kazakhstan, Almaty, Zhambul, Akmola, Kostanay, and Karagandy oblasts were visited and analyzed, or 2.5 percent of all projects implemented. This is considered a representative sample for the project. The key economic data on the grants analyzed are presented in table 3A.1.

Table 3A.1 Project Completion: Key Economic Data on Analyzed Project Grants

#	Model	Investment costs (US$ thousand)[a]			Annual net benefits (US$ thousand)			Incremental annual net benefits per US$1 of investment (US$)	IRR (%)	NPV (US$ thousand)
		CGP	Beneficiary	Total	Without project	With project (full development)	Incremental			
1	Applied research (AR), CYMMIT/Farm "Vlad," zero till of wheat and cropped fallow on drylands (Karagandy Oblast)	64	36	100	197	801	605	6.1	64	788
2	AR, CYMMIT/Farm "Tumar," zero-till on irrigated land (Almaty Oblast)	75	37	112	422	651	229	2.0	55	451
3	AR, Farm "Agro-Duman," testing grain varieties with minimum-till technology (Karagandy Oblast)	78	193	271	7	2,039	2,032	7.5	79	2,646
4	AR, Co-op "Shakpak," diversification of production with oil crops applying minimum-till technology and processing (South Kazakhstan Oblast)	53	106	159	180	801	621	3.9	69	1,086
5	Extension, Farm "Bakhytzhan," zero till of spring wheat on drylands (Kostanay Oblast)	9	4	13	667	716	49	3.8	47	757
6	Extension, Farm "Ken-Dala," minimum-till of rain-fed fodder barley (Zhambyl Oblast)	19	26	45	347	647	301	6.7	125	757
7	Extension, Farm "Agro-Duman," minimum till of agroparon on drylands (Karagandy Oblast)	22	21	42	24	73	49	1.2	34	66
8	Extension, Farm "Kunar," cold oil pressing of safflower (Zhambul Oblast)	21	31	52	0	46	46	0.9	208	200
9	Extension, Farm "Mateev," production of packed apple chips (Zhambyl Oblast)	20	16	36	0	12	12	0.3	46	34
10	Extension, improved feed for cows, Kenes Advisory LPP/Ak Sut Farm (Almaty Oblast)	12	6	18	6	44	38	2.1	1,315	137
11	Modernization of private laboratory, Kazexpoaudit LPP (Almaty Oblast)	52	40	92	1	38	38	0.4	69	130
12	Modernization of private laboratory, Baltic Control KZ Certification LPP (Astana)	47	21	68	71	1,473	1,402	20.6	1,315	5,772
13	Marketing, milk processing, Ak Sut cooperative (Almaty Oblast)	54	33	87	7	35	28	0.3	19	25
14	Image enhancement, Natige Milk Processing Plant, introduction of marketing strategy and packaging (Karagandy Oblast)	40	15	55	404	504	100	1.8	—	515
	Average number	**40**	**42**	**82**	**167**	**563**	**396**	**4.11**	**265**	**954**
	Average percentage	**49**	**51**	**100**						

— Not available.

a. Includes only investment costs, so the amounts differ from grant costs. Full development is in a 10-year period.

The following summarizes the projects analyzed:

