

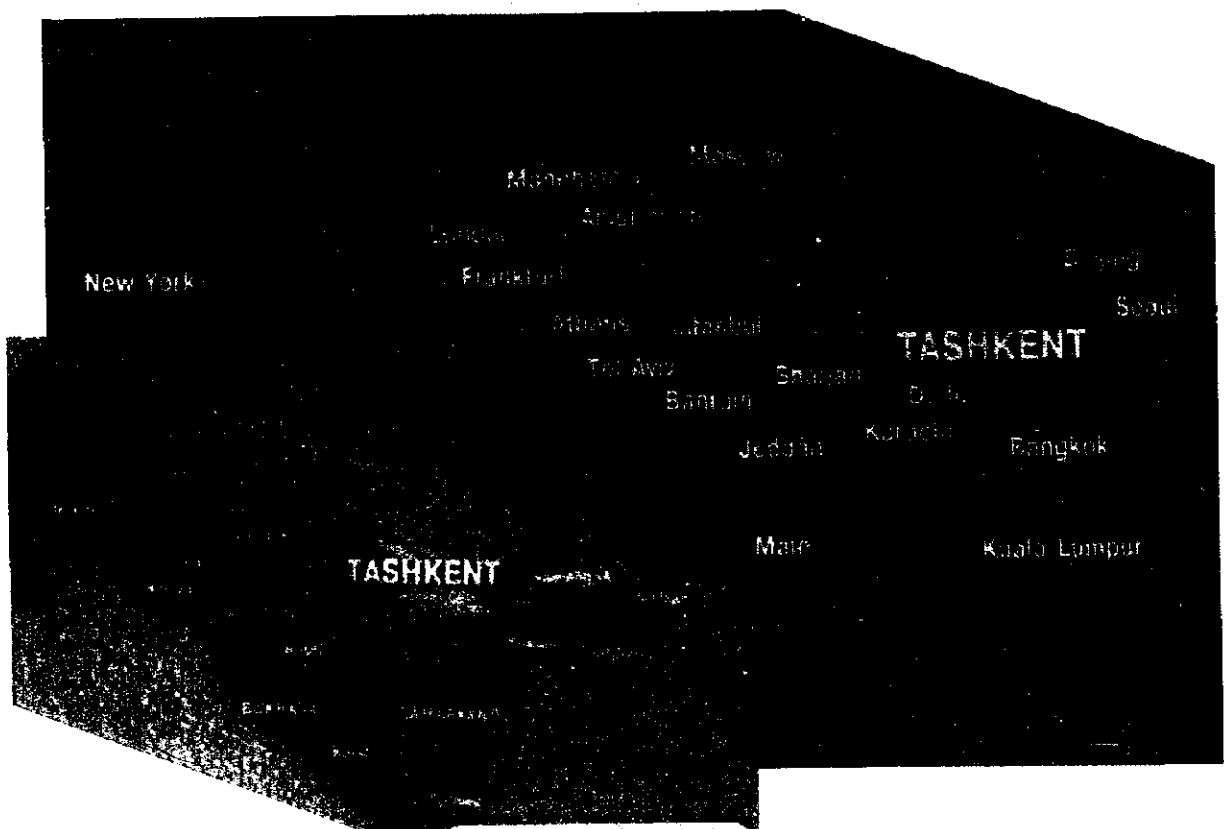
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

*NATIONAL AIR COMPANY
"UZBEKISTAN HAVO YULLARI"
THE REPUBLIC OF UZBEKISTAN*

*THE STUDY
FOR
THE AIR TRANSPORTATION DEVELOPMENT
IN THE REPUBLIC OF UZBEKISTAN*

FINAL REPORT

MAIN REPORT



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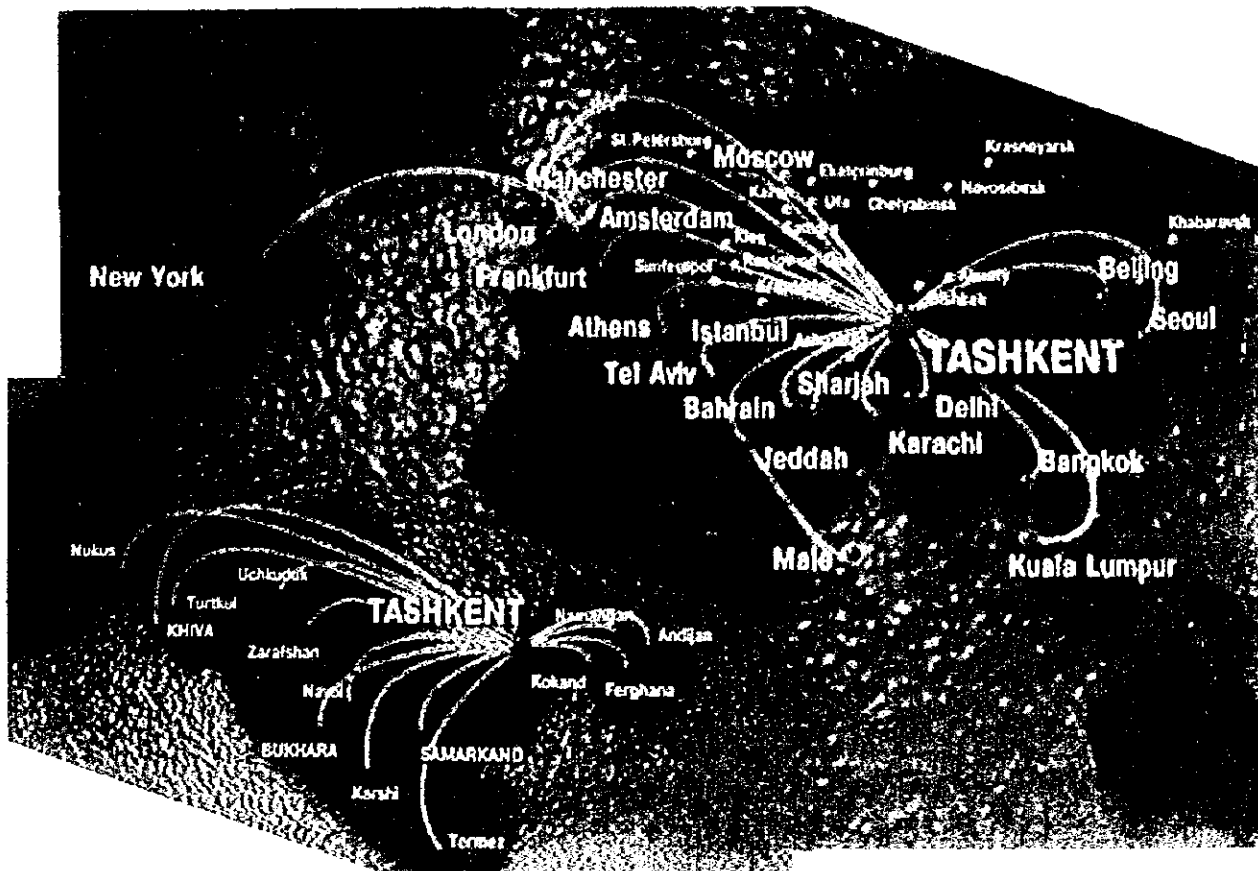
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Exchange Rate of Currency

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As of July 1997

PREFACE

In response to the request of the Government of the Republic of Uzbekistan, the Government of Japan agreed to conduct the Study for the Air Transport Development in the Republic of Uzbekistan, and entrusted the Study to Japan International Cooperation Agency (JICA).

JICA sent to Uzbekistan a study team headed by Mr. Kunio Saito, Japan Airport Consultants, Inc., three times between April 1997 and June 1998.

The team held discussions with the officials concerned of the Government of the Republic of Uzbekistan, and conducted field surveys at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

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

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.

August 1998



Kimio Fujita
President

Japan International Cooperation Agency

August 1998

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

Dear Mr. Fujita

Letter of Transmittal

We are pleased to herewith submit to you the Final Report of the Study for the Air Transport Development in the Republic of Uzbekistan. The report contains the study results of the long-term master plan on air transportation development, the pre-feasibility study on high priority projects picked out from the said mater plan, and recommendations on improvements of operation and management under the National Air Company "Uzbekistan Havo Yullari".

The result of comparison and analyses of the long-term master plans up to the year 2020 for the selected 12 airports in Uzbekistan indicates that the existing or the proposed new Tashkent airport should be given high priority to be developed as the Metropolitan Airport, and also that development of three local airports, namely, Namangan, Termez and Nukus should take priority over other local airports for their regional development potential. In addition, the development of Nationwide Air Navigation System should be considered to be given priority.

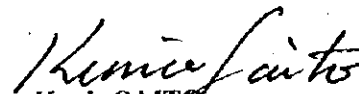
The result of the pre-feasibility study for the development up to the year 2005 of high priority projects thus selected shows that implementation of the New Tashkent Airport Project as the Metropolitan Airport is not viable at the moment, despite such strong desire as expressed by the Government of Uzbekistan, and should be carefully projected taking into account the future growth of air traffic demand.

Although development of each of the three local airports was not considered viable from the results of economic and financial analyses, implementation of the projects is recommended from the viewpoint of enhancement for regional development. Implementation of the development of Nationwide Air Navigation System is also recommended from the viewpoint of possible increasing overflying charges and the improvement of aviation safety.

