Document of
The World Bank

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Report No: 31939-KZ

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$24 MILLION

TO THE

REPUBLIC OF KAZAKHSTAN

FOR AN

AGRICULTURAL COMPETITIVENESS PROJECT

April 5, 2005

Environmentally and Socially Sustainable Development (ECSSD)
Central Asia Country Unit
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 24, 2005)

| | | |
|---|---|---|
| Currency Unit | = | Kazakhstan Tenge (KZT) |
| KZT 1 | = | US$0.0077 |
| US$1 | = | KZT 130.51 |

FISCAL YEAR
January 1 to December 31

**ABBREVIATIONS AND ACRONYMS**

| | |
|---|---|
| CC | Coordination Center |
| CGS | Competitive Grants Scheme |
| CIS | Commonwealth of Independent States |
| ERR | Economic rate of return |
| FAO | Food and Agriculture Organization of the United Nations |
| FMR | Financial monitoring report |
| FSU | Former Soviet Union |
| GB | Governing Board |
| GDP | Gross domestic product |
| GOST | State standards |
| ISO | International Standard Organization |
| NGO | Nongovernmental organization |
| OED | World Bank Operations Evaluation Department |
| PHRD | Japan Policy and Human Resources Development Fund |
| PIP | Project Implementation Plan |
| SOE | Statement of Expenditure |
| SPS | Sanitary and Phytosanitary Agreement of the WTO |
| TACIS | European Union Technical Assistance for Commonwealth of Independent States |
| WTO | World Trade Organization |

| | |
|---|---|
| Vice President: | Shigeo Katsu |
| Country Director: | Dennis De Tray |
| Sector Manager: | Joseph Goldberg |
| Task Team Leader: | Maurizio Guadagni |

KAZAKHSTAN
Agricultural Competitiveness Project

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**KAZAKHSTAN AGRICULTURE COMPETITIVENESS PROJECT**

**PROJECT APPRAISAL DOCUMENT**

EUROPE AND CENTRAL ASIA
ECSSD

| | |
|---|---|
| **Date:** March 31, 2005 | **Team Leader:** Maurizio Guadagni |
| **Country Director:** Dennis de Tray | **Sectors:** Agricultural extension and research (60%); Agricultural marketing and trade (40%) |
| **Sector Director:** Laura Tuck | **Themes:** Technology diffusion (P), Rural services and infrastructure (P) |
| **Project ID**: P049721 | **Environmental screening category:** Financial Intermediary |
| **Lending Instrument:** Specific Investment Loan (SIL) | **Safeguard screening category:** S2 |

**Project Financing Data**

[X] Loan [ ] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$ m.): 24.0
Proposed terms: 17 Years, with 5 Years of Grace

**Financing Plan (US$m)**

| Source | Local | Foreign | Total |
|---|---|---|---|
| BORROWER | 27.5 | 19.3 | 46.8 |
| INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | 9.4 | 14.6 | 24.0 |
| BENEFICIARIES | 11.8 | 0.5 | 12.3 |
| Total: | 48.7 | 34.4 | 83.1 |

**Borrower:** The Republic of Kazakhstan

**Responsible Agency:** Ministry of Agriculture

**Estimated disbursements (Bank FY/US$m)**

| FY | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | | | |
|---|---|---|---|---|---|---|---|---|---|
| Annual | 4.9 | 6.3 | 5.6 | 3.4 | 2.3 | 1.5 | | | |
| Cumulative | 4.9 | 11.2 | 16.8 | 20.2 | 22.5 | 24.0 | | | |

Project implementation period: Start: September 2005, End: January 2010
Expected effectiveness date: November 30, 2005
Expected closing date: July 30, 2010

## A. STRATEGIC CONTEXT AND RATIONALE

### 1. Country and sector issues

Agriculture contributes 8 percent of Kazakhstan's GDP and employs 32 percent of its economically active population. Principal products include wheat, cotton, meat, poultry and milk. Although agricultural output contracted sharply during the transition, output has steadily recovered since 1998. During 1998–2003, total agricultural output increased at an average real annual rate of 8.2 percent, with agricultural production growing by an annual average of 10.5 percent and agroprocessing growing by an annual average of 5.1 percent in real terms. Crop production, which rose in real terms by an annual average of 19.5 percent, is responsible for most of this growth. Livestock output in real terms grew by just 3.4 percent. Despite the recovery of agricultural production, its share in the economy shrank because of strong growth in other sectors, particularly in the extractive petroleum industry. The government is encouraging diversification of the country's economy to reduce its dependence on oil, whose price volatility and resulting fluctuations in revenues make budget management challenging. Agricultural development is an important element of its strategy.

Agriculture has significant potential to contribute to the country's growth. Both crop yields and livestock productivity are well below levels reached in countries with similar agro-ecological conditions. For example, farmers produce an average of one ton of cereal per hectare in Kazakhstan, compared with 2.7 tons per hectare in Canada, which has a similar climate, and 1.8 tons per hectare in Australia, which has a similar extensive crop system. Cows produce on average about 1,800–2,000 kilograms of milk per year, one-third of those in New Zealand. Available pasture, although not of excellent quality, can sustainably maintain a much larger livestock herd than it currently does. In fact, Kazakhstan has the most extensive permanent pasture per animal in the world. However, to unleash the potential of agriculture, access to markets must be improved, know-how and technology must reach farmers, and the appropriate financial services to serve small farmers must be developed.

The competitiveness of agriculture in Kazakhstan depends on many factors. The following table lists both positive and negative aspects of the country's competitive environment.

**Table 1: Factors Affecting Competitiveness of Agriculture in Kazakhstan**

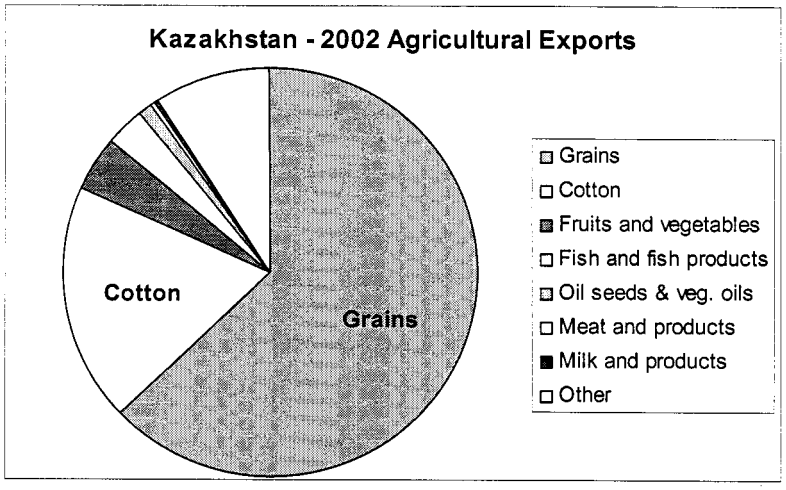
| *Positive* | *Negative* |
|---|---|
| • Abundant agricultural land | • Harsh and uneven climate |
| • Qualified labor force | • Higher cost of labor compared to neighboring countries |
| • Stable macroeconomic environment | • Difficult access to markets, know-how, and technology |
| • Low cost of energy | • Risk that rising revenues from exports of oil raises the value of the currency, making agricultural goods less competitive than those of other nations (Dutch disease) |
| • Increasing public support to the sector | • Relatively unfavorable environment for private investment, including high transportation costs |
| • High liquidity of commercial banks | • Limited access of small farmers to financial services |

Kazakhstan's pattern of economic growth during the past six years suggests that the country's comparative advantage lies with land-intensive agricultural products, such as wheat, rather than labor-intensive products, such as fruits and vegetables. (Cotton, a labor-intensive crop, whose exports have grown at an average rate of 16 percent per year during the past five years, is an exception.) However, land-intensive products offer limited opportunity to contribute to economic diversification and rural poverty reduction. To offset the high costs of transport and ensure that agriculture is competitive in the

long run, the country will have to diversify away from wheat and cotton, and focus more on producing higher value agricultural products.

*Limited access to international markets.* Finding new export markets is essential if agriculture is to contribute to the country's economic growth. Domestic demand for agricultural products is largely fulfilled, except for in certain regions (oversupply in rural areas, and undersupply in urban areas), during periods of seasonal shortfalls in output, and for specific high-quality products. Russia traditionally has been Kazakhstan's major export market. However, Russia is expected soon to become self-sufficient in wheat, and may also produce surpluses for export in competition with Kazakhstan. In 2002 for the first time Kazakhstan exported more grain to Iran and Azerbaijan than to Russia.

During 1998–2002, annual agricultural exports have averaged US$540 million. Wheat comprises 60 percent of agricultural exports. Kazakhstan is the eighth largest exporter of wheat in the world, with a share of 2–3 percent of the global market. The country produces a type of soft wheat (*triticum aestivum L*)—with a level of gluten and protein comparable to that of hard wheat—that serves a special niche market. However, high transport costs reduce the competitiveness of Kazakhstan's wheat in international markets.




Kazakhstan has applied for membership in the World Trade Organization (WTO). International markets require products that are certified for safety and quality and meet minimum animal and plant health standards. To qualify for membership in the WTO, the Ministry of Agriculture is currently negotiating the limit for subsidies. It is also working to comply with the Sanitary and Phytosanitary (SPS) Agreement of the WTO, which requires member countries to guarantee food safety and animal and plant health standards, without limiting trade. This will require harmonization of standards and development of sufficient testing capacity. Currently only 3 out of 37 agricultural state (GOST) standards and only 14 out of 115 food GOST standards are harmonized with international standards). The proposed project will support Kazakhstan's efforts to comply with the SPS Agreement.

Private enterprises have had difficulty implementing private standards to meet customer demand. For example, only three firms have introduced the standards of the International Standards Organization (ISO). Moreover, wheat classification in the Commonwealth of Independent States (CIS) is based on gluten content, while international classification is based on protein content. Although the ratio between gluten and protein is usually two to one, the ratio is not fixed, making Kazakhstan growers vulnerable to unfair quality assessment, which must be addressed through litigation. Thus, lack of harmonization reduces the efficiency of wheat trade.

In addition, price differentials reflecting differences in product quality are limited. For instance, most farmers receive the same price for class two and class three of wheat. This creates a disincentive to produce higher quality products, which reduces the efficiency of the value chain. While competition among processors is reducing such inefficiencies (such as for milk, where quality is becoming an important factor in pricing), the government can assist by ensuring that information on price differentials

being paid by private firms are disseminated through the existing market information system, and by requiring state-owned enterprises to pay higher prices for higher quality products.

*Increasing number of small farmers who have limited access to knowledge.* Since the break-up of the former Soviet Union, nearly all agricultural enterprises have been privatized (with the exception of agricultural research stations). As a result, the number of family farms has doubled since 1998 to 121,500, and arable land under their control has climbed from 19 percent to over 42 percent (table 2). Family farms now produce more than a third of grain, well over 50 percent of meat, and more than two thirds of raw cotton. Production from household plots is also very important. In 2003 they produced 48 percent of agricultural output (26 percent of crop products and 87 percent of livestock products).

**Table 2: Farm Structure in Kazakhstan, 2003**

| *Type of entity* | *Number* | *Total arable land ('000 hectares)* | *Average size (hectares)* | *Proportion of value of total agricultural output* |
|---|---|---|---|---|
| Agricultural Enterprises | 4,492 | 11,900 | 2,649.00 | 27% |
| Family Farms | 121,500 | 9,000 | 74.00 | 25% |
| Household Plots | 1,831,600 | 250 | 0.14 | 48% |
| **Total** | **1,957,592** | **21,150** | **10.80** | **100%** |

Source: Agricultural Register of the National Statistical Office.

Many of the family farms and household plots are managed by people with limited experience in farming and limited access to modern technology. At the same time, the system of research, technological development, and dissemination that served farmers during the Soviet era collapsed and a new system able to meet the needs of increasing numbers of small farmers has not yet emerged to take its place.

Agricultural research is currently carried out by ten centers employing some 1,200 scientists. Although the public research system is being reorganized, many shortcomings remain. The system is underfunded, with an annual public investment of US$6 million, or just 0.3 percent of agricultural GDP, compared with a global average of over 1 percent of agricultural GDP. More important, a system to disseminate the findings of agricultural research and to facilitate adoption of technology by farmers and agroprocessors currently does not exist.

Most agricultural research centers are involved in various types of commercial activities to supplement their limited public resources. Many of the activities relate to non-research products and services which substitute for, rather than complement, research activities. For example, the agricultural mechanization research center in Almaty is producing poles for a cellular phone company. Although the private sector is increasingly becoming involved in agricultural research, it finances just 10 percent of total investment in agricultural research in Kazakhstan, according to the Scientific Technical Information Institute.

*Role of agriculture in the economy.* Agriculture employs 2.3 million people, or 22 percent of the economically active population, according to official statistics. However, 1.8 million households—nearly half of the country's total—are involved in agriculture. Many grow food on small household plots (dachas) for self-consumption, but some 120,000 households rely on farming as their main livelihood.

*Government strategy.* To reduce dependence on extractive industries, and to bring visible benefits to rural areas where poverty is concentrated, the government intends to embark on an ambitious program to stimulate agricultural growth and promote rural development. To this end, the Ministry of Agriculture has developed two ambitious programs: the 2003–05 Agro-Food Program and the Rural Development Program. These involve three main actions:

- *Increased budget allocation.* The government allocated US$1 billion for implementation of the 2003–05 Agro-Food Program, 8 percent of the national budget in 2003 up from 1 percent in 1998;
- *Institutional reform.* The Ministry of Agriculture increased its oversight of management of natural resources (establishing water, forestry, and fisheries committees) and applied agricultural research, thus strengthening the linkages between agricultural research and agricultural policy. In 2003, the Ministry of Education transferred the management of 30 public agricultural research institutes to the Ministry of Agriculture, which subsequently consolidated them into ten centers, aimed at consolidating many dispersed institutes; and
- *Improved legal framework.* Kazakhstan recently approved new laws to encourage agricultural growth and rural development, passing the land, forest and water codes, the microfinance law, and the law on credit partnership, among others. The land code allows private ownership of agricultural land, which is critical for agricultural development.

## 2. Rationale for Bank involvement

A more productive export-oriented agricultural sector can make a valuable contribution to the country's economic diversification and growth. The priority that the government is now giving agriculture offers the opportunity to unleash its potential. The World Bank with its experience, knowledge, and financial resources can help the country to establish the policy, legal and regulatory frameworks and to make the investments needed to stimulate rural growth. The World Bank has extensive experience in the Europe and Central Asia Region and in other regions in designing and implementing research and extension projects that comprise competitive funding schemes. Notable examples include projects in Chile, Colombia, Brazil, Bolivia, Ecuador, Croatia, Azerbaijan, Romania, Albania, Georgia, among others. It also has experience in defining the roles of the public and private sectors in delivering research and extension services, which will be valuable in helping Kazakhstan to establish an effective research and extension system. Bank involvement is also expected to strengthen collaboration between public and private actors by acting in the role of honest broker. Its experience in dealing with issues of quality and safety of agricultural products will be useful to Kazakhstan as it moves to implement the SPS Agreement. Bank involvement will also help in strengthening linkages with other development partners assisting the government, such as the Food and Agriculture Organization (FAO) and the Codex Alimentarius Commission, both of which are supporting efforts to implement the SPS Agreement. Collaboration during project preparation has already served to strengthen linkages between the groups.

## 3. Higher level objectives to which the project contributes

The project will support the implementation of the government's 2003–05 Agro-Food Program and the Rural Development Program, which aim to improve the productivity and competitiveness of agricultural and agroprocessing enterprises through transfer of technology and introduction of food quality and safety standards, and therefore help to reduce poverty in rural areas, where the majority of the poor are concentrated. It supports the overarching goal of the Bank's Country Partnership Strategy for Kazakhstan, discussed by the Board on September 9, 2004, to use its global knowledge and experience to help Kazakhstan to build a modern, rapidly growing, and diverse economy that improves the welfare of all citizens, especially the poor. Specifically, the project supports the government's agenda to increase the competitiveness of tradable non-oil sectors, accede to the WTO, improve public institutions and policies, and develop an appropriate role for the government to foster competitiveness and facilitate business. The proposed Agricultural Competitiveness Project is one of four projects included in the Bank's fiscal 2005 business plan outlined in the Country Partnership Strategy.

## B. PROJECT DESCRIPTION

### 1. Lending instrument

The project will be financed with a specific investment loan.

### 2. Project development objective and key indicators

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.

The key outcome indicators proposed for the project are:

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

The key output indicators are:

- Seven technical regulations, each consisting of a number of individual standards, are harmonized.
- Sixty laboratories receive international accreditation.
- At least 120 market-oriented subprojects implemented under the competitive grant scheme.
- At least 600 applied research and extension subprojects implemented under the competitive grant scheme.
- At least 40 scientists below the age of 40 receive advanced education.
- Institutional structure for research and extension services, comprising the Governing Board (GB), the Coordination Center (CC), and the roster of independent peer reviewers, established and operating as indicated through the minutes of the semiannual meetings of the GB.

### 3. Project components

The project consists of four components: (1) quality and safety management of agricultural products, (2) agricultural marketing, (3) applied agricultural research and extension, and (4) institutional development and agricultural policy. A brief description of each of the components is presented below and details are presented in annex 4.

**Component 1: Quality and Safety Management of Agricultural Products.** This component will enhance the management of food safety controls and quality certification along the value chain. It comprises two subcomponents: harmonization and development of standards, and quality and safety monitoring.

*Harmonization and development of standards.* This subcomponent will support the country's ongoing efforts to harmonize standards, including the public safety standards required by the Codex Alimentarius and the SPS Agreement, and private quality standards such as those related to production of organic products. It will support the establishment of technical committees on harmonization of regulations and standards related to agricultural products, which will improve and institutionalize the current standards review process. It will provide training on technical regulations and standards. It will also finance an

awareness campaign aimed at generating interest in the work of the committees and disseminating their achievements. This subcomponent will also support efforts to monitor and certify organic production in accordance with internationally recognized standards. Kazakhstan can potentially compete successfully in markets for organic products, because its long cold winters reduce the need for pesticides.

*Quality and safety monitoring.* This subcomponent will strengthen the capacity of public and private entities to monitor food quality and certify standards of agricultural products through an internationally recognized system for testing and monitoring of quality and safety. Activities include:

- Establishing and equipping a veterinarian and a plant protection testing center (reference laboratory for microbiology, radiology, toxicology, biochemistry, virology, entomology, phyto-pathology) in Astana.
- Modernizing laboratories for testing seeds and inputs by procuring new equipment, training people on how to operate it, and improving laboratory systems.
- Providing training and financial incentives (matching grants) to encourage public and private laboratories to seek accreditation.
- Implementing a Quality Assurance Schemes in selected agro-enterprises.

**Component 2: Agricultural Marketing**. This component will help to enhance agricultural producers' and processors' understanding of markets, improve marketing infrastructure, and facilitate equal access to market information. It comprises two subcomponents: strengthening market information systems, and developing market-oriented infrastructure.

*Strengthening the market information system.* Activities will enhance the existing system by (a) adding quality classifications and price differentials to the existing price lists; (b) increasing the frequency of price bulletins to at least once a day for perishable agricultural products; (c) providing information on quantities traded; (d) supporting diverse means to disseminate information on prices and quantities in addition to posting information on the existing web page, such as through newspapers, radio, television, and messages to cell phones; (e) strengthening the monitoring of use of information with regular users' surveys; and (f) enhancing analytical capacity of both public and private entities concerning agricultural marketing.

*Developing market-oriented infrastructure.* This will provide financial incentives to develop marketing associations or partnerships, or both. It will co-finance up to 40 percent of the cost of image enhancement and infrastructure subprojects (at least one or two subprojects in all districts included in the northern and southern economic corridors) designed to improve post-harvest processing. Eligible subprojects will include facilities such as milk collection points, slaughterhouses, storage facilities, distribution networks, and the like for processing of identified priority commodities. The grants will be provided to marketing associations, not to individuals, and a portion of the funds provided under this subcomponent will be used to establish and strengthen marketing associations. Proposals for competitive grants will be reviewed through the same system developed for the Competitive Grant Scheme (CGS, described below under implementation arrangements).

**Component 3: Applied Agricultural Research and Extension**. This component aims to increase the effectiveness of agricultural research and extension services in Kazakhstan. It will facilitate the adoption of innovations that increase the productivity of farmers and agroprocessors. It comprises two subcomponents: applied research, and agricultural extension.

*Applied research.* This subcomponent will finance (a) technical assistance required to design and implement plans to reorganize the existing system of agricultural research; (b) advanced education for 60 scientists below the age of 40; and (c) competitive grant subprojects for applied research.

*Agricultural extension.* This subcomponent will strengthen the publicly-financed system for provision of extension services to agricultural entities. The Ministry of Agriculture will expand its presence in rural areas, employing at least one extension agent per district and one extension supervisor per oblast. Altogether, about 200 new field staff and 14 supervisors will be placed in all 160 districts of the country. This subcomponent will also support the selection, training, and monitoring of the performance of extension agents; and training and certification of 400 private extension agents. Finally it will finance competitive grant subprojects for training and provision of extension services.