1. Minimum and zero-till technologies reduced input costs by 3–45 percent and increased outputs by 5–56 percent (on a per hectare basis), with annual benefits ranging between US$49,000 and US$1.8 million depending on farm size and location. The analysis revealed that the project played an important role in expanding the use of conservation agriculture technologies. Overall, 42 grant projects implemented minimum- and zero-till technologies. About 500,000 hectares are now under zero and minimum tillage, with around 420,000 hectares in Karagandy Oblast alone. On the seven farms analyzed, the incremental annual benefits from applying zero- and minimum-tillage practices amounted to an estimated US$3.7 million at full development (2010).
2. Introduction of cold oil pressing enabled the processing of 300 tons of safflower per year, thus producing 60 tons of quality oil and 230 tons of oil cake and generating four full-time jobs. The incremental annual benefits of this operation were estimated at US$46,000.
3. Investments in production of apple chips enabled the processing of 65 tons of apples and generated the sale of 260,000 packs of nutritious dried apples, bringing an additional US$12,000 annually to the beneficiary enterprise. The investment also generated employment for two full-time workers.
4. Improved animal feeding (use of silage and vitamin mix) increased milk production in participating farms from 7–8 to 10–12 liters per head per day, or around 30 tons. Incremental benefits were almost US$38,000 per year.
5. Investments in two accredited laboratories brought an additional US$1.44 million annually due to the increased number of tests performed (from 4,000 to 45,000) as well as the savings realized by clients. Previously about 1,800 tests per year had to be carried out in Europe due to the scarcity of modern laboratory equipment in Kazakhstan. Thanks to the project, these tests are now undertaken in Kazakhstan, reducing costs by almost US$660 per test or US$1.2 million per year.
6. Investments in a milk-processing facility enabled the production of 83 tons of various milk products, bringing US$28,000 of value added per year.
7. Development of a marketing strategy, a public relations campaign, and packaging (image enhancement of Kazakhstan agricultural products) led to a 25 percent increase in sales of dairy products, bringing an additional US$100,000 per year to the enterprise.
8. NPVs for the analyzed farms and enterprises ranged between US$25,000 and US$5.7 million. ERRs ranged from 19 percent to more than 1,000 percent. These are much higher than the numbers projected during appraisal: NPVs between US$1,800 and US$133,000; ERRs between 16 and 80 percent.

The economic analysis was performed for a period of 20 years. Based on data from the 14 grant projects analyzed, an average incremental annual net benefit per US$1 of investment equaled US$4. The overall benefits from the CGS were calculated by multiplying this extrapolation factor by the amount of investments factually disbursed under the CGS. The analysis assumed an 80 percent success rate (that is, 80 percent of all grants were successfully implemented and generated the same level of benefits) as well as a gradual increase of such benefits over the next 20 years. The incremental costs in economic prices were calculated by removing price contingencies, taxes, and duties. No residual values for capital investments were assumed. However, the analysis considered the investments made by indirect beneficiaries who adopted the promoted technologies without the project's financial support. The total incremental economic cost of the project amounted to about US$54.4 million.

For the project as a whole, the ERR and the NPV at completion were an estimated 29.3 percent and US$70.5 million, respectively, assuming an opportunity cost of capital of 12 percent. These rates are higher than those projected at appraisal: ERR at 23.5 percent and NPV at US$51 million. A sensitivity analysis revealed that a fall of 20 percent in total project benefits and an increase in total project costs by the same proportion would reduce the base case ERR to about 26 percent. The switching value is about 72 percent for total project benefits, and approximately 255 percent for project costs. Implementation success factors for the grant projects of 50 and 30 percent would reduce the ERR to 22 and 15 percent, respectively.

Financial Analysis

The 14 grants visited were also used to estimate financial costs and benefits. The main results of the financial analysis were (a) overall, gross, and net returns increased substantially; (b) benefit-cost ratios were favorable; and (c) the level of profitability varied by activity. NPVs for the analyzed farms and enterprises ranged from US$15,000 to US$2.5 million. IRRs ranged from 16 to 780 percent. These numbers are much higher than those projected during the appraisal: NPVs between US$13,000 and US$160,000 and IRRs between 16 and 80 percent. Favorable cash flows indicated that the CGS would continue working successfully after project closure. A sensitivity analysis was undertaken to assess the impact on financial returns of changes in (a) output prices, (b) expected yields, (c) operating costs, and (d) investment costs. Although the grant projects were more sensitive to changes in both yield and price assumptions than to variations in investment and operating costs, they were reasonably sound in terms of revenue.

Table 3A. 2 summarizes financial costs and benefits. Details can be found in the project files.