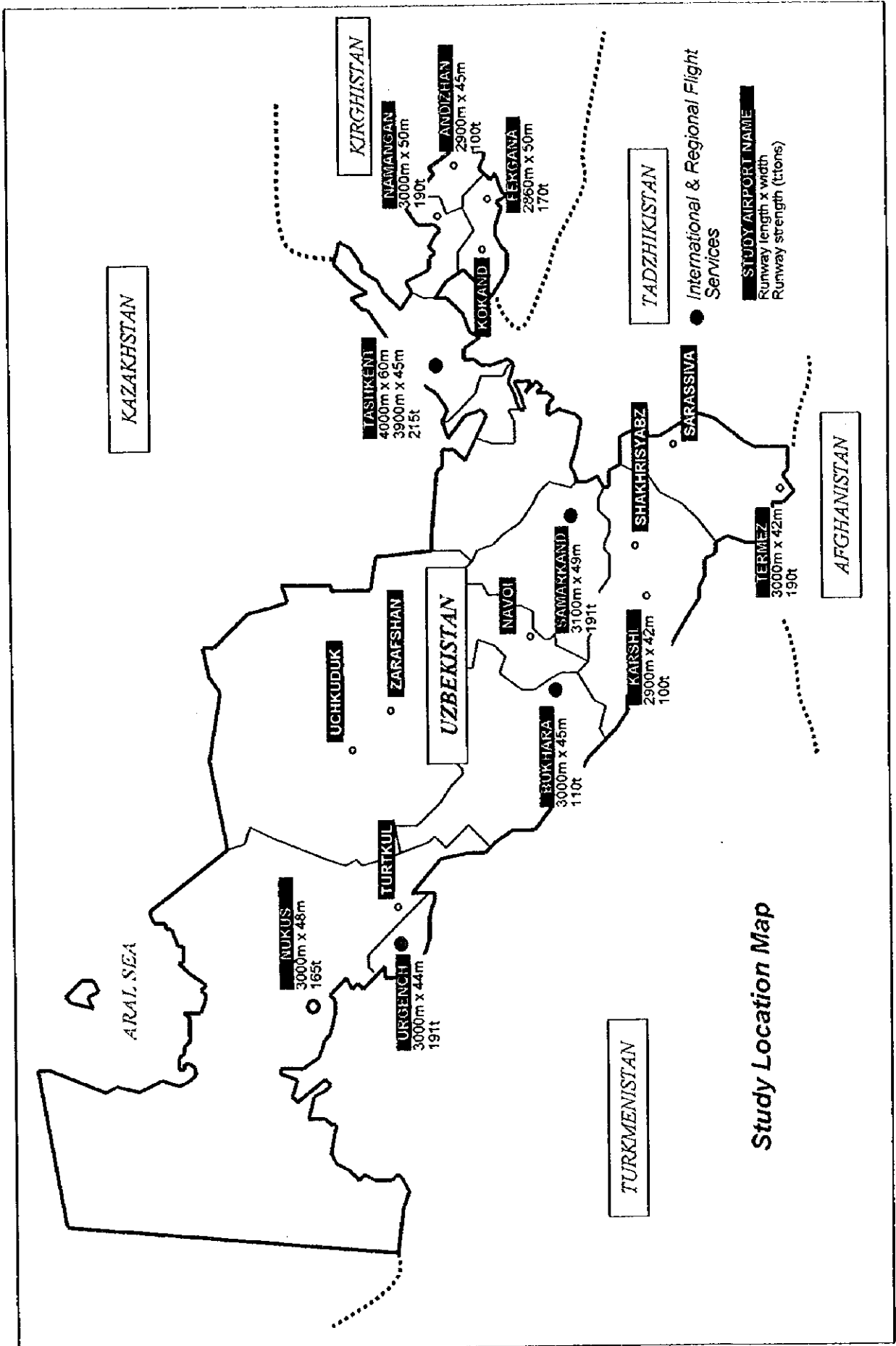
For the improvement of operation and management under the National Air Company, recommendations are made for the clear segregation between the governmental functions and commercial business in the air transportation sector of Uzbekistan, and for the necessity to enhance efficiency and modernization of management of airport and air transportation business.

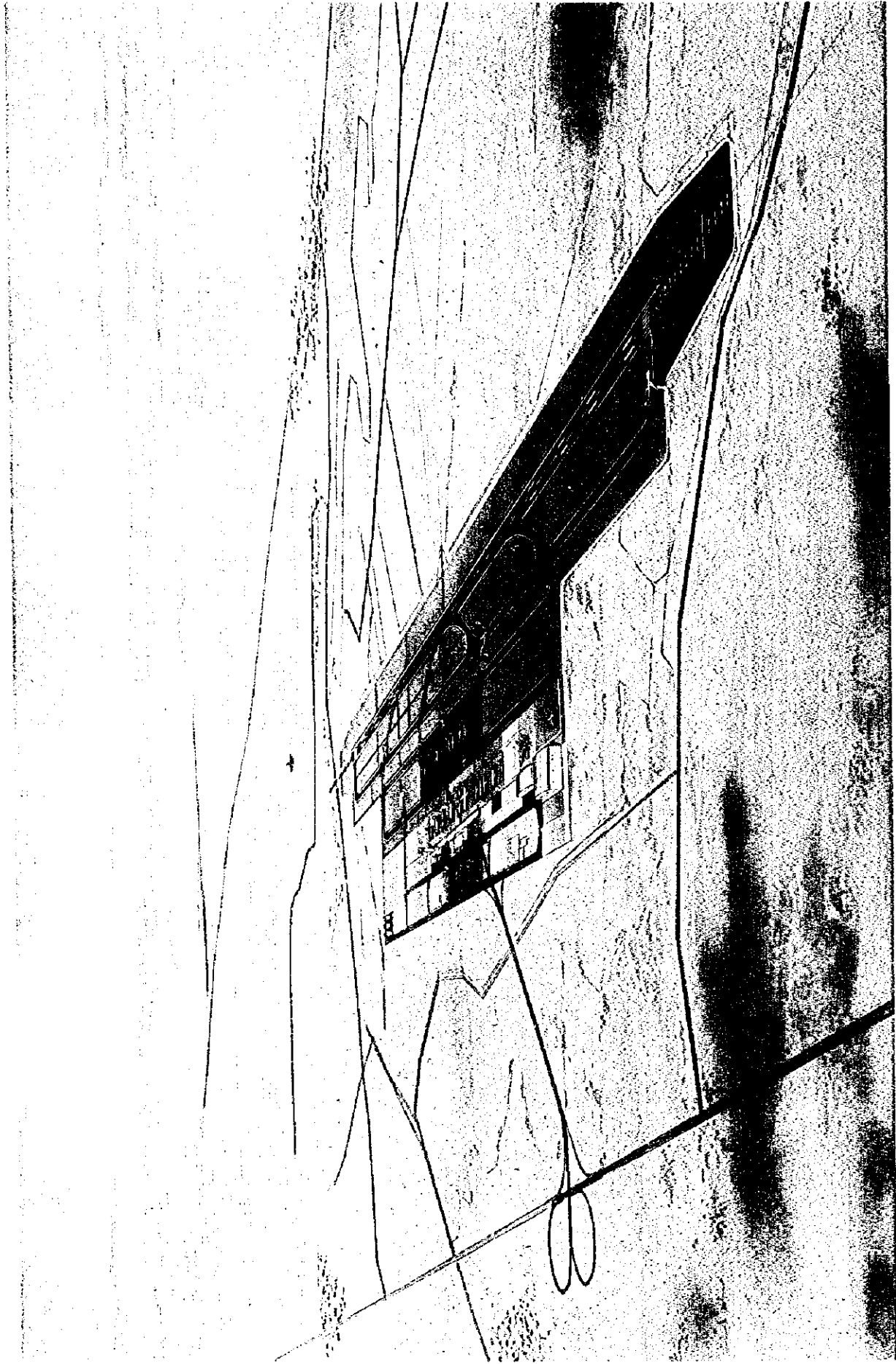
We wish to take this opportunity to express our sincere gratitude to your esteemed Agency, the Ministry of Foreign Affairs, the Ministry of Transport and the Overseas Economic Cooperation Fund in Japan. We are deeply grateful also to the National Air Company, "Uzbekistan Havo Yullari" and other authorities concerned of the Government of the Republic of Uzbekistan for their close cooperation and assistance extended to us during our investigation and study.

Very truly yours,

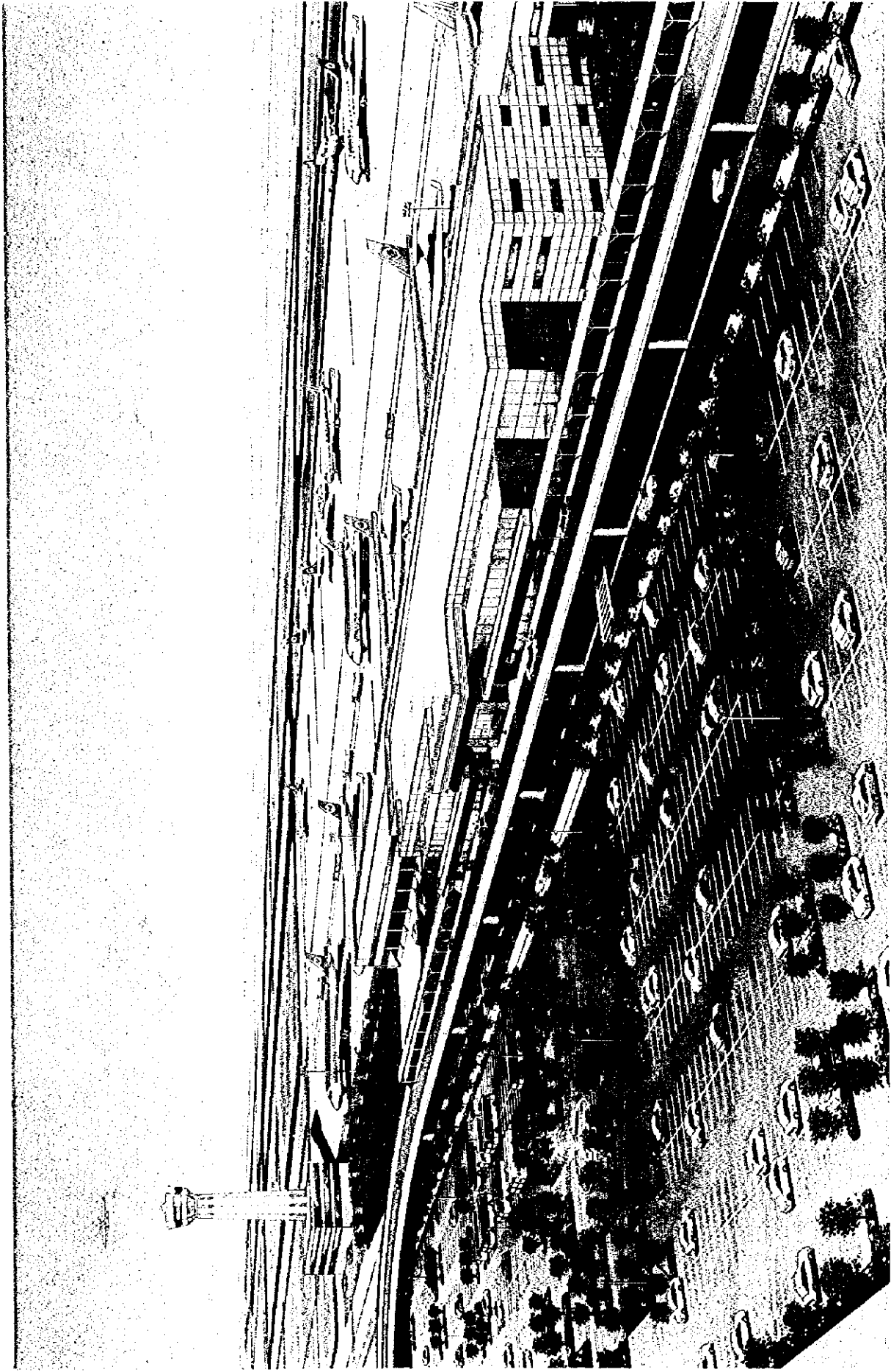


Kunio SAITO
Team Leader, The Study for the Air
Transport Development in Uzbekistan
Japan Airport Consultants, Inc.





