

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Ministry of Macroeconomics and Statistics  
Ministry of Communal Services  
City of Tashkent

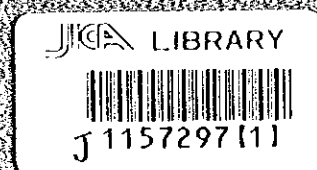
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THE REPUBLIC OF UZBEKISTAN

**The Study Report**  
**for Improvement of Management and Tariff Policy**  
**in Water Supply Services**  
**in the Republic of Uzbekistan**

**FINAL REPORT**

**MAIN REPORT**

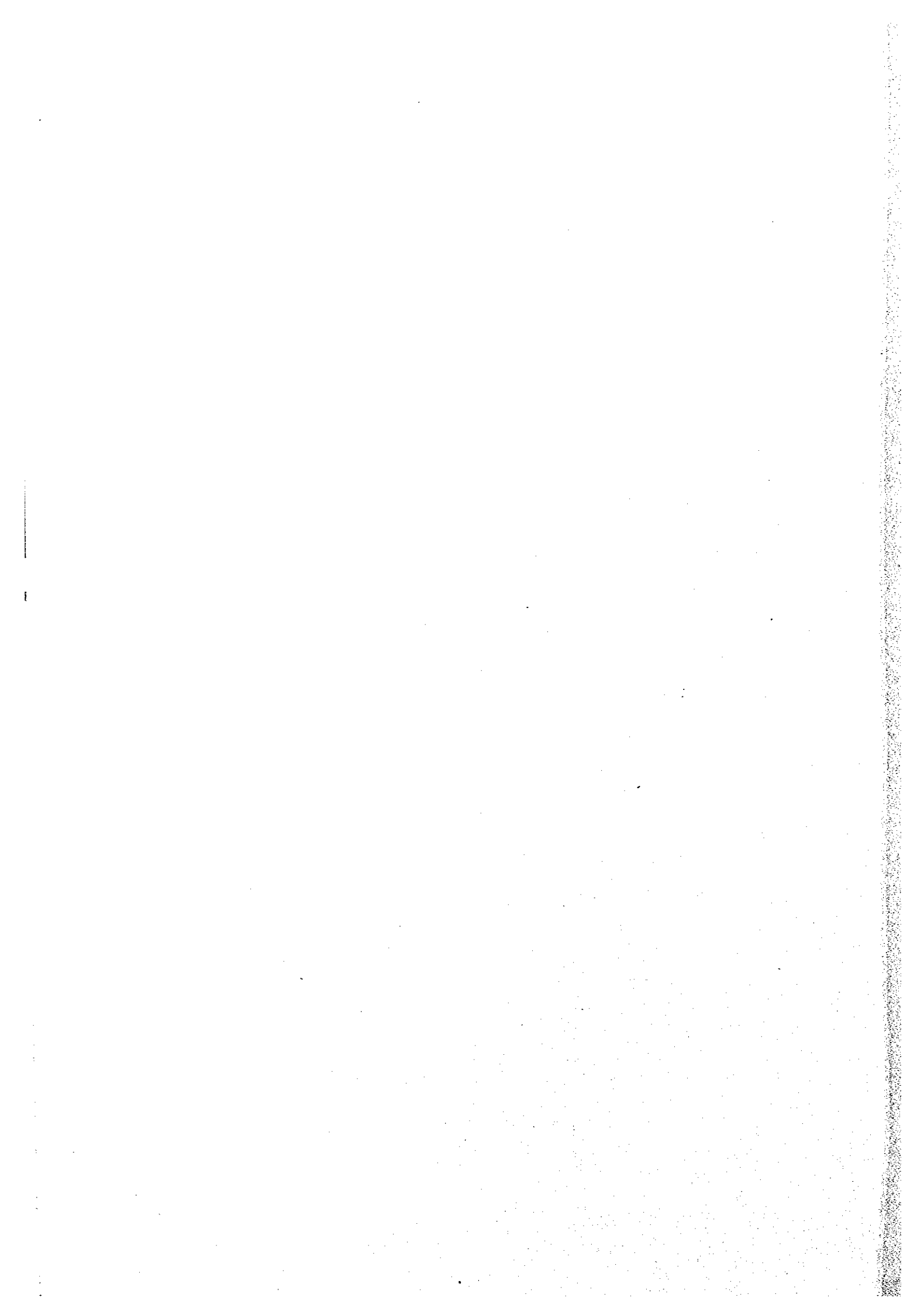


**MARCH 2000**

**Showa Ots & Co.**

**Nippon Jogensido Sekkei Co., Ltd.**

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**The Study Report  
for Improvement of Management and Tariff Policy  
in Water Supply Services  
in the Republic of Uzbekistan**

**MAIN REPORT**

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SUMMARY REPORT Separate Volume

SUPPORTING REPORT Separate Volume

DATA Separate Volume

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## PREFACE

In response to a request from the Government of the Republic of Uzbekistan, the Government of Japan decided to conduct a development study on Improvement of Management and Tariff Policy in Water Supply Services and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Mr. Kenji Yoshino of Showa Ota & Co., which consisted of Showa Ota & Co. and Nippon Jogesuido Sekkei Co., LTD. to the Republic of Uzbekistan, three times between June 1999 and March 2000. In addition, JICA set up an advisory committee headed by Mr. Masaaki Kinoshita, Chief Executive of Fukuoka District Waterworks Agency between June 1999 and March 2000, which examined the study from specialist and technical points of view.

The team held discussions with the officials concerned of the Government of the Republic of Uzbekistan and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Uzbekistan for their close cooperation extended to the Team.