Table 3A.2 Project Completion: Key Data on Analyzed Project Grants (Financial)

#	Model	Investment costs (US$ thousand)*			Annual net benefits (US$ thousand)			Incremental annual net benefits per US$1 of investment (US$)	IRR (%)	NPV (US$ thousand)
		CGP	Beneficiary	Total	Without project	With project (full development)	Incremental			
1	Applied Research (AR), CYMMIT/Farm "Vlad," zero till of wheat and cropped fallow on drylands (Karagandy Oblast)	64	41	105	178	784	607	5.8	60	749
2	AR, CYMMIT/Farm "Tumar," zero-till on irrigated land (Almaty Oblast)	75	37	112	395	627	232	2.1	55	457
3	AR, Farm "Agro-Duman," testing grain varieties with minimum-till technology (Karagandy Oblast)	78	233	310	7	1,806	1,800	5.8	70	2,488
4	AR, Co-op "Shakpak," diversification of production with oil crops applying minimum-till technology and processing (South-Kazakhstan Oblast)	53	119	172	159	836	677	3.9	68	1,159
5	Extension, Farm "Bakhytzhan," zero till of spring wheat on drylands (Kostanay Oblast)	9	5	14	599	655	56	4.1	50	752
6	Extension, Farm "Ken-Dala," minimum till of rain-fed fodder barley (Zhambyl Oblast)	20	27	47	306	611	305	6.4	120	752
7	Extension, Farm "Agro-Duman," minimum-till of agroparon on drylands (Karagandy Oblast)	24	22	46	24	73	49	1.1	30	56
8	Extension, Farm "Kunar," cold oil pressing of safflower (Zhambul Oblast)	22	33	55	0	46	46	0.8	179	195
9	Extension, Farm "Mateev," production of packed apple chips (Zhambyl Oblast)	21	16	37	0	11	11	0.3	36	26
10	Extension, improved feeding for cows, Kenes Advisory LPP, Ak Sut farm (Almaty Oblast)	13	7	19	6	44	38	2.0	781	136
11	Modernization of private laboratory, Kazexpoaudit LPP (Almaty Oblast)	52	50	102	1	46	45	0.4	78	162
12	Modernization of private laboratory, Baltic Control KZ Certification LPP (Astana)	47	29	76	0	316	316	4.2	309	1,267
13	Marketing, milk processing, Ak Sut cooperative (Almaty Oblast)	54	39	93	7	34	27	0.3	16	15
14	Image promotion, Natige Milk Processing Plant, introduction of marketing strategy and packaging (Karagandy Oblast)	41	18	59	449	560	111	1.9	—	574
	Average number	**41**	**48**	**89**	**152**	**461**	**308**	**2.79**	**142**	**628**
	Average percentage	**46**	**54**	**100**						

Annex 4. Bank Lending and Implementation Support/Supervision Processes

Table 4A.1 Task Team Members

Names	Title	Unit	Responsibility/ specialty
Lending			
Maurizio Guadagni	Sr. rural development specialist	ECSSD	Task team leader
Mathew A. McMahon	Lead agriculture specialist	ECSSD	Peer reviewer
Steven M. Jaffee	Sr. economist	PRMTR	Peer reviewer
Janna Ryssakova	Social development specialist	ECSSD	
DerekR. Byerlee	Adviser	ARD	
Fasliddin Rakhimov	Operations analyst	ECCUZ	
Kairat Nazhmidenov	Consultant	ECSSD	
Daniele P. Giovannucci	Consultant	ECSSD	
Emanuela Montanari Stephens	Consultant	ECSSD	
Bulat Utkelov	Operations officer	ECSSD	
Talimjan Urazov	Operations analyst	ECSSD	
Sholpan Spanova	ET temporary	ECCKZ	Interpreter
Anarkan Akerova	Counsel	LEGEC	
Allen Wazny	Sr. financial management specialist	ECSPS	
Aliya Kim	Finance assistant	ECCU8	
Hannah Koilpillai	Finance officer	LOAG1	
Naushad Khan	Lead procurement specialist	ECSPS	
Anara Akhmetova	Team assistant	ECCKZ	
Aitolkyn Kourmanova	Program assistant	ECCU8	
Wendy Aires	Editor	AFTTR	
Anara Jumabaeva	Financial analyst	FAO	
David Lugg	Agricultural economist	FAO	
Supervision/ICR			
Safinaz El Hag El Tahir Ahmed	Rural development specialist	ECSS1	
Anara Akhmetova	Procurement assistant	ECCKZ	
Mustafa Ugur Alver	Junior professional associate	ECSS1	
Michael G. Carroll	Lead natural resource management specialist	ECSS1	Task team leader
Norpulat Daniyarov	Sr. financial management specialist	ECSO3	
Gulana Enar Hajiyeva	Environmental specialist	ECSS3	Safeguards
Aliya Kim	Financial management analyst	ECSO3	
Nurbek Kurmanaliev	Procurement specialist	ECSO2	Procurement
John Otieno Ogallo	Sr. financial management specialist	ECSO3	
Talimjan Urazov	Operations officer	ECSAR	ICR team leader
Yuling Zhou	Lead procurement specialist	EAPPR	Procurement
Sandra Broka	Sr. rural finance specialist	ECSAR	Task team leader
Maurizio Guadagni	Sr. rural development specialist	ECSAR	Task team leader
Arcadii Capcelea	Sr. environmental specialist	ECSEN	Safeguards
Ignacio Jauregui	Counsel	LEGLE	
Asa H. Giertz	Consultant	ECSAR	
Chris Mathias	Consultant	ECSSD	
Anara Jumabayeva	Sr. economist	FAO	CGS