**Component 4. Institutional and Agricultural Policy Development**. This component will create the institutional structure to implement project activities and will help the Ministry of Agriculture to establish the policy and institutional framework to improve the competitiveness of the country's agricultural sector. It comprises three subcomponents: institutional structure, project evaluation, and agricultural policy development.

*Institutional structure.* This subcomponent will help the government to separate roles between policy making, implementation, and technical review by supporting the establishment of a Governing Board (GB), Coordination Center (CC), and the roster of independent peer reviewers, each with distinct roles and responsibilities.

- The Governing Board (GB) will have two distinct roles: (a) a role approving the CGS operational manual and list of subprojects, and (b) a consultative and advisory role regarding priority setting, overseeing project implementation, and policy making for other project activities. All major decisions of the Board will be recorded in the project operational manual, which will be revised and approved by the Board. The Board will comprise ten members, nine of whom will have voting rights and the Manager of the Coordination Center (CC), who will not. Among the nine members with voting rights, four will represent public institutions (Ministry of Agriculture, GOST standards, parliament, and the public research system), four will represent private institutions (professional associations, farmers unions, entrepreneurs forums, and consulting firms), and one will represent international organizations. This composition will ensure that the project design and implementation reflects private and public interests and the interests of the farmers in the two primary geographical corridors (described below). Board members will not be remunerated.

- The Coordination Center (CC) will act as the secretariat of the project. It will be responsible for implementing the policies agreed by the Governing Board (GB) and for implementing all project activities, including the CGS.

- The roster of independent peer reviewers will be responsible for selecting the proposals submitted for funding under the CGS. It will comprise rotating national and international experts who will examine and evaluate proposals according to the multicriteria methodology described in the operational manual. The CGS operational manual will specify criteria and assign relative weights to the criteria, which will be described in the call for proposals to ensure transparency.

*Project evaluation.* The subcomponent will finance technical assistance to monitor and evaluate project implementation and outcomes. The results of the monitoring and evaluation will be presented directly to the Governing Board (GB).

*Agricultural policy development.* This subcomponent will strengthen the capacity of government to analyze, formulate, and monitor agricultural policies. This subcomponent will also finance training, including a limited number of study tours, for selected staff of the Ministry of Agriculture.

**Table 3: Project Costs and Financing (US$ millions)***

| Component | Government | | IBRD | | Beneficiaries | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Amount | % | Amount | % | Amount | % | Amount | % |
| 1. Quality and safety of agricultural products | 19.3 | 41.2 | 12.7 | 52.9 | 1.4 | 11.4 | 33.4 | 40.2 |
| 2. Agricultural marketing development | 2.9 | 6.2 | 1.5 | 6.3 | 2.6 | 21.1 | 7 | 8.4 |
| 3. Applied agricultural research & extension | 19.2 | 41.0 | 9 | 37.5 | 8.3 | 67.5 | 36.5 | 43.9 |
| 4. Institutional development | 5.4 | 11.5 | 0.8 | 3.3 | 0 | 0.0 | 6.2 | 7.5 |
| **Total** | 46.8 | 56.3 | 24 | 28.9 | 12.3 | 14.8 | 83.1 | 100 |

*Including contingencies

### 4. Lessons learned and reflected in the project design

The project reflects the lessons of international experience in improving agricultural productivity and competitiveness. In particular, it focuses on redefining the role of the state and of the private sector in agriculture, giving the state a policy making and regulatory role, while leaving production to the private sector. It involves all stakeholders—scientists, educators, extension agents, farmers, nongovernmental organizations, and industry representatives—in setting the research agenda and in designing extension services for maximum impact. It includes a variety of methods to reach farmers. It encourages innovation by offering matching grants through a transparent and competitive process for applied and adaptive research and knowledge transfer. It supports institutional and policy reform to complement investments in research and extension services. Finally, it supports interventions at all points in the supply chain. These include measures to increase farm-level productivity, support to lower marketing costs, and actions to enable farmers to comply with international standards on food safety and quality.

### 5. Alternatives considered and reasons for rejection

Project alternatives considered during preparation include:

- *Operating throughout the country.* This was rejected because the country's large size would make implementation and supervision of the project very difficult. Focusing on two of the nation's primary economic corridors—a northern corridor and a southern corridor, where labor, transportation, ancillary services, and industries are concentrated—will facilitate implementation, increase the likelihood of spillovers from innovation, and make project results more visible. The selected corridors account for nearly 90 percent of the country's agricultural GDP and 70 percent of its population, although they cover less than 40 percent of the country's area (see map of project area at the end of this document).

- *Supporting all products.* This was rejected in favor of concentrating resources on the products with high potential for export and import substitution, for value addition, and for reducing poverty. Selected products include grains, cotton, fish and fish products, oil seeds and vegetable oils, and livestock products.

## C. IMPLEMENTATION

### 1. Partnership arrangements

Several development partners are supporting aspects of the project. The FAO is working closely with Codex Alimentarius and other standard setting organizations to harmonize standards. The Codex Alimentarius has encouraged the Kazakhstan delegation to participate in its sessions. It is anticipated that consultants of Codex Alimentarius contracted through a trust fund will assist in revising the existing system of Kazakhstan agricultural standards.

## 2. Institutional and implementation arrangements

*Executing agency*. The Ministry of Agriculture will be responsible for overall project execution. To support effective implementation, an institutional structure for project implementation will be created at the ministry, comprising a Coordination Center (CC), and the roster of independent peer reviewers.

*Project oversight*. The Governing Board (GB) will be responsible for overseeing project implementation. It will prepare strategic guidelines for the project, help to address obstacles hampering project implementation, provide policy direction on matters relating to implementation, promote collaboration, coordination, and cooperation among stakeholders, and support and facilitate project monitoring and evaluation. The GB will meet at least once every six months.

*Specific arrangements related to the Competitive Grant Scheme*. One-third of project expenditures will be channeled through the CGS and will be managed in accordance with the operational manual. The independent peer reviewers will be responsible for reviewing and selecting proposals for funding. A CGS agent will administer disbursements to the many grant recipients, checking for compliance with requirements laid out in the operational manual and the achievement of required milestones. The CGS agent will visit recipients to verify stated conditions, documenting the procedures performed and results of the visit, and submitting key findings to the Ministry of Agriculture and the Coordination Center (CC). The Ministry of Agriculture will advance funds to the CGS agent from a treasury or commercial bank account for the CGS agent to disburse to grant recipients. The CGS agent will provide documentation of expenditure in a period of 60 days, so that no funds will be advanced for a period longer than 60 days. The Ministry of Agriculture and the CGS agent will sign a bilateral agreement specifying the terms and conditions of the assignment and comprising the fee to be paid to the CGS agent for administering the grants.

## 3. Monitoring and evaluation of outcomes/results

To track progress towards the desired outcomes, the Coordination Center (CC), with technical assistance from local and international experts, will regularly monitor a set of intermediate results indicators in accordance with the results framework specified in annex 3. Twice a year it will present a report to the GB summarizing achievements of the previous six months and plans for the next six months. The GB will review and discuss the findings of the report at its regular semiannual meetings.

A consulting firm will be hired under project finance to produce an annual evaluation of project achievements, which will be presented directly to the GB. This evaluation will be based, among other sources, on data from a survey of key project stakeholders. The GB will review the annual evaluations and, if needed, recommend measures to improve performance. No evaluation will be carried out at the end of the first year of implementation, since experience shows that time is required before achievements are realized.

## 4. Sustainability

Government is deeply committed to increase the contribution of agriculture to the economy, and views the project as central to its development agenda. It increased its budgetary allocation to the agricultural

sector to 8 percent of the national budget in 2003 up from 1 percent in 1998. As long as the project activities generate the expected benefits, the government is likely to continue to finance project-related activities, such as research and extension services, quality and safety management, and marketing improvements. The institutional structure created under the project is likely to be sustained because government plans to issue a decree providing it with a legal basis. In addition, the project aims to strengthen private sector participation in both quality management and agricultural research and extension, which is likely to be sustained and grow once the project is complete.

## 5. Critical risks and possible controversial aspects

| *Risk* | *Risk Rating* | *Risk Mitigation Measure* |
|---|---|---|
| **From Outputs to Objective**<br>An overvalued currency due to the importance of oil exports (Dutch disease) reduces the competitiveness of the country's agricultural products. | S | The central bank will maintain a prudent monetary policy. The National Fund of the Republic of Kazakhstan will continue to accumulate resources. |
| The business environment and the transport network do not improve, and the competitiveness of agriculture therefore does not increase. | M | The government, international finance institutions, and the private sector will continue with policy dialogue on the business environment and investments in transport network. |
| The private sector does not assume an increasing role in quality management and agricultural research and extension. | M | The project will build a strong incentive structure for private sector participation. |
| **From Components to Outputs**<br>Institutional capacity to implement a complex project, with investments in both hardware and software, is limited. | S | The institutional development component will create a multiplayer structure involving both the public and private sectors, and both local and international experts. The structure was developed on the basis of experience gained during project preparation. |
| Project activities, particularly the CGS, are not implemented transparently. Public and private interests are not well balanced on the Governing Board. | M | A draft operational manual has been under discussion discussed by a working group with participation of the Ministry of Agriculture, Ministry of Finance, Ministry of Justice, civil society, and the private sector. Its finalization is a condition of disbursement. |
| The CGS is not perceived as transparent and fair. | M | A communication strategy has been designed and will be implemented. |
| **Overall Risk Rating** | S | Bank staff based in the field will supervise the project and provide support and advice to address issues quickly. |

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

### 6. Loan/credit conditions and covenants

Conditions of Loan effectiveness

- None, except for standard conditions.

Conditions of disbursement

- The Governing Board (GB) and the Coordination Center (CC) have been established.
- The Project Implementation Plan (PIP) and the Operational Manual, satisfactory to the Bank, have been adopted by the Borrower in accordance with legislation of the Borrower.

Financial and legal covenants

- The government shall maintain an institutional structure comprising the Governing Board, the Coordination Center (CC), and the roster of independent peer reviewers comprising experts who are satisfactory to the Bank to carry out project implementation.
- Financial management and procurement are carried out in accordance with Bank's guidelines, by staff whose qualifications are acceptable to the Bank.

## D. APPRAISAL SUMMARY

### 1. Economic and financial analyses

Economic evaluation methodology:
■ Cost benefit NPV = US$51 million; ERR = 23.5 percent (see annex 9)
O Cost effectiveness
O Other (specify)

For the project as a whole, the economic rate of return (ERR) is estimated to be 23.5 percent, and the net present value (NPV) is estimated to be US$51 billion, assuming an opportunity cost of capital of 12 percent.

The key quantifiable benefit resulting from project investments is the incremental income from (a) higher prices paid to the farmers from improved quality and safety of agricultural products and more effective marketing; and (b) improved productivity of farm and rural nonfarm enterprises resulting from extension services and subprojects supported through the CGS. Since wheat is a major crop in Kazakhstan, the incremental value of improved quality of wheat is estimated as a proxy for the incremental value generally of improved quality and safety of agricultural products. According to official statistics, 70 percent of wheat production is class three, 22 percent is class four, and 8 percent is divided among the remaining three classes. Experts estimate that up to 30 percent of Kazakhstan's wheat could be improved to classes one and two. This is consistent with information from Kazakh wheat exporters in Europe (Gaonac'h, 2003). At the end of the project (year 5), 10 percent of exports or 0.5 million tons of wheat would graduate from class three to class two, and at full development (year 7), 20 percent or 1 million tons would graduate from class three to class two. The difference in the price between wheat class three and class two is US$15 per ton, and the annual incremental benefits from improving quality of wheat would be US$15 million at full development (year 7).

Estimating the incremental value of CGS subprojects is difficult because most of the activities that the project will support are not yet known. The estimates are thus based on experience in similar locations. Business proposals were prepared for the following seven activity models:

1. Investments in an accredited laboratory at rayon level (either public or private) would produce an additional US$14,153 annually due to the increased number of tests performed and the implementation of a cost-recovery mechanism.
2. Introduction of a slaughterhouse would reduce marketing costs by up to 10 percent and increase the processing capacity of meat to up to 9,200 heads, providing services valued at up to US$16,600 per year.
3. Establishment of a milk collection point would allow up to 1,500 liters of milk per day to be collected and supplied to milk processing plants in a timely manner and with assured quality. This activity would bring an estimated incremental net benefit of about US$2,950.
4. Optimum application of fertilizers on wheat would increase yields by 20–30 percent and gross margins by US$47 per hectare.
5. Improved animal feeding (such as use of concentrate and soybean-based feeds) would increase milk production in the participating farms from 7 to 12 liters per head per day, providing incremental benefits of nearly US$150 per cow.
6. Improved technology in cotton production such as high density sowing would lead to an increase in cotton yield from 1.5 to 2.2 tons per hectare and additional margins of US$205 per hectare.
7. Adoption of good agricultural practices in soybean production could bring incremental benefits of US$63 per hectare.

In calculating the overall benefits from the CGS, the following assumptions were made:

- The following rates of success or adoption were applied to the different types of subprojects:
  - applied research: 10 percent
  - extension and marketing: 25 percent.
- The benefits of the models are calculated for a period of ten years.
- The models involve 5 to 40 direct beneficiaries. Assuming an average direct involvement of the around 10 people, the project would directly benefit 8,700 people, assuming that about 870 subprojects are implemented.

On the basis of above assumptions and calculations, the ERR is estimated to be 23.5 percent. The base case NPV of the project's net benefit stream, discounted at 12 percent, is US$51 million. A sensitivity analysis carried out to assess the effect of variations in benefits and costs reveals 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 17 percent. The switching value is about 43 percent for total project benefits, and approximately 75 percent for project costs. A one-year delay in project benefits reduces the project ERR to 19 percent. With a two-year delay in project benefits, the ERR falls to approximately 16 percent.

**Financial**. The seven models presented above were also used to estimate financial costs and benefits. The analysis reveals that gross and net returns for each of the models increase significantly with the project, and that benefit to cost ratios are high. The NPVs after grant financing for the various models range from US$12,931 to US$160,084. The financial rates of return after grant financing range from 16 percent to more than 50 percent.

*Fiscal impact.* The government budget will finance 56 percent of the total project costs. Nonetheless this will have a marginal fiscal impact, because the annual government's contribution of about US$10 million represents less than four percent of state expenditures on agriculture in 2003.

## 2. Technical

The technical design of the project is based on the findings of several technical background notes (see annex 11) and on concurrent economic and sector work. An FAO study focusing on wheat showed the importance of diversification because of Kazakhstan's high variation in rainfall (one of the highest in the world), and the importance of quality assessment as an element to increase the farmers' share of the final price. The project design includes measures to promote diversification and product innovation, and to improve capacity for agricultural quality assessment at the farm level. A cotton study prepared under the PHRD grant for project preparation showed that cotton yields could be improved with better cultivation practices and that farmers could obtain a higher price for their cotton if they could better monitor quality. The proposed project will encourage adoption of better cultivation practices through extension services that demonstrate the financial and environmental impact of improved cultivation, and will provide farmers' with options to test quality of raw cotton.

## 3. Fiduciary

*Procurement issues*

*General procurement environment.* The June 2002 Country Procurement Assessment, a review of the general procurement environment and practices, revealed several weaknesses in Kazakhstan's procurement practices, in particular with respect to the legal framework and regulatory regimes, and procurement and contract administration. To help the government eliminate these weaknesses, a comprehensive action plan was drawn up, focusing on strengthening the legal and institutional framework to regulate and manage public procurement in the country. For this project, as is customary for all projects supported by international finance institutions, the Loan Agreement will need to be ratified and brought to the level of an international treaty so that the World Bank procurement guidelines will apply.

*Procurement capacity of the Ministry of Agriculture.* The Ministry of Agriculture has its own procurement department that handles all procurement issues, and maintains an up-to-date and well-organized records system. The Coordination Center (CC) will provide assistance to carry out day-to-day project management. In view of the above, suitable staff of the Ministry of Agriculture as well as a member of the CC will receive appropriate and adequate refresher training in Bank procurement guidelines prior to project effectiveness.

*Financial management issues*

The overall responsibility for financial management will rest with the budget department of the Ministry of Agriculture and with the CC. The budget department of the Ministry of Agriculture will control the flow of funds and maintain the accounting records. The CC will be responsible for project monitoring and evaluation, including the preparation of quarterly financial monitoring reports (FMRs). Personnel from Ministry of Agriculture have past experience with implementing World Bank funded projects and are familiar with World Bank financial management and disbursement requirements.

The key policies and procedures of the CC, which will be outlined in the financial management manual, and the key policies and procedures of the budget department of the Ministry of Agriculture, will both be reviewed during appraisal. Project management-oriented FMRs will be used to monitor and supervise the project, and, subject to the foregoing, the forms will be included in the financial management manual.

## 4. Social

*Participatory approach*

Project preparation was carried out in partnership with several governmental agencies (including the Ministry of Agriculture, Standardization Commission of the Ministry of Industry, Ministry of Health), the private sector (Seymar, Raimbek Group, KazAgroMarketing state owned enterprise, Food Contract Corporation state owned enterprise, etc.), and civil society (farmers unions, entrepreneurs forums, and others). Representatives of both government and private groups on the Governing Board and the independent peer reviewers will ensure that the partnership is maintained during project implementation.

*Social assessment*

A social assessment was carried out during project preparation in four oblasts (Almaty, Akmola, Pavlodar, and West Kazakhstan) that are representative of the geographic, ethnic, climatic, and structure of farms in Kazakhstan. The main stakeholders of the social assessment were (a) owners of small private farms as well as managers and owners of large farms and agricultural enterprises, (b) farm workers, (c) managers and owners of small and medium rural non-farm enterprises, (d) managers of agricultural processing companies, and (e) key village informants. The social assessment found that each of the major groups of stakeholder believes that the project will help to stimulate the rural economy and improve the quality and safety of agricultural products. It also confirmed that information asymmetry, particularly regarding prices, limited knowledge of quality issues, and insufficient price differentials for quality are major challenges for farmers. Finally, it showed that producers and processors question whether access to government support programs is truly equitable.

One of the important topics addressed was the respondents' attitude toward participating actively in marketing associations. Although most respondents claimed to be interested, some doubts remain. In fact, very few effective associations have been created to date in Kazakhstan. Farmers were concerned about the need for financial contributions. Private traders were uneasy about the impact that such marketing associations could have on their livelihoods. Skepticism regarding the value of associations may also be a consequence of the Soviet legacy of collective farms. In any case, given the limited trust of stakeholders in government action, it is important that the project is not perceived as exercising excessive pressure to create associations.

## 5. Environment

The project is rated environmental assessment category financial intermediaries. The project will finance (a) laboratories to monitor quality and safety of agricultural products, (b) demand-driven investments of different types; and (c) institutional development investments in extension and policy making. A significant share of project funds will be provided through the demand-driven CGS, so activities are not yet known. As required for projects of environmental assessment category financial intermediaries, a comprehensive environmental review (Environment Sector Review, June 2004) was conducted by a local consultant. Its main findings include:

- National legislation aimed at protecting the environment is significantly developed in Kazakhstan. However, by-laws and regulations are still under development, and enforcement is weak.
- No potential large-scale, significant and/or irreversible negative impacts are likely under the proposed project.
- The food safety component will have a direct positive impact on the environment, particularly the development and enforcement of food safety legislation. However rehabilitation and

management of laboratories could potentially have a negative impact because of their use of chemicals and reagents. Nonetheless the planned supply of incinerators to dispose of laboratory waste will benefit the environment.

- Marketing, applied research, and extension subprojects supported through the CGS may have negative environmental consequences. Although some subprojects may have positive environmental impacts—natural resources management, organic agriculture, crop rotation, and integrated pest management—most will involve agricultural intensification, which may generate negative environmental impacts. A primary example is increased use of pesticides. Thus the pest management safeguard policy has been triggered. Other subprojects that will require a careful environmental review include food processing subprojects, such as slaughterhouses.

The capacity of the government of Kazakhstan, and particularly of the Ministry of Agriculture, to recognize and address environmental impacts of project activities needs improvement. For this reason a set of manuals on operations of laboratories and environmental screening of CGS subproject has been developed. Other manuals will be prepared during project implementation. The manuals propose procedures for designing and implementing mitigation measures for subprojects that have the potential to damage the environment, such as the use of incinerators in slaughterhouses. Training will be provided.

The manuals were discussed at a consultation workshop with the stakeholders and local NGOs and disclosed in the country. The Loan Agreement has appropriate language committing the borrower to implement the environmental guidelines set forth in the operational manual. In addition, the project will contract the services of an independent consultant each year to assess the extent to which environmental screening is taking place, and the extent to which recommended remedial actions have been satisfactorily carried out. This assessment will also recommend any further training that may be needed to ensure adherence to the agreed environmental screening procedures and management plan.