March 2000



Kimio Fujita

President

Japan International Cooperation Agency

March 2000

Mr. Kimio Fujita  
President  
Japan International Cooperation Agency  
Tokyo, Japan

Dear Mr. Kimio Fujita

Letter of Transmittal

We are pleased to submit to you our Study Report for the Improvement of Management and Tariff Policy with respect to Water Supply Services in the Republic of Uzbekistan.

This report presents our Study Team's understanding of the current status of the water supply services in Tashkent City and Chirchik City, the related issues identified as a result of the analysis made by the Study Team, and the proposed solutions to the issues identified by the Study Team.

The Republic of Uzbekistan has taken many steps towards implementing new policies for the transition to a market economy since its independence in 1991. The water supply organizations in both cities should conduct their water supply services as self-supporting systems. Certain reforms are already underway, such as the installation of water meters and a revision of the tariff policy. However, the project for the installation of water meters has not proceeded as expected because the method for bearing the total cost of installation has yet to be determined and certain technical problems in installing the meters in apartment blocks have arisen. The Study Team regards water conservation and the replacement of aging facilities as the most important issues to be resolved for the efficient operation of water supply services.

The Study Team has proposed various solutions to resolve these issues including a proposal for how the total cost of the installation of water meters could be allocated. Some of the solutions proposed by the Study Team have already been incorporated into the policy of the water supply organization in Tashkent.

