

**ASIAN DEVELOPMENT BANK**

**TAR:KAZ 36441**

**TECHNICAL ASSISTANCE**

**TO THE**

**REPUBLIC OF KAZAKHSTAN**

**FOR**

**ENVIRONMENTAL MONITORING AND**

**INFORMATION MANAGEMENT SYSTEM**

**FOR SUSTAINABLE LAND USE**

**August 2004**

## CURRENCY EQUIVALENTS

(as of 5 July 2004)

Currency Unit	–	tenge (T)
T1.00	=	\$0.0074
\$1.00	=	T135.8500

## ABBREVIATIONS

ADB	–	Asian Development Bank
CACILM	–	Central Asian Countries Initiative on Land Management
MOEP	–	Ministry of Environmental Protection
NGO	–	nongovernment organization
TA	–	technical assistance
TAFA	–	Technical Assistance Framework Agreement
TAMU	–	TA management unit
UNCCD	–	United Nations Convention to Combat Desertification

## TA CLASSIFICATION

<b>Poverty Classification</b>	–	Other
<b>Sector</b>	–	Agriculture and natural resources
<b>Subsector</b>	–	Environment and biodiversity
<b>Theme</b>	–	Environmental sustainability
<b>Subtheme</b>	–	Natural resources conservation

## NOTES

- (i) The fiscal year (FY) of the Government ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

This report was prepared by Xiaoying Ma, Agriculture, Environment, and Natural Resources Division, East and Central Asia Department.

## I. INTRODUCTION

1. The Government of Kazakhstan requested advisory technical assistance (TA) from the Asian Development Bank (ADB) to improve environmental monitoring and information management system for sustainable use of agricultural land. The TA<sup>1</sup> is included in the country strategy and program (2003) for Kazakhstan. The Government and ADB agreed to include the TA in the Pilot Study for Delegation of Consultant Recruitment and Supervision under Technical Assistance to Executing Agencies (Pilot Study). An ADB Fact-Finding Mission visited Kazakhstan in May 2004 and held discussions with key officials of relevant government agencies. During the discussions, understanding was reached on the TA's objectives, scope, terms of reference for consultants, cost estimates, implementation arrangements, and pilot study implementation procedures. The TA framework is in Appendix 1.

## II. ISSUES

2. Agriculture is a significant sector of non-oil production in Kazakhstan, accounting for almost 18% of its gross domestic product in 2003. Forty-four percent of its population live in rural areas. Among the Central Asian countries, Kazakhstan is the largest and its considerable land resources have remarkable potential for agricultural development.<sup>2</sup> About 66% of its land, however, suffers from degradation and threats of desertification, soil erosion, soil dehumidification, and salinization are increasing. The main causes of land degradation are unsustainable land and water management practices, including overgrazing, poor water management in extensive irrigation systems, and inadequate drainage systems. The main economic consequences include reduced crop production, decreased cattle stock and productivity, decreased export capacity in agriculture products, and stagnant food and light industries. Lack of income diversification, decreased farm and rural household incomes, and increased rural poverty are directly linked to land degradation in many of the agricultural provinces. Land degradation has become a major factor constraining economic development, and reversing this trend is an essential ingredient in enhancing the living standards of the rural population.

3. The Government is aware of the problem and has developed a series of strategies to address it. The Long-term Strategy of Development of Kazakhstan Till 2030 outlines long-term goals to improve rural living standards and environmental safety. The State Program of Rural Development of Kazakhstan 2004–2010 emphasizes the development of rural settlements in areas with potential for sustainable income and employment growth under a market economy to encourage migration of communities from regions that have limited prospects for economic growth or are environmentally hazardous. The Concept of Rational Use and Protection of Land Resources for 1994–1995 and for the Period Till 2010 issued by the Government identifies three stages in improving land management, namely, improvement in land tax policy, implementation of land reform, and maintenance of state land cadastre and land monitoring. The 2002 National Action Plan to Combat Desertification and the Concept of Ecological Security 2004–2015 both emphasize the need for a cross-sector approach to implement programs to combat desertification, and recommend activities to be implemented during 2002 and 2011, including development of a methodology for land use analysis, establishment of a monitoring and information management system, and implementation of pilot projects to control desertification.