New Tashkent Airport Development
ОБЩИЙ ВИД НОВОГО АЭРОПОРТА ТАШКЕНТ



New Tashkent Airport Development (International Passenger Building)
АЭРОВОКЗАЛ МЕЖДУНАРОДНЫХ ЛИНИЙ НОВОГО АЭРОПОРТА ТАШКЕНТ

CONCLUSION AND SUMMARY

CONCLUSION AND RECOMMENDATIONS

1. The result of comparison and analyses of the long-term master plans made up to the year 2020 for the selected 12 airports in Uzbekistan indicates that the existing or the proposed new Tashkent airport should be given high priority to be developed as the Metropolitan Airport, and also that development of three local airports, namely, Namangan, Termez and Nukus should take priority over other local airports for their regional development potential. In addition, the development of the Nationwide Air Navigation System should be considered also a high priority.
2. The result of the pre-feasibility study for the development up to the year 2005 of high priority projects thus selected shows that implementation of the New Tashkent Airport Project as the Metropolitan Airport is not viable at the moment, despite such strong desire as expressed by the Government of Uzbekistan from the viewpoint of economic and financial aspects.
3. Although the development of the existing Tashkent Airport fundamentally interferes with the Tashkent City development, and cause possible aircraft noise pollution and risk of aircraft accident, considering the above results and situation, it is recommended that, at this moment in time, priority of the development for the capital airport should be put on the existing Tashkent airport.
4. Construction of a new capital airport after the development of the EBRD project would entail huge financial burden to the government as well as to NAC. Development of a new capital airport should be reconsidered and analyzed, taking into account future trend of air traffic demand and negative impact on the social environment by the existing Tashkent airport.
5. Furthermore, in the long-term development of the new Tashkent airport, it is important to promote possibility and realization of the project by taking a view that Tashkent has been historically the crossroads of European and Asian countries for a long time, and will be functioned as an air cargo distribution base and air transportation center in the CIS regions.
6. Although development of each of the three local airports was not considered viable from the results of economic and financial analyses, implementation of the projects is recommended only from the viewpoint of enhancement for future regional development. Implementation of the development of the Nationwide Air Navigation System is also recommended from the viewpoints of possible increasing overflying charges and the enhancement of aviation safety.
7. For the improvement of operation and management under the National Air Company, recommendations are made for the clear segregation between the governmental functions and commercial business in the air transportation sector of Uzbekistan, and for the necessity to enhance efficiency and modernization of management of airport and air transportation business.

SUMMARY OF THE STUDY

1. OBJECTIVES AND BACKGROUND OF THE STUDY

The objectives of the Study are to prepare the long-term master plans on air transportation development including priority airports and air navigational facilities in Uzbekistan; to conduct a pre-feasibility study on high priority project(s) to be selected through a study of the above long-term master plans; and to make recommendations for the organization, operation and management of air transport development in Uzbekistan.

Uzbekistan had been one of the centers of the aviation industry and traffic in the Soviet era. Tashkent Airport is expected to be an air transportation hub in the Central Asian region.

However, after independence in 1991, air traffic volume in Uzbekistan declined sharply. On the other hand, airports and air navigation facilities in Uzbekistan were constructed in the Soviet era before independence, and most of the facilities and equipment are obsolete and outmoded.

Under these circumstances, the Government of Uzbekistan recognized the necessity of modernization of its air transportation system, and the present study was conducted.

2. SOCIO-ECONOMIC CONDITIONS IN UZBEKISTAN

The total population of Uzbekistan at the beginning of 1996 was 23 million, increasing at an average rate of about 2 % per annum. The Gross Domestic Product (GDP) after independence turned to positive growth in 1996 from a negative growth position up to 1995. The breakdown of GDP by sector is 38% for Services, 23% of Agriculture and 17% for Industry respectively. The volume of export and import has been increasing slightly year by year since independence, and is relatively well balanced. The official rate as of June 1997 is Sum 60.65/US\$. On the other hand, the unofficial rate as of June 1997 is Sum 100/US\$ with a gap of 165% between both rates.

After independence in 1991, the Government of Uzbekistan has been undertaking a gradual reform of the economic system from a centralized planned economy to a market-oriented economy, and is implementing such economic reform policies as privatization of state enterprises and promotion of foreign investment.

3. CURRENT CONDITIONS OF AIR TRANSPORTATION

(1) Historical Perspective

In the former USSR era, air transportation activity had been managed and controlled under Aeroflot. It was promulgated to found a national air company at the beginning of 1992 integrating the Uzbekistan Civil Aviation Administration, Civil Aviation Factory No.243 and Aviaspetsmontajnalagka, in accordance with the Presidential Decree of 28 January 1992. Based on the Decree, the National Air Company "Uzbekistan Havo Yullari" was established by a Resolution of Cabinet Ministers dated 4 February 1992 as a self-supporting account company.

(2) Air Traffic Statistic

The air passenger traffic in Uzbekistan has been decreasing sharply since independence in 1991. The annual passengers traffic in 1995 decreased to a quarter of that in 1991.

(3) Air Route Network

According to the domestic summer schedule in 1997, all domestic air routes were being served

exclusively by NAC. Among 19 routes in total, 16 routes were pivoted at Tashkent. CIS route summer schedule in 1997 showed that among 32 routes (109 - frequency/week) in total 25 routes (60 - frequency/week) were being served by NAC from Tashkent, Samarkand, Namangan, Fergana, Bukhara, Andizhan. Annual CIS departure passengers in 1996 were about 740,000.

There were 22 routes (58 - frequency/week) from Tashkent Airport. 18 routes (44 - frequency/week) among them were being served by NAC. Major airlines operating from/to Tashkent airport were Lufthansa, Pakistan International, Asiana Airlines, Turkish Airlines, Iran Air. International air routes from Tashkent consist of New York, Amsterdam, Athens, Bahrain, Beijing, Seoul served by A310 (180 seats), B767 (250 seats) and H.-62 (150 seats). Bilateral air agreements have been established with 35 countries as of May 1997.

(4) Airport Facilities

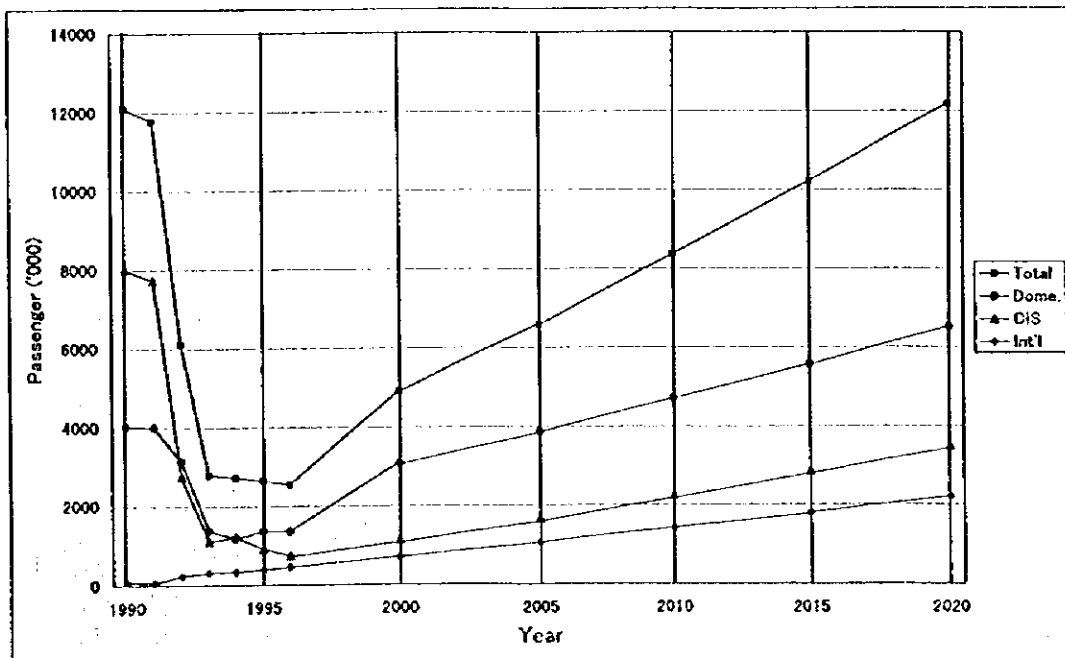
There are twenty (20) airports in Uzbekistan operated and managed by NAC, of which 16 airports are served by domestic air routes, and of which 10 airports are served by CIS air routes. International air routes are served at only Tashkent airport. 12 airports have a runway or runways more than 2,500 m-long. Study airports include Tashkent and 11 local airports.

4. LONG-TERM AIR TRANSPORTATION FACILITY DEVELOPMENT

(1) Air Traffic Demand Forecast

Air traffic demand forecast up to the year 2020 was made based on the correlation with Gross Domestic Product of Uzbekistan and the World. The results of air passenger traffic forecast of Uzbekistan is shown below.

Air Traffic Demand Forecast



(2) Development Plan

① Basic Development Strategy

Long-term development plans up to the year 2020 for airports and air navigation facilities were made adopting an airport classification made for the study purpose on the basis of functions and importance of the airports. Evaluation to select the high priority projects was conducted through project cost and preliminary economic analyses for each of the master plans.

② Metropolitan Airport Development Plan

Expansion of the existing Tashkent airport involves the following problems: interference of development of Tashkent City due to expansion plan of the urban area; impact of aircraft noise and air pollution because the present approach and departure courses are crossing over the southern part of Tashkent city; and geographical difficulty due to the rivers on the both sides of the runway. Judging from the above circumstances, in the long-term development plan of airports for the Capital, construction of a new metropolitan airport is considered as an alternative solution. However, construction of a new metropolitan airport may require huge investment cost. Therefore, a long-term development plan for the metropolitan airport was studied in the following two cases, one is the development plan of the existing Tashkent airport, and the other is construction of a new airport.

③ Local Airports Development Plan

Long-term master plan was made for 11 local airports based on the air traffic demand forecast up to the year 2020.

④ Nationwide Air Navigation Facility Development Plan

Most of air navigation facilities for airport and air routes were installed in the 1970s-80s, and will be required to replace due to expiry of useful life by the year 2020. Development plan up to the year 2020 for Nationwide Air Navigation Facility was also prepared.

(3) Selection of High Priority Projects

Evaluation was made for 14 projects including 10 air transportation facility developments and improvement projects for management and organization of NAC. Based on the evaluation of the air transportation facility development from viewpoints of the priority of national development plan, urgency of improvement and efficiency of investment, 6 projects, namely, existing Tashkent airport development project, new Tashkent airport development project, Namangan airport development project, Termez airport development project, Nukus airport development project and the Nationwide Air Navigation Facility Development project, were selected as high priority projects for the subsequent pre-feasibility study. In addition, 4 improvement projects of management and organization of NAC were also selected.