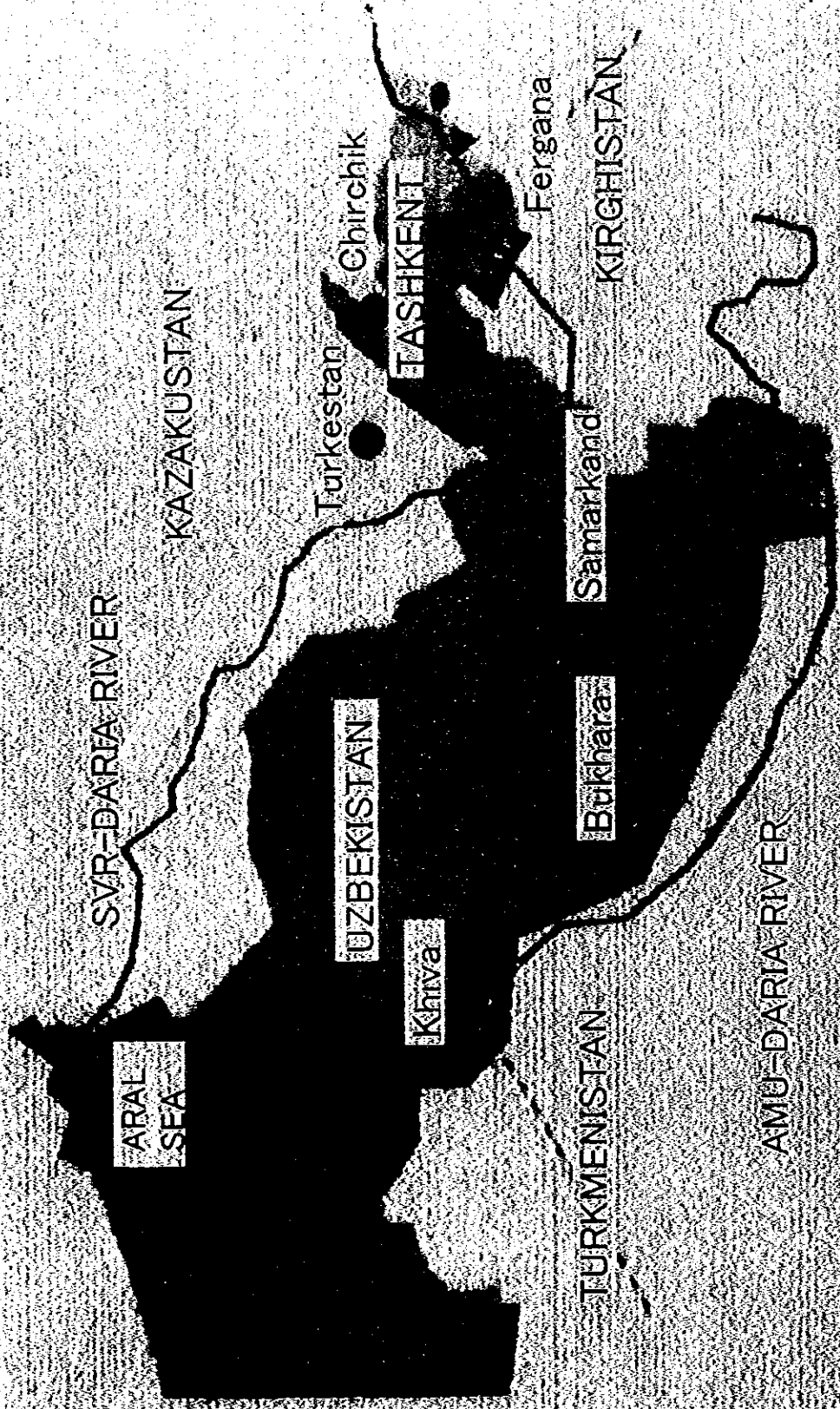
We wish to take this opportunity to express our sincere gratitude to the Ministry of Foreign Affairs for your cooperation. We also wish to express our deep gratitude to the Ministry of Macroeconomics & Statistics, the Ministry of Communal Services, Tashkent City and the Vodokanals for the many courtesies extended to us during the course of our

research and study in the Republic of Uzbekistan. Finally, we hope that the tentative solutions which we have proposed will contribute beneficially to the management of water supply services enabling them to operate, to a great extent, as self-supporting entities within an emerging and vibrant market economy.