4. While Kazakhstan has adequate strategies for sustainable use of land resources, the process of translating them into local policies and specific programs and projects has been slower

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<sup>1</sup> The TA first appeared in *ADB Business Opportunities* (Internet edition) on 4 March 2004.

<sup>2</sup> The total area of Kazakhstan territory is 272.5 million hectares (ha), of which 222 million ha is agricultural lands.

and less effective than expected. Among others, inadequate institutional capacity to implement these strategies is a major challenge. The Ministry of Environmental Protection (MOEP) has realized that the gap between the extent of sustainable land use commitments made by the Government and the institutional capacity to implement them is getting wider. This is mainly because the Government has limited experience in coordinating complex environmental management policy across various government agencies, lacks operational mechanisms and procedures to introduce environmental safeguards into agricultural and land management policies and activities, and has inadequate knowledge and information to meet the changing farming needs for sustainable land use. Capacity building and institutional development at local levels are particularly needed to address the multifaceted and cross-sector land management issues. Oblast and rayon officials in charge of agriculture and land planning are typically with science and engineering backgrounds and lack skills and knowledge needed to address a broad range of multi-sectoral land degradation issues. Local environmental agencies also lack skills to deal with agricultural and land management concerns as their current tasks primarily relate to industrial pollution issues.

5. Overlapping functions between various government agencies responsible for different aspects of agricultural policies and land management and unclear mandates often make decision making and implementation of decisions related to sustainable land use difficult in Kazakhstan. It is difficult to obtain and compile relevant monitoring data from various sources. There is no mechanism for comprehensive data analysis. Also, Kazakhstan lack an information management system that various agencies can share as a common basis to support cost-effective, cross-sector policy innovations and measures to address worsening land degradation.

6. Lack of an effective monitoring and information management system is not a new problem. Information related to environmental and land management has deteriorated since independence. The most pressing need, however, is not simply to collect data but to review the relevance of the data currently generated and reform it to meet the changing needs for integrated policy development and program or project preparation. Often, data were gathered without asking fundamental questions about the purposes and benefits of the efforts and therefore had limited value for supporting decision making, program design, or other practical needs. In addition, lack of data compatibility, comparability, reliability, and accessibility that are required to link various sectoral networks into an integrated information management system is another problem. For example, criteria for monitoring the land degradation process applied by various land management agencies are inconsistent and do not comply with the United Nations Convention to Combat Desertification (UNCCD) indicators. Thus, it is difficult to integrate some planned activities within the framework of actions on combating desertification. The Government launched Unified Information Program 2001–2006 to deal with this problem.

7. Environmental auditing as part of the monitoring and information management system for sustainable land use is necessary to facilitate the implementation of national strategies and plans for fighting land degradation. An effective and practical auditing system provides standards for efficient use of water and other agricultural resources, offers approaches to audit actual conditions, and identifies best practices options to meet the standards and minimize adverse impacts on land. This type of auditing system is almost completely missing in Kazakhstan. Such a system is essential to develop ideas and build knowledge for agricultural agencies and farmers to apply best practices that can reduce production costs while gaining environmental benefits.

8. The important link between improved natural resources management and poverty reduction is recognized both in ADB's country strategy for Kazakhstan and regional strategy for Central Asian countries. Kazakhstan accords high priority in improving land management and

participated in one advisory TA and ten regional TAs. Lessons from most relevant TAs<sup>3</sup> include (i) capacity building focusing only on the central Government tends to be too theoretical and not directly related to the specific needs of the institutions, and (ii) sustained capability to better manage the environment is best carried out by involving agencies other than environmental agencies at both national and local levels. The recently launched ADB program for Central Asian Countries Initiatives on Land Management (CACILM) emphasizes the mainstreaming of land management considerations into overall sustainable development policies and programs, and covers a range of interactive interventions from policy and legislation development, institutional strengthening to on-the-ground investment projects. This TA is in line with the CACILM and is designed to help the Government to develop a cost-effective and cross-sectoral monitoring and information management system to support policy development, program or project preparation, and establishment of environmental safeguard mechanisms for sustainable land use. A pilot under the TA to be implemented in the South Kazakhstan Oblast not only will have a positive impact on the oblast, but could also be replicated nationally and in other Central Asian countries.