5. ENVIRONMENTAL STUDY

Environmental management in Uzbekistan is conducted by the State Committee on Environment Protection based on the Nature Protection Law. The existing Tashkent airport is located about 5 km from the city, and surrounded by the urban and residential area. Emission level of CO (carbon monoxide) and NO₂ (nitrogen dioxide) monitored in 1994 at Tashkent airport exceeded the standard permissible concentrations. Furthermore, aircraft noise level observed during the field survey period was higher than the aircraft noise standard level of Uzbekistan.

6. PRE-FEASIBILITY STUDIES FOR HIGH PRIORITY PROJECTS

(1) High Priority Projects

Scope of development plan for the selected High Priority Projects were summarized as follows:

Projects	Major Scope of Development
• Existing Tashkent Airport	Expansion of domestic passenger and cargo building, fire and rescue station, installation of ASDE
• New Tashkent Airport	Runway 4,300m, international passenger building, tower, ATC and air navigation facilities, utilities
• Namangan Airport	Runway extension, overlay of pavement, expansion of passenger building, tower, ATC and air navigation facilities.
• Termez Airport	Runway expansion, overlay of pavement, expansion of passenger building, tower, ATC and air navigation facilities.
• Nukus Airport	Runway extension, overlay of pavement, expansion of passenger building, tower, ATC and air navigation facilities.
• Nationwide Air Navigation Facilities	Replacement of NDB with VOR/DME,

(2) Project Cost

Costs of each project were estimated as shown below.

Estimated Project Cost

(thousand US\$)

Cost Items	Existing Tashkent	New Tashkent	Namangan	Termez	Nukus	Nationwide Air Navigation Facility
A) Compensation	0	4,991	0	0	0	0
B) Airfield Facility	12,912	319,314	26,258	19,277	16,885	0
C) Terminal Area Facility	26,536	136,753	37,209	27,021	37,713	0
D) Air Navigation Facility	14,884	41,242	29,742	29,658	29,658	10,400
E) Airport Special Equipment	462	13,469	4,541	4,310	4,540	0
F) Utilities	30,036	81,836	12,071	8,682	13,588	0
G) Total of Work	84,830	597,605	109,821	89,948	102,384	10,400
H) Land Acquisition	0	39,000	1,966	355	0	0
J) Administration Expenses	848	6,976	1,098	889	1,024	104
K) Survey and Engineering	12,725	59,761	16,473	13,342	15,358	1,560
L) Contingency	9,755	65,736	12,629	10,229	11,774	1,196
L) Total	108,158	768,078	141,987	113,763	130,540	13,260

(3) Construction Plan

Total required period for the development of the existing Tashkent airport was estimated to be 6 years, including 1 and half years for survey and design, 1 year for tendering, and 3 and half years for construction.

Total required period for the development of a new Tashkent airport was estimated to be 9 years, including 2 years for survey and design, 1 year for tendering, and 6 years for construction.

(4) Environment Impact Assessment (EIA)

Based on the Guideline for Environment Impact Assessment of JICA, Environment Impact Assessment (EIA) for the High Priority Projects was conducted in respect to aircraft noise, air

pollution and water pollution identified through Initial Environmental Evaluation (IEE) as the expected items which may cause impact on the surrounding area of the airports.

As the development projects except for the new Tashkent airport project is to be conducted within the existing airport area, impact by implementation of the project to the environment may not be serious.

The New Tashkent airport is planned in the cotton field zone. As aircraft noise impact to the surrounding area of the new airport will become larger compared with the present condition, adequate mitigation measures will be required based on the further basic environment study and monitoring survey.

(5) Economic and Financial Analyses

Economic and financial analysis were made for the High Priority Project except for the Nationwide Air Navigation Facility Development Project due to the difficulty of quantification of economic and financial benefits. The results of the analyses are as shown below.

Results of Economic and Financial Analyses

Airport	Project	EIRR (%)			FIRR (%)	
		Case A Base Case	Case B Demand 20% Increase	Case C Demand 20% decrease	Case 1 Present Airport Charge	Case 2 200 % Higher Airport Charge
Existing Tashkent	Domestic Area Only	Invalid	Invalid	Invalid	-0.66%	10.38%
New Tashkent	a) International	1.93%	2.97%	0.65%	-5.19%	-0.75%
	b) Int. + Dom.	7.01%	7.58%	6.39%	4.07%	5.44%
Namangan	a) All Facilities	8.20%	10.44%	5.60%	-10.00%	-1.26%
	b) Without Nav.	12.46%	15.02%	9.50%	-9.40%	0.72%
Termez	a) All Facilities	6.13%	8.21%	3.70%	-5.43%	2.07%
	b) Without Nav.	11.61%	14.09%	8.73%	-3.20%	5.45%
Nukus	a) All Facilities	7.60%	9.93%	4.85%	-11.15%	-1.54%
	b) Without Nav.	12.25%	15.05%	9.04%	-11.60%	0.13%

(6) Overall Evaluation and Recommendation

• Implementation of the Capital Airport Development

The existing Tashkent airport has sufficient capacity except for the domestic passenger and cargo facilities, to accommodate the demand up to the year 2020. Furthermore, international passenger terminal building and apron are being improved with EBDR finance, amounting to 48 million US Dollars. Hence, these facilities will help to upgrade passenger comfort and convenience.

On the other hand, a new airport with a 4,300 m-long runway and international traffic facilities was planned 40 km south west of Tashkent, to be a new gateway airport in Uzbekistan substituting for the existing Tashkent Airport.

However, from the results of economic and financial analysis, it was concluded that the implementation of the new airport development project would not be feasible for the national benefit of Uzbekistan. Although the development of the existing Tashkent Airport fundamentally interferes with the Tashkent City development, and cause possible aircraft noise pollution and the risk of aircraft accident, considering the above results and situation, it is recommended that, at this moment in time, priority of the development for the capital airport should be put on the existing Tashkent airport.

Thereafter, development of a new capital airport should be reconsidered and analyzed, taking into account tendency for air traffic demand to increase and the social environment.

In the long-term development of the new Tashkent airport, it is important to promote possibility and realization of the project by taking a view of that Tashkent has been historically the crossroads of

European and Asian countries for a long time, and will be functioned as air cargo distribution base and air transportation center in CIS regions.

- **Implementation of Local Airport Development**

Development of each of the three local airports, namely, the Namangan, Termez and Nukus airports was viewed not viable financially, but economically viable subject to reduction of scope of project and a higher airport charge level. However, each of the three airports is located in the capital city of Province, which is a center of social, economic and political activities in the area, and no other transportation to connect Tashkent is well developed. Therefore, implementation of development of the three local airports is desirable from the viewpoint of helping regional development.

- **Implementation of Nationwide Air Navigation System Development**

Implementation of the development of Nationwide Air Navigation System should be executed from the viewpoint of encouraging revenue increases from overfly charges and contributing to the improvement of aviation safety.

7. REVIEW OF ORGANIZATION AND MANAGEMENT PROCEDURES OF NAC

National Air Company (NAC) covers all activities relating to civil aviation from policy making and administration of civil aviation, airport operation and management, air transportation services and license of airlines, having more than 16 thousand staff. Major problems identified are as follows:

- Profitability of NAC had been in positive side up to 1994, but has been in deficit since 1995. Amount of loss in 1996 was approximately 20 million US dollars;
- Ratio of equity to total assets (Stability) has been decreasing since 1994, and Liquidity of assets has worsen. Current financial status and funding conditions of NAC are not in good condition;
- No clear separation between governmental functions and commercial business activities;
- Redundancy of employment in each unit of NAC;
- Unclear transferring of responsibility and decision making under self-supporting account system
- Low service level for passenger comfort of facilities and services;
- No clear separation of present account system in accordance with activity of each unit of NAC;
- Differences of corporate planning for airline business between NAC and international practice;
- Necessity of enhancement of safe operation due to introduction of western-made aircraft;
- Low productivity of Russian-made aircraft;
- Low level of sales and customer satisfaction;
- Necessity of enhancement of training of cabin crew.

8. MODERNIZATION PLAN OF NAC AND RECOMMENDATIONS

Present National Air Company (NAC) is too large an organization to be able to attend detailed services under one management unit, especially in the area of commercial business operation. NAC requires considerable modernization in airport facilities and aircraft and a restructuring of its organization in the functional and financial sides of management towards the market-oriented economy.

In functional areas, a clear division between the governmental functions and commercial business in aviation sector in Uzbekistan will be required in order to enhance efficiency of air transportation of the country.

In the financial areas, current financial balance of NAC as a whole is negative due to the increase of

cost for the introduction of western-made aircraft and the steep decrease of air traffic demand.

As a summary of review of organization, management and operation of NAC, the following points are recommended in order to promote modernization of air transportation in NAC ranging from the state civil aviation management to air carrier services.

- It is recommendable for NAC and the Government of Uzbekistan to take first steps toward the revitalization of the aviation sector, by transforming the existing units of NAC into some independent organizations, and to establish a "Department of Civil Aviation" as the governmental administration bodies;
- Reform of revenue sources in accordance with the restructuring plan of NAC organization, taking into account a clear separation of activities between government, airline and airport services;
- Upgrade of the quality level of facilities, and promotion for improvement of attendance performance for passenger and customer;
- Introduction of route profitability analysis, selection of essential routes of airline and "Middle-size Group" of routes in accordance with international practice, in order to develop corporate planning procedure of the NAC
- Improvement of attractiveness of the airline to customers and offering customer satisfaction with the airlines services;
- Efficient training and technical transfer with instructors, specialists and consultants, who can instruct personnel on an "On the Job Training" basis in order to strengthen aircraft operation planning and maintenance control planning for western-made aircraft.