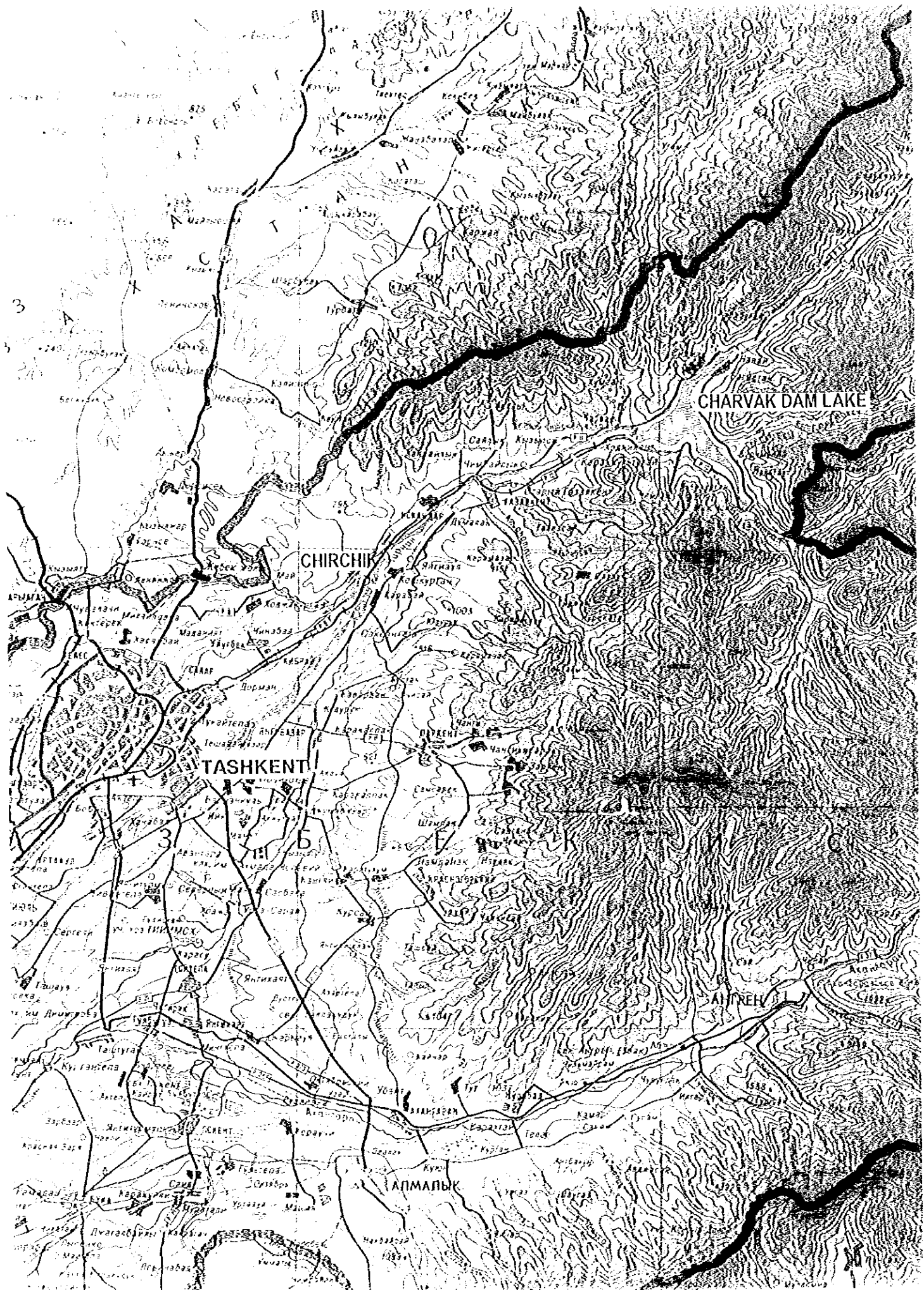
Very truly yours,



KENJI YOSHINO, Leader of Study Team  
Study Report for the Improvement of Management  
and Tariff Policy with respect to Water Supply  
Services in the Republic of Uzbekistan.