## 6. Safeguard policies

| Safeguard Policies Triggered by the Project | Yes | No |
|---|---|---|
| Environmental Assessment (OP/BP/GP 4.01) | [X ] | [ ] |
| Natural Habitats (OP/BP 4.04) | [ ] | [X ] |
| Pest Management (OP 4.09) | [X] | [ ] |
| Cultural Property (OPN 11.03, being revised as OP 4.11) | [ ] | [ X] |
| Involuntary Resettlement (OP/BP 4.12) | [ ] | [ X] |
| Indigenous Peoples (OD 4.20, being revised as OP 4.10) | [ ] | [ X] |
| Forests (OP/BP 4.36) | [ ] | [ X] |
| Safety of Dams (OP/BP 4.37) | [ ] | [ X] |
| Projects in Disputed Areas (OP/BP/GP 7.60)* | [ ] | [ X] |
| Projects on International Waterways (OP/BP/GP 7.50) | [ ] | [ X] |

The Pest Management Safeguard Policy (OP 4.09) has been triggered. The project will finance the purchase of chemical control agents and reagents for testing laboratories. The project will also encourage farmers to adopt disease-resistant varieties and integrated pest management practices to limit the need for chemicals. The government of Kazakhstan has recently upgraded its management of the control and oversight regarding use of pesticides with the help of FAO (FAO/TCP/KAZ 0065). A new department of plant protection and quarantine was established in the Ministry of Agriculture. The project will build on this development. A pest management plan, which comprises a training manual on safe handling, use, and disposal of pesticides, is being finalized. Training will be provided.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

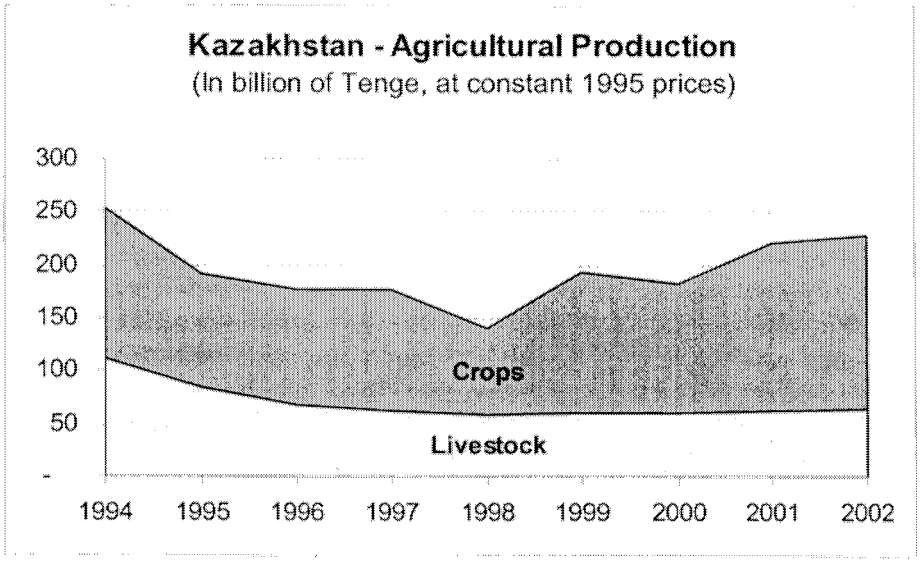
## 7. Policy exceptions and readiness

No exceptions to Bank policy are required for this project. The project meets the regional criteria for readiness for implementation. The institutional arrangements for project implementation are largely in place due to the work carried out during project preparation. Issuing a decree to establish the project institutional structure comprising the Governing Board and CC, is a condition of disbursement, and is not expected to delay project implementation since legislation has already been drafted.

## Annex 1: Sector Background

### KAZAKHSTAN: Agricultural Competitiveness Project

**History**. Agriculture was a key sector during the Soviet period. In the 1950s and 1960s almost 35 million hectares were cultivated under the Virgin Land Scheme, while irrigation was developed in the south. At the end of the '80 Kazakhstan had 35 million sheep and goats, or around 25 percent of the Former Soviet Union's stocks. After independence, during the period 1991-1998, agriculture production contracted by 50 percent. This was due to the transition from a planned to a market economy: prices of inputs increased to reflect market prices, collective farms were restructured, and the large Soviet market was lost. Collective farms were heavily undercapitalized: livestock reduced from 25 to 9 million animal equivalent units during 1990–98; agricultural machinery also reduced significantly (from 220,000 tractors in 1990 to 50,000 in 2000). In addition, social services that were earlier provided by collective farms deteriorated. In 1998 a convergence of exogenous factors (i.e., bad weather, the regional financial crisis, low international prices, and substantial currency overvaluation) contributed to bring production to its lowest level in several decades. After 1998 the agricultural sector started to recover, particularly thanks to a significant increase of crop production (in average more than 20 percent annually). The recuperation of livestock has been slower (in average 2 percent annually), as visible in the graph above. Access to markets and knowledge has been two of the most important limiting factors.




**Access to markets**

The agricultural sector is already able to satisfy the domestic need for agricultural products. Therefore substantial sector growth requires increased integration with international markets. However finding a suitable market for agricultural products is a challenge in Kazakhstan. The vast and thinly populated territory, high dependence on transport to cover long distances, underdeveloped markets and difficult access to foreign markets are constraints to agricultural development. Two main obstacles limit access to markets: the first one relates to quality aspects, while the second one relates to market inefficiencies. Each of them is briefly described below.

*Quality and safety of agricultural products.* International trade requires certified safe and quality products, including high standards of animal and plant health. This is also a requirement of the forthcoming WTO accession, under the Sanitary and Phytosanitary (SPS) Agreement (see box to the right). Currently Kazakhstan has difficulty in meeting these requirements due to insufficient harmonization of standards and insufficient testing capacity. The majority of standards currently used are not internationally accepted: only 3 out of 37 *agricultural* standards and 14 out of 115 *food* standards are internationally harmonized. The other standards are accepted in CIS countries. However, for export beyond the CIS countries, failure to adhere to international standards constitutes an obstacle to market access. In addition, the private sector has difficulty in access to the necessary skills to implement private standards according to client demand (see box): only three agroprocessing companies have introduced ISO standards. For example, lack of harmonization creates a barrier to wheat trade. Wheat classification in the CIS is based on gluten content, while international classification is based on protein content. Since the ratio between gluten and protein content is not fixed, this causes either unfair quality assessment and/or litigation. The international trade trend is that this kind of problem will increase in relevance in the future.

**Safety (public/compulsory) standards** required under the SPS agreement of the WTO (Kazakhstan is member of the three organizations, and it is applying for WTO membership):

- Codex Alimentarius
- Office International des Epizooties
- International Plant Protection Convention

**Quality (private/voluntary) standards**:

- International Standard Organization (ISO)
- Hazard Analysis of Critical Control Points (Hazard Analysis of Critical Control Points)
- Good Agricultural Practices (good agricultural practices)
- Good Manufacturing Practices (good manufacturing practices)
- International Union for the Protection of New Varieties of Plants
- Etc.

Public standards accept some private standards: for instance the Codex Alimentarius for processed meats recognize ISO/DIS 2918 for determination of

In addition, the philosophy of government's role has to be modernized: Soviet standards did not distinguish private (quality or commercial) from public (safety) standards. A new law "On Technical Regulations" is under discussion to separate *voluntary* private standards from *compulsory* public standards (see Paul Mendle's report for more detail).
Finally, the capacity of both private and public sectors to certify quality and safety is insufficient. There are 35 private certification companies with 70 labs for testing food and agricultural products. Moreover there are 6 public certification institutions and the major ones - State Vet Inspection, National Public Sanitation-Epidemiological Control Stations (SES) and KazAgroEX – comprises 200, 250 and 13 labs respectively. However the government does not have a Reference Laboratory, as required to play a "reference role", and also as required under the SPS agreement (see detailed report from Cecil McMurray). A summary of markets, safety, quality, and testing challenges if available in Annex Table 2: page 24.

*Certification*: recognized quality/safety characteristics of a product or service
*Accreditation*: recognized competence of a laboratory to perform specific types of testing, measurement, or calibration
Both may be or not internationally

*Market inefficiencies* are significant in Kazakhstan. For instance, although the grain sub-sector is one of the most developed, marketing inefficiencies have been estimated in the order of US$60–80 million. Two different estimations provided such a result: the first compared parity price with farm gate price (Debatisse et al., 2000), while the second compared the costs of handling, storage, and marketing excluding transport of Germany and Kazakhstan (FAO, 2003). Market inefficiencies are even more acute in other agricultural products, such as fruits and vegetables. Many fruits and some vegetables are difficult to grow in most of the northern part of the country, and therefore they are produced in the south and sold

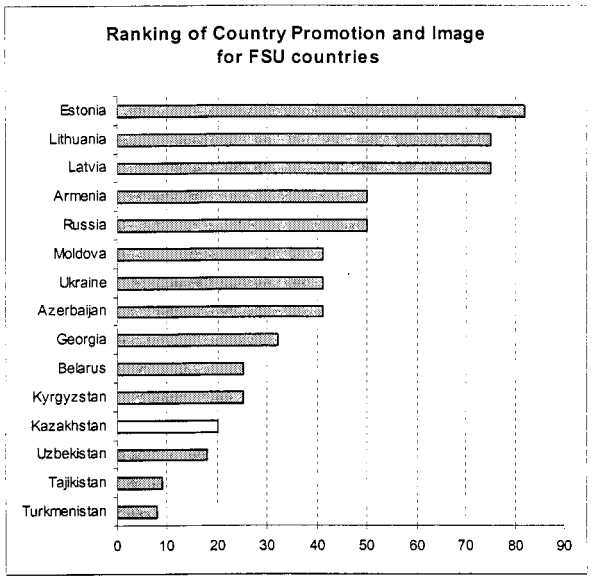
in the north (imports from China are also increasing their competitive pressure). However the price differential between the two regions is in the order of 200-400 percent, which is significantly superior to marketing costs. Analysis shows that difference in income level can not justify differences in prices for vegetables and livestock products. For example, correlation of tomato prices with income is quite low.

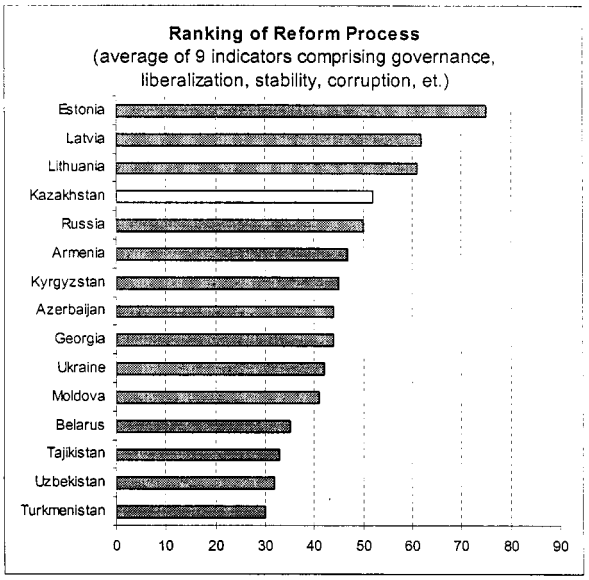
The problem has been highlighted at the government's top level. According to statistics, increase of fruit and vegetable prices is significantly higher than average inflation. This is also caused by corrupt policemen who demand bribes particularly from trucks transporting perishable products. In order to avoid police corruption, some local authorities organized "vegetable trains" to deliver fruits and vegetables under their strict supervision. Administrative restrictions of competition may also hinder efficient marketing. The government decided to undertake several initiatives to address it. The main adopted approach has been to create state owned enterprises, such as the *Food Contract Corporation* for grains, *Malonemderi* for livestock products, and *KazAgroMarketing*. This approach risks substituting for private sector inefficiencies rather than providing an incentive for the private sector to increase its role.

Limited and asymmetric access to information is one of the main obstacles to private sector involvement in marketing of agricultural products. It contributes to a fragmented and inefficient market. The Ministry of Agriculture, with the collaboration of a EU financed TACIS project, is addressing this issue. The Marketing Information System (market information system) accessible also through KazAgroInform web page is one of the results. However this market information system is still insufficiently utilized by farmers and traders. This is due to several reasons, among which the fact that information is nonspecific (e.g., quality is not taken into consideration) and not sufficiently timely (weekly information is not sufficient for products whose prices change even in hours, such as fruits and vegetables.)

In a sector undergoing such rapid transformation, the rapid changes do affect in different ways the different value chains. Among the efforts of project preparation, the value chains of cotton, oil seeds, and livestock products were analyzed. The analysis provided a list of bottlenecks affecting the sector and recommended suitable actions. Some actions are clearly public sector's responsibility. However limited private sector infrastructure is a key bottleneck which is challenging to address. To avoid having the public sector substitute for the private, a possibility could be to create incentives for the private sector to step in. By doing this, public and private sectors would join efforts to develop market-oriented infrastructure (collection points, slaughter houses, markets, storage and distribution facilities, etc.).

*Country image.* An important bottleneck to access international markets is the image of agriculture in Kazakhstan. People in other countries, particularly outside the CIS, have an image of Kazakhstan as a polluted country, based on internationally renowned environmental disasters such as the nuclear test site in Semipalatinsk and the Aral Sea. The graphs below show that Kazakhstan's efforts to promote its country image are significantly below most other Former Soviet Union (FSU) countries, which contrasts with an advanced pace of reforms (source: the Bleyzer initiative).




However Kazakhstan has also some environmental advantages, such as cold winters which reduce the incidence of some agricultural pests. In addition, during the last 10-12 years the level of application of agrochemicals in Kazakhstan was very low, which could facilitate the production of organic agricultural products.

**Access to knowledge**

The system of agricultural research and extension in Kazakhstan has to adapt to the increasing number of small farms. Current investments in technology development and extension are poor both in terms of quality and quantity. Agricultural research is currently carried out by 10 public centers employing some 1,200 scientists. This public research system is undergoing a re-organization which is addressing its shortcomings. The system is under-funded, with an annual public investment of around US$6 million, or 0.3 percent of Agricultural GDP. This is less than one third of a global average of over 1 percent public investments in agricultural research and extension. In addition, there is no system of knowledge transfer to disseminate the findings of agricultural research and facilitate adoption of technology by final users such as farmers and agroprocessors.

**Annex Table 1: The Research Centers in Kazakhstan**

| # | Name/topic | Location | 2003 budget (US$) | |
|---|---|---|---|---|
| 1 | Livestock and veterinary | Almaty, Semipalatinsk, Petropavlosk, etc. | 1,354,252 | 23% |
| 2 | Farming and crop production | Almaty, Taldykorgan, Ust-Kamenogorsk | 916,088 | 16% |
| 3 | South-Western Agricultural Center | Shymkent / animal science, crop production, cotton | 859,109 | 15% |
| 4 | Grains | Shortandy, Astana, Kostanai | 749,531 | 13% |
| 5 | Agricultural mechanization | Almaty | 579,226 | 10% |
| 6 | Agricultural processing and food industry | Almaty | 550,889 | 9% |

| | | | | |
|---|---|---|---|---|
| 7 | North-Western Agricultural Center | Kostanai / animal science, crop production | 275,546 | 5% |
| 8 | Agroindustrial economics and rural development | Almaty | 272,957 | 5% |
| 9 | Forestry | Kokshetau (Shchuchinsk) | 168,814 | 3% |
| 10 | Fishery Center | Almaty, Balkash | 160,602 | 3% |
| | **Total** | | **5,887,014** | **100%** |

The system started a process of reform in 2003, when agricultural research was moved from the Ministry of Education and Science to the Ministry of Agriculture. This is a positive step because it will facilitate links with the final clients of research activities. The Ministry of Agriculture consolidated the previous 21 research stations into the 10 research centers, reducing fragmentation and transaction costs. The Ministry also prepared a plan to hire 200 new extension agents in all 160 districts of the country. This would represent a mere skeleton of public extension, with an average of one extension agent every 650 farmers. However many problems still remain:

- There is no systematic diffusion of research results into practice; on the contrary, there is a widespread belief that the diffusion is not working efficiently;
- Farmers' needs, as well as those of processors and traders do not have an impact on the directions of scientific research;
- Human resource management of scientific centers is inadequate. The pay scale of researchers is not competitive, and therefore very few new scientists are entering the system, while over half of scientists are over 50 years of age. Only less than 10 percent of scientists are under 40 years, the most productive age for innovative research. Almost none of the scientists have foreign post-graduate training outside of the FSU, and few speak English. Although research centers have a semi-autonomous status, which could allow a fair amount of flexibility in managing funds, in practice they are not allowed to implement an independent human resources strategy, such as setting competitive salaries;
- Access to international scientific knowledge is extremely limited. Libraries have few subscriptions to international journals and access to internet is inadequate;
- Research methodology tends to be traditional, with limited participation of farmers and the private sector in setting priorities. Most research activities involve a single discipline, and they are carried out on-station;
- There is little consideration of impact. Although some research activities undoubtedly lead to significant impact on the ground, such as wheat breeding, most of the research has yet to adjust to a market oriented system, where profitability determines technology uptake;
- Most scientific equipment is old, although generally well maintained;
- Many research centers are involved in various types of commercial activities to counteract limited budget allocations. Many of these activities relate to non-research products and services which substitute for, rather than complement, research activities. For instance, the agricultural mechanization research center in Almaty is producing poles for a cellular phone company.

The private sector is taking an increasing role in agricultural research, albeit still limited. According to the Scientific Technical Information Institute, the private sector finances 10 percent of total investment in applied agricultural research. The private sector is also increasing its role in extension, with a few pilot extension systems supported by farmer associations and agrarian universities (such as in Northern Kazakhstan). Also, some agroprocessors are providing good technical advice to their suppliers. Some examples: (a) the milk chain, where some dairy companies are making an effort to help their suppliers to improve the quality of raw milk, and (b) soybean, where oil-mills are providing *Rizhobium Japonicum* to inoculate soy seeds, with significant increase in yields (reaching significant results of 6 tons per hectare).

These sporadic examples prove both the needs for such services and the potential for the private sector's role. However there is still the necessity of systematizing such services in a coherent structure of public-private collaboration.

Several analyses of farmers' needs for information and advisory services (Balgabaeva, 2003) showed that there is a demand for information and advisory services. The most pressing issues at the moment are legal, technological, and marketing ones. Only 11 percent of respondents answered positively to the question whether they are prepared to pay for provided services (while the percentage of farmers willing to pay for advice on how to access credit is higher).

**Limited institutional capacity**. An analysis carried out during project preparation proved that institutional capacity is one of the main obstacles to the effective implementation of the government strategy. The public sector suffers institutional weaknesses as a consequence of the legacy of the Soviet hierarchical and bureaucratic management style. Personnel management and motivation, particularly in line ministries, is weak. The Ministry of Agriculture was a prestigious institution during the Soviet period, though after the transition central ministries such as economy and finance gained much more prestige, reducing line ministries' capacity to attract qualified staff. A low salary scale increases this problem, particularly in comparison to a private sector which is quickly modernizing and draining the best skills. Therefore line ministries are facing increasing difficulties to manage their relatively large work force: the Ministry of Agriculture has almost 8,000 employees, mostly deconcentrated in regional offices, without counting for 13 institutions related to the ministry (i.e., the ten Research Centers, water and forestry committee, and State Owned Enterprises such as KazakhAgromarketing, FoodContractCorporation, KazAgroFinance, etc.).

The still persistent Soviet, top-down, bureaucratic approach creates difficulty to develop a culture of serving clients (farmers). Institutional and policy monitoring remains mostly input oriented. This weakness is even more acute when monitoring multi-faceted policies such as those affecting competitiveness. In addition, the Ministry of Agriculture does not have a department specifically responsible for sector competitiveness, since responsibilities are carried across all specific departments (strategic department, crops, livestock, scientific research, and others). A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of the Ministry of Agriculture was carried out. The analysis identified a strong and determined leadership, a significant field presence, and a relatively positive perception of the population. Major weaknesses are limited staff qualifications, international links, attention to implementation arrangements, and result-oriented monitoring. The main opportunity is the increasing attention of the whole government to the rural/agricultural sector, while the major threat may come from inadequate implementation of the National Agro-Food and Rural Development programs, whose significant budget allocation represents a strong challenge.