Turi Fileccia	Sr. agronomist	FAO	Extension

Table 4A.2 Staff Time and Cost (Bank Budget Only)

Stage of project cycle	Number of staff weeks	Cost, including travel and consultant costs (US$ thousand)
Lending		
FY99		3.90
FY00		45.13
FY01		73.14
FY02		42.56
FY03		134.74
FY04		198.07
FY05		143.19
Total		640.73
Supervision/ICR		
FY05		17.05
FY06		54.39
FY07		155.01
FY08		143.74
FY09		166.80
FY10		92.36
FY11		116.10
FY12		123.15
FY13		37.00
Total:		905.60

Annex 5. Beneficiary Survey Results
Not applicable

Annex 6. Stakeholder Workshop Report and Results
Not applicable

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

The Ministry of Agriculture of the Republic of Kazakhstan (Ministry) has reviewed the draft implementation completion report on the Agricultural Competitiveness Project and advises as follows.

Regarding the ICR section *Project-specific* factors that affected implementation. Paragraph 41 *Change in management of the Ministry of Agriculture.* Partial reorganization of the Project Coordination Center (PCC) and completion of some components as of January 1, 2012 have resulted in the project suspension in 2012.

Pursuant to the Feasibility Study for the Agricultural Competitiveness Project, in 2005 Component 1 envisaged preparation of a detailed design and construction of a National Reference Laboratory (NRL). A long process of the ToR reconciliation due to the increase in the principal budget for NRL design, as well as a protracted (over 1 year) international bidding, have proved to be the main reasons for cancelling the construction within this component and proceeding with the design only. The contract for the NRL design was only signed in April 2011 between the Ministry of Agriculture of the RoK and Gairia JSC, Lithuanian company, and suspension of the design process in November 2011 was caused by the following factors:

1) lack of analysis on the design of a National Reference Laboratory at the time of signing the contract.
2) unjustified total area of NRL proposed by Gairia JSC that was not consistent with the terms of the Contract. The design company provided the NRL drawings for an area of 11,000 m^2 instead of the area of 3,961 m^2 set forth by the Contract, which 3 times exceeds the required building area. During the subsequent negotiations, the company insisted on the need for expanding the area envisaged by the contract.

Besides, neither the calculations of the international experts (Cecil McMurray and Jazeps Rimeicans), nor those made by the Kazakh experts have been taken into account. Therefore, the Ministry finds it unreasonable to expand the area of the National Reference Laboratory which entails the increase in the cost of design and civil works. The drawings provided by the design company did not contain basic design solutions. Neither a topological and geodetic survey, nor a geological engineering survey has been carried out in the site allocated for the NRL design. The subsequent suspension of the NRL design process was caused by the project closure on June 30, 2012.