9. Relevant assistance provided by other international aid agencies in Kazakhstan include Basic Geographic Data on Land Use, Registration and Cadastres (Japan International Cooperation Agency); Hydrometeorological Services for the Aral Sea Basin Program (Swiss Government); and A Website on the National State of the Environment (United Nations Environment Programme and the Government of Norway). Most of these projects emphasize information management at the national level or in the Aral Sea Basin. An ongoing dryland management project supported by the World Bank/Global Environment Facility aims to demonstrate sustainable land uses in the marginal dryland ecosystem in Sheksky rayon of Karaganda oblast. This TA will complement the efforts of other aid agencies.

### III. THE TECHNICAL ASSISTANCE

#### A. Purpose and Output

10. The TA aims to enhance institutional capacity in environmental auditing, monitoring, and information management system to support policy development, program preparation, and environmental safeguards for sustainable land uses. The TA will have the following outputs: (i) methodologies and operational guidelines to improve environmental auditing, monitoring, and information management system for sustainable use of agricultural land; (ii) a pilot implementation of the system in response to actual needs of policy development, program preparation, and environmental safeguards for sustainable land use in the South Kazakhstan Oblast;<sup>4</sup> and (iii) a follow-up expansion program to be included in the 2006 pipeline and financed by the Government.<sup>5</sup>

#### B. Methodology and Key Activities

11. An intersectoral and process approach emphasizing participation of not only national and local environmental agencies but also agricultural and land management agencies will be

<sup>3</sup> ADB. 1999. *Technical Assistance to the Republic of Kazakhstan for Strengthening Environmental Management*. Manila; ADB. 2000. *Technical Assistance for Regional Environmental Action Plan (REAP) in Central Asia*. Manila; ADB. 2000. *Technical Assistance for Combating Desertification in Asia*. Manila.

<sup>4</sup> The South Kazakhstan Oblast is selected for trial implementation based on the following criteria: (i) an oblast with high percentage of desertification and land degradation, (ii) high incidence of poverty tied in part to land degradation, (iii) oblast government's willingness to participate, (iv) data availability, and (v) complement of other ADB project efforts.

<sup>5</sup> \$150,000–\$200,000 equivalent will be financed from Ministry of Environmental Protection's budgets under various related projects.

adopted. A steering committee comprising key staff from the Ministry of Agriculture, the Land Resources Management Agency, the Working Group of UNCCD, and MOEP will be established. To transfer experience and knowledge from international consultants to Government staff, staff of MOEP (the Executing Agency) and local concerned agencies will be involved not only in on-the-job training, but also in all key activities such as document review, problem analysis, draft of methodologies and guidelines, pilot project design, and development of the follow-up program proposal.

12. The TA will support the following interrelated activities: (i) identify the national and local needs of environmental auditing, monitoring, and information management systems for the purpose of policy development, program preparation, and environmental safeguards for sustainable land use; (ii) reviewing the existing monitoring and information programs handled by various agencies, and identify the gaps in meeting the national and local needs; (iii) designing cost-effective methodologies and operational guidelines for improving the existing systems; (iv) developing a pilot system for environmental auditing, monitoring, and information management in the South Kazakhstan Oblast; (v) recommending to oblast decision makers policy innovations, investment project concepts, and environmental safeguard mechanisms for sustainable land use based on information assessment; and (vi) preparing a follow-up project to be financed by the Government to expand the TA outcomes in 2006.

13. As milestones, four interagency workshops will be held to discuss TA implementation design, solicit comments on TA findings, and reach consensus among key stakeholders.<sup>6</sup> As key members of the steering committee, the Ministry of Agriculture, the Land Resources Management Agency, the Working Group of UNCCD, and MOEP will each be responsible for organizing one workshop. Consultants will conduct a series of on-the-job training seminars for national and local government staff during TA implementation. National and local nongovernment organizations (NGOs) will be involved in TA design and implementation. In addition to NGOs' participation in workshops and pilot project implementation, sections on NGOs' roles as monitoring and information network facilitators and in policy development will be defined as part of the overall methodology and guidelines.