## Annex Table 2: Quality and Safety Issues of Selected Agricultural Products

| Product | Current Markets | Potential Markets | Safety | Quality | Testing |
|---|---|---|---|---|---|
| 1 Grains | Very high annual variation. 2002 exception with 66% outside CIS.<br>CIS (Russia, Kyrgyz Rep., Azerbaijan, Tajikistan); abroad (Iran, Middle East, Italy, Afghanistan) | Russia and CIS to the north, Iran, Azerbaijan, EU.<br>Packaging obstacles with China | Domestic standards for Maximum Residues Levels (MRL) of heavy metals and myco-toxins are laxer than international standards, while those for radionucleides are stricter | Gluten/protein<br>Low/mixed grades paid to farmers by elevators<br>No price differentials | No capacity to test protein<br>Problem in 2002 with Iran caused rejection of 1,000 wagons later solved by the involvement of SGS, a Swiss private testing company<br>Insufficient independent testing available |
| 2 Cotton | Iran, Bangladesh, Latvia and Russia | CIS, China | GMO varieties | Adoption of Uzbek standards, almost harmonized, which require HVI tests.<br>Grades paid to farmers by ginners lower than reality | No independent testing available. Lack of HVI testing (done in Uzbekistan)<br>High variability of inputs quality (smuggling from Uzbekistan) |
| 3 Fruits and vegetables | Siberia and Uralsk (Russia), outside (Turkey, China when processed) | CIS. Outside CIS for niche products (e.g. organic)<br>China is becoming a strong competitor | Quarantine problems (e.g. apple)<br>Safety of imported products | Underdeveloped quality standards (fruit juices are exception) | Lack of testing equipment in quarantine posts |
| 4 Fish and fish products (including caviar) | Russia, USA, Canada, Malaysia. Caviar export to non-CIS countries. Limited competition for caviar, valuable fish product, which is produced by only 4 countries (Azerbaijan, Kazakhstan, Iran, Russia) | EU. Apparently a significant share of fish fillet goes to the EU through other countries, without disclosing the real Kazakhstani origin | Some production sites have higher content of heavy metals and pesticides than allowed | Underdeveloped quality standards (caviar exception) | Limited to few processing centers. In this safety and quality problems are better addressed compared to other products<br>Need of genetic finger-printing equipment, which is required at international trade |

| Product | Current Markets | Potential Markets | Safety | Quality | Testing |
|---|---|---|---|---|---|
| 5 Oil seeds and vegetable oils | Russia, Kyrgyz Rep., Uzbekistan, Tajikistan, Turkmenistan, Iran | Domestic (import substitution) and CIS | Radionuclueides (produced mostly in North-East, near atomic testing site | Mixing of classes<br>Excessive temperatures in processing | Insufficient seed testing capacity (comprising GMO)<br>Lack of independent quality testing |
| 6 Meat and meat products | Domestic and CIS. | Import substitution<br>Beef and pork to the north (Siberia and Uralsk have 32 m inhabitants), lamb the south (Central Asia, Middle East).<br>Special niche markets such as "marble" meat | Increasing safety challenges even within the CIS.<br><br>DDT limit 50 times stricter than international standard | Underdeveloped quality standards<br>Limited knowledge of Quality Assurance Systems (e.g., Hazard Analysis of Critical Control Points, good agricultural practices, good manufacturing practices). | Almost inexistent capacity to test quality<br><br>Need to develop a mobile testing equipment |
| 7 Milk and milk products | Domestic and CIS. | Import substitution<br>Siberia and Uralsk, but competition with Russia more difficult than in meat | Increasing safety challenges even within the CIS.<br>Maximum levels of heavy metals residues and radionucleides laxer in domestic than international standards.<br>Myco-toxins are instead stricter | Quality standards under continues development, more than in meat<br>Price differentials are developing without public assistance | Limited capacity to test quality at collection points, particularly among small processors |

## Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

### KAZAKHSTAN: Agricultural Competitiveness Project

| Sector Issue | Project | Latest Supervision (PSR) Ratings (Bank-financed projects only) | |
|---|---|---|---|
| | | Implementation Progress (IP) | Development Objective (DO) |
| World Bank Bank-financed Sustainable agriculture | Agriculture Post-Privatization Assistance Project (first phase closed, second phase recently approved) | S | S |
| | Irrigation and Drainage Project | S | S |
| | IDF Grant for Improving Productivity, Sustainability and Profitability of the Wheat Sector | S | S |
| | Syr Darya and Northern Aral Sea Project | S | S |
| | Drylands Management Project | S | S |
| ADB | Water Resources Management and Land Improvement project | Water and land resources | |
| | Locust management project | Pest control and environmental management | |
| | Regional Rural Development study and planned project | Economic Growth, Private Sector Development, Poverty Intervention | |
| EuropeAid (formerly TACIS) | Support to Agricultural Producers to Establish a Vertical Market Integration | Food production, processing and distribution | |
| USAID-PRAGMA | Enterprise Development Project | Quality Management and Meteorology | |
| EBRD | Kazakhstan Warehouse Receipt Program | Agribusiness and bank lending | |

IP/DO ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory

## Annex 3: Results Framework and Monitoring

### KAZAKHSTAN: Agricultural Competitiveness Project

### Results Framework

| Project Development Objective | Outcome Indicators | Use of Outcome Information |
|---|---|---|
| Increase the competitiveness of the agricultural sector in Kazakhstan. | • Farmers' income, particularly of small and medium-sized farmers, rises compared with 2004 levels.<br>• Value of agricultural exports, including livestock products, rises compared with 2004.<br>• Increased proportion of agricultural products that are tested and that meet international standards for quality and safety.<br>• Satisfaction of potential direct and indirect beneficiaries of the project | Project implementers will monitor progress in establishing intermediate indicators and take action if these are not being satisfactorily implemented.<br><br>Progress towards project outcomes will be reported annually and compared with baseline data. |
| **Intermediate Results One per Component** | **Results Indicators for Each Component** | **Use of Results Monitoring** |
| **Component One:**<br>Capacity to certify quality and safety of agricultural products increased. | **Component One:**<br>• 7 technical regulations, each consisting of a number of individual standards, are harmonized.<br>• 60 laboratories receive international accreditation. | **Component One:**<br>Action will be taken to either ensure that the project achieves these outputs or to redesign the project to correct deficiencies. |
| **Component Two:**<br>Market-oriented infrastructure strengthened. | **Component Two :**<br>• At least 120 market-oriented subprojects implemented under the CGS. | **Component Two:**<br>Action will be taken to either ensure that the project achieves these outputs or to redesign the project to correct deficiencies. |
| **Component Three:**<br>Efficiency of agricultural applied research and technology transfer increased. | **Component Three:**<br>• At least 600 applied research and extension subprojects implemented under the CGS.<br>• At least 40 scientists under age of 40 receive advanced education. | **Component Three:**<br>Action will be taken to either ensure that the project achieves these outputs or to redesign the project to correct deficiencies. |
| **Component Four:**<br>Institutional structure to implement project activities established. | **Component Four:**<br>• Governing Board, Coordination Center, and the roster of independent peer reviewers established and operating, as demonstrated through minutes of the meetings. | **Component Four:**<br>Action will be taken to either ensure that the project achieves these outputs or to redesign the project to correct deficiencies. |

**Arrangements for results monitoring**

| | | Target Values | | | | | Data Collection and Reporting | | |
|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Baseline** | **YR1** | **YR2** | **YR3** | **YR4** | **YR5** | **Frequency and Reports** | **Data Collection Instruments** | **Responsibility for Data Collection** |
| Percentage of farmers' income increases compared with 2004 levels in real terms. | Total number of farms in project area: 120,000 | 0 | 0 | 1 | 1.5 | 2 | Annual evaluation starting on the second year. | Official statistics and survey starting on the second year | Independent consulting company |
| Value of agricultural exports, including livestock products, rises compared with 2004. | $774 million | | 785 | 795 | 805 | 820 | Annual evaluation starting on the second year. | Official Statistics | Coordination Center |
| Increased proportion of agricultural products that are tested and that meet international standards for quality and safety. | 90% of domestic and CIS trade does not meet international standards | | | 85% | 80% | 70% | Annual evaluation starting on the second year. | Survey starting on the second year | Independent consulting company |
| Satisfaction of potential direct and indirect beneficiaries of the project | Percentage of surveyed beneficiaries who knows and use the project | | 5% | 10% | 15% | 20% | Annual evaluation starting on the second year. | Survey starting on the second year | Independent consulting company |
| **Results Indicators for Each Component** | | | | | | | | | |
| **Component One :**<br>• 7 technical regulations, each consisting of a number of individual standards, are harmonized | 0 | 1 | 1 | 2 | 2 | 1 | Semiannual | Project monitoring and reporting | Component coordinator |
| • A total 90 laboratories receive international accreditation (2 national, 9 at oblast level, 60 at rayon level, and 19 private). | 0 | 2 | 12 | 17 | 35 | 24 | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Component Two:**<br>• At least 140 market-oriented subprojects implemented | 0 | 10 | 30 | 40 | 40 | 20 | Semiannual | Project monitoring and reporting | Component coordinator |
| **Component Three:**<br>• 600 applied research and extension subprojects implemented | 0 | 20 | 120 | 160 | 180 | 120 | Semiannual | Project monitoring and reporting | Component coordinator |
| • At least 40 scientists aged less than 40 receive advanced education | 0 | | | 12 | 14 | 14 | | | |
| **Component Four:**<br>• Governing Board meets at least every six months as shown by the minutes. | 0 | 2 | 2 | 2 | 2 | 2 | Semiannual | | Component coordinator |

## Annex 4: Detailed Project Description

### KAZAKHSTAN: Agricultural Competitiveness Project

1. The project will implement the following components and sub-components:

**Component 1 - Quality and Safety Management of Agricultural Products**
*Subcomponent 1.1. Harmonization and Development of Standards*
*Subcomponent 1.2. Quality and Safety Monitoring*

**Component 2 - Agricultural Marketing**
*Subcomponent 2.1. Strengthening the Market Information System*
*Subcomponent 2.2. Development of Market-Oriented Infrastructure*

**Component 3 - Applied Agricultural Research and Extension**
*Subcomponent 3.1. Applied Research*
*Subcomponent 3.2. Agricultural Extension*

**Component 4 - Institutional Development and Agricultural Policy**
*Subcomponent 4.1. Institutional Structure*
*Subcomponent 4.2. Agricultural Policy Development*
*Subcomponent 4.2. Project Monitoring and Evaluation*

**Component 1 - Quality and Safety Management of Agricultural Products**

2. *Objective.* The component will enhance the management of food safety control and quality certification along the value chain. To achieve this, the component will improve the capacity of public and private sector to (a) harmonize and develop standards; and (b) monitor quality and safety. The component will comprise the following two subcomponents.

3. *Subcomponent 1.1 . Harmonization and Development of Standards.* The subcomponent will strengthen the capacity of public and private sector to harmonize and develop standards. To do so it will establish a Group of Experts on harmonization of regulations and standards of quality of agricultural products, and it will provide technical assistance and training on introduction of regulations and standards.

4. The Group of Experts will provide a set of capacity building and awareness activities such as:

- a conference on SPS standards for key individuals in government, the food and agriculture industry and consumer representatives in the role and functions of SPS standards
- a series of Working Groups to work on harmonizing relevant Kazakhstan standards with those of SPS on a priority basis, to evaluate the cost and benefits of harmonization and to recommend changes to Kazakhstan laws and standards as appropriate
- training of key individuals involved in the development of standards in SPS methods and the use of existing SPS materials
- providing training to private sector on public and private standards
- sponsoring active participation in the international SPS related meetings
- provide support to join the International Union for the Protection of new Varieties of Plants
- develop the framework standards and regulations for organic production and certification
- increase awareness on sanitary, phytosanitary, and quality aspects of the value chain, including the value of price differentials

5. As Kazakhstan adapts the necessary Codex rules, it can use the Codex organic production guidelines as a baseline to achieve international recognition in this area. It will work within this and the International Federation of Organic Agriculture Movements (IFOAM) framework to facilitate adoption of organic production methods and their certification to an internationally accredited standard. This niche, for which Kazakhstan may have a comparative advantage (due to minimal application of synthetic agrochemicals since independence and cold winters that reduce the incidence of some agricultural pests), can facilitate improved natural resource management. It can also serve as a useful linkage to the image building activities of the project since organic agriculture is typically perceived as a safe, nutritious, and environmentally-friendly production method and can eventually become a useful part of Kazakhstan's promotion. Perhaps most importantly, farmers who can meet organic production standards are meeting many of the emerging requirements for high-value markets i.e. foods that are free of chemical residues and traceability. It is nonetheless important to consider that it takes 2-3 years for qualified production to be certified as organic.

6. An important component of competitiveness in modern food production is traceability. This requires a reliable and documented chain of custody from farm to table. In high risk foods such as meat products, this is likely to be a vital component in opening markets that are often closed to Kazakh exports for sanitary reasons, such as the border with Russia. Some standards that are proposed under the project – such as organics - intrinsically incorporate such traceability. Traceability in meat production may be economically viable and required by the market, and thus the subcomponent will provide technical support to implement it.

7. *Subcomponent 1.2. Quality and Safety Monitoring.* The subcomponent will improve the capacity of the public and private sectors to monitor food quality and certify standards of agricultural products rationalize the system to testing and monitoring of quality and safety. The component will:

- establish and equip a public Veterinarian Testing Center (Microbiology, Radiology, Toxicology, Biochemistry, Virology) and Plant Protection Testing Center (Entomology, phytopathology, Virology, Herbology, Microbiology)
- staff training (see following table)

**Annex Table 3: Training Plan for Quality and Safety Monitoring**

| | Specialization | Level | | | | Staff No. | Trained staff | Share of staff |
|---|---|---|---|---|---|---|---|---|
| | | National | Oblast | Rayon | Market | | | |
| 1 | Plant Protection | 1 | 13 | 60 | - | 482 | 45 | 9% |
| 2 | Phytosanitary | 1 | 15 | - | - | 50 | 45 | 90% |
| 3 | Quarantine | 1 | 6 | - | - | 110 | 37 | 27% |
| 4 | Republican Vet Laboratory | - | 18 | 200 | 310 | 2,700 | 50 | 2% |
| 5 | National Vet Monitoring Center | 2 | - | - | - | 84 | 14 | 17% |
| 6 | Standards | 1 | | | | 30 | 9 | 30% |

- modernize seeds and input laboratories
- provide training and incentives for accrediting line laboratories as needed along value chain (through the Competitive Grant Scheme with 25 - 60 percent of cost-sharing)

8. Regional laboratories:

- Within the two economic corridors there are 9 oblast centers. Each of them has a Ministry of Agriculture lab which requires modernization
- Within the corridors there are 80 districts. Each of them has a lab which require modernization
- 400 new mobile labs for veterinary services will be established
- It is expected that some 20 private labs will require support on a matching grant basis.

**Component 2 - Agricultural Marketing**

9. *Objective.* The marketing component targets the private sector's ability to both assess agricultural markets and provide access to them. To achieve this, the component will (a) facilitate access to market knowledge; (b) improve value chain efficiency through identifying bottlenecks and providing incentives to overcome them; and (c) promote exports by improving the international image of Kazakhstani agriculture. The component will comprise the following three subcomponents.

10. *Subcomponent 2.1. Strengthening the Marketing Information System.* The subcomponent will strengthen the existing system in the following aspects: (a) adding quality classifications and price differentials to the existing price lists; (b) increasing the frequency of price provided, providing at least a daily frequency for perishable agricultural products, (c) complementing price information with traded quantities; (d) complementing the existing web page with means of easier access to farmers and traders, such as mass media (newspapers, radios, TVs) and cellular phones; (e) strengthening the monitoring of information use, and (f) enhancing analytical capacity.

11. The subcomponent will regularly monitor the use of information by farmers and traders to assure that the needed information is disseminated through appropriate channels. The extension subcomponent will complement this effort.

12. The subcomponent will also provide training for staff of private companies and associations on (a) collection, processing and analysis of data; and (b) use and development of information-marketing systems. This training will not be provided to commodity exchanges, whose institutional development will be provided by the Second Agriculture Post Privatization Assistance Project.

13. Each of the above trainings shall last 3-5 days. In total within the first two years of the Project about 36 training courses shall be provided to 800 farms and 150 companies (comprising KazAgroMarketing, MalOnimderi and Food Contract Corporation, 10 information and marketing companies, 70 processing companies and 15 professional/farm associations).

14. Trainings shall be prepared and delivered with the support of 6 international and local trainers. Recruitment of experts, preparation and organization of trainings shall be executed by local training company, selected on tender basis.

15. *Subcomponent 2.2. Development of Market-Oriented Infrastructure.* The subcomponent will provide financial incentives to develop marketing associations and or partnerships. It will co-finance up to 40 percent of the cost of post harvest infrastructure such as milk collection points, slaughter houses, storages, distribution networks, etc. for the identified priority commodities in the northern and southern economic corridors.

16. Business plans of proposals will be reviewed through the same system developed for the Competitive Grant Scheme (CGS). To avoid crowding out the private financial system, the grants will be required to have a strong public aspect, including but not limited to:

- incentive the creation of marketing associations, with part of the grant devoted to technical assistance for institutional development,
- technology innovation, with one grant per type in each region, and a significant amount of grant will be devoted to dissemination activities, and
- promotion of subsectors, and agricultural activities that have a public benefit beyond that of the firm.

Experience from other countries (e.g., Albania) shows that with a detailed guidelines and careful implementation these types of grants can actually complement and contribute to the development of the financial system.

**Component 3 - Applied Agricultural Research and Extension**

17. *Objective.* The component aims at improving the current system of agricultural research and extension in Kazakhstan. The system will be improved by (a) complementing the exiting system of funding with a competitive funding mechanism for applied research and extension, and (b) complementing the public extension system currently under development with a structure to train and support new extension agents. The component will:

- increase the adoption of technologies for both process and product innovation by farmers and agroprocessor;
- strengthen links between knowledge generators and customers;
- increase private-sector participation in priority-setting, delivery, and funding of the system of agricultural research and extension.

The component encompasses the following two subcomponents.

18. *Subcomponent 3.1. Applied Research.* The subcomponent will (a) provide technical assistance to complete the design of, implement, and monitor the draft plan to reorganize the core agricultural research system. The technical assistance will emphasize research prioritization (for which a set of focus groups for need assessment has already been carried out during project preparation), human resource development and management, quality control and enhancement measures, accountability, information management and access, comprising internet access; (b) finance advance education for 60 young scientists, both domestically and internationally; and (c) utilize a Competitive Grant Scheme (CGS) to finance applied research proposals. The Competitive Grant Scheme (CGS) would finance 180 proposals with an average matching-grant of US$48,000. Definitions and examples of proposals (or subprojects) are provided below.

19. *Subcomponent 3.2. Agricultural Extension.* The subcomponent will (a) establish a Government funded system for provision of extension services to agricultural entities. The Ministry of Agriculture will expand its presence in rural areas, employing at least one extension agent per district and one extension supervisor per Oblast. Altogether, this will represent about 200 new field staff in all 160 districts of the country and 14 supervisors; (b) provide a system of support to the extension agents, including selection, training and output oriented monitoring of extension agents; (c) train and certify 400 private extension agents; and (d) utilize a Competitive Grant Scheme to finance extension and training proposals. The Competitive Grant Scheme will finance around 450 proposals with an average matching-grant of US$25,000. Definitions and example of this type of proposals (or subprojects) are provided below.

20. The project will help Ministry of Agriculture to establish a public network of extension agents, employing at least one extension agent per district and one extension supervisor per Oblast; altogether, this will mean about 200 new field staff in all 160 districts of the country and 14 supervisors. The project will contribute to the selection and training of the new extension agents and to establish a system of

support to these newly hired staff. The support system will provide an initial training and certification of the extension agents, a continuous on the-job training program, and a system of support which extension agents can address to ask specific questions in order to link the work of extension agents with the best source of knowledge in the country. Each new agent will receive a one-month initial training, with final test for certification. Hiring will be conditional on passing the test; in addition, each year there will be a one-week training based on on-the job practical experience.

21. In addition to public extension agents, 400 private extension agents will be trained and certified. Also 130 lecturers from Agricultural universities, colleges, and professional schools will be trained.

22. Main subjects of training will be:

- methodological aspects such as sociology of change, extension methods and media, participatory rapid rural appraisal, local planning, community development, etc.
- technical aspects such as agro-technology of production and processing, marketing, quality management, etc.
- natural resources management, comprising crop rotation, integrated pest management (IPM), organic farming, minimum tillage, environmental effects of extensive versus intensive agriculture, pasture management, alternative sources of energy, etc.;
- legal and tax issues such as legal aspects of associations and cooperatives, the tax code and tax holidays for agriculture and SME, the land code, the crop-insurance law, registration and inspections, processing and marketing, quality management, etc.; and
- business planning such as farm management, return on investments, cost and financial analysis, risk management, potentials for diversification, etc.

23. Supervisors and national coordinators will be required to have a master on subjects such as extension planning, extension management, extension monitoring and evaluation.

24. *Implementation of the CGS for Component 3 – Applied Research and Extension.* Both subcomponents will utilize the Competitive Funding Scheme (CGS) to finance demand driven proposals originating from both public and private organization. The approach is described under the chapter on implementation mechanisms. The operational aspects of implementation are described in an operational manual currently which first draft has already been discussed.

25. Scientific centers and academic organizations may apply for grants irrespective of their ownership (form of property). Individual researchers and consultants may also apply for grants, as well as farms and companies of the agricultural sector that will submit applications jointly with researchers. The cycle of CGS, beginning with publication of an announcement of a certain competitive bidding and ending up with selection results, will be disseminated in the mass media (see Annex 6 for subproject cycle).

**Annex Table 4: Characteristics of Applied Research and Extension Subprojects**

| | Applied Research | Extension / Demonstration |
|---|---|---|
| Provider/beneficiary co-financing | >30% | >35% |
| Maximum size of grant*, thousand US$ | US$100 | US$30 |
| Average size of grant, thousand US$ | US$48 | US$25 |
| Max implementation period (years) | 3 | 2 |

| | | |
|---|---|---|
| Providers (with technical capacity to implement the proposed activity) | Research centers, KazAgroMarketing, universities, NGOs, consulting companies, scientist groups, international organizations | Research centers, KazAgroMarketing, universities, NGOs, consulting companies, scientist groups, international organizations |
| Beneficiaries (final clients) | Farmers, associations, agroprocessors | Farmers, associations, agroprocessors |

* The maximum size of grants may be changed during project implementation

26. **Applied research sub-projects** validate innovations which are likely to have positive results in the specific eco-region of Kazakhstan, but have not yet been tested on a real scale. These subprojects will not limit their validation to technical feasibility of innovations, but will also test their economic, institutional, social, and environmental feasibility. All sub-projects should be proposed by integrated teams, composed by researchers and producers (beneficiaries in agriculture or in the food industry), and should allow validating innovations before their diffusion to all interested parties. They will have a scientific approach and consequently the major responsibility for the elaboration of proposals and for the implementation is borne upon the scientists. However, due to the applied nature of the research themes, and to avoid a separation between research and practice, it will be mandatory that validation research proposals include in the research team and in the research methodologies also the involvement of technicians (agronomists, veterinarians, food experts, etc.). Their final products are (a) research reports for the national and international scientific community and (only in case of successful results); (b) very simple and clear guidelines for national producers; and (c) a dissemination plan, which will be implemented only in case the validation will have been positive. Joint proposal and alliances between local and foreign/international research institutes will be considered as a positive element at the moment of subproject evaluation.