**THE STUDY
FOR
THE AIR TRANSPORTATION DEVELOPMENT
IN THE REPUBLIC OF UZBEKISTAN**

MAIN REPORT

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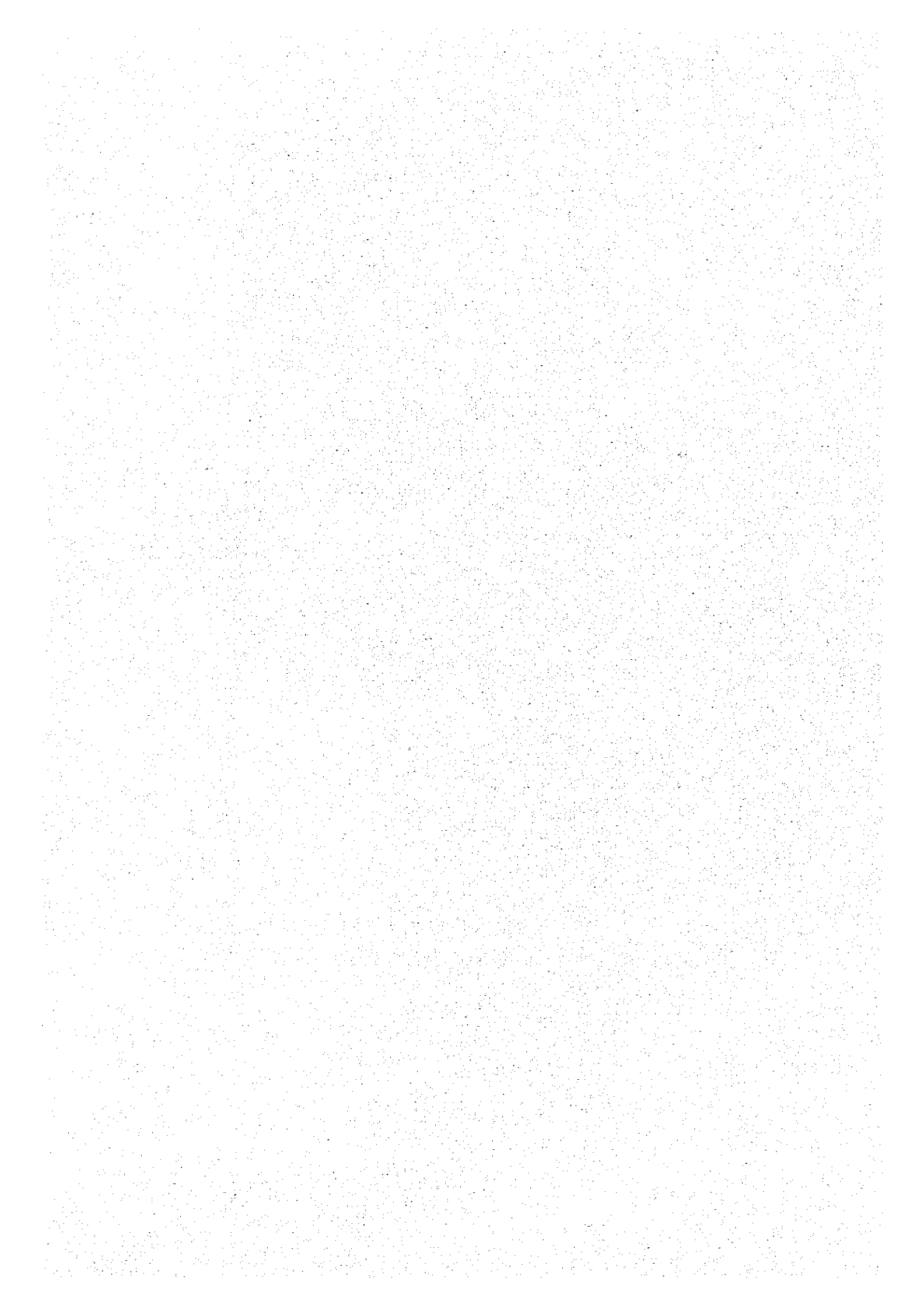
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Soil Investigation Report for New Tashkent Airport

CHAPTER 1
INTRODUCTION



CHAPTER 1 INTRODUCTION

1.1 General

In response to a request from the Government of the Republic of Uzbekistan (hereinafter referred to as "the Government of Uzbekistan"), the Government of Japan decided to conduct the Study for Air Transportation Development in the Republic of Uzbekistan (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

The Japanese Preparatory Study Team organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, was dispatched to Uzbekistan from 27th November to 14th December 1996 to discuss the scope of work and all matters relevant to the Study.

Thereafter, JICA organized a Team to carry out the Study based on the Minutes of Meetings (hereinafter refer to as "Minutes") concerning the Scope of Work dated 13th December 1996 between the National Air Company "Uzbekistan Havo Yullari" (hereinafter referred to as "NAC") and JICA.

The Study was initiated with the Preparatory Work for the Study in Japan and will be conducted in three phases, namely Phase I, Phase II and Phase III. Each Phase consists of Field Work in Uzbekistan and Home Work in Japan.

The Present Report compiles the results of the Study conducted from the end of March 1997 to August 1998 both in Uzbekistan and Japan.

1.2 Background of the Study

Uzbekistan is the most populated country in the Central Asian region with a total population of more than 23 million and an area of about 447,000 square kilometers. It borders on Kirgizstan in the east, on Kazakhstan in the north and north-west, on Turkmenistan in the southwest, on Tajikistan in the southeast and on Afghanistan in the south.

The civil aviation system in Uzbekistan had been operated and managed under the control of Aeroflot of the former Soviet Union. After Uzbekistan gained independence in 1991, NAC was founded by a resolution of the Cabinet of Ministers in 1992 as a state company to manage and operate civil aviation activities in Uzbekistan including airport operation, air traffic control and civil aviation transport.

Air traffic volume in Uzbekistan declined sharply after independence. However, Uzbekistan had been one of the centers of the aviation industry and air traffic in the Soviet era. It has recorded a steady expansion of international relations and trade activities between Uzbekistan and the CIS as well as on an international scale, including tourism activities. Tashkent Airport is expected to be an air transportation hub in the Central Asian region, due to its geographical advantage.

On the other hand, as airports and air navigation facilities in Uzbekistan were constructed in the Soviet era before independence, most of the facilities and equipment are obsolete and outmoded. Furthermore, technical standards, system of airport facilities and equipment are different from the international standards and requirements.

Under these circumstances, the Government of Uzbekistan recognized the necessity of modernization of its air transportation system in order to cope with passenger and cargo traffic demand considering the economic development of the country and the promotion of tourism. This led to a request for the Japanese Government to conduct a study to prepare a master plan for the long term development for the modernization of air transportation, including recommendations for a reform plan on the organization, operational and management system of airport operation, air traffic control services and air carrier sector.

1.3 Objectives of the Study

The objectives of the Study agreed between the Government of Uzbekistan and JICA are as follows:

- (1) To prepare long term master plans up to the year 2020 on air transportation development including priority airports and air navigational facilities in Uzbekistan;
- (2) To conduct a pre-feasibility study up to the year 2005 on high priority project(s) to be selected through a study of the above long term master plan; and
- (3) To make recommendations for the organization, operation and management of air transport development in Uzbekistan.

1.4 Scope and Schedule of the Study

1.4.1 Scope of Study

The Study is divided into the four (4) Phases; namely Preparatory Work, Phase I, Phase II and Phase III, with the task items as listed below;

- (1) Preparatory Work in Japan
 - a) Confirmation of Study Philosophy
 - b) Review and analysis of existing study reports and data related to the Study
 - c) Planning of study schedule and methodology
 - d) Preparation of Inception Report and questionnaire
- (2) Phase I Field Work in Uzbekistan
 - a) Explanation and Coordination on Schedule and Methodology of the Study
 - b) Data Collection and Supplementary Survey on Air Transportation Facilities
 - c) Survey on Organization and Operation and Management System
 - d) Discussion and Confirmation on Criteria for Selection of High Priority Project(s)
 - e) Preparation and Explanation of Progress Report
 - f) Workshop (1)
- (3) Phase I Home Work in Japan
 - a) Projection and Formulation of Air Transportation Development
 - b) Study and Planning of Airport Facility Development
 - c) Analysis and Planning on Organization and Operation and Management System
 - d) Master Planning of Priority Project(s)
 - e) Evaluation and Selection of Project(s) for Pre-feasibility Study
 - f) Preparation of Interim Report
- (4) Phase II Field Work in Uzbekistan
 - a) Confirmation of Requirements for Pre-feasibility Study

- b) Survey of Physical Conditions of High Priority Project(s)
 - c) Environmental Survey of the High Priority Project(s)
 - d) Planning of Land Use in the Vicinity of Project Site(s)
 - e) Planning of Airport Facilities
 - f) Study and Analysis of Organization and Operation and Management System
 - g) Holding of Workshop (2)
- (5) Phase II Home Work in Japan
- a) Preliminary Design of Airport and Other Relevant Facilities
 - b) Environmental Impact Analysis (EIA) for High Priority Project(s)
 - c) Preparation of Construction Plan
 - d) Estimation of Project Costs
 - e) Pre-feasibility Study
 - f) Recommendation for Development and/or Modernization of Air Transportation in Uzbekistan
 - g) Preparation of Draft Final Report and Summary
- (6) Phase III Field Work in Uzbekistan
- a) Explanation and Discussion on the Draft Final Report
 - b) Holding of Seminar
- (7) Phase III Home Work in Japan

Correction and additions to the Draft Final Report based on NAC's comments.

1.4.2 Schedule and Reports

(1) Schedule of the Study

The Study was carried out over an 18-month period, as shown in **Figure 1.4.1**.

(2) Reports

The following reports both in English and Russian language were prepared during the course of the Study and submitted to the Government of Uzbekistan.

a) Inception Report

Inception Report was submitted in 15 copies of each language version in April 1997.

b) Progress Report

Progress Report was submitted in 15 copies of each language version at the end of the Phase I Field Work.

Reference materials for the workshop (1) were submitted in 30 copies in the Russian language on May 20, 1997.

c) Interim Report

Interim Report was submitted in 15 copies of each language version at the initial stage of the Phase II Field Work of October 1997.

Reference materials for the workshop (2) to be held during the Phase II Field Work period were also submitted in 30 copies in the Russian language version.

d) Draft Final Report and Summary

Draft Final Report and its Summary in 15 copies of each language version was submitted

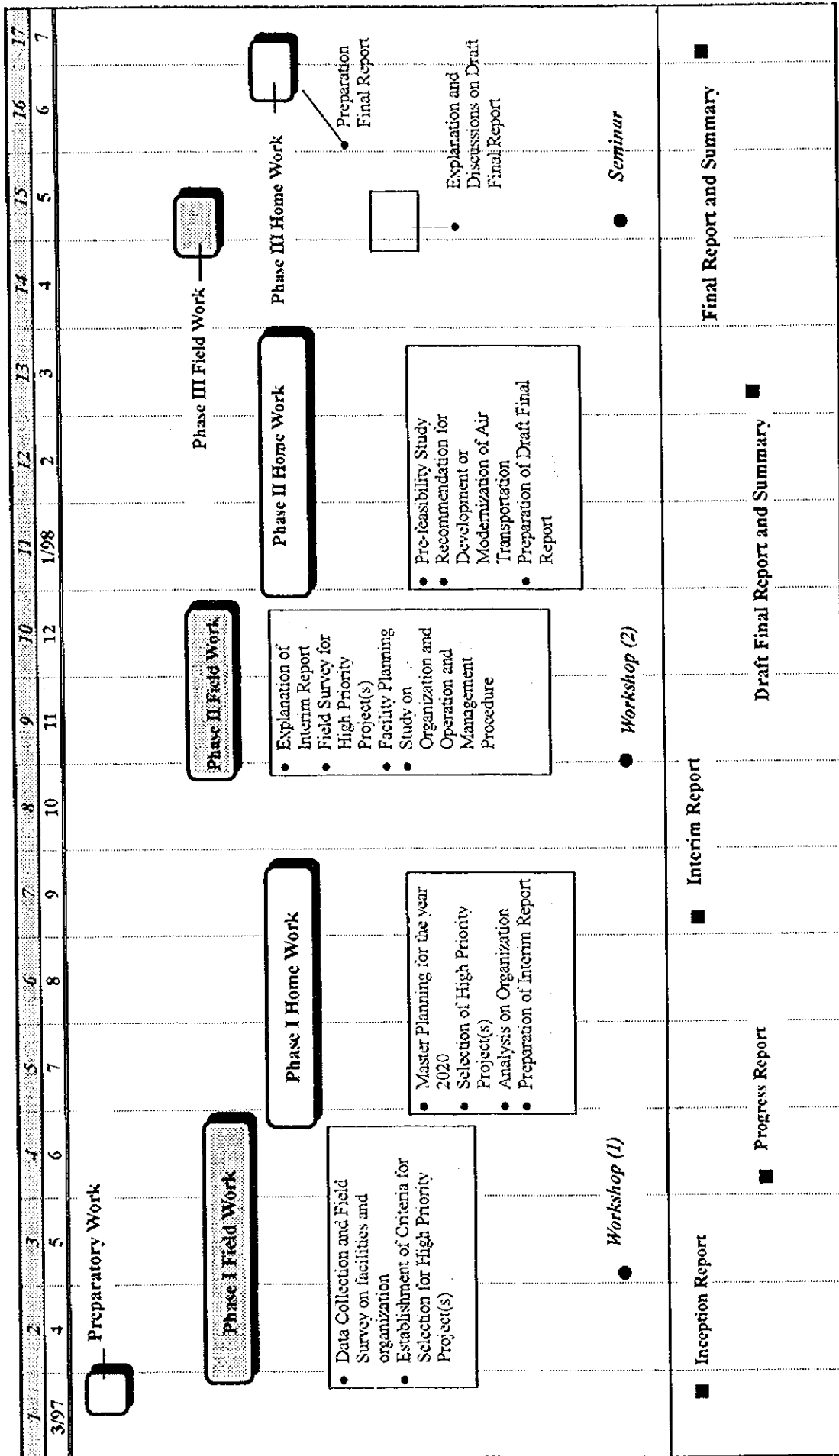
at the initial stage of Phase III Field Work of May 1998.