### **C. Cost and Financing**

14. The TA is estimated to cost \$860,000 equivalent, comprising \$377,000 of foreign exchange and \$483,000 equivalent of local currency. ADB will finance \$600,000 equivalent comprising the entire foreign exchange cost and \$223,000 equivalent of the local currency cost. The TA will be financed on a grant basis by ADB's TA funding program. The Government will finance the remainder of the local currency cost of \$260,000 equivalent (\$60,000 parallel financing from MOEP's budget under its 2004–2006 Ecological Cadastre Project and Environmental Information Project, and \$200,000 in kind). Cost estimates are presented in Appendix 2.

### **D. Implementation Arrangements**

15. MOEP will be the Executing Agency for the TA. A steering committee will be established, chaired by a vice minister of MOEP and comprising representatives from the Ministry of Agriculture, the Land Resources Management Agency, and the Working Group of UNCCD. The

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<sup>6</sup> The first workshop will discuss the outlines of the methodologies and guidelines. The second will discuss the drafted methodologies and guidelines and the trial implementation arrangement. The third will assess outcomes of trial implementation, and discuss the revised methodologies and guidelines responding to the results of the trial implementation. The last workshop will discuss the draft proposal of the follow-up program and overall TA findings.

committee will provide overall guidance in the TA's direction. The committee members will meet 2–3 times during TA implementation. A TA management unit (TAMU) will be established in MOEP to carry out the day-to-day operations of the TA. One senior, qualified official from MOEP will serve as the head of the TAMU and function as the overall TA coordinator. A junior staff will serve as administrative assistant. The TAMU will comprise five additional technical experts, one each from the Working Group of UNCCD, Hydrometeorology Center, and Information and Analysis Center of MOEP, and two from the South Kazakhstan Oblast.

16. A team of international and domestic consultants will be recruited. The international consultants will be recruited from a firm using the quality- and cost-based selection method in accordance with ADB's *Guidelines on the Use of Consultants*. The domestic consultants will be selected in accordance with procedures acceptable to ADB. Implementation will require 12 person-months of international and 40 person-months of domestic consulting services. The international consultants will have solid experience in (i) land management (5 person-months); (ii) environmental auditing and monitoring (land-related, 3 person-months); and (iii) environmental information management system (4 person-months). The required expertise for domestic consultants follows: (i) agricultural economics and rural development; (ii) geographic information system; (iii) information technology (hardware, software, and web design); (iv) land use planning and land cadastre; (v) soil science; (vi) water resources management; (vii) legal and institutional aspects of environmental and land use planning; and (viii) rural sociology. One international consultant will serve as team leader and one domestic consultant will serve as deputy team leader. Outline terms of reference for the consulting services are in Appendix 3. A simplified technical proposal will be used. Completion of the TA will take 14 months from February 2005 to April 2006. Equipment for the TA will be procured by the consultants in accordance with ADB's *Guidelines for Procurement*.

17. The Government and ADB have agreed to include this TA among selected projects under the Pilot Study for Delegation of Consultant Recruitment and Supervision under the TA to Executing Agencies (Pilot Study)<sup>7</sup> approved by ADB. In particular, the Government agreed to follow the implementation procedures outlined in the Pilot Study Board Paper and such other detailed procedures and practices as ADB may require from time to time. The Government has acknowledged that the terms and conditions of the Technical Assistance Framework Agreement (TAFAs) between the Government and ADB dated 5 October 1995 apply to this TA. For the purpose of Section 3.01 of the TAFAs, ADB has agreed to delegate consultant selection and supervision of firms (or, if applicable, individuals) under this TA to the Government. The letter agreement to be issued under the TAFAs for this TA will accordingly reflect this arrangement. As provided in the TAFAs, consultants engaged and supervised by the Government under this TA will, among others, have the status of experts performing missions for ADB and will be entitled to the privileges and exemptions conferred upon such experts under the *Agreement Establishing the Asian Development Bank*.

#### IV. THE PRESIDENT'S DECISION

18. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$600,000 on a grant basis to the Government of Kazakhstan for Environmental Monitoring and Information Management System for Sustainable Land Use, and hereby reports this action to the Board.