MAP OF THE REPUBLIC OF UZBEKISTAN



CHARVAK DAM LAKE

CHIRCHIK

TASHKENT

ANGREN

АДМАЛЫК



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(Acronyms and Abbreviations)

Abbreviations	Formal form
Study	Study for Improvement of Management and Tariff Policy in Water Supply Services in the Republic of Uzbekistan
Preparatory Team	Preparatory Study Team
JICA	Japan International Cooperation Agency
Study Team	Study team sent by JICA
TACIS	Technical Assistance to CIS countries
GDP	Gross Domestic Product
FDI	Foreign Direct Investments
VAT	Value Added Tax
ADB	Asian Development Bank
NEAP	National Environmental Action Plan
WHO	World Health Organization
GOU	The Government of Uzbekistan
ROU	The Republic of Uzbekistan
CIS	Commonwealth of Independent States
TCMA	Territorial Communal and Maintenance Amalgamation
KEU	Communal Maintenance Board
JEK	Housing Maintenance Office
MCS	Ministry of Communal Services
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
Uzbek SSR (UzSSR)	Uzbek Soviet Socialist Republic
COM	The Cabinet of Ministers
ASSOCIO	Asian-Oceanian Computing Industry Organization
OECD	Organization of Economic Cooperation and Development
IT Industry	Information Technologies Industry
ISP	Internet Service Provider
NBU	National Bank for Foreign Economic Activity of the Republic of Uzbekistan
MMS	The Ministry of Macroeconomics and Statistics

**(Acronyms and Abbreviations)**

<b>Abbreviations</b>	<b>Formal form</b>
<b>PSB</b>	<b>Industrial &amp; Construction Bank</b>
<b>SMEs</b>	<b>Small and Medium Scale Enterprises</b>
<b>VOD</b>	<b>Vodokanal</b>
<b>CPUs</b>	<b>Central Processing Units</b>
<b>WAN</b>	<b>Wide Area Network</b>
<b>LAN</b>	<b>Local Area Network</b>
<b>WTP</b>	<b>Water Treatment Plant</b>
<b>PS</b>	<b>Pump Station</b>
<b>LWL</b>	<b>Low Water Level</b>
<b>O &amp; M</b>	<b>Operation and Maintenance</b>
<b>BOD</b>	<b>Biochemical Oxygen Demand</b>
<b>EDP</b>	<b>Electronic Data Processing</b>
<b>FM</b>	<b>Flow Meter</b>
<b>ODA</b>	<b>Official Development Assistance</b>
<b>PC</b>	<b>Personal Computer</b>
<b>GUI</b>	<b>Graphic User Interface</b>
<b>OCR</b>	<b>Optical Character Reader</b>
<b>UPS</b>	<b>Uninterruptible Power Supply Unit</b>
<b>OJT</b>	<b>On-the-job Training</b>
<b>PR Section</b>	<b>Public Relations Section</b>



**CHAPTER 1**

**INTRODUCTION AND SCOPE OF THE STUDY**



# **Chapter 1 Introduction and Scope of the Study**

## **1.1 Introduction**

### **1.1.1 Background of the Study**

#### **(1) Considerations for Communal Services in the Past**

The Republic of Uzbekistan (hereinafter referred to as the "ROU") has taken many actions to implement new policies for the transition to a market economy since its independence in August 1991.

During the era of the former Soviet Union, communal services including such utilities as drinking water and sewage services, were provided by government agencies. Utility ("tariff") charges for drinking water and sewage services were required to be maintained at a low level for all users. In addition, the calculation of the charges especially for the population (the general public) was based on the number of members in each household and at a predetermined level (the so-called "fixed rate") regardless of the volume of water actually delivered. Thus, not only the population, but also the community service sector and other corporations have not at all been conscious of the concept of conserving water, and any effective actions intended to create an awareness of the need to conserve water have not been received positively by the water supply organizations. Accordingly, the volume of Water Consumption per capita has been very high.

## **(2) Basic Requirements for Water Supply Services**

After independence, the Government of the Republic of Uzbekistan (hereinafter referred to as the "GOU") determined the following basic requirements for the water supply organizations (hereinafter referred to as "Vodokanal") as part of their reform program for the transition to a market economy:

- 1) Vodokanals should conduct the water supply business as a self-supporting system.
- 2) Meters to measure users' water consumption should be installed at the users' sites by 2004.
- 3) The water tariff table should be revised by each Vodokanal to eliminate cross subsidies by 2003, subject to the approval of the local government.