Reference materials for the Seminar to be held during the Phase III Field Work period were also submitted in 100 copies in Russian.

e) Final Report and Summary

Final Report and its Summary with 30 copies of each language was submitted at the end of the Study.

Figure 1.4.1 Schedule of Study



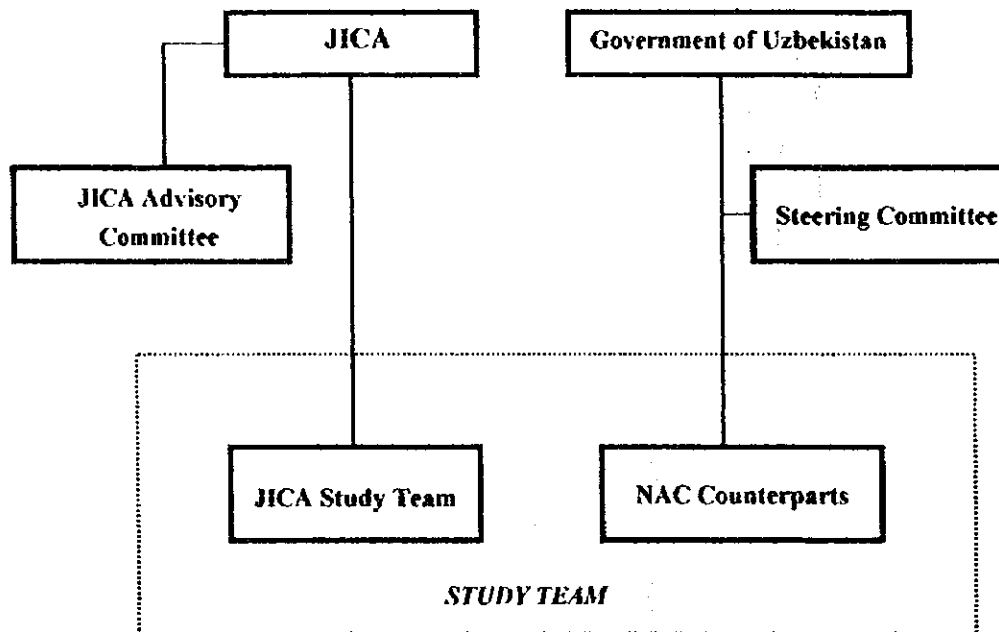
1.5 Organization for the Study

The Study was carried out by the Study Team duly organized by the Japan International Cooperation Agency. The Japanese side also appointed the Advisory Committee as an advisory body to the president of JICA to monitor the study and give advice to the Study Team.

NAC was the counterpart organization and has assigned the counterparts personnel for the Study Team. The Uzbekistan side also established a Steering Committee to discuss and coordinate the various matters related to the Study among governmental agencies or organizations.

Organizations concerned in implementation of the Study are as shown **Figure 1.5.1**

Figure 1.5.1 Study Implementation Organization



(1) Japanese Side

a) Study Team

A Study team consists of the following engineers and specialists to cope with the various aspects of the Study.

Mr. Kunio SAITO	Team Leader
Mr. Toshiki ASANO	Airport Facility Planning/Relevant Facility Planning
Mr. Atsushi YAMANE	Air Traffic Control/Air Space Use Planning
Mr. Shintaro YAMAMOTO	Operation Planning/ Maintenance Planning
Mr. Kazuo OKUNO	Facility Planning and Design (Airfield Facilities)
Mr. Kenzi TANAKA	Facility Planning and Design (Building and Equipment)

Mr. Yukimi TAJIMA	Facility Planning and Design (Air Navigation Facilities)
Mr. Mitsuho OMACHI	Construction Planning and Cost Estimate
Mr. Azuma FURUSE	Demand Forecast/Economic and Financial Analysis
Mr. Kunihiro TAKANO	Airport Operation and Management
Mr. Ryoza KOYAMA	Operation and Management of Airline
Mr. Yuri PLOTNIKOV	Physical Condition Survey
Miss. Kanae MATSUZAKI	Environmental Impact Assessment
Mr. Kazuo OSANAI	Interpreter

b) Advisory Committee

Advisory Committee was organized as an advisory body to the president of JICA consisting of the following members in order to supervise the present Study.

Mr. Kazuhito ARAO	Director of Airfield Department Tokyo Civil Aviation Bureau Ministry of Transport (Successor of Mr. Umeki)
Mr. Yuji UMEKI	Director of Airfield Department Osaka Civil Aviation Bureau Ministry of Transport
Mr. Nobuo GUNJI	Deputy Director of Planning Division Civil Aviation Bureau, Ministry of Transport (Successor of Mr. Watanabe)
Mr. Masami WATANABE	Deputy Director of Planning Division Civil Aviation Bureau, Ministry of Transport
Mr. Shigeki TERASHIMA	Deputy Director of Construction Division Civil Aviation Bureau, Ministry of Transport (Successor of Mr. Terashima)
Mr. Yoshiaki KAWABE	Deputy Director of Construction Division Civil Aviation Bureau, Ministry of Transport
Mr. Ken YOSHIDA	Deputy Director of 4th Division Operation Department II (Successor of Mr. M. Yoshida)
Mr. Minoru YOSHIDA	Deputy Director of 4th Division Operation Department II The Overseas Economic Cooperation Fund

(2) Uzbekistan Side

a) Steering Committee

Mr. Ruzmetov A.G.	Director General of NAC
Mr. Tyan V.N.	First Deputy-Director General of NAC
Mr. Gordiyenko V.G.	Deputy-Director General of NAC
Mr. Karimullin K.A.	Senior expert of Transport and Communication Department in the Cabinet of Ministers
Mr. Belyalov N.M.	Chief of department of expertise of registration and monitoring of execution of loan agreements MFER
Mrs. Koroleva N.V.	Chief ecologist of Main ecological expertise of the State Committee for Nature of the Republic of Uzbekistan

b) Counterpart Group

Mr. Vakhobov M.V.

**Chief of the Working Group, Chief of Capital
Construction Department at NAC**

Mr. Davidov D.S.

Deputy-chief of financial department

Mr. Gusev V.V.

Deputy-director of Uzaeronavigation on ATC

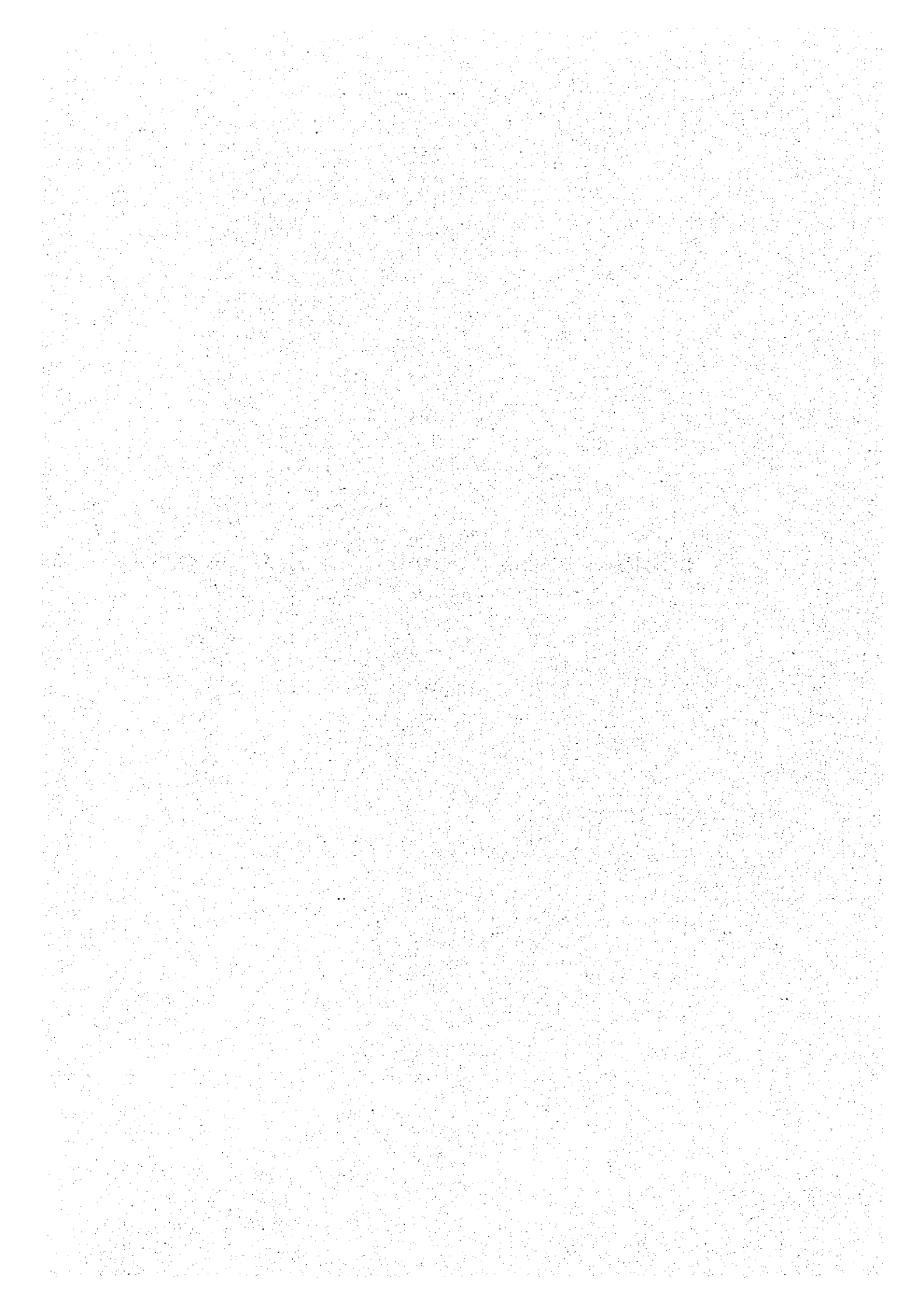
Mr. Kalabaev A.A.