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<sup>7</sup> ADB. 2003. *A Pilot Study for Delegation of Consultant Recruitment and Supervision Under Technical Assistance to Executing Agencies*. Manila.

## TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p><b>Goal</b> Improved mechanisms for mainstreaming sustainable land management</p>	<p>Goals set up in Central Asian Countries Initiative on Land Management (CACILM) reached</p>	<p>Policy dialogue  Country review missions  National reports and documents</p>	<p>Mainstreaming sustainable land management taken as a priority of the Government as a whole</p>
<p><b>Purpose</b></p> <p>(i) Enhance institutional capacity in environmental auditing, monitoring, and information system management to support policy development, program or project preparation, and environmental safeguards for sustainable land use</p>	<p>Developed strategies and adopted upgraded approaches of environmental monitoring and information management system and applying the system to meet actual needs of policy development, program preparation, and environmental safeguards</p>	<p>Policy dialogue  Technical assistance (TA) reports and review missions  Reports of the Ministry of Environmental Protection (MOEP) and other agencies</p>	<p>Strong leadership and sense of ownership of MOEP, the Executing Agency  Sufficient capacity of MOEP and related local agencies to implement the TA</p>
<p><b>Outputs</b></p> <p>(i) Methodologies and operational guidelines on improving environmental auditing, monitoring, and information management system</p> <p>(ii) A trial implementation of the system in response to actual needs of policy development, program preparation, and environmental safeguards for sustainable land use in South Kazakhstan Oblast</p> <p>(iii) A follow-up expansion program to be financed by the Government in 2006</p>	<p>Draft completed by the end of first phase of TA, and finalized responding to trial implementation findings at the end of second phase of TA</p> <p>A trial implementation in a selected oblast completed and the results assessed 2 months before the end of TA</p> <p>A proposal that identifies follow-up actions approved and included in 2006 pipeline by MOEP by the end of TA</p>	<p>Progress reports  TA review missions  Final report  Minutes of steering committee meetings</p>	<p>Data availability, and information sharing among related agencies  MOEP coordination capability, oblast government willingness and implementation capability  MOEP's commitment to TA's sustainability</p>
<p><b>Activities</b></p> <p>(i) Identify the national and local needs for environmental auditing, monitoring, and information management systems.</p> <p>(ii) Review and assess the main existing monitoring and information programs handled by various agencies, and identify the gaps to meet national and local needs.</p> <p>(iii) Design and develop cost-effective methodologies and operational guidelines for</p>	<p>A detailed work plan and time table prepared for each of the activities and submitted as part of the inception report; all activities are timely conducted based on the detailed work plan and timetable</p>	<p>Progress reports  TA review missions  Timely communications among State Environmental Protection Administration (SEPA), Asian Development Bank (ADB), and consultants</p>	<p>Close involvement of MOEP and local environmental agencies in TA implementation  Sufficient capacity of MOEP to coordinate related government agencies to build consensus</p>

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p>improving the existing systems.</p> <p>(iv) Develop a pilot-based auditing, monitoring, and information management system in South Kazakhstan Oblast in response to the oblast's actual needs for policy development, program preparation, and environmental safeguards.</p> <p>(v) Recommend to oblast's decision makers policy innovations, investment program concepts, and mechanisms of environmental safeguard for sustainable land use based on information assessment.</p> <p>(vi) Prepare a follow-up project to be financed by the Government to expand the TA outcomes in 2006.</p> <p>(vii) Provide on-the-job training for carrying out the trial implementation.</p> <p>(viii) Organize workshops to solicit comments on the guidelines and disseminate TA findings.</p> <p>(ix) MOEP to select and supervise the consultants.</p>	<p>Agreed-upon timetable between MOEP and ADB reflected in the Aide Memoire</p>		<p>MOEP's familiarity with ADB procedure, staff time, and capability</p>
<p><b>Inputs</b></p> <p>Consulting services: 12 person-months international and 40 person-months domestic</p> <p>Staff time of MOEP, local environmental agency, and ADB</p> <p>Counterpart fund, office space, and equipment</p>	<p>\$600,000 equivalent financed by ADB</p> <p>\$260,000 (\$60,000 in cash and \$200,000 in kind) equivalent local currency cost financed by the Government</p>	<p>TA review missions, consultants' reports, and timely communications among MOEP, ADB, and consultants</p>	<p>Competitive bidding and recruitment of qualified consultants as a pilot study TA</p> <p>ADB's timely supervision</p> <p>Timely provision of counterpart support</p>