Regarding Paragraph 42. *Lack of proper background analysis for certain activities.* Under the project, 18 expensive units of equipment have been procured for immune fermented analysis (IFA). The IFA robots were supplied to the Republican Veterinary Laboratory in 2009 without either taking into account the actual needs, or providing relevant training to the specialists on how to operate an IFA robot. Moreover, the software was provided for only one disease (brucellosis). The IFA robots required and are still requiring regular maintenance by a service engineer to keep them in an operational condition from the moment they were supplied. To ensure continuous operation of the software, a constant maintenance service is required, and each diagnostic requires relevant software. At the official meetings with the World Bank team, the Ministry has repeatedly requested for technical assistance to be provided by an international expert to carry out a respective analysis of the IFA laboratory equipment, by this request was not addressed by the World Bank.

Factors that have impeded the implementation of the Competitive Grants Scheme.

One of the main factors is that the PCC management failed to conduct a proper review of the Competitive Grants Scheme implementation. Execution of the 5th round in 2010 when the grants from the 3rd and 4th rounds had not been completed would have resulted in an excessive number of grant recipients which was challenging for the small staff of the PCC and tight implementation schedule. This has subsequently produced an adverse effect on implementation of this component.

Despite difficulties that have emerged during the project implementation, the Ministry in general supports the project performance rating as Moderately Satisfactory. Some of the project activities, particularly the Competitive Grants Scheme, support of the extension system, etc. have produced a moderately positive effect on agricultural competitiveness in Kazakhstan.
We are looking forward to our continued fruitful cooperation.

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
АУЫЛ ШАРУАШЫЛЫҒЫ
МИНИСТРЛІГІ

МИНИСТЕРСТВО
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18.01.2013 № 10-1-10/189

Представительство Всемирного Банка
в Республике Казахстан

Министерство сельского хозяйства Республики Казахстан (далее – Министерство) рассмотрев проект заключительного отчета по проекту «Повышение конкурентоспособности сельскохозяйственной продукции» сообщает следующее.

В разделе заключительного отчета: Специфические для проекта факторы, оказавшие воздействие на реализацию.

По пункту 41. *Смена руководства Министерства сельского хозяйства.* Частичная реорганизация Координационного центра проекта (КЦП) и завершение реализации некоторых компонентов на период 1 января 2012 года привело к приостановлению реализации проекта в 2012 году.

Согласно Технико-экономического обоснования Проекта «Повышение конкурентоспособности сельскохозяйственной продукции» в 2005 году в 1 Компоненте были предусмотрены подготовка проектно-сметной документации и строительство Национальной референтной лаборатории (далее - НРЛ). Длительный процесс согласования технического задания, в связи с увеличением первоначального бюджета по проектированию НРЛ, а также затянувшиеся сроки (более 1 года) проведения международных конкурсных торгов, явились основными причинами отмены в данном компоненте строительства и продолжения только проектирования НРЛ.

Контракт на проектирование НРЛ был заключен только в апреле 2011 года между Министерством сельского хозяйства РК и литовской компанией ЗАО «Гайрия», и приостановление процесса проектирования в ноябре 2011 года было связано со следующими причинами:

1) отсутствие анализа по проектированию Национальной референтной лаборатории на период заключения контракта;

2) предоставление со стороны проектной компании ЗАО «Гайрия» необоснованных и несоответствующих Контракту по проектированию Национальной референтной лаборатории площадей. Проектной компанией были представлены чертежи НРЛ площадью на 11 000 $м^2$, вместо предусмотренных по контракту 3961 $м^2$, что превышает в 3 раза необходимую площадь здания. При дальнейших переговорах компания настаивала на необходимости увеличения площади предусмотренной контрактом.

При этом, не были учтены расчеты международных экспертов (Сеселя Макмюррей и Язепа Римейцанса) и Казахстанских экспертов.

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В связи с чем, Министерство считает не целесообразным увеличение площади Национальной референтной лаборатории, которое влечет за собой увеличение стоимости проектных и строительных работ.

Представленные проектной компанией чертежи НРЛ не содержали в себе основных проектных решений, не были выполнены топогеодезические и инженерно-геологические изыскания на земельном участке, выделенном для проектирования НРЛ.

Последующее приостановление проектирования НРЛ связано с завершением срока реализации проекта 30 июня 2012 года.