Chief of ecology and on-ground facilities department

Mrs. Ruban E.P.

Chief of Operation-economy Department of NAC

CHAPTER 2
SOCIO-ECONOMIC CONDITIONS IN UZBEKISTAN



CHAPTER 2 SOCIO-ECONOMIC CONDITIONS IN UZBEKISTAN

2.1 Socio-Economic Situation of Uzbekistan

2.1.1 General

(1) Geography and Climate

Uzbekistan is the most populous country in the Central Asian region with a total population of more than 23 million, and the second largest country in terms of physical size with an area of about 447,400 square kilometers. It borders on Kirgizia in the north, on Kazakhstan in the north and north-west, on Turkmenistan in the south-west, on Tajikistan in the south-east. In the south it borders on Afghanistan.

The national territory has topography with a general inclination from south-east to north-west. In the north-west it is washed by the Aral Sea. The greater north-western part has a flat topography and the smaller south-eastern part has a relief marked by foot-hills and mountains. The plains of Uzbekistan include the greater part of the Kyzulkum desert, the plain of the Amu-Darya River, the delta of Zerafshan and Kashkadarya, and the south-eastern part of the Usturt plateau. The foot-hills and mountainous parts of Uzbekistan include Tien-Shan spurs and Hussar-Alai ranges.

The bulk of the water used for irrigation is derived from the country's two major rivers, the Amu-Darya and the Syr-Darya, which flow from the Tien Shan mountains in the south-east to the Aral sea in the north-west. The extensive diversion of water from these rivers to irrigate the country's vast cotton plantations has caused a number of serious environmental problems, the most serious of which is the drying of the Aral Sea.

Uzbekistan has a continental climate, with a long dry and hot summer, with temperatures averaging 32 °C in July, and often rising above 40 °C. Winter lasts in the south of Uzbekistan for about 1.5-2 months and in the far north of the country (Usturt) for about 5 months. The average air temperature in January is below - 10 °C in the north (Usturt) and + 3 °C in the south (Termez). Uzbekistan belongs to the area with a small amount of precipitation and agriculture is only possible by using artificial irrigation.

(2) Recent History

The Republic of Uzbekistan was proclaimed independent on August 31, 1991 and a new constitution was adopted December 1992. The former Communist Party became the National Democratic Party (NDP). President Islom Karimov who is the leader of the NDP was elected for a five-year term under the first democratic elections after the collapse of the USSR in December 1991. President Karimov governs the country according to his motto of an "Eastern Democracy" and stresses the importance of political stability as being more important than a western-style democracy under the following "Five Principles".

- a) Internal and external economic relations should be free of ideology, with the economy taking precedence over politics.
- b) Central and local authorities are responsible for the success of market-oriented measures and for creating conditions favorable to entrepreneurship. The Presidential Decree of January 21, 1994 forbids any interference by state entities in the

commercial or economic activities of enterprises and organizations.

- c) The new constitutions and laws passed in conformity with international law apply to all citizens, without exception. Foreign investors operate under the same conditions as Uzbeks.
- d) A free market is not an end in itself. The ultimate objective is to achieve economic prosperity and raise living standards.
- e) The goal of reforms is to ensure the gradual changeover to a full-scale market economy.

(3) State System

The political system of the Republic of Uzbekistan is parliamentary democracy with the Supreme Assembly as the legislative organ and the government as the executive body. The head of the executive body is the President elected on the basis of universal, equal and direct suffrage by secret ballot. The President can be elected for two five-year terms in succession.

The Prime Minister is Otkir Sultanov and has been in office since December 1995. The Cabinet of Ministers is appointed by the President with approval of the Supreme Assembly. The Supreme Assembly (Oliy Majlis) with 250 seats is elected by secret ballot. The results of the latest election held in December 1995 were as follows: The NDP gained 69 seats, 14 seats went to the Fatherland Party, 47 seats to the Social Democratic Party and 120 seats to local government. The Supreme Court and judges are nominated by the President and confirmed by the Supreme Assembly.

2.1.2 Population

(1) Total Population

The total population of Uzbekistan at the beginning of 1996 was 23 million, increasing at an average rate of 2.3 % per annum as shown in Table 2.1.2. A breakdown of the share of the urban and rural, parts of the population shows that the rural population accounts for 60% of the total. It also has a higher growth rate than the urban population. As shown in Table 2.1.2, major ethnic groups in Uzbekistan as of January 1996 consist of 76% of Uzbeks, 6% of Russian, 5% of Tajiks and 4% of Kazakhs.

Table 2.1.1 Population in Uzbekistan

(at the beginning of the year)

Year	Population ('000)			Share (%)		Growth Rate (%/year)		
	Total	Urban	Rural	Urban	Rural	Total	Urban	Rural
1980	15,757.6	6,471.3	9,286.3	41.1	58.9	---	---	---
1985	17,925.7	7,293.2	10,632.5	40.7	59.3	2.66	2.42	2.74
1990	20,322.3	8,304.0	12,018.3	40.9	59.1	2.22	2.63	2.48
1991	20,708.2	8,366.1	12,342.1	40.4	59.6	1.90	0.75	2.69
1992	21,206.8	8,506.0	12,700.8	40.1	59.9	2.41	1.67	2.91
1993	21,702.7	8,582.2	13,120.5	39.5	60.5	2.34	0.90	3.30
1994	22,192.5	8,677.0	13,515.5	39.1	60.9	2.26	1.10	3.01
1995	22,562.4	8,732.6	13,829.8	38.7	61.3	1.67	0.64	2.33
1996	23,007.2	8,831.0	14,176.2	38.4	61.6	1.97	1.13	2.50

Source : The State Committee for Forecasting and Statistics

Table 2.1.2 Population by Ethnic Groups

(as of Jan.1.1996)

Ethnic Group	Share (%)
Total	100.0
Uzbeks	75.8
Russians	6.0
Tajiks	4.8
Kazakhs	4.1
Tatars	1.6
Kirghizes	0.9
Turkmens	0.6
Ukrainians	0.6
Azerbaijanians	0.2
Armenians	0.2
Byelorussians	0.1
Jews	0.1
Germans	0.1
Other nationalities	4.9

Source : The State Committee for Forecasting and Statistics

(2) Regional Population

Administrative division of the country comprises 12 provinces (wiloyatlar), 1 autonomous republic (republikasi) and 1 city (shahri: city of Tashkent): Andizhan, Bukhara, Djizhak, Fergana, Kashkadarya, Navoi, Namangan, Samarkand, Surkhandarya, Sirdarya, Tashkent Khorezm, Karakalpakstan and the city of Tashkent. Each province also has several cities, districts, towns, urban type settlements and villages, as shown in Table 2.1.3.

Table 2.1.3 Territory and Number of Administrative Units

(as of Jan.1.1996)

Province	Territory (thous. sq.km)	City	District	Town	Urban type Settlement	Village
Total	447.4	54	163	66	114	1,421
Republic of Karakalpakstan	164.9	7	15	5	16	110
Andizhan	4.2	5	14	6	5	95
Bukhara	39.4	3	11	8	2	107
Djizhak	20.5	1	11	6	8	95
Kashkadarya	28.4	2	14	10	4	142
Navoi	110.8	3	8	3	8	53
Namangan	7.9	6	11	2	12	99
Samarkand	16.4	4	16	7	12	125
Surkhandarya	20.8	2	14	6	7	109
Sirdarya	5.1	5	9	---	5	75
Tashkent	(*) 15.6	7	15	9	17	147
Fergana	7.1	5	15	4	10	164
Khorezm	6.3	3	10	---	7	100
City of Tashkent	---	1	---	---	1	---

Note : (*) including City of Tashkent

Source : The State Committee for Forecasting and Statistics

The regional population pattern as of 1996 shows that Fergana Province is the most populated in Uzbekistan followed by Samarkand Province, Tashkent Province, the city of Tashkent and Andizhan Province, with a population of more than 2 million. On the other hand, the total population of Tashkent Province and the city of Tashkent is 4,378 thousand and is equal to 19% of Uzbekistan's total population as shown in Table 2.1.4.

The population growth rate after 1980 in Sirdarya Province, Tashkent Province, Fergana Province and the city of Tashkent is lower than that of the country as a whole. In particular, the growth rate of Tashkent city shows a negative growth trend after 1990 as shown in Table 2.1.5.

Table 2.1.4 Population by Province

(at beginning of the year)

Province	1980	1985	1990	1991	1992	1993	1994	1995	1996
Total	15,757.6	17,925.7	20,322.3	20,708.2	21,206.8	21,702.7	22,192.5	22,562.4	23,007.2
Republic of Karakalpakstan	931.2	1,089.6	1,244.7	1,273.8	1,310.7	1,342.8	1,371.6	1,396.7	1,418.1
Andizhan	1,382.7	1,568.8	1,760.9	1,795.1	1,838.7	1,899.4	1,951.4	1,993.1	2,040.3
Bukhara	905.9	1,017.7	1,171.6	1,199.6	1,232.3	1,261.9	1,290.3	1,315.2	1,339.9
Djizhak	528.2	632.5	760.4	780.0	806.2	830.7	852.7	871.4	891.1
Kashkadarya	1,158.5	1,390.0	1,646.9	1,697.7	1,756.2	1,812.0	1,867.9	1,917.9	1,975.2
Navoi	510.7	594.9	673.3	684.9	701.8	715.3	729.5	734.5	748.2
Namangan	1,133.1	1,320.8	1,514.5	1,557.8	1,604.1	1,651.6	1,699.4	1,741.2	1,786.4
Samarkand	1,699.6	1,916.6	2,164.4	2,209.7	2,264.8	2,322.3	2,377.6	2,431.7	2,488.6
Surkhandarya	922.6	1,093.0	1,292.7	1,335.9	1,384.7	1,436.5	1,489.5	1,535.8	1,582.4
Sirdarya	457.9	518.9	575.0	580.3	587.1	599.8	617.0	626.1	633.9
Tashkent	1,787.9	1,970.0	2,137.6	2,149.5	2,175.9	2,206.3	2,234.5	2,239.8	2,263.8
Fergana	1,734.9	1,955.6	2,188.1	2,226.4	2,282.2	2,337.8	2,398.0	2,444.5	2,499.5
Khorezm	771.1	902.2	1,039.2	1,068.5	1,100.3	1,135.5	1,169.5	1,198.4	1,225.9
City of Tashkent	1,833.3	1,955.1	2,153.0	2,149.0	2,161.8	2,150.8	2,143.6	2,116.1	2,113.9