**COST ESTIMATES AND FINANCING PLAN**  
(\$)

Item	Foreign Exchange	Local Currency	Total Cost
<b>A. Asian Development Bank (ADB) Financing<sup>a</sup></b>			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants	240,000	0	240,000
ii. Domestic Consultants	0	95,000	95,000
b. International and Local Travel			
i. International Consultants (international and domestic travel)	40,000	0	40,000
ii. Domestic Consultants	0	6,000	6,000
2. Seminars, Workshops, and Training	0	35,000	35,000
3. Reports, Translation, and Dissemination	10,000	10,000	20,000
4. Pilot Monitoring and Information System			
a. Data, Survey, NGOs' Services	0	30,000	30,000
b. Equipment <sup>b</sup>	30,000	0	30,000
5. Miscellaneous Administration and Support Costs	7,000	7,000	14,000
6. Contingencies	50,000	40,000	90,000
<b>Subtotal (A)</b>	<b>377,000</b>	<b>223,000</b>	<b>600,000</b>
<b>B. Government Financing</b>			
1. Counterpart Staff and Travel	0	80,000	80,000
2. Office Accommodation	0	80,000	80,000
3. Administrative Support	0	40,000	40,000
4. Workshops and Training <sup>c</sup>	0	15,000	15,000
5. Data, Studies, and Reports <sup>c</sup>	0	20,000	20,000
6. Equipment <sup>b</sup>	0	25,000	25,000
<b>Subtotal (B)</b>	<b>0</b>	<b>260,000</b>	<b>260,000</b>
<b>Total</b>	<b>377,000</b>	<b>483,000</b>	<b>860,000</b>

NGO = nongovernment organization.

<sup>a</sup> Financed from ADB's technical assistance funding program.

<sup>b</sup> Equipment includes software, computers and accessories, and simple monitoring equipment.

<sup>c</sup> Parallel financing by Ministry of Environmental Protection's budget under its 2004–2006 Ecological Cadastre Project and Environmental Information Project. Funds will be made available for purchasing equipment and gathering data for the pilot information system and workshops and training.

Source: ADB estimates.

## **OUTLINE TERMS OF REFERENCE FOR CONSULTANTS**

1. TA implementation will require 12 person-months of international and 40 person-months of domestic consulting services. The international consultants (person-months in parentheses) will have solid experience in (i) land management (team leader, 5); (ii) environmental auditing and monitoring (land-related, 3); and (iii) environmental information management system (4). The domestic consultants will have expertise in (i) land use planning policy (deputy team leader, 7); (ii) agricultural economics and rural development (4); (iii) geographic information system (5); (iv) information technology (hardware, software, and web design, 3); (v) soil science and environmental monitoring (4); (vi) water resources management (2); (vii) legal and institutional aspect of land management (3); (viii) poverty reduction (2); and (ix) agronomy (2). The unallocated person-months of domestic services will be used to provide inputs identified as the design of the Project becomes more specific during TA implementation.

### **A. Tasks**

#### **1. International Consultants**

2. The three international consultants will work together. A flexible approach will be adopted to allow each consultant to provide his/her services at most opportune times during TA implementation. The consultants will perform the following tasks:

- (i) Introduce international experience in monitoring and information management system to prevent and control land degradation/desertification and best practices that may be applicable to Kazakhstan.
- (ii) Together with the domestic consultants, identify the national and local needs of environmental auditing, monitoring and information management systems for the purpose of policy development, program preparation, and environmental safeguard for sustainable land use.
- (iii) Review and assess the main existing monitoring and information programs handled by various agencies, and identify the gaps in meeting the national and local needs.
- (iv) Design and develop methodologies and operational guidelines for improving the existing systems, covering (a) clearly defined users; (b) indicators needed for policy development, program preparation, and environmental safeguards; (c) methodology for monitoring and database development and management; (d) mechanism and procedure of information sharing and exchanges among key agencies; (e) data compatibility, comparability, accessibility, and reliability; (f) data analysis methods to meet the major needs of policy development, program preparation, and environmental safeguards; and (g) mechanisms and procedures to facilitate decision making with the information management system.
- (v) Develop a pilot-based monitoring and information management system in the South Kazakhstan Oblast in response to the oblast's actual needs for policy development, program preparation or environmental safeguards, possibly covering (a) an inventory of its significant characteristics reflecting land use and land quality (landforms, vegetation, water resources status, biodiversity status, soil nutrient status, agriculture systems, and current practices in the use of land resource); (b) database and statistic mapping reflecting other key socioeconomic, legal, institutional, and technical indicators; (c) assessment of varied policies and investment programs related to poverty reduction; desertification control; development plans on agriculture, forestry, water resource and land use, rangeland and livestock management; and (d) environmental monitoring practices.

- (vi) Recommend to decision makers of the South Kazakhstan Oblast practices on policy improvement, program preparation, and establishment of an environmental safeguard system for sustainable land use, based on an assessment of the effectiveness of land management policies and investment programs.
- (vii) Revise and finalize the methodologies and guidelines based on the findings of pilot implementation.
- (viii) Prepare a follow-up project to be financed by the Government to expand the TA outcomes in 2006. Instead of simply disseminating methodologies for environmental monitoring and database establishment, emphasize in the follow-up project the impacts of the information management system on downstream policy improvement and institutional changes.

## **2. Domestic Consultants**

3. The domestic consultants will play a technical role rather than mainly translators or interpreters in TA implementation. They will perform the following tasks:

- (i) Through document reviews, surveys, and interviews with national and local key stakeholders; collect and analyze data and information that will identify the gaps in the existing environmental auditing, monitoring, and information systems, and national and local needs; and organize this information in a form facilitating review and analysis by the international consultants.
- (ii) Help the international consultants understand the Government's perception of existing opportunities to learn from international experiences.
- (iii) Help the international consultants carry out the pilot-based monitoring and information management system, that is, collect data for selected indicators, develop the database and mapping, compile a data dictionary, prepare the user's manual, design appropriate map templates, design and develop a web site in consultation with the oblast users.
- (iv) Help the international consultants design and organize the training program, and provide appropriate services as resource persons.
- (v) Together with the international consultants, help the Ministry of Environmental Protection (MOEP), the Executing Agency, draft all the documents specified as TA outputs.
- (vi) Perform other activities relating to the TA central objectives as assigned by the team leader.

## **B. Deliverable Outputs**

4. The consultants will help MOEP deliver the following documents and services as the main technical assistance (TA) outputs: (i) guidelines (methodologies and operational procedures) on environmental auditing, monitoring and information management system for the purposes of policy development, program preparation, and environmental safeguards for sustainable land use; (ii) development/improvement of environmental auditing, monitoring and information management systems to prevent and control land degradation in the South Kazakhstan Oblast, with necessary documents reflecting the outcomes; and (iii) a project proposal for expansion of TA outcomes to be implemented in 2006.

5. The consultants will also submit an inception report with a detailed work plan for TA implementation to MOEP and the Asian Development Bank (ADB) within 5 weeks after their services begin. A 15-page interim report that discusses major progress to be made, outstanding

issues with recommended solutions, and tasks to be completed between the midterm review and the end of the TA will be submitted to MOEP and ADB 7 months after the submission of the inception report, accompanied by all available draft documents that are specified in para. 4. The draft final report (summarizing key TA findings and recommendations) with all documents specified in para. 4 will be submitted 12 months after the TA begins. The draft final report will be discussed at a tripartite meeting of MOEP, the consultants, and ADB. The consultants will submit the final report and output documents in English and the local language at the end of the TA.

6. The team leader and deputy team leader will be jointly responsible for drafting and finalizing the inception, interim, and final TA reports. The team leader will communicate with ADB and MOEP in a timely manner to report on TA progress and alert ADB and MOEP to any potential problems.