По пункту 42. *Отсутствие надлежащего общего анализа для некоторых мероприятий.* В рамках проекта был произведен закуп дорогостоящего оборудования имунно-ферментного анализа (ИФА), в количестве 18 штук. Поставка ИФА-роботов в 2009 году в РГП «Республиканская ветеринарная лаборатория» производилась без учета реальной потребности, соответствующего обучения специалистов на работе с ИФА-роботом и наличии программного обеспечения только на одно заболевание – бруцеллез.

ИФА-роботы с момента поставки требовали и требуют регулярного посещения сервисного инженера, для поддержания их в рабочем состоянии. В целях бесперебойного функционирования программного приложения необходим постоянный контроль сервис службы, так же необходимо программирование под каждый вид диагностикума. Министерство неоднократно на официальных встречах с представителями Всемирного банка обращалось с просьбой, для оказания технической помощи по предоставлению международного эксперта для проведения соответствующего анализа по лабораторному оборудованию ИФА, но данное обращение осталось без внимания со стороны Всемирного банка.

Факторы, повлиявшие на затруднение реализации Системы конкурсных грантов.

Одним из основных факторов является то, что Руководством КЦП не проводился соответствующий анализ реализации системы конкурсных грантов, проведение конкурса по 5 раунду в 2010 году, на период когда не завершенными оставались грантополучетели 3 и 4 раунда, привело к чрезмерно большому объему грантополучателей не смотря на небольшой штат КЦП и сжатые сроки реализации, что в последствии оказал отрицательный эффект на реализацию данного мероприятия.

Несмотря на возникшие в ходе реализации проекта трудности, Министерство в целом поддерживает оценку результатов проекта как «Умеренно Удовлетворительные». Одним из не многих мероприятий проекта, в частности программа конкурсных грантов, поддержка системы распространения знаний и другие, оказали средне положительное влияние на конкурентоспособность сельскохозяйственной продукции в Казахстане.

Надеемся на дальнейшее плодотворное сотрудничество.

Вице-министр **Г. Исаева**

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Annex 8. Comments of Co-financiers and Other Partners/Stakeholders

The project demonstrated the challenges and complexity for a member country of being involved with the Cooperative Programme of the World Bank and the FAO's Investment Centre. The Investment Centre management and its staff members partnered with the Bank throughout the project, providing technical input and know-how. At the same time, the project extended this collaboration to other international organizations such as the CIMMYT.

In spite of some acknowledged shortfalls, overall the project had visible and measurable outcomes, such as a sustainable increase in the income of beneficiaries thanks to the adoption of improved technologies and knowledge. In particular, the following are the most salient features of FAO's collaboration:

- The design and supervision of the CGS improved the responsiveness and effectiveness of the National Research System.
- Technical assistance provided support for establishing a demand-driven, pluralistically efficient, and sustainable extension system in the country.
- The careful analysis of options and advocacy of successful approaches promoted the use of conservation agriculture/no-till technology among Kazakh farmers.

Both the extension system and the CGS enabled the creation of a functional system of delivering services to farmers. Linking participants (scientists and farmers, farmers and farmers, scientists and scientists) through the extension and CGP components as well as numerous promotional events created a sustainable pool of knowledge and relationships. The testing of diverse techniques and service modalities with KAI demonstrated the benefits of establishing a cost-effective farmer- or production-specific advisory system throughout the country.

Lastly, the FAO-IC assessed the advantages of adopting conservation agriculture/no-till technology in Kazakhstan, which can be summarized as follows:

- Adoption of conservation agriculture/no-till technology is progressing steadily in Kazakhstan. It is practiced on at least 1.85 million hectares, representing a remarkable 200 percent advancement in five years. Kazakhstan is ranked ninth in the world in terms of acreage planted using conservation agriculture/no-till technology, second only after Russia in the Eastern Europe–Central Asia region.
- The adoption of conservation agriculture/no-till technology in Kazakhstan enabled an increase in wheat production of almost 2 million tons, equivalent to incremental income of about US$580 million over the last three years (2010–12).
- In food security terms, this incremental production satisfied the annual cereal requirements of some 5 million people (at 130 kilograms per capita per year).
- In terms of climate change mitigation, Kazakhstan has sequestered about 1.8 million tons of carbon dioxide (at 1 ton per hectare).
- No-till technology induced by the project covers some 350,000–400,000 hectares (around 20 percent of the overall no-till area in the country).