Vodokanals have been attempting to proceed with the implementation of the basic requirements outlined above and have encountered various problems to be resolved, because the methods employed in implementing these reforms are either completely new or relatively unfamiliar to the users and also to the management of the water supply organizations. In addition, the reasons why the volume of water consumption per capita has been so high, have not been reasonably analyzed yet.

## **(3) Project Undertaken by the Government of Japan**

Based upon a request by the GOU, the Government of Japan sent a study team to the GOU in April 1997 and discussed with the ROU whether it would be useful to establish a project for researching the problems in the area of water supply services in the ROU and preparing proposals for solutions. As a result of these discussions, the GOU and the Government of Japan decided to proceed with a research project on water supply services in the ROU and agreed that a team would be sent by the Government of Japan to Uzbekistan.

## **1.1.2. Request for the Study**

### **(1) Scope of Work for the Study**

The Government of Japan, in accordance with the relevant laws and regulations in force in Japan, decided to conduct "A Study for the Improvement of Management and Tariff Policy in Water Supply Services in the Republic of Uzbekistan" (hereinafter referred to as the "Study") and sent a Preparatory Study Team (hereinafter referred to as the "Preparatory Team") representing the Japan International Cooperation Agency (hereinafter referred to as "JICA") to the ROU in November 1998. After discussions, an agreement entitled "Scope of Work for the Study" was signed in Tashkent City on November 11, 1998 by both the Uzbekistan side (i.e. the Ministry of Macroeconomics and Statistics, the Ministry of Communal Services and Tashkent City) and by the Preparatory Team as the representative of JICA.

### **(2) Inception Report**

In accordance with "Scope of Work for the Study," signed by the Uzbekistan Side and by JICA, JICA sent a study team (hereinafter referred to as the "Study Team") to the ROU in June 1999 to conduct studies in Tashkent City and Chirchik City. The Study Team submitted their Inception Report describing their plan for the Study to the Uzbekistan side on June 28, 1999. After a discussion of the Inception Report between the Uzbekistan representatives and the Study Team, the Uzbekistan side expressed its satisfaction with the Inception Report and promised to offer the Study Team as much cooperation and assistance as possible.

The Ministry of Macroeconomics and Statistics, the Ministry of Communal Services and Tashkent City agreed to act jointly as a counterpart agency to the Study Team. They also assigned key personnel as their members on the Steering Committee, which is the coordinating liaison body designated to communicate with the relevant departments and organizations in order to proceed smoothly with the Study.

## **1.2. Scope of the Study**

### **1.2.1 Objectives of the Study**

The objectives of the Study which the Study Team aimed to accomplish were as follows:

- (1) To formulate an improvement plan for management as well as a tariff policy for drinking water supply services; and
- (2) To transfer technology related to planning methods and other skills to the counterpart personnel during the course of the Study.

### **1.2.2 Study Areas**

The designated study areas for the Study Team were the drinking water supply services in Tashkent City and in Chirchik City. Tashkent City is the capital of the ROU. Chirchik City is one of the major cities located in Tashkent Province. It is expected that the solutions to be proposed by the Study Team as a result of their analysis of the issues found by researching the present situation in Tashkent City and Chirchik City will have a strong influence, not only on these two cities, but also on other cities in Uzbekistan. It is also expected that many other municipal service organizations in other major cities will recognize that the solutions proposed for Tashkent City are good suggestions for them as well and that the solutions proposed for Chirchik City are applicable to other smaller cities. Thus, it is anticipated that a study of these two cities could have a positive impact in improving the level of management of many Vodokanals in the ROU.