27. **Extension, demonstration, and training sub-projects** will be focused on disseminating technologies which have already been tested, and will also cover non technological aspects of training, such as legal aspects, business planning, economic and financial analysis, quality management, marketing, etc.

28. **Priorities.** Although priority area of investment will be adjusted annually by the Governing Board, since they need to adapt to a changing environment, the following priority criteria have been agreed.

- **Product innovation**. Testing new products, such as crop, animal or food products. a minimum of 30% of resources will be invested for this type of subprojects, which is needed to supply changing consumers' needs, diversify farmers' income, and reduce over-dependence on few products;
- **Process innovation**. Testing new improved methods for obtaining the same product. Most researches generally focus on process innovations and search to improve the productivity of existing crops, or try to reduce the environmental impact of old practices.

29. The following table reports some examples of applied research/demonstration subprojects.

**Annex Table 5: Examples of applied research/extension subprojects**

| Topic | Production | Post-harvest, storage, processing, marketing |
|---|---|---|
| **Soft wheat** | • Farm trials of zero-tillage | • Post-harvest loss reduction<br>• Dry gluten production |
| **Durum wheat** | • Variety on-farm trials | • Quality assurance<br>• Potential niche market assessment |
| **Barley. Animal feeding and brewing varieties** | • Financial calculations according to quality grades | • Outturn in processing different varieties |
| **Livestock** | • Financial calculations of improved feeding. Improved feeding Vs improved breed in quality aspects<br>• Quantifying financial impact of improved feeding<br>• Potentials of cashmere production<br>• Organic livestock production<br>• Effectiveness of panel for animal feeding | • Market assessments<br>• Collection, slaughtering, and cooling<br>• Small scale milk cell count<br>• Financial feasibility of small scale processing |
| **Oil seeds** | • Seed development and testing | • Small scale oil seed processing |
| **Cotton** | • Integrated Pest Management<br>• Two seeds technology<br>• Quantifying financial impact of crop rotation | • Densely packing units<br>• Ginning outturn |
| **Fish products** | • Financial justification of aquaculture of high commercial value species (pike perch, trout, sturgeon, silver carp, etc.)<br>• Dry fish meal production | • Testing of small-scale primary processing and cooling plants<br>• Financial feasibility of smoked and canned fish production |
| **Natural resources management** | • Watering points for livestock<br>• Biogas | • Recuperation of slaughterhouse wastes |

**Component 4 - Institutional Development and Agricultural Policy**

30. *Objective.* This component will support the Ministry of Agriculture's ability to: (a) create the institutional structure to implement project activities; (b) provide technical assistance to improve the legal framework for sector competitiveness (c) monitor the effects of policy changes; (c) provide training to staff on different aspects such as policy analysis, management, and economics, as well as technical aspects such as agricultural trade and WTO accession, agricultural knowledge and information systems, participation in regional agricultural fairs and conference, and (d) monitor and evaluate project activities. The component will be subdivided in the following three subcomponents.

31. *Subcomponent 4.1. Institutional Structure.* According to international experience, the institutional setting of the system will require setting up a three bodies: (a) Governing Board, (b) Coordination Center (secretariat), and (c) Independent Peer Reviewers.

(i) The **Governing Board** will have the responsibility of defining the strategic guidelines of the project, including the funding systems under the previous three components. All major decisions of the Governing Board will be recorded in the project operational manual, which will be approved and revised by the Board. It will regularly meet semi-annually, plus eventual extraordinary meetings as necessary (but possibly not more than six time a year). The Board will be composed by nine members with voting rights and by the Director of the Secretariat, without voting rights. The members will be representatives of the Ministry of Agriculture and other Ministries, of the most important associations of the three levels of the agro-food chain (production, processing and trade) and/or private sector. Representatives of public institutions such as Ministries will not exceed the number of four. The representatives in the Board will last for 3 or 4 years and can be reappointed only for a second term. The members of the Board should receive a bonus per each meeting they participate. Other operational expenses include travels to participate in the meetings, board and lodgings, study travels abroad to visit similar experiences and similar training.

(ii) The **Coordination Center** will act as Secretariat of the project and will have the responsibility of implementing the policies agreed by the Governing Board and reflected in the Project Implementation Plan and Operational Manual. Therefore it will be responsible for the implementation of the whole project. One important task of the Coordination Center will be to inform all concerned parties, through proper methods (mass media, meetings at Universities and Research Centres, leaflets and posters, etc.), about the opportunities offered by the system. It will take care of all administrative duties related to the Calls for proposals, administrative selection of the proposals, relationships with the Independent Peer Reviewers, signing of contracts for the provider of the selected sub-projects, disbursement procedures, monitoring and periodical evaluation of project activities. The Coordination Center will prepare the meetings of the Board to inform about the progress of the implementation and will provide all necessary information in case of proven misbehaviour of contracted parties. The Coordination Center will be also responsible for project monitoring and it will produce progress reports.

(iii) The **Independent Peer Reviewers** is a rotating roster of experts, not a permanent institution. It will be responsible for the technical review of proposals submitted for the (a) private laboratories, (b) market-driven infrastructure, (c) applied research, and (d) extension, according to the criteria defined in the CGS operational manual. The roster will be composed of national and international experts who will examine the proposals and will evaluate them according to the multi-criteria methodology described in the operational manual. The CGS operational manual will specify criteria and relative weights which will be made public in the Call for Proposals, to ensure high transparency. For each group of proposals in one specific area, 2-3 Independent Peer Reviewers will selected, out of a roster elaborated by the Coordinating Centre. At least one Peer Reviewer will be international. The roster will include respected individuals of the scientific and technical civil society in Kazakhstan and abroad. In order to avoid conflict of interests, individuals involved in a specific proposal can not evaluate it. The Independent Peer Reviewers will receive via internet the proposals and individually send back their judgment, based on scores; the Coordinating Centre will elaborate the average score and nominate winners. The Independent Reviewers are paid an honorarium per each proposal they have analyzed individually.

32. *Subcomponent 4.2. Project Evaluation.* The subcomponent will finance technical assistance to carry out project evaluation. A consulting firm will be hired to produce two evaluations per year: the first evaluation will assess achievements in terms of output indicators working with project partners and executors, the second evaluation will be based on a survey of a sample of project potential beneficiaries to assess outcome achievements by subcomponent. The results will be presented directly to the Governing Board.

33. *Subcomponent 4.3 Agricultural Policy Development.* The subcomponent will strengthen the capacity of public sector to analyze, monitor and develop agricultural policies. To do so it will establish a Group of Experts on agricultural policy, and it will provide technical assistance to introduce the monitoring of state support indicators (such as aggregate measure of support, producer subsidy equivalent, etc.). The Group of Experts will also prepare of proposals and recommendation on development of legislation affecting agricultural competitiveness of different sub-sectors, including fisheries. This subcomponent will also finance training to selected staff of the Ministry of Agriculture, comprising a limited number of study tours.

34. The subcomponent will also support the Ministry of Agriculture to clearly define its role and responsibilities within a national food control strategy. It will identify adequate coordination with other government agencies, food industry and other relevant stakeholder groups to ensure effective programs are in place for food safety at the farm and market level.

## Annex 5: Project Costs

### KAZAKHSTAN: Agricultural Competitiveness Project

### Annex Table 6: Project Cost By Component

| Project Cost By Component and/or Activity | Local US$ million | Foreign US$ million | Total US$ million |
|---|---|---|---|
| 1. Quality and Safety of Agricultural Products | 13.8 | 16.2 | 30.0 |
| 2. Agricultural Marketing Development | 4.3 | 2.6 | 6.9 |
| 3. Applied Agricultural Research and Extension | 22.2 | 12.8 | 35.0 |
| 4. Institutional Development | 4.3 | 0.7 | 5.0 |
| **Total BASELINE COSTS** | 44.6 | 32.3 | 76.9 |
| Physical Contingencies | 1.2 | 1.4 | 2.6 |
| Price Contingencies | 2.9 | 0.7 | 3.6 |
| **Total Project Costs**[1] | 48.7 | 34.4 | 83.1 |
| Interest during construction | | | |
| Front-end Fee | | | |
| **Total Financing Required** | | | |

[1] Identifiable taxes and duties are US$7.9 million of the total project cost. Project cost net of taxes is US$75.2 million. Therefore, the share of project cost net of taxes is 90.5 percent..

### Annex Table 7: Allocation of Loan Proceeds

| Expenditure Category | Amount in US$ million | Maximum % of expenditure to be finance by the IBRD Loan |
|---|---|---|
| Civil works | 5.3 | 70% |
| Goods | 6.7 | 100% foreign expenditures, 100% local expenditures (ex-factory cost), 84% local expenditures for other items procured locally |
| Competitive grants | 11.0 | 100% |
| Unallocated | 1.0 | |
| Subtotal | 24.0 | |
| Front-end Fee | 0 | |
| Total Loan | 24.0 | |

## Annex 6: Implementation Arrangements

### KAZAKHSTAN: Agricultural Competitiveness Project

**Project Management**

35. The Ministry of Agriculture (Ministry of Agriculture) will have the overall responsibility for the project implementation. This will include administration of the Project Special Account, maintenance of records of all project related transactions, carrying out procurement for all goods and technical assistance associated with the project (except the procurement associated with sub-projects financed under the Competitive Grant Scheme which will be carried out by the beneficiaries), among others. Specifically, the Head of the Department of External Relations and Investments of Ministry of Agriculture will be responsible for the project's day-to-day implementation.

36. The institutional structure for project management is designed in such a way as to separate policy setting (Governing Board), implementation (Coordination Center), and technical advice/review (Independent Peer Reviewers). Summary responsibilities for the three institutions have been described under sub-component 4-1 – Institutional Structure. A Project Implementation Plan (PIP) is currently under finalization. It will report draft terms of reference for expert group that will work on standard harmonization, the criteria to select public and private laboratories for modernization, the criteria to select agro companies whom the project will help to get certificate, the modules for training in marketing, an awareness campaign guide and terms of reference for extension agents. The plan will set a detailed procedure for the activities planned by the project and can be modified during the project implementation. The following chapter presents a summary of the responsibilities of the Coordination center and its main staff.

37. A Competitive Grant Scheme (CGS) will be used whenever project activities could be implemented by either private or public providers. The detailed implementation arrangements are being defined in an operational manual which is currently under discussion with different stakeholders. A summary of these implementation arrangements is provided in the next chapter

**Coordination Center**

38. The Coordination Center, under supervision of the Ministry of Agriculture, will serve as a standing management body of the Project and will fulfill the duties of a Secretariat in that it will be involved with the hands-on, routine aspects of project management. The Center's main responsibilities will include, but not limited to:

- project implementation and monitoring
- preparation and implementation of the annual work program
- monitoring, evaluation and reporting to government, the Bank, and the Governing Board
- procurement of goods and services (except CGS)
- administration of the Competitive Grant Scheme
- administration of the Project and Special Accounts, and maintaining records of all project related transactions, in collaboration of the accounting department of the Ministry of Agriculture, and
- ensuring the preparation and submission of annual project audits.

39. The Ministry of Agriculture is suggesting that the Coordination center be staffed with 12 professionals. However the Ministry of Economy may want to review this proposal and this will require some discussion during negotiations.

40. **Project Manager**. The project manager will be responsible for managing the Coordination Center and for overall project implementation. He/she will be responsible for communication with the Ministry of Agriculture, the Governing Board, other governmental agencies, and the World Bank task team. The manager will be accountable to the Vice Minister of the Ministry of Agriculture who is in charge of the project implementation. He/she is supposed to take a lead in troubleshooting during the project implementation, alert the Ministry of Agriculture, the Governing Board, and the World Bank task team on any deviation from the original Project Implementation Plan (PIP).

41. Each component will be responsibility of a suitable professional who will be responsible for day-to-day implementation of each component. They will follow the PIP and report to the project coordinator on any problems not envisaged in the PIP.

42. The coordinator of **Component 1 - Quality and Safety Management of Agricultural Products** will:

- Help Ministry of Agriculture with designing, establishing, and accrediting the public laboratories planned under the project
- Work with the Group of Experts and Technical Committees on harmonization of regulations and standards of quality of commodities and follow up on their activities
- Carry out the dissemination campaign
- Select on a competitive basis a qualified company for conducting training according to the preset modules
- Review applications from public and private laboratories to be financed under the CGS and inform the Independent Technical Reviewers on short listed candidates.

43. The coordinator **Component 2 - Agricultural Marketing** will:

- Select on a competitive basis a qualified company for conducting training on Management Information System according to preset modules
- Make arrangements for domestic and international image making campaign to build awareness, writing and distributing print promotional material on agriculture in Kazakhstan, explaining the potential to promising export markets of Kazakh agricultural products.
- Review applications from beneficiaries willing to improve market infrastructure by the CGS and inform the Independent Technical Reviewers on short listed candidates.

44. The coordinator of **Component 3 - Applied Agricultural Research and Extension** will:

- Administer the whole CGS scheme, organize calls for proposal and training, arrange for the signature of contracts
- Review applications, select peer reviewers, for the applications concerning applied research and extension
- Organize training of the module instructors and follow up on the elaboration of training modules by them
- Select on a competitive basis a qualified company for conducting training of the public & private extension advisors according to the modules developed consultants.

45. The coordinator of **Component 4 - Institutional Development and Agricultural Policy** will:

- Help Ministry of Agriculture with establishing the Governing Board by preparing necessary documentation and assuring continuous communication with members of the Governing Board. The component coordinator will announce meetings of the Governing Board, provide logistical and other support to facilitate Governing Board operation
- Help Ministry of Agriculture with establishing the roster of Independent Technical Reviewers by preparing necessary documentation and assuring continuous communication with the Independent

Technical Reviewers. The component coordinator will provide logistical and other support to facilitate the operation of the Independent Technical Reviewers.

- Provide administrative support to the project coordinator on Coordination Center operations, help him with communication with project stakeholders including Ministry of Agriculture and the World Bank task team

**Public network of extension agents**. The Ministry of Agriculture would like to select KazAgroMarketing as the institutional home of the extension system. During Negotiations it was agreed that consultants to carry out this activity, which is fully financed by the Republican Budget, will be selected according to domestic law. In any case, the contract with the provider of these services will be not longer than one year, and it will be renewable. Although a state owned enterprise such as KazAgroMarketing may have some limits, alternatives were not acceptable to the Ministry of Agriculture. The one year renewable contract limit will allow the possibility of reviewing and if needed modifying this arrangement during project implementation. The World Bank will provide prior review of the draft contract and TORs, but not of the selection method, given that the Borrower will finance the totality of this contract.

**Competitive Grant Scheme (CGS)**

46. The implementation arrangements for the Competitive Grant Scheme (CGS) are detailed in an operational manual which will be approved by the Governing Board and will receive no-objection by the World Bank. In case of need, the Manual may be periodically adjusted and updated to incorporate lesson learned during implementation. All changes will require approval of the Governing Board and World Bank no-objection.

47. The CGS will be managed by the same institutional structure to be developed under the project. The Governing Board, the Coordination Center, and the Independent Peer Reviewers will be respectively responsible for policy making, implementation, and technical advice, as described under the sub-component 4-1. Institutional Structure.

48. **Applicants.** Eligible applicants to the CGS can be: research centers, universities, non governmental organizations (NGOs), consulting companies, private companies, scientist groups, international organizations, registered associations, etc. Proposals should provide evidences of the provider's implementation capacity. For instance, in the case of applied research subprojects, the provider should prove its capacity to analyze results of research activities, including but not limited to scientific capacity to provide statistically reliable results. A required minimal experience period will also be utilized as a rule-of-thumb. The Ministry of Agriculture and project preparation team are currently discussing the appropriate minimal experience (track-record.) The discussion is oriented around 2-4 years of actual experience. The shorter the experience required, the easier would be for newcomers to participate. However this will also have the trade-off of increasing the risk working with organizations with limited capacity. The discussion will be finalized by appraisal.

49. The scheme will make a distinction between "providers"—those with the technical capacity to implement the proposed activity – and beneficiaries – those who will ultimately benefit from the achievements of the proposed subproject. If deemed useful, there could be a tripartite contract among the Coordination Center, the provider, and the beneficiary. Such tripartite contract will constitute a favorable feature, though it will not be a requirement. This was decided because to sign a legally binding contract beneficiaries need to have legal personality (thus being registered as association or similar). The lack of registration would constitute an obstacle to implementation.

50. **Requirements of sub-project proposals**

(i) **All subproject proposals should provide a benefit to society – public benefit– larger then the benefit to private providers.** All proposals should clearly define the benefit to society, or spillovers, because grants are provided only for activities which provide a public benefit larger than the private benefit. This means that the goods or services provided should be "not excludable" (additional potential users cannot be excluded from use by others) and "not rivalry" (goods and services can be used more times). The Grant has the objective of compensate for a market failure. It is however important that economic benefits are not confused with social benefits (i.e., employment generation.) Although a strict economic analysis is not feasible for such small projects, some models were developed during preparation and will be used to benchmark proposals.

(ii) **Implementation capacity**. Proposals should provide evidences of the provider's implementation capacity. In the case of applied research subprojects, the provider should prove its capacity to analyze results of research activities, including but not limited to scientific capacity to provide statistically reliable results.

(iii) **Topics and grant size.** Subprojects will be selected according to the priority level of proposed topics, implementation period, grant size, and minimal beneficiaries' contribution (for most types of subprojects, beneficiaries' contribution can be in kind, as detailed in the operational manual). The following table (Annex Table 8) reports the details of these requirements.

**Annex Table 8: Competitive Grant Scheme Subprojects**

| | **Laboratories** (sub-comp. 1.2) | **Market-Oriented Infrastructure** (comp 2) | **Image Enhancement** (comp. 2) | **Applied Research** (sub-comp. 3.1) | **Extension / Demonstration** (sub-comp. 3.2) | **Total** |
|---|---|---|---|---|---|---|
| Budget allocation (US$) | 1,300,000 | 4,200,000 | 1,300,000 | 8,640,000 | 11,250,000 | 26,690,000 |
| Provider/beneficiary co-financing | >25% | >40% | >50% | >30% | >35% | |
| Maximum size of grant* (US$ '000) | US$80 | US$40 | US$50 | US$100 | US$30 | |
| Average size of grant (US$ '000) | US$65 | US$30 | US$25 | US$48 | US$25 | US$32 |
| Expected number of subprojects | 20 | 140 | 30 | 180 | 450 | 800 |
| Max implementation period (years) | 1 | 1 | 1 | 3 | 2 | |

* The maximum size of grants may be changed during project implementation

**CGS Agent.** Given the high number of CGS, it was decided to use an agent to carry out administration of these grants. The CGS Agent will not be responsible for making technical decisions or approving proposals. It will only be requested to check whether grant recipients meet the conditions for subsequent tranche disbursements under the Competitive Grant Scheme. The Administrative Agent will be expected to perform certain agreed-upon procedures to assist the Ministry of Agriculture (or Coordination Center, CC) in determining if the conditions have been met. These procedures would include a representative of the CGS Agent will (i) make field visits to the Sub-project sites to verify the Sub-project implementation state and will submit its findings to the MoA and CC; (ii) undertake all necessary actions and exercise all of its rights in the CGS Agent Agreement, including suspension or termination of the right of Grant

recipients to use the proceeds of the Grant upon failure by the Grant recipient to perform any of its obligation under the Grant Agreement; (iii) be empowered, upon failure by the Grant recipient to carry out its obligations under the Grant Agreement, to terminate it with prior agreement of MoA, cease disbursement of the Grant and request other appropriate remedies available under the law; (iv) receive up to a maximum 30% of the Grant funds to assure that the proceeds of the Grant are disbursed to the Grant recipients in a timely manner; and (v) furnish to the MoA and CC documentation of expenditure in a period of sixty days to assure that no Grant funds will be advanced for a period of longer than sixty days The MOA and Administrative Agent would sign a bilateral agreement specifying the terms and conditions of this work. The grant recipients / beneficiaries should well understand the nature of the relationship of the between the MOA and Administrative Agent, particularly with respect to the agency fee.

**Subproject Cycle**

**1. Call for submitting subproject proposals.** Twice a year the Coordination Center (CC) will carry out a dissemination campaign to a call for proposals. The dissemination campaign will comprise but not be limited to announcements inviting sub-project proposals under the CGS will be publicized. Advertisements in Russian and Kazakh languages will be placed in all newspapers distributed in rural areas. Advertisement will also disseminate (a) priority areas; (b) main requirements, (c) application and evaluation process, comprising deadlines, and (d) timing and location of training on proposal formulation.