Annex 9. List of Supporting Documents

1) Project Appraisal Document
2) Loan Agreement and Supplemental Letter 2
3) Project Restructuring Papers and amended Supplemental Letters 2:
   - Restructuring Paper of July 30, 2010 (Report #55340-KZ)
   - Restructuring Paper of October 28, 2011 (Report #62731-KZ)
   - Amended Supplemental Letter-2 (signed on December 30, 2011)
4) Aide-mémoires for the missions of:
   - October 8–December 8, 2006
   - February 4–20, 2007
   - April 10–June 15, 2007
   - November 9–December 6, 2007
   - June 9–July 2, 2008
   - March 30–April 10, 2009
   - December 7–11, 2009
   - June 15–24, 2010
   - September 28–October 8, 2010
   - April 25–May 23, 2011
   - September 12–22, 2011
   - May 10–30, 2012
5) Implementation Status and Results Reports (sequence #1–#15).
6) Country Partnership Strategy for the Republic of Kazakhstan for the period FY05–FY11 (August 10, 2004; Report # 29412-KZ)
7) Country Partnership Strategy for the Republic of Kazakhstan for the period FY12–FY17 (March 30, 2012; Report # 67876-KZ)
8) Assessment of Project Contribution to the Agriculture Sector of Kazakhstan, By A. Alberto Yanosky, September 16, 2012
9) Description of subprojects implemented under the Competitive Grant Scheme by Kazakh National Agrarian University
10) Statistical Bulletins of the Statistical Agency of Kazakhstan
11) President Nazarbaev's Address to the Nation on January 27, 2012 (http://www.parlam.kz/ru/presidend-speech/29)


KAZAKHSTAN
SELECTED CITIES AND TOWNS
OBLAST CAPITALS
GALASY (CITIES WITH REGIONAL STATUS)
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
OBLAST BOUNDARIES
INTERNATIONAL BOUNDARIES
RUSSIAN FEDERATION
NORTH KAZAKHSTAN
AKMOLA
PAVLODAR
KOSTANAI
WEST KAZAKHSTAN
ATYRAU
AKTOBE
MANGYSTAU
KYZYLORDA
ZHAMBYL
ALMATY
EAST KAZAKHSTAN
KARAGHANDY
SOUTH KAZAKHSTAN
Kazakh Uplands
Torghay Plateau
Ustyurt Plateau
Caspian Sea
Aral Sea
ASTANA
Petropavlovsk
Kostanai
Kokshetau
Pavlodar
Ekibastuz
Semipalatinsk
Oskemen (Ust-Kamenogorsk)
Ural'sk
Chapaevo
Aktobe
Atyrau
Embi
Shalkar
Arkalyk
Turgay
Karagandy
Zhezkazgan
Balkhash
Ayakos
Saryshaghan
Aral
Baikonur
Beineu
Aktau
Kyzyl-Orda
Shu
Taldykorgan
Almaty
Turkistan
Taraz
Shymkent
Pik Khan-Tengri (6995 m)
2001 LEVEL OF ARAL SEA
1990 LEVEL OF ARAL SEA
1960 LEVEL OF ARAL SEA
Lake Balkash
Lake Alakol
Lake Zaisan
Volga
Ural
Ob
Irtysh
Esil (Ishim)
Torghai
Yrghyz
Zhem
Sarysu
Syrdariya
Shu (Chu)
Talas
Ile
Lepsi
Karatal
To Chelyabinsk
To Kurgan
To Tyumen'
To Novosibirsk
To Barnaul
To Saratov
To Samara
To Ufa
To Orenburg
To Astrakhan'
To Urumqi
To Korla
To Naryn
To Nukus
To Bukhoro
To Dushanbe
RUSSIAN FEDERATION
CHINA
KYRGYZ REP.
UZBEKISTAN
TURKMENISTAN
TAJIKISTAN
AFGHANISTAN
AZERBAIJAN
0 100 200 300 Kilometers
0 100 200 Miles
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