### 1.2.3 Schedule and Approach for the Study

The Study Team's schedule consists of the following stages spread over 10 months:

- |     |                              |                                 |
|-----|------------------------------|---------------------------------|
| (1) | Stage 1. Study in Uzbekistan | (June 25, 1999 – Oct. 3, 1999)  |
| (2) | Stage 1. Study in Japan      | (Oct. 1, 1999 – Oct. 29, 1999)  |
| (3) | Stage 2. Study in Uzbekistan | (Nov. 12, 1999 – Dec. 17, 1999) |
| (4) | Stage 2. Study in Japan      | (Dec. 10, 1999 – Dec. 30, 1999) |
| (5) | Stage 3. Study in Uzbekistan | (Jan. 28, 2000 – Feb. 26, 2000) |
| (6) | Stage 3. Study in Japan      | (Mar. 17, 2000 – Mar. 30, 2000) |

#### Stage 1. Study in Uzbekistan

The Study Team visited Tashkent City in June 1999 and submitted and discussed their Inception Report with the representatives of the Uzbekistan side. The minutes of the meeting on the Inception Report were signed by the representatives of the Uzbekistan side and by JICA on July 1, 1999.

The Study Team's purposes in conducting "Stage One of the Study in Uzbekistan" were primarily to understand the present situation surrounding the drinking water supply business and the related organizations and their circumstances in Tashkent City and Chirchik City.

The major procedures to accomplish the purposes of the Stage 1. Study were to perform 1) data collection and hearings with respect to the management of the water supply services and on the socioeconomic and institutional conditions, 2) an investigation of the existing water supply facilities, 3) to conduct various field surveys such as the measurement of water consumption and water leakage, and 4) to administer a survey in the form of a questionnaire to the water users.

### **Stage 1. Study in Japan**

The Study Team prepared an Interim Report in Japan in October 1999. The Interim Report reflected their understanding of the present situation and the current issues identified as a result of the analysis by the Study Team.

### **Stage 2. Study in Uzbekistan**


The Study Team visited Uzbekistan in November 1999 and submitted their Interim Report and discussed it with the Steering Committee. The minutes of meeting on the Interim Report were signed by the representatives of the Uzbekistan side and by JICA on November 22, 1999.

During their stay in Uzbekistan, the Study Team tried to find solutions to resolve the existing issues, and asked the representatives of the Uzbekistan side whether the issues analyzed by the Study Team were appropriate or not. In addition, they discussed the effectiveness of the solutions tentatively proposed by the Study Team with the representatives of Uzbekistan.

### **Stage 2. Study in Japan**

In December 1999 and January 2000, members of the Study Team identified various existing issues as a result of their analyses of the present situation in Tashkent City and Chirchik City. They attempted to propose solutions for the issues in the areas to be included in the Draft Final Report and to collect materials for the technology transfer seminars.






### **Stage 3. Study in Uzbekistan**

The Study Team explained and discussed the Draft Final Report with the Steering Committee in February 2000. The minutes of the meeting on the Draft Final Report are to be signed in February 2000.

Comments on the Draft Final Report are to be submitted to the Study Team within one month after its submission.

In addition, technical transfer seminars are to be held in February 2000.

### **Stage 3. Study in Japan**

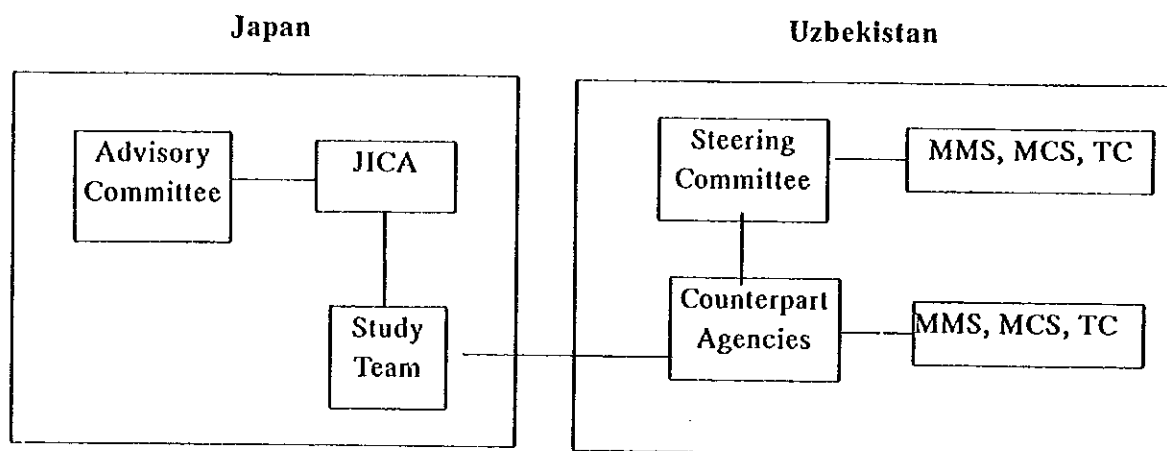


The Study Team will prepare the Final Report within one month after receiving comments from the Steering Committee.