**2. Training on proposal preparation and submission.** Training on proposal submission will be carried out during the two months after the Call for Proposals. The training will be based on the content of the operational manual, with the main objective of disseminating its contents and explaining that selection will be based on criteria defined in the manual. The objective of this training will be to improve the quality of proposal received and to clearly explain the "rules of the game" increasing thrust in the system and reducing the possibility of arbitrary decisions.

**3. Submission of Short Proposals.** The deadline for submission of a short proposal of max three pages will be two months after the Call for Proposal. The two months period is required to allow the dissemination campaign to achieve a significant share of target audience and sufficient time for training. This period may be reduced in follow up calls. No proposal will be accepted after the deadline. (The Sample Short Proposal Form is available in Annex IV of Operational Manual.)

**4. Evaluation of Short Proposals (pre-selection).** The Coordinating Center will have one month to review the Short Proposals and eliminate those which do not comply with the to requirements of the operational manual.

**5. Communication of results of pre-selection.** All proponents will be informed of the results of pre-selection within one month. Only the pre-selected proponents will be invited to prepare Full Proposals. They will have one month of time to present full proposals.

**6. Submission of full Proposals.** Full proposals will be presented according to a pre-designed form (max 25 pages). The deadline for presentation will be at least one month after communication of positive result of pre-selection. (The Sample Full Proposal Form is available in Annex V of Operational Manual)

During this period, the Coordinating Center will also assign 2-3 Independent Peer Reviewers to each proposal which will pass the pre-selection. At least one Peer Reviewer per project should be foreign. The names of Peer Reviews should remain strictly confidential.

**7. Evaluation of Full Proposals.** Proposals will be sent to selected Independent Peer Reviewers for their analysis. A point based system of evaluation will be utilized by the Independent Peer Reviewers.

Proposals can be (a) rejected, (b) accepted after some revisions, or (c) accepted. Discussion is still undergoing on who should have final approval authority over the proposals (whether the Governing Board, the Coordination Center, or others). A final decision is expected by appraisal.

**8. Contract signing and registration.** A formal contract will be signed between the Coordination Center (CC) and the provider/beneficiary. The contract may be between two parties – CC and provider – or between three parties – CC, provider, and beneficiaries. The separation between provider and beneficiary will not be a requirement (as in some cases of international experience, i.e. Albania), though it will constitute a positive feature of the project. The contract will set out responsibilities, implementation arrangements, reporting requirements, and monitoring indicators. The operational manual will constitute integral part of the contract. (The Sample Contract is available in Annex VII of Operational Manual.)

**9. Communication of results of final selection.** The list of accepted as well as rejected proposals will be always disseminated (if timing will coincide, in conjunction with the next call for proposals.)

**10. Implementation: procurement and financial management**. The grant will be implemented according to the rules detailed in the operational manual. Disbursements will be based "milestones", meaning that each tranche will be disbursed only after achieving a specific milestone or target.

Procurement of goods and consultant below US$10,000 each will be done in accordance to the May 2004 Manual For Conducting Very Small-Value Procurement Under World Bank/Ida Small Grants, Loans And Credits). World Bank guidelines will be utilized for procurement of higher value.

Grant applicants will be required to maintain a simple accounting system.

**11. Reporting.** The organization implementing the grant will be required to provide technical and financial progress reports every six months starting on the date of contract signature. Each interim report should also comprise a detailed work plan for the next period. (see annex XII of Operational Manual for a sample form.)

**12. Evaluation of Completion.** The organization implementing the grant will be required to send a final evaluation report within one month from completion. The report will link of all project findings so that overall achievements and impact can be assessed. The evaluation report should clearly define the public nature of these achievements, and separate them in terms of contribution to knowledge dissemination, human resources development. (see annex XII of Operational Manual for a sample form.)

**13. Auditing**. Project auditing will comprise a sample of around 10% of subprojects. Therefore the organization implementing the grant should maintain records and the simple accounting system for a period of at least two years after sub-project completion.

## Annex 7: Financial Management and Disbursement Arrangements

### KAZAKHSTAN: Agricultural Competitiveness Project

**Financial Management**

A pre-appraisal assessment of the financial management arrangements for the Project was undertaken during April / May 2004 to determine whether the financial management arrangements are acceptable to the Bank. These financial management arrangements include the MOA's systems of accounting, financial reporting, staffing, auditing, and internal controls in place during the project preparation phase. In October 2004, an update of the pre-appraisal assessment determined that the FM arrangements are satisfactory and meet the World Bank's financial management requirements.

***Country Financial Management Issues.*** A Country Financial Accountability Assessment (CFAA) for Kazakhstan was completed in 2002 and was disseminated to Government authorities in September 2002. The CFAA provided many recommendation towards improving the country's public financial accountability, including, among others, strengthening external audit and public oversight, strengthening internal audit within budget organizations, improving accountability for state-owned enterprises; and improving governance and transparency in government programs.

***Strengths and areas for improvement.*** The primary strength of the MOA financial management system is the continuity in financial management personnel responsible for implementing the existing projects within the MOA Budget Department and MOA External Relations and Investments Department. The primary area for improvement will be for the financial management personnel within the MOA to gain experience working in an automated environment ("1-C" software system) for maintaining the books and records of account.

***Implementing Entity.*** The MOA, through its Budget Department, will control the flow of funds and maintain the accounting records, including preparation of the quarterly Financial Monitoring Reports (FMRs). Personnel from the MOA have past experience with implementing WB-funded projects and are familiar with WB financial management and disbursement requirements. The MOA will be supported by a Coordination Center (CC), and the roster of independent peer reviewers.

***Funds Flow.*** The Project funds will be disbursed through a Special Account at a commercial bank acceptable to the World Bank. To facilitate timely project implementation, the MOA will establish, maintain and operate, under terms and conditions acceptable to the Bank, the Special Account at a local commercial bank. All payments for project expenditures financed from Government of Kazakhstan counterpart funds will be made directly from the bank accounts of the Treasury Committee within the Ministry of Finance.

The MOA will manage the Special Account, including preparing withdrawal applications and supporting documentation, replenishment and timely reconciliation of the Special Account. The replenishment applications should be submitted at least every month and must include the Special Account Reconciliation Statement and relevant supporting documentation.

Disbursements under the Competitive Grant Scheme (CGS) will be made directly to beneficiaries from the Administrative Agent. Advances from the Special Account to the Administrative Agent will be based upon expected disbursements to beneficiaries not exceeding acceptable periods of time (maximum 60 days or otherwise as agreed-upon with the WB).

***Staffing.*** The MOA have designated personnel from within the MOA Budget Department that have gained experience from implementation of existing WB-funded projects. The project Coordination Centre (CC) will also include consultants responsible for implementing various components of the project.

***Accounting Policies and Procedures.*** The MOA Budget Department will maintain appropriate financial records and accounts in accordance with existing MOA policies / procedures and project specific procedures to be established under the Project Implementation Plan (PIP) and will be described in the Operational Manual. These accounts which follow generally accepted accounting practices will reflect the progress of the project and identify its resources, operations and expenditures. The project accounts will reflect all financial transactions during the project period for the IBRD loan and government counterpart financing by project component and by expenditure categories. The project accounts will be maintained independently from any routine budget account or other externally funded project account.

***Internal Audit.*** There is no existing internal audit department within the Ministry of Agriculture. The MOA activities are subject to periodic audits by the Committee for Financial Control within the Ministry of Finance and annually by the Accounts Committee of Control Over Republican Budget Execution. For the purposes of the IBRD loan, no reliance will be placed upon the audits performed by these two organizations.

***External Audit.*** Annual audits for the project accounts will be carried out in accordance with the *Guidelines for Financial Reporting and Auditing of Projects Financed by the World Bank (June 2003).* Effective from 1 July 2003, the guidelines require a single audit opinion on the project financial statements as a whole, which will include the Special Accounts Statement and the Statement of Expenditures on which Bank disbursements are made. The project will adopt these guidelines and submit a single audit opinion on the annual project financial statements within six (6) months following the end of the projects fiscal year end.

As noted above, the World Bank does not intend to place reliance on the external auditing activities conducted by the Accounts Committee related to this project. The external audit will be carried out by independent auditors in accordance with International Standards on Auditing (ISA) and terms of reference acceptable to the Bank. Appointment of independent auditors acceptable to the World Bank is a dated covenant specified in the Loan Agreement.

***Reporting and monitoring.*** Project management-oriented Financial Monitoring Reports (FMR's) will be used for project monitoring and supervision and sample forms are included in the Operations Manual. The Project will prepare and submit Financial Monitoring Reports (FMR) in a form and frequency agreed with the Bank. The FMRs will be customized to reflect the country circumstances and the needs of the project, while meeting the Bank's minimum information requirements for the financial monitoring of the Project. The FMR will include, but not be limited to, (a) written summary of project progress, including explanations for significant budget variances (b) statement of sources and uses of funds, including budget to actual comparisons, (c) a detailed schedule for tracking disbursements against specific project activities, (d) special account reconciliation statement, (e) forecast of commitments, and (f) detailed results of procurement. The MOA will submit quarterly FMRs for the Project to the Bank starting with the first quarter ended in which disbursements will commence and quarterly thereafter, no later than 45 days after the relevant quarter's end.

***Information systems.*** The MOA will prepare its initial FMR's and annual financial statements using EXCEL spreadsheets. This is the current method applied by the MOA for current WB-funded projects under implementation and is sufficient for meeting the WB and GOK requirements. The MOA Budget Department has recently installed the "1C" system, a Russian-based software system that is commonly

used among WB-funded projects in Central Asia. Once the 1-C has been customized to respond to the Project components and specifics , the MOA Budget Department will use it to produce routine reports such as: trial balance, general ledger, balance sheet, income and expenditure statement by sources of funds, cash flow, suppliers' ledger, and budget to actual variances. The software system will also be used to produce quarterly FMR's and annual financial reports.

***Disbursement Arrangements.*** IBRD loan funds will be disbursed under the Bank's traditional disbursement procedures with full documentation, including the use of Statements of Expenditures (SOEs), letters of credit, and direct payments.

Statements of Expenditures (SOE) will be used for: (a) goods contracts estimated to cost less than US$100,000 equivalent each; (b) works contracts estimated to cost less than US$1,000,000 equivalent each and; (c) all competitive grants under Components 2, 3 and 4 of the project;. The Ministry of Agriculture will retain the relevant documents and make them readily available for inspection and review by supervision missions and the auditors.

***Special Account (SA)***: To facilitate project implementation, the MOA will open a Special Account (SA) in a bank acceptable to the Bank, and on terms and condition acceptable to the Bank. IBRD will make an initial deposit of US$500,000 to the Special Account upon the request by the Ministry of Finance (MOF) after Loan effectiveness. The total Authorized Allocation will be limited to US$1,000,000. Funds from the Special Account will be used to finance all IBRD disbursement categories. Replenishment of the Special Account from the IBRD loan account will be made against withdrawal applications, supported by appropriate documentation or statements of expenditure prepared by the MOA, signed by the authorized officials and submitted to IBRD for approval.

The selected commercial bank to hold the Special Account should have: (a) significant foreign correspondence network covering all currencies; (b) reasonable capacity and experience for issuing letters of credit, making direct foreign payments and other international transactions; (c) capacity to perform a wide range of banking services at local branches, including cash payments, transfers to other domestic and regional banks, issuance of debit notes, application of conversion rates from foreign currencies; (d) the capacity to maintain adequate accounts for the Special Account as required by the Bank, and provide monthly statements to the MOA; (e) willingness to issue a Comfort Letter to ensure that amount deposited in the Special Account will not be set off or otherwise seized or attached to satisfy amounts due to a commercial bank by the Borrower; and (f) willingness to change competitive rates for their services and provide reasonable interest income to the balances held.

***Supervision Plan.*** The reports of the progress of project implementation will be monitored in detail during supervision missions. The FMRs will be reviewed on a regular basis by the field-based FMS and the results or issues followed up during supervision missions. Annual audited project financial statements and management letters will be reviewed and issues identified will be followed up with the MOA and CC.

The FM supervision missions will include a review of the project's financial management and disbursement arrangements (including a review of a sample of SOEs and movements on the Special Accounts for each funding source) to ensure compliance with the Bank's minimum requirements. It is envisaged that the FM supervision missions are carried out every six months initially, and subject to satisfactory FM performance by the MOA Budget Department, the frequency may be reduced.

## Annex 8: Procurement

### KAZAKHSTAN: Agricultural Competitiveness Project

**A) General**

Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The description of various items under different expenditure category is available below. For each contract to be financed by the Loan/Credit, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank project team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

**Procurement of Works:** Works procured under this project, would include refurbishment or construction of laboratory building/s. The procurement will be done using the Bank's Standard Bidding Documents (SBD) for all ICB and National SBD agreed with the Bank. Procurement of works under the Competitive Grants will be conducted based on the Operational Manual

**Procurement of Goods**: Goods procured under this project would include:
Laboratory equipment; Vehicles; Office furniture and equipment. The procurement will be done using Bank's SBD for all ICB and National SBD agreed with the Bank. Procurement of goods under the Competitive Grants will be conducted based on the Operational Manual

**Procurement of non-consulting services:** Services like Accreditation and Advertisement are non-consulting type of services. Their procurement will be done using Bank's SBD for all ICB and National SBD agreed with the Bank.

**Selection of Consultants:** Consulting services are envisaged on harmonization and development of standards; monitoring the quality and safety; training; information campaigns. Short lists of consultants for services estimated to cost less than USD50,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

**Operational Costs:** Office Running Costs; Vehicles and Stationary *which would be financed by the project would be procured using the implementing agency's administrative procedures which were reviewed and found acceptable to the Bank.*

**Others**: None

**B. Assessment of the agency's capacity to implement procurement**

Procurement activities will be carried out by the Coordination Center (CC) under the Ministry of Agriculture, Department of Foreign Relations. The agency is not staffed yet and there is a person who is in charge for procurement and who reports to head of Department. The Vice Minister is responsible for the project. The Ministry has hired a consulting firm working on preparation of the project who is advising them on all aspects of the project preparation.

An assessment of the capacity of the Implementing Agency to implement procurement actions for the project has been carried out by Naushad Khan and Fasliddin Rakhimov during June 1-4, 2004. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement (Officer) and the Ministry's relevant central unit for administration and finance.

Most of the issues/ risks concerning the procurement component for implementation of the project have been identified and include first of all lack of World Bank procurement knowledge and experience of the Project Coordination Center (CC) staff and consultants involved in preparation of the project.

The corrective measures which have been agreed are (a) hiring the procurement consultant during the remaining project preparation period; (b) hiring the procurement consultant right from the beginning of the project; (c) training the CC staff on the Bank procurement procedures. It was decided by the Ministry of Agriculture to send a person in charge for the project coordination and procurement - Mr. Talgat Akhmetjanov (Chief Specialist) to the World Bank procurement training being organized in Bishkek in June 7-11, 2004. The overall project risk for procurement is that if procurement capacity is not developed, then all the project activities may suffer.

**C. Procurement Plan**

The Borrower developed a draft Procurement Plan for project implementation which provides the basis for the procurement methods. The plan has to be agreed between the Borrower and the Project Team during appraisal. As soon as it is agreed it will be available in the Project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

**D. Frequency of Procurement Supervision**

In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended semiannual supervision missions to visit the field to carry out post review of procurement actions.

## Annex 9: Economic and Financial Analysis

### KAZAKHSTAN: Agricultural Competitiveness Project

*Economic Analysis*

| | | |
|---|---|---|
| Cost benefit | X | NPV = US$51 million; ERR = 23.5% |
| Cost effectiveness | X | |
| Other (specify) | | |

**Project Benefits**. Project activities are expected to increase incomes of farmers, rural entrepreneurs, and other rural residents resulting from the following benefits

(i) reduced losses of production and processing and lowered quantities of rejected products
(ii) improved quality of products (including recognized quality of produced commodities but ignored due to absence of laboratory test confirmations), thus fetching higher prices on internal and external markets
(iii) improved access to market, reduced transaction costs, increased sales and raise producers' share in sales price
(iv) employment generation either as hired labour or as increased household labour requirements for both on-farm and off-farm activities
(v) adoption of improved technologies

Other benefits related to project activities are difficult to quantify and therefore they were not considered in the economic analysis: (a) innovations that go beyond the scope and implementation period of the project; (c) development of an intellectual pool of the Kazakhstan's science and education systems; (d) improved food safety; (e) consumer confidence in the food system; (f) improved market environment and a more equitable policy framework with reduced barriers for market entry; and (g) incremental tax revenues as a result of increased volume of taxable production.

The difficulties in calculating such benefits relate to the complexity of making justifiable assumptions or to the lack of reliable data. For example, food safety benefits could be measured in economic terms through the avoided costs associated with foodborne illnesses. Moreover, some non-health benefits may accrue from safer food such as increased consumers' demand for reputable products, reductions in market risks due to higher consumer confidence, lower market volatility and possible links between food safety and improved nutrition. This kind of information partially exists in Kazakhstan (see Annex Table 9 below) and can be used to justify project's interventions rather than suggesting any quantifiable benefit. Some world example can be useful to indicate the relevance of food borne illness. The following are some estimates of the annual cost of foodborne illness:

| | |
|---|---|
| Australia: | US$2.6 billion |
| United States of America: | US$12 to 27 billion |
| United Kingdom: | GBP350 million (food poisoning only) |

Sufficient cost-effectiveness indicators for food safety as well as effective monitoring and evaluation criteria will allow for a more detailed analysis of project benefits during project implementation.

**Annex Table 9: Number of Food-borne Illnesses per 100,000 Population**

| Type of illness/Year | 1997 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| Typhoid | 0.4 | 0.8 | 0.22 | 0.2 | 1.5 |
| Brucellosis | 12.9 | 12.3 | 12.9 | 15 | 16 |
| Salmonella | 28.2 | 27.3 | 23.9 | 19.9 | 17.6 |
| Hepatitis A | 364.5 | 83.8 | 156.5 | 116.3 | 70.7 |

**Economic Analysis.** The economic analysis was based on a period of twenty years. The scenario presented in the economic analysis is rather conservative. The results presented below are indicative and illustrate the range of profitability based on conditions prevailing at the time of the preparation.

The analysis attempts to identify quantifiable benefits that relate directly to project activities. The incremental quantifiable benefit stream comprises of two main elements derived: (a) improved quality and safety of agricultural products, as well as improved market environment at national level from; and (b) improved effectiveness and profitability at farmers' and rural entrepreneurs' level. Regarding the former element, wheat was taking as a proxy as a major crop in Kazakhstan and the following assumptions were made:

- Average annual export of wheat is 5 million tons.
- According to official statistics, 70% of wheat production is class three, 22 percent is class four, and 8 percent is divided among the remaining 3 classes. Wheat sector experts estimate that the share of class 1 and 2 is up to 30 percent of total wheat production. This data is more consistent with information from Kazakh wheat exporters in Europe (Gaonac'h, 2003). As consequence of project investments in quality management, quality would gradually increase. At project end (year 5) 10 percent of exports or 0.5 million ton wheat would graduate from class 3 to class 2, and at full development (year 7) 20 percent or 1 million ton would graduate from class 3 to class 2.
- Difference in price between wheat class 3 and 2 is US$15.

Based on the above assumptions, the annual incremental benefits from the first element at full development (year 7) are estimated at US$15 million.

In regard to the second element, a total number of seven activity models were prepared. The calculation of such benefits is difficult, as the likely uptake of activities cannot be known with certainty. In addition, given the demand-driven aspect of the Competitive Grant Scheme (CGS), specific CGS financed activities cannot be known in advance. Nonetheless the estimations made are based on practical experience in similar locations and they are sufficiently valid to make good estimations. Business plans were prepared for the following seven activity models:

1. Investments in accredited laboratory at rayon level (either public or private) would bring an additional US$14,153 annually due to the increased number of tests performed and a cost-recovery mechanism implemented.
2. Introduction of a slaughterhouse would reduce marketing costs by up to 10 percent and increase the processing capacity of meat up to 9,200 heads, or amount of services provided up to US$16,600 per year.
3. Development of a milk collection point would allow for assembling of up to 1,500 liters of milk per day that could be supplied to milk processing plants timely and with assured quality.
4. Optimum application of fertilizers on wheat is expected to increase its yield by 20-30 percent and gross margin by US$47 per hectare.
5. Improved animal feeding (such as use of concentrate and soybean-based feeds) is expected to increase milk production in the participating farms from 7 to 12 liter per head per day or incremental benefits of almost US$150 per cow.

6. Intensive technology in cotton production would lead to an increase in cotton yield from 1.5 to 2.2 ton per ha or additional margins of US$205 per hectare.
7. Promotion of good agricultural practices in soybean growing could bring incremental benefits of US$63 per hectare.

The illustrative models have been prepared using relatively conservative parameters for both output and inputs and account only for indicated income-generating activities. The summary of economic benefits of demonstrated sub-projects is presented in Annex Table 10. It should be also noted that each full proposal submitted would require detailed estimates of the direct and indirect benefits including crop and livestock budgets. These crop and livestock budgets were prepared to support the assumptions applied for the sub-projects in the field of agricultural applied research and extension.