## 1.2.4 Study Teams

### Study Team Organization

The Study was conducted by the Study Team for JICA under the Guidance of the Advisory Committee and with the cooperation of the Uzbekistan counterparts, the Ministry of Macroeconomics and Statistics, the Ministry of Communal Services and Tashkent City. The following teams for the Study were formed in Japan and Uzbekistan:



Note: MMS: The Ministry of Macroeconomics and Statistics  
MCS: The Ministry of Communal Services  
TC: The Tashkent City

## **The Study Team**

The Study Team consisted of the following members:

<b>Name</b>	<b>Assignment</b>
Mr. Kenji Yoshino	Leader/Management of Water Supply Services
Mr. Akihiro Nakagome	Accounting for Public Work organizations
Ms. Nahoko Yano	Management Systems Development (1)
Mr. Yoshio Chikamatsu	Management Systems Development (2)
Mr. Akio Kabasawa	Tariff Collection System
Mr. Eiji Maeda	Organizations and Institutions (1)
Mr. Viktor Kouprianov	Organizations and Institutions (2)
Mr. Akio Shimizu	User Awareness/User Participation
Mr. Masao Fujiwara	Operation and Maintenance Planning
Mr. Keiji Matsuoka	Water Leakage and Facilities Planning (1)
Mr. Shigeo Nitta	Water Leakage and Facilities Planning (2)
Ms. Naoko Okabayashi	Interpreter (1)
Ms. Ayame Komatsu	Interpreter (2)
Ms. Hiroko Suzuki	Project Coordinator

## **The Advisory Committee**

The Advisory Committee consisted of the following members:

<b>Name</b>	<b>Position</b>
Mr. Masaaki Kinoshita	Chairman, Water Supply Service Management Fukuoka District Waterworks Bureau
Mr. Shigeo Ishida	Management of Public Works International Development Specialist, JICA

## **The Steering Committee**

The Steering Committee consisted of the following members:

<b>Name</b>	<b>Position</b>
Ministry of Macroeconomics & Statistics	
Mr. B.H. Halilov	Deputy Minister
(Mr. Bakhodir E. Khodjaev, predecessor)	
Mr. Alexander P. Mironenkov	Head, Department of Rural Infrastructure
Mr. Djurabek S. Yuldashbekov	Head, Department of Communication and Housing Community Services
Ministry of Communal Services	
Mr. Erkin A. Yuldashev	Deputy Minister
Mr.D.I. Israilov	Head, Department of Foreign Economic Relations

Mr. A.I. Kuvandykov

Head,  
Department of Water Supply and  
Ecology

**Trust "Tashkilotchi"**

Mr. Kurban Kh. Magomedov  
Hokimiyat of Tashkent City

1<sup>st</sup> Deputy Director

Mr. Viktor N. Dorokhov

Deputy Mayor,  
General Director of TCMA-Tashkent  
City

Mr. A.U. Ibragimov

Head,  
Main Department of Investment

**Territorial Communal Services Maintenance Amalgamation (TCMA)-Tashkent City**

Mr. Rauf A. Kurbanov

Vice General Director

**Vodokanal - Tashkent City**

Mr. Zakir T. Salikhodjaev

Director

**Territorial Communal Services Maintenance Amalgamation – Tashkent Region**

Mr. Pulat Karimov

1<sup>st</sup> Deputy Director  
Chief Engineer

**Vodokanal – Tashkent Province**

Mr. Erkin Y. Babadjanov

Director

**Vodokanal – Chirchik City**

Mr. Turab Abdullaev

Director