**Annex Table 10: Summary of the Illustrative Models**

| Model | Estimated Costs (US$ '000) | | | Annual Net Benefits (US$ '000) –before financing | | | Incremental annual net benefits (%) | IRR-before financing (%) | NPV-before financing (US$ '000) |
|---|---|---|---|---|---|---|---|---|---|
| | CGS | Benef. | Total | W/out Project | With Project | Increment | | | |
| Rayon Level Laboratory | 48.7 | 16.2 | 65 | 4.2 | 18.3 | 14.1 | 0.22 | 16.4% | 9.9 |
| Marketing-Slaughter House | 10 | 10 | 20 | 0 | 5.1 | 5.1 | 0.26 | 22.1% | 7.1 |
| Marketing-Milk Collection Point | 6.8 | 6.8 | 13.5 | 0 | 2.9 | 2.9 | 0.22 | 19.0% | 3.1 |
| Applied Research-Improved Fertilization of Spring Wheat | 15.1 | 17.2 | 32.3 | 0.4 | 0.9 | 48.4 | 1.50 | 79.5% | 133.1 |
| Applied Research-Improved Feeding for Cows | 22.2 | 14.5 | 36.8 | 20.1 | 0.3 | 143 | 0.39 | 24.3% | 17.8 |
| Extension-Intensive Technology for Cotton | 26.2 | 7.9 | 34.1 | 56.7 | 896 | 32.8 | 0.96 | 51.8% | 79.3 |
| Extension-good agricultural practices Technology for Soybean | 10.5 | 3.0 | 13.5 | 5.0 | 8.8 | 3.8 | 0.28 | 15.6% | 1.8 |
| **Average** | **19.9** | **10.8** | **30.8** | **18.5** | **35.9** | **17.4** | **0.55** | **32.7%** | **36.0** |
| **%** | **65%** | **35%** | **100%** | | | | | | |

In calculating the overall benefits from the CGS, the following **assumptions** were made:

- The following rates of success or adoption were applied to the different types of subprojects
  - applied research: 10%
  - extension and marketing: 25%
- The benefits of the models are calculated for a period of ten years.
- The models involve 5 to 40 direct beneficiaries. Assuming an average direct involvement of the around 10 people, the project would reach out to 8,700 beneficiaries directly, considering that about 870 sub-projects will be implemented

As a result, the following incremental annual net benefits per one dollar of investments were estimated:

| | |
|---|---|
| Laboratory equipment | 0.22 |
| Marketing development | 0.24 |

| | |
|---|---|
| Applied research | 0.94 |
| Extension | 0.62 |

The incremental net benefits for each type of CGS's sub-projects were calculated by multiplying these indicators with the amount of estimated investments for the CGS, considering a gradual increase of such benefits over the project implementation.

The models show that the activities in applied research and extension have an ERR in a range of 16 percent to 80 percent. These estimates are more conservative than a recent comprehensive study by Alston, and others (2000) that shows the return on research and development investments is significantly high in different conditions (see Annex Table 11).

**Annex Table 11: Rate of Return of Research and Development Investments**

| | Number of estimates | Median return on investment (%) |
|---|---|---|
| Africa | 188 | 34 |
| Asia | 222 | 50 |
| Latin America | 262 | 43 |
| West Asia/N. Africa | 11 | 36 |
| Industrialized countries | 990 | 46 |

Furthermore, studies carried out in a number of countries by the International Food Policy Research Institute have shown that public investment in agricultural research provides higher returns than other investments in agricultural and rural development. Other studies show an average rate of return of over 40 percent for investment in agricultural research, even if only a 10-20 percent of research is successful. This successful research has such high return rates that average result is over 40 percent. In addition, public research provides strong pro-poor benefits, to both producers and consumers.

Project interventions are also expected to improve the management and negotiating skills of rural producers; as well as enhancing their access to training, extension, inputs, and market. The main financial benefits would arise from improved terms of trade with the commercial sector and *social capital* arising from strengthened local rural institutions. Enhanced extension/ technical assistance and better market knowledge, information and negotiating skills will result in higher farmer's share in unit prices for products sold. Ultimately, this will result in increased farmers' income. The world experience shows an increase of up 40 percent in the net value of marketed products cash earnings to producers due to the improved market efficiency. It is not feasible to estimate the impact of the project on prices and marketing margins. Nevertheless, these kinds of benefits are financial in nature, accruing to the target beneficiaries through increased farm-gate/factory prices for their products. These do not constitute an economic benefit, as they represent transfer payment from one element within society (traders, transporters, companies) to another (farmers, rural entrepreneurs), thus were not considered in the economic analysis. However, an increased producer's share in consumer price would be a good monitoring indicator for project's achievements.

The incremental costs in economic prices have been calculated by the removal of price contingencies and taxes and duties. No residual values for capital investment items have been assumed. Replacement of the vehicles and equipment (US$1.6 million every 5 years), laboratory equipment (US$4.6 million, 50 percent of the initial amount every 5 years) and recurrent costs (US$1.8 million annually) beyond PY 5 have been included to support the public extension services and work of the Veterinary and Plant

Protection National Testing Centers and regional public laboratories. The total economic cost of the project amounts to about US$78.6 million.

Overall Estimated Return of the Proposed Project. Given the above benefit and cost streams, the base case internal rate of return (IRR) is estimated at 23.5 percent. The base case net present value of the project's net benefit stream, discounted at 12 percent, is US$51 million. Full details of the economic analysis are available in project files (Jumabaeva, 2004).

A sensitivity analysis to assess the effect of variations in benefits and costs and for various lags in the realization of benefits was carried out. The results are presented below. A fall in total project benefits by 20 percent and an increase in total project costs by the same proportion would reduce the base ERR to about 17 percent.

The switching value for total project benefits is about 43 percent; while for project costs it is approximately 75 percent. A one-year delay in project benefits reduces the project ERR to 19 percent. With a two-year delay in project benefits, the ERR falls to approximately 16 percent.

**Financial Analysis**

The seven models presented above were also used for the financial analysis, on the basis of financial costs and benefits. They are based upon the information on the production systems collected during field visits, and a review of available documents and statistics as well as the achievements of other similar projects. In addition, crop and livestock budgets were prepared to serve as building blocks for the models representing project activities. Annex Table 12 presents the summary of financial costs and benefits, while details could be found in project annexes (Jumabayeva, 2004).

The main results of the financial analysis included: (a) a significant increase in gross and net returns for each of the models in the with-project situation; and (b) high benefit/cost ratios demonstrating the attractiveness of the investments. NPVs after financing for the various models ranged from US$12,931 to US$160,084. FRRs before financing ranged from 16 percent to more than 50 percent. The models show that benefits after financing would be positive beginning in the first year, therefore no FRRs after financing could be calculated. Favorable cash flows from the possible project financed investments indicated that the improvements in incomes at the farm, community and national levels would be sufficient to ensure uptake of the proposed activities. Also, a beneficiary's contribution is likely to translate a high degree of economic rationality. Business proposals would be required for each sub-project financed under the CGS. Favorable financial benefits would be a reasonable indicator of positive economic returns.

**Annex Table 12: Financial Results, Ratios and Switching Values***

| Model | NPV after financing, (US$ '000) | FRR before financing | Switching Values, % | | | | |
|---|---|---|---|---|---|---|---|
| | | | Incre-mental revenue | Increme ntal inflows | Incre-mental production costs | Incre-mental invest-ment costs | Incre-mental outflows |
| Safety and quality: rayon level laboratory | 67.9 | 16 | -57 | -38 | 62 | 117 | 62 |
| Marketing: slaughterhouse | 23.6 | 22 | -27 | -20 | 30 | 132 | 25 |
| Marketing: milk collection point | 15.2 | 19 | -4 | -4 | 4 | 125 | 4 |
| Applied research: improved fertilization of spring wheat | 160.1 | 80 | -83 | -70 | 264 | 579 | 230 |
| Applied research: improved Feeding for Cows | 49.2 | 24 | -76 | -49 | 105 | 155 | 97 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Extension: intensive technology for cotton | 107.6 | 51 | -78 | -61 | 181 | 371 | 159 |
| Extension: good agricultural practices for soybean | 12.9 | 16 | -50 | -32 | 53 | 113 | 47 |

* The switching values show percentage by which the costs would need to rise or benefits decrease before the NPV reached zero, associated with each of the values (at 12 percent opportunity cost).

A **Sensitivity Analysis** was undertaken to assess the impact on the financial returns of changes, in: (a) output prices; (b) expected yields; (c) operating costs; and (d) investment costs. Although the models were more sensitive to changes in both yield and price assumptions than they are to variations in investment and operating costs, they remained reasonably sound in revenue terms.

**Fiscal Impact.** The government budget will finance 56 percent of the total project costs. Nonetheless this will have a marginal fiscal impact as the annual government's contribution of about US$10.0 million represents less than four percent of state expenditures on agriculture in 2003.

The project will request a line item to be included in the national budget during budget discussions in July/August of each project year, a sustainable counterpart funding mechanism for the incremental costs during the project implementation will need to be further examined. Incremental costs for recurrent expenditures and the replacement of equipment are required to support the public extension services and the work of the Veterinary and Plant Protection National Testing Centers and regional public laboratories after the project completion. In terms of size, it should not be difficult for the government to cover such costs.

Project investments will indirectly increase economic activity and thus contribute to expanding the revenue base.

## Annex 10: Safeguard Policy Issues

### KAZAKHSTAN: Agricultural Competitiveness Project

### 1. Environmental Assessment

51. The project **Environmental Category** is Financial Intermediaries (FI) Category. The project will finance (a) laboratories to monitor quality and safety of agricultural products, (b) demand-driven investments of different type; and (c) institutional development investments in extension and policy making. A large part the project will mainly provide funds through the demand-driven Competitive Grant Scheme (CGS), whose exact nature is not known in advance. As required for FI category projects, a comprehensive Environmental Review (Environment Sector Review, dated June 2004, in project files) was conducted by a local consultant and produced the following findings:

(i) National legislation to ensure environmental protection is significantly developed in Kazakhstan. However by-laws and regulations are still under development and enforcement is weak;

(ii) No potential large-scale, significant and/or irreversible negative impacts are envisaged under the proposed project;

(iii) The food safety component will have a direct positive environmental effect, particularly in developing and enforcing food safety legislation. However rehabilitation and management of laboratories can have a negative impact, as for the use of chemicals and reagents in laboratories. Nonetheless the planned supply of incinerators to dispose laboratories wastes will produce an environmental benefit

(iv) Marketing, applied research, and extension CGS subprojects may cause negative environmental effects. Although there are some exceptions – e.g., natural resources management, organic agriculture, crop rotation, and integrated pest management – the majority of CGS subprojects will cause an agricultural intensification which may cause negative environmental effects. The main example is increased use of pesticide, and because of this the pest management safeguard policy has been triggered (see below). Another example of subproject which will require a careful environmental review are food processing subproject, such as slaughterhouses;

(v) the capacity of the government of Kazakhstan, and particularly of the Ministry of Agriculture, to recognize and address environmental impacts of project activities needs improvement. For this reason a set manuals on operations of laboratories and environmental screening of CGS subproject has been developed. Others will be prepared during project implementation, and training on these subjects will be provided. The manuals also propose procedures for design and implementation of mitigation measures for certain sub-projects, such as the use of incinerators in slaughterhouses.

52. The **Pest Management** Safeguard Policy (OP 4.09) has been triggered. Some project financed activities will finance the purchase of chemical control agents, chemicals, and reagents for laboratories. Farm input use will be the farmers' responsibility; nonetheless the project will assist farmers to use these inputs in a more safe and responsible way. The government of Kazakhstan has recently upgraded it management of the control and oversight regarding use of pesticides with the help of FAO (FAO/TCP/KAZ 0065) and a new department of plant protection and quarantine was established in the Ministry of Agriculture. The project will build on this development. As a mitigation measure, laboratory personnel and farmers who will use chemical control agents will be trained in the storage, handling and use of these chemicals as well as with respect to the careful disposal of the containers, when suitable with the use of incinerators. To be accredited, laboratories will need to develop environmental management plans which will increase the current level of environmental safety. The use of appropriate clothing will be encouraged through demonstration. The approved chemicals are all class III chemicals. The project

will also propose alternative methods to chemicals, such as disease-resistant varieties and integrated pest management (IPM). A Pest Management Plan which comprises training manual on safe handling, use, and disposal of pesticides is under finalization.

53. ***Stakeholder Participation.*** The draft Guidelines were discussed at a series of consultation workshop with a number of stakeholders from the Ministry of Environment, NGOs and farmer organizations and disclosed in country; and minor comments received had been reflected in the final document.

## 2. Social Assessment

54. A social assessment was completed as part of project preparation to help project managers develop the project to fit the needs of local rural residents in the project area, thereby increasing returns on investment and enhancing sustainability. The social assessment aimed to understand and express the needs, aspirations, and social and economic constraints and opportunities of rural people, including levels and sources of income, living standards, consumption patterns, access to goods and services, as well as standard social and demographic characteristics. The study took place in four oblasts which are representative of the geographic, ethnic, and structure of farms in Kazakhstan: Almaty; Akmola; Pavlodar; and West Kazakhstan. The method used included; (a) background review of the existing data and information regarding land and land use and review of different reports, including the background reports prepared for this project as well as the findings of the study on farm restructuring; (b) key informant interviews; and (c) focus group discussions.

55. ***Project Implications***. The Social Assessment produced a number of important results that have implications for the project design, which have already been incorporated into the project; others will shape the group training and support activities and provide the basis for social monitoring.

56. Overall, the project would contribute directly to the improvement of the socio-economic state of project beneficiaries by better access to knowledge and markets to the rural population.

57. One of the main targets of the project is the small family farms[1] whose access to commercial lending is limited. The project will facilitate access to knowledge and markets to overcome some of the constraints that small farmers face. The project will also facilitate access to testing quality of agricultural products, thus increasing the equity of payment for the real produced quality. Appropriate indicators will be integrated into the project monitoring and evaluation system for tracking by the project's Monitoring and Evaluation specialist throughout project implementation.

58. Some passages of the social assessment **gender analysis** are available below. Its implication for project design were that no specific gender related target indicators is suitable for this project. Nonetheless the monitoring system should disaggregate its results according to gender to highlight whether gender imbalances will occur, so that corrective action may be warranted.

- **The roles of men and women have shifted as economic conditions have recently changed.** In 1994-1998, women were often the breadwinners for their families when many people lost their jobs because women were available to pick up any job, even low paying manual jobs, such as street sweeping, to support their families. During that period, women gained respect in their families and

[1] A family farm is a legal classification connected to ownership. They are often referred to as "peasant farms" but in Kazakhstan they have an average size of more than 50 ha, larger than what is usually referred to as a *peasant* farm. In addition to family farms, there are agricultural enterprises with an average holding of above 1,000 ha of land and households plots. For the latter category it is difficult to live solely on the land. Many of them have a second income such as having a member in the family who is a wage laborer or pensioners.

local communities for their hard work. Recently men are coming back to play more active roles because of increased opportunities. Some women have been happy to leave the hard manual labor behind and moved back into more traditional homemaker roles.

- **"Women have an important role in decision-making."** Social assessment informants suggested that the new economic roles are leading women into more active roles in decision-making in the households and they are proud of this. Both men and women said that husbands and wives often jointly manage family money.
- **However the overall status of women in the rural area is worse than that of men.** There is a difference in the access of men and women to social and material resources in the north as well as the south of Kazakhstan. Consistently across villages, there are more poor women than poor men, due largely to divorce and widowhood.
- **The majority of farmers are men.** Land privatization resulted in the emergence new categories of entrepreneurs-farmers (peasant or family farms) whose majority are men. This is perceived as natural tradition because "land labor is a men's labor."
- **The traditional areas for women's employment include** education, health care, services, and seasonal farm work, while men work the peasant farms, provide private transportation services, and work in plants and factories, such as a plant producing reinforced concrete, a battery plant, or a furniture factory.
- **Recently it became more difficult for women to find jobs.** Previously the labor market offered more opportunities to women. Many women work only seasonally.

## Annex 11: Project Preparation and Supervision

### KAZAKHSTAN: Agricultural Competitiveness Project

| | Planned | Actual |
|---|---|---|
| PCN review | 07/23/2004 | 07/23/2004 |
| Initial PID to PIC | 01/16/2004 | 01/16/2004 |
| Initial ISDS to PIC | 01/16/2004 | 01/16/2004 |
| Appraisal | 07/19/2004 | 08/10/2004 |
| Negotiations | 10/25/2004 | 02/19/2005 |
| Board/RVP approval | 12/14/2004 | |
| Planned date of effectiveness | 03/30/2005 | |
| Planned date of mid-term review | 10/10/2007 | |
| Planned closing date | 03/30/2010 | |

Key institutions responsible for preparation of the project:

- The Ministry of Agriculture of the Republic of Kazakhstan

Bank staff and consultants who worked on the project included:

| Name | Title | Unit |
|---|---|---|
| Maurizio Guadagni | Senior Rural Dev. Specialist | ECSSD |
| Matthew A. McMahon | Lead Agric., Peer Reviewer | ECSSD |
| Steven M. Jaffee | Sr. Economist, Peer Reviewer | PRMTR |
| Janna Ryssakova | Social Development Specialist | ECSSD |
| Derek R. 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 | E T Temporary | ECCKZ |
| Anarkan Akerova | Counsel | LEGEC |
| Allen Wazny | Senior Fin. Mgmt. Specialist | ECSPS |
| Aliya Kim | Finance Assistant | ECCU8 |
| Anara Jumabaeva | Financial Analyst | FAO |
| Hannah Koilpillai | Finance Officer | LOAG1 |
| Naushad Khan | Lead Procurement Specialist | ECSPS |
| David Lugg | Agricultural Economist | FAO |
| Anara Akhmetova | Team Assistant | ECCKZ |
| Aitolkyn Kourmanova | Program Assistant | ECCU8 |
| Wendy Aires | Editor | AFTTR |

Bank funds expended to date on project preparation:

| | |
|---|---|
| 1. Bank resources: | US$438,000 |
| 2. FAO | US$ 64,000 |
| 3. Italian Trust Fund: | US$ 47,000 |
| 4. Japanese PHRD Grant (implemented by the Borrower) | US$620,000 |
| 5. Total: | US$1,169,00 |

Estimated Approval and Supervision costs:

| | | |
|---|---|---|
| 1. | Remaining costs to approval: | US$5,000 |
| 2. | Estimated annual supervision cost: | US$100,000 |

## Annex 12: Documents in the Project File

### KAZAKHSTAN: Agricultural Competitiveness Project

**Reports available at**
http://wbln0018.worldbank.org/ECA/ruraldevelopmentkz.nsf/ExtECADocbyUnid/4F8EBB3A0F1FD1A885256EB0000E0B85?Opendocument

1. Agricultural Competitiveness Project – Report prepared by the International and National Consultants for KERA, the Ministry of Agriculture and the World Bank Kazakhstan, October 31, 2003
2. Agro-Food Program of Kazakhstan for Years 2003 – 2005.
3. Akhmetova, Dinara – Report on market information system and Value Added Chains
4. Balgabaeva, Zhanar - Report on the System of Agricultural Knowledge and Information – December 2003
5. BISAM Company - Rapid Rural Assessment of Social Issues: Qualitative Analysis, May 2004
6. Debatisse, Michael, and Philippe Chabot - A Review of Grain Marketing Sector in Kazakhstan and Ukraine, June 2000
7. Deberdiev, Anvar– Institutional Development and Policy Framework – April 2004
8. FAO – Wheat Production in Kazakhstan Technology, Incentives and Competitiveness, October 2003
9. Financial Management Guidelines for Project Management Unit
10. Gaonac'h, Laurent and Loftus, David - Kazakhstan - Au pays des steppes, la filiére blé mise sur l'export, 2003
11. Giovannucci, Daniele - National Trade Promotion Organizations: their role and functions
12. Giovannucci, Daniele, Back To Office Report, March 10-16, 2004
13. Giovannucci, Daniele, Back To Office Report, October 24-28, 2003
14. Grigoruk - Report on Knowledge Extension and Transfer, April 2004
15. Integrated Safeguards Data Sheet and Minutes of Public Disclosure
16. Jumabayeva, Anara – ACP Economic and Cost Analysis, May 2004
17. Kazantseva - Report on Reforms in Agricultural Commodities Quality Assessment
18. Kenny, Mary – Report on management of food control programmes and improvements in compliance with food safety standards and the SPS Agreement, March 6, 2004
19. KERA Company - Feasibility Study, June 2004
20. Latypova, Olga – Quality Improvement by International Standards, November 2003
21. Mandl, Paul - Quality Improvements Through International Standards, May 2004
22. McMurray, Cecil H – Report on Monitoring and Control of Quality of Agricultural Products and Food Safety, March 31, 2004
23. Nazhmidenov, Kairat – Seed System of Kazakhstan – October 2003
24. Nazhmidenov, Kairat – Institutional Analysis – May 2004

25. Operational manual "Competitive Grand Scheme of the Agricultural Competitiveness Project", June 2004
26. Procurement Plan
27. Project Implementation Manual
28. Sadler, Marc - Livestock, Cotton & Oilseed Sectors, May 2004
29. Santucci, Fabio M. - Agricultural Knowledge and Information System in Kazakhstan: Present situation and proposals for its improvement, within the framework of the Agricultural Competitiveness Project, March 22-30, 2004
30. Serova, Evgeniya - Overview of the Food and Agricultural Policy in the Republic of Kazakhstan, May 2004
31. World Bank Sector Work– Kazakhstan's Livestock Sector – Supporting Its Revival
32. Zharmagambetova, Zhamal – Justification on Reforms in Agricultural Commodities Quality Assessment, March 2004

## Annex 13: Statement of Loans and Credits

### KAZAKHSTAN: Agricultural Competitiveness Project

| | | | Original Amount in US$ Millions | | | | | | Difference between expected and actual disbursements | |
|---|---|---|---|---|---|---|---|---|---|---|
| Project ID | FY | Purpose | IBRD | IDA | SF | GEF | Cancel. | Undisb. | Orig. | Frm. Rev'd |
| P059803 | 2003 | NURA RIVER CLEANUP | 40.39 | 0.00 | 0.00 | 0.00 | 0.00 | 40.39 | 0.00 | 0.00 |
| P071525 | 2003 | DRYLANDS MGMT (GEF) | 0.00 | 0.00 | 0.00 | 5.27 | 0.00 | 5.07 | -0.20 | 0.00 |
| P046045 | 2001 | SYR DARYA CONTROL/NO. ARAL SEA | 64.50 | 0.00 | 0.00 | 0.00 | 0.00 | 51.39 | 7.56 | 0.00 |
| P065414 | 2000 | ELEC TRANS REHAB | 140.00 | 0.00 | 0.00 | 0.00 | 0.00 | 90.23 | 78.10 | 0.00 |
| P008500 | 1999 | ATYRAU PILOT WATER | 16.50 | 0.00 | 0.00 | 0.00 | 4.50 | 0.56 | 4.98 | 0.56 |
| P008499 | 1999 | ROAD TRANSP. RESTRUC | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9.81 | 8.15 | 0.00 |
| P008507 | 1997 | UZEN OIL FIELD REHAB | 109.00 | 0.00 | 0.00 | 0.00 | 0.00 | 33.93 | 33.93 | 14.23 |
| P008510 | 1996 | IRRIG & DRAINAGE | 80.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.65 | 7.65 | 0.00 |
| | | Total: | 550.39 | 0.00 | 0.00 | 5.27 | 4.50 | 239.03 | 140.17 | 14.79 |

KAZAKHSTAN
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

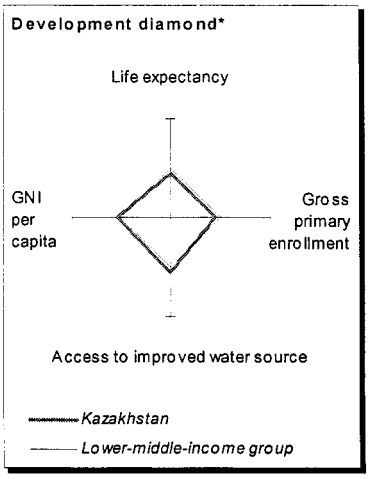
| | | Committed | | | | Disbursed | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | IFC | | | | IFC | | | |
| FY Approval | Company | Loan | Equity | Quasi | Partic. | Loan | Equity | Quasi | Partic. |
| 2002 | Karachaganak | 50.00 | 0.00 | 25.00 | 75.00 | 47.00 | 0.00 | 25.00 | 70.50 |
| 1996 | Kazgermunai | 0.00 | 0.68 | 23.87 | 0.00 | 0.00 | 0.38 | 5.82 | 0.00 |
| 1997/99 | Kazkommertsbank | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0/97/03 | Nelson Resources | 0.00 | 3.66 | 0.00 | 0.00 | 0.00 | 3.66 | 0.00 | 0.00 |
| 1999/02 | Rambutya LLP | 1.56 | 0.00 | 0.00 | 0.00 | 1.56 | 0.00 | 0.00 | 0.00 |
| 2001 | SEF CASPI Ltd. | 2.50 | 0.00 | 0.00 | 0.00 | 2.50 | 0.00 | 0.00 | 0.00 |
| 1999 | SEF Const. Mat | 0.67 | 0.00 | 0.00 | 0.00 | 0.67 | 0.00 | 0.00 | 0.00 |
| 2000 | SEF LP-GAZ Ltd. | 0.52 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 |
| 2001 | SEF NefteBank | 0.00 | 0.00 | 2.50 | 0.00 | 0.00 | 0.00 | 2.50 | 0.00 |
| 2000 | Sazankurak | 12.50 | 0.00 | 5.00 | 0.00 | 7.50 | 0.00 | 5.00 | 0.00 |
| 1999 | TuranAlem | 6.70 | 4.95 | 0.00 | 0.00 | 6.70 | 4.95 | 0.00 | 0.00 |
| 0/94/98/03 | ABN AMRO Kazak | 10.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 |
| 2002 | Astana Tower | 5.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 |
| 2003 | Citibank Kaz | 25.00 | 0.00 | 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 |
| 2000 | FIOC | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| | IK | 5.41 | 0.00 | 0.00 | 0.00 | 5.41 | 0.00 | 0.00 | 0.00 |
| 1998 | | | | | | | | | |
| 2001 | IKSME Resource | 3.27 | 0.13 | 0.00 | 0.00 | 1.50 | 0.13 | 0.00 | 0.00 |
| | Total portfolio: | 123.13 | 9.43 | 56.37 | 75.00 | 111.36 | 9.13 | 38.32 | 70.50 |

| | | Approvals Pending Commitment | | | |
|---|---|---|---|---|---|
| FY Approval | Company | Loan | Equity | Quasi | Partic. |
| 2001 | Kazkommertsbk 2 | 0.02 | 0.00 | 0.00 | 0.00 |
| | Total pending commitment: | 0.02 | 0.00 | 0.00 | 0.00 |

# Annex 14: Country at a Glance

## KAZAKHSTAN: Agricultural Competitiveness Project

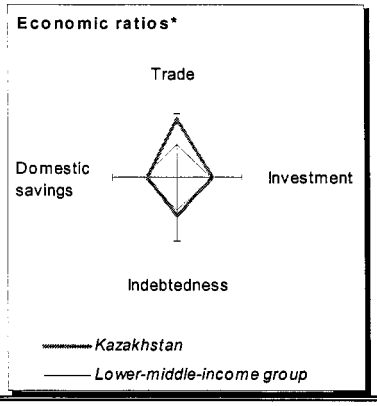
| POVERTY and SOCIAL | Kazakhstan | Europe & Central Asia | Lower-middle-income |
|---|---|---|---|
| **2002** | | | |
| Population, mid-year *(millions)* | 14.8 | 476 | 2,411 |
| GNI per capita *(Atlas method, US$)* | 1,510 | 2,160 | 1,390 |
| GNI *(Atlas method, US$ billions)* | 22.3 | 1,030 | 3,352 |
| **Average annual growth, 1996-02** | | | |
| Population *(%)* | -1.2 | 0.1 | 1.0 |
| Labor force *(%)* | -0.7 | 0.4 | 1.2 |
| **Most recent estimate (latest year available, 1996-02)** | | | |
| Poverty *(% of population below national poverty line)* | 38 | .. | .. |
| Urban population *(% of total population)* | 56 | 63 | 49 |
| Life expectancy at birth *(years)* | 62 | 69 | 69 |
| Infant mortality *(per 1,000 live births)* | 81 | 25 | 30 |
| Child malnutrition *(% of children under 5)* | 4 | .. | 11 |
| Access to an improved water source *(% of population)* | 91 | 91 | 81 |
| Illiteracy *(% of population age 15+)* | 1 | 3 | 13 |
| Gross primary enrollment *(% of school-age population)* | 99 | 102 | 111 |
| Male | 99 | 103 | 111 |
| Female | 98 | 101 | 110 |




**KEY ECONOMIC RATIOS and LONG-TERM TRENDS**

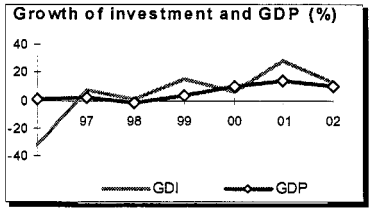
| | 1982 | 1992 | 2001 | 2002 |
|---|---|---|---|---|
| GDP *(US$ billions)* | .. | 27.4 | 22.2 | 24.2 |
| Gross domestic investment/GDP | .. | 31.5 | 26.1 | 26.9 |
| Exports of goods and services/GDP | .. | 74.0 | 46.8 | 46.0 |
| Gross domestic savings/GDP | .. | 30.2 | 23.7 | 23.5 |
| Gross national savings/GDP | .. | .. | 18.9 | 19.4 |
| Current account balance/GDP | .. | .. | -5.6 | -7.5 |
| Interest payments/GDP | .. | 0.0 | 3.1 | 2.9 |
| Total debt**/GDP | .. | 0.1 | 64.9 | 72.5 |
| Total debt service/exports | .. | 0.0 | 31.1 | 36.7 |
| Present value of debt/GDP | .. | .. | 64.4 | .. |
| Present value of debt/exports | .. | .. | 133.2 | .. |

| | 1982-92 | 1992-02 | 2001 | 2002 | 2002-06 |
|---|---|---|---|---|---|
| *(average annual growth)* | | | | | |
| GDP | .. | 0.4 | 13.5 | 9.5 | 5.9 |
| GDP per capita | .. | 1.6 | 14.7 | 10.2 | 5.8 |

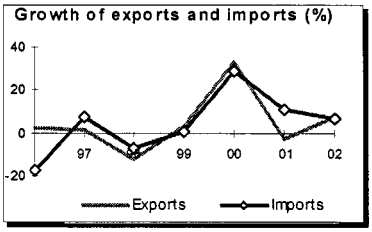



**STRUCTURE of the ECONOMY**

| | 1982 | 1992 | 2001 | 2002 |
|---|---|---|---|---|
| *(% of GDP)* | | | | |
| Agriculture | .. | 26.7 | 9.0 | 8.5 |
| Industry | .. | 44.6 | 38.8 | 43.4 |
| Manufacturing | .. | 8.9 | 15.6 | 17.4 |
| Services | .. | 28.7 | 52.3 | 48.1 |
| Private consumption | .. | 51.6 | 59.7 | 63.9 |
| General government consumption | .. | 18.2 | 16.6 | 12.6 |
| Imports of goods and services | .. | 75.3 | 49.2 | 49.3 |

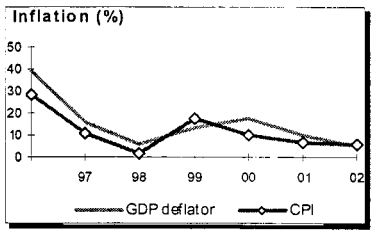



| | 1982-92 | 1992-02 | 2001 | 2002 |
|---|---|---|---|---|
| *(average annual growth)* | | | | |
| Agriculture | .. | -5.6 | 16.9 | -6.0 |
| Industry | .. | -1.2 | 15.1 | 10.7 |
| Manufacturing | .. | .. | .. | .. |
| Services | .. | 3.0 | 10.8 | 8.6 |
| Private consumption | .. | -0.1 | 18.9 | 9.1 |
| General government consumption | .. | -1.4 | 19.6 | 10.3 |
| Gross domestic investment | .. | -5.1 | 28.0 | 12.1 |
| Imports of goods and services | .. | -2.7 | 10.5 | 6.7 |



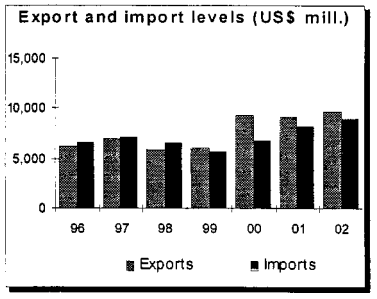
## PRICES and GOVERNMENT FINANCE

| | 1982 | 1992 | 2001 | 2002 |
|---|---|---|---|---|
| ***Domestic prices*** | | | | |
| *(% change)* | | | | |
| Consumer prices | .. | 2,960.8 | 6.4 | 6.2 |
| Implicit GDP deflator | .. | 1,472.2 | 10.2 | 5.3 |
| ***Government finance*** | | | | |
| *(% of GDP, includes current grants)* | | | | |
| Current revenue | .. | .. | 21.8 | 22.5 |
| Current budget balance | .. | .. | 2.3 | 3.2 |
| Overall surplus/deficit | .. | .. | -0.9 | -0.2 |



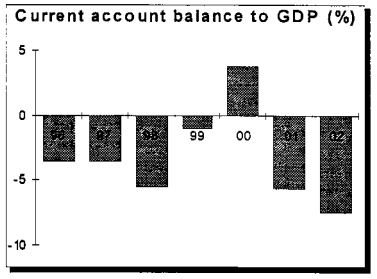

## TRADE

| | 1982 | 1992 | 2001 | 2002 |
|---|---|---|---|---|
| *(US$ millions)* | | | | |
| Total exports (fob) | .. | .. | 9,120 | 9,676 |
| Fuel and oil products | .. | .. | 4,733 | 5,038 |
| Ferrous metals | .. | .. | 1,009 | .. |
| Manufactures | .. | .. | 1,508 | 1,618 |
| Total imports (cif) | .. | .. | 8,224 | 8,886 |
| Food | .. | .. | 836 | .. |
| Fuel and energy | .. | .. | 790 | .. |
| Capital goods | .. | .. | 2,837 | 3,125 |
| Export price index *(1995=100)* | .. | .. | .. | .. |
| Import price index *(1995=100)* | .. | .. | .. | .. |
| Terms of trade *(1995=100)* | .. | .. | .. | .. |



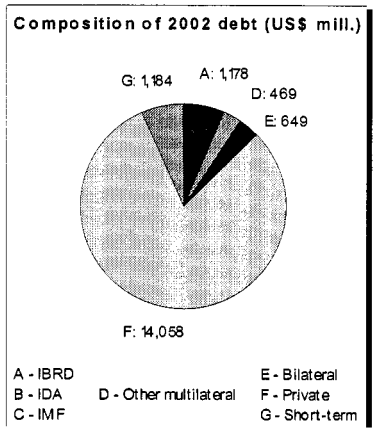

## BALANCE of PAYMENTS

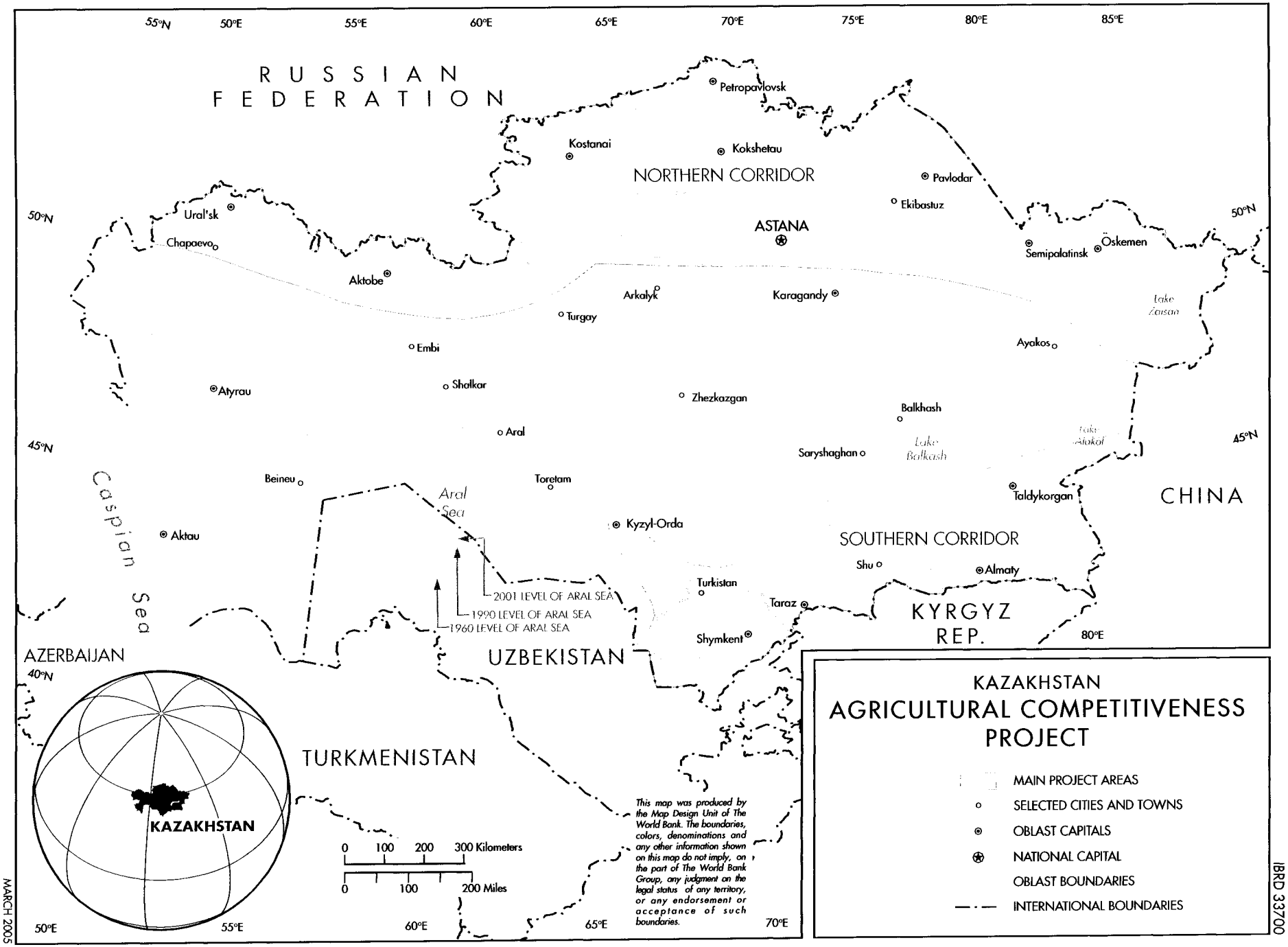
| | 1982 | 1992 | 2001 | 2002 |
|---|---|---|---|---|
| *(US$ millions)* | | | | |
| Exports of goods and services | .. | 5,758 | 10,393 | 11,129 |
| Imports of goods and services | .. | 5,862 | 11,077 | 11,938 |
| Resource balance | .. | -104 | -684 | -809 |
| Net income | .. | -175 | -1,215 | -1,200 |
| Net current transfers | .. | 168 | 232 | 190 |
| Current account balance | .. | .. | -1,240 | -1,818 |
| Financing items (net) | .. | .. | 1,625 | 2,089 |
| Changes in net reserves | .. | 589 | -384 | -270 |
| ***Memo:*** | | | | |
| Reserves including gold *(US$ millions)* | .. | .. | 2,508 | 3,136 |
| Conversion rate *(DEC, local/US$)* | .. | 8.80E-2 | 146.7 | 154.8 |




## EXTERNAL DEBT and RESOURCE FLOWS

| | 1982 | 1992 | 2001 | 2002 |
|---|---|---|---|---|
| *(US$ millions)* | | | | |
| Total debt outstanding and disbursed | .. | 35 | 14,372 | 17,538 |
| IBRD | .. | 0 | 1,070 | 1,178 |
| IDA | .. | 0 | 0 | 0 |
| Total debt service | .. | 0 | 3,331 | 4,115 |
| IBRD | .. | 0 | 101 | 107 |
| IDA | .. | 0 | 0 | 0 |
| Composition of net resource flows | | | | |
| Official grants | .. | 3 | 28 | .. |
| Official creditors | .. | 10 | 34 | 20 |
| Private creditors | .. | 17 | 2,128 | 1,809 |
| Foreign direct investment | .. | 100 | 2,763 | .. |
| Portfolio equity | .. | 0 | 55 | .. |
| World Bank program | | | | |
| Commitments | .. | 0 | 65 | 0 |
| Disbursements | .. | 0 | 114 | 92 |
| Principal repayments | .. | 0 | 47 | 56 |

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RUSSIAN FEDERATION
Petropavlovsk
Kostanai
Kokshetau
NORTHERN CORRIDOR
Pavlodar
Ekibastuz
ASTANA
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Ural'sk
Chapaevo
Aktobe
Arkalyk
Karagandy
Semipalatinsk
Oskemen
Lake Zaisan
Turgay
Embi
Ayakos
Atyrau
Shalkar
Zhezkazgan
Balkhash
Aral
45°N
Saryshaghan
Lake Balkash
Lake Alakol
Beineu
Toretam
Taldykorgan
CHINA
Caspian Sea
Aral Sea
Aktau
Kyzyl-Orda
SOUTHERN CORRIDOR
Shu
Almaty
Turkistan
2001 LEVEL OF ARAL SEA
1990 LEVEL OF ARAL SEA
1960 LEVEL OF ARAL SEA
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UZBEKISTAN
TURKMENISTAN
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0 100 200 300 Kilometers
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50°E
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KAZAKHSTAN
AGRICULTURAL COMPETITIVENESS PROJECT
MAIN PROJECT AREAS
SELECTED CITIES AND TOWNS
OBLAST CAPITALS
NATIONAL CAPITAL
OBLAST BOUNDARIES
INTERNATIONAL BOUNDARIES
MARCH 2005
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