Source: The State Committee for Forecasting and Statistics

Table 2.1.5 Growth Rate of the Population by Provinces

(%/year)

Province	1980	1985	1990	1991	1992	1993	1994	1995	1996	Average
Total	2.50	2.66	2.22	1.90	2.41	2.34	2.26	1.67	1.97	2.39
Republic of Karakalpakstan	3.42	3.08	2.55	2.34	2.90	2.45	2.14	1.83	1.53	2.66
Andizhan	2.60	2.55	2.04	1.94	2.43	3.30	2.74	2.14	2.37	2.46
Bukhara	2.33	2.54	2.76	2.39	2.73	2.40	2.25	1.93	1.88	2.48
Djizhak	3.43	3.45	3.22	2.58	3.36	3.04	2.65	2.19	2.26	3.32
Kashkadarya	3.56	3.88	3.18	3.08	3.45	3.18	3.08	2.68	2.99	3.39
Navoi	2.00	2.73	2.72	1.72	2.47	1.92	1.99	0.69	1.87	2.42
Namangan	3.16	2.95	2.67	2.86	2.97	2.96	2.89	2.46	2.60	2.89
Samarkand	2.56	2.71	2.10	2.09	2.49	2.54	2.38	2.28	2.34	2.41
Surkhandarya	3.23	3.55	3.28	3.34	3.65	3.74	3.69	3.11	3.03	3.43
Sirdarya	2.23	2.73	1.18	0.92	1.17	2.16	2.87	1.47	1.25	2.05
Tashkent	1.73	1.97	1.52	0.56	1.23	1.40	1.28	0.24	1.07	1.49
Fergana	2.49	2.33	1.70	1.75	2.51	2.44	2.58	1.94	2.25	2.31
Khorezm	3.32	3.12	2.55	2.82	2.98	3.20	2.99	2.47	2.29	2.94
City of Tashkent	0.97	1.48	1.23	-0.19	0.60	-0.51	-0.33	-1.28	-0.10	0.89

Source: The State Committee for Forecasting and Statistics

Table 2.1.6 Population on Urban and Rural by Province

('000)

Province		1980	1985	1990	1991	1992	1993	1994	1995	1996
Total	Urban	6,471.3	7,293.2	8,304.0	8,366.1	8,506.0	8,582.2	8,677.0	8,732.6	8,831.0
	Rural	9,286.3	10,632.5	12,018.3	12,342.1	12,700.8	13,120.5	13,515.5	13,829.8	14,176.2
	Total	15,757.6	17,925.7	20,322.3	20,708.2	21,206.8	21,702.7	22,192.5	22,562.4	23,007.2
Republic of Karakalpakstan	Urban	394.4	500.2	599.8	614.4	634.7	654.4	667.7	677.9	686.2
	Rural	536.8	589.3	644.9	659.4	676.0	688.4	703.9	718.8	731.9
	Total	931.2	1,089.5	1,244.7	1,273.8	1,310.7	1,342.8	1,371.6	1,396.7	1,418.1
Andizhan	Urban	391.8	504.2	572.4	578.7	588.9	589.3	588.3	600.8	613.0
	Rural	990.9	1,064.6	1,188.5	1,216.4	1,249.8	1,310.1	1,363.1	1,392.3	1,427.3
	Total	1,382.7	1,568.8	1,760.9	1,795.1	1,838.7	1,899.4	1,951.4	1,993.1	2,040.3
Bukhara	Urban	296.0	368.4	408.2	413.8	423.9	427.9	431.7	433.1	435.3
	Rural	609.9	649.3	763.4	785.8	808.4	834.0	858.6	882.1	904.6
	Total	905.9	1,017.7	1,171.6	1,199.6	1,232.3	1,261.9	1,290.3	1,315.2	1,339.9
Djizhak	Urban	144.2	175.3	225.4	228.6	238.3	269.0	276.4	280.9	281.3
	Rural	384.0	457.2	535.0	551.4	567.9	561.7	576.3	590.5	606.8
	Total	528.2	632.5	760.4	780.0	806.2	830.7	852.7	871.4	891.1
Kashkadarya	Urban	291.3	340.5	436.2	445.8	459.1	467.7	483.1	491.7	516.4
	Rural	867.2	1,049.5	1,210.7	1,251.9	1,297.1	1,344.3	1,384.8	1,426.2	1,458.8
	Total	1,158.5	1,390.0	1,646.9	1,697.7	1,756.2	1,812.0	1,867.9	1,917.9	1,975.2
Navoi	Urban	209.9	231.6	278.3	282.0	287.0	290.3	295.1	292.9	300.6
	Rural	300.8	363.3	395.0	402.9	414.8	425.0	434.4	441.6	447.6
	Total	510.7	594.9	673.3	684.9	701.8	715.3	729.5	734.5	748.2
Namangan	Urban	403.4	490.9	579.9	594.7	615.6	632.9	648.1	660.6	676.7
	Rural	729.7	829.9	934.6	963.1	988.5	1,018.7	1,051.3	1,080.6	1,109.7
	Total	1,133.1	1,320.8	1,514.5	1,557.8	1,604.1	1,651.6	1,699.4	1,741.2	1,786.4
Samarkand	Urban	694.0	592.5	677.6	679.5	685.8	686.6	691.3	703.7	709.6
	Rural	1,005.6	1,324.1	1,486.8	1,530.2	1,579.0	1,635.7	1,686.3	1,728.0	1,779.0
	Total	1,699.6	1,916.6	2,164.4	2,209.7	2,264.8	2,322.3	2,377.6	2,431.7	2,488.6
Surkhandarya	Urban	173.4	205.6	251.2	257.2	264.3	269.5	282.6	319.6	325.2
	Rural	749.2	887.4	1,041.5	1,078.7	1,120.4	1,167.0	1,206.9	1,216.2	1,257.2
	Total	922.6	1,093.0	1,292.7	1,335.9	1,384.7	1,436.5	1,489.5	1,535.8	1,582.4
Sirdarya	Urban	140.9	169.2	187.7	186.8	185.5	187.5	195.6	194.4	195.7
	Rural	317.0	349.7	387.3	393.5	401.6	412.3	421.4	431.7	438.2
	Total	457.9	518.9	575.0	580.3	587.1	599.8	617.0	626.1	633.9
Tashkent	Urban	764.0	854.8	947.0	948.2	959.7	950.5	952.4	935.3	935.3
	Rural	1,023.9	1,115.2	1,190.6	1,201.3	1,216.2	1,255.8	1,282.1	1,304.5	1,328.5
	Total	1,787.9	1,970.0	2,137.6	2,149.5	2,175.9	2,206.3	2,234.5	2,239.8	2,263.8
Fergana	Urban	582.1	648.6	700.7	695.1	702.5	717.6	726.9	727.0	735.5
	Rural	1,152.8	1,307.0	1,487.4	1,531.3	1,579.7	1,620.2	1,671.1	1,717.5	1,764.0
	Total	1,734.9	1,955.6	2,188.1	2,226.4	2,282.2	2,337.8	2,398.0	2,444.5	2,499.5
Khorezm	Urban	152.6	256.2	286.6	292.3	298.9	288.2	294.2	298.6	303.3
	Rural	618.5	646.0	752.6	776.2	801.4	847.3	875.3	899.8	922.6
	Total	771.1	902.2	1,039.2	1,068.5	1,100.3	1,135.5	1,169.5	1,198.4	1,225.9
City of Tashkent	Urban	1,833.3	1,955.1	2,153.0	2,149.0	2,161.8	2,150.8	2,143.6	2,116.1	2,113.9
	Rural	--	--	--	--	--	--	--	--	--
	Total	1,833.3	1,955.1	2,153.0	2,149.0	2,161.8	2,150.8	2,143.6	2,116.1	2,113.9

Source : The State Committee for Forecasting and Statistics

2.1.3 Economy and Industry

(1) Current Situation of the Uzbekistan Economy

The main role of Uzbekistan in the former USSR was to supply raw materials, mainly oil, gas and cotton. After the declaration of independence, Uzbekistan introduced a new currency, the "Sum" in November 1993.

The macroeconomic indicators for Uzbekistan in 1996s given in Table 2.1.7 show a slight positive growth for all indicators except gross agricultural production and the transport volume of passengers and freight.

Table 2.1.7 Macroeconomic Indicators of Uzbekistan

Macroeconomic Indicators	(at actual prices, bl. Sums)	
	1996	1996 as % of 1995
Economic Indicators		
Gross domestic product	560.1	101.6
Net material products	435.9	100.3
Volume of industrial output	444.1	106.0
Consumer goods production	147.5	108.1
Gross agricultural production	179.3	92.7
Capital investment on account of all funds sources	166.5	106.9
Construction of buildings & dwellings by enterprises and institutions covering all forms of property (thou sq m)	6,127.0	124.0
General education schools (thou pup seats)	63.5	132.0
Volume of contracted work	83.5	100.6
Retail trade turnover	236.4	121.0
Volume of paid services	34.0	109.9
Freight turnover of public transports (including pipeline) (bl ton/km)	52.4	108.1
Carried freight by all means of transport (mil ton)	291.1	96.6
Passengers transported by all means of transport (mil persons)	2,673.4	99.6
Passenger turnover by all means of transport (bl passenger/km)	21.1	95.4
Foreign trade turnover (US\$ mil.)	9,311.3	140.8
Social Indicators		
Income of population	317.9	220.0
Income per capita of population (thou sums)	13.6	210.0
Expenditure of population on goods and services	254.7	230.0
Expenditure per capita on goods and services (thou sums)	10.9	220.0
Expenditure and saving per capita (thou sums)	12.3	210.0
Total number of registered unemployed (at end of the year) (thou persons)	33.9	109.4

Source : The State Committee for Forecasting and Statistics

(2) Gross Domestic Products

The Gross Domestic Product (GDP) after the independence turned to positive growth in 1996 from a negative growth position up to 1995. GDP growth shows a faster recovery than the World Bank's forecast.

Table 2.1.8 Trend of Gross Domestic Product (GDP)

Year	Gross Domestic Product (GDP) (bl. Sums)	% to previous year in comparable prices	
1991	0.06	99.5	
1992	0.44	88.9	
1993	5.10	97.6	
1994	64.88	95.8	
1995	298.53	98.8	
1996	3 months	84.30	99.6
	6 months	180.40	101.4
	9 months	350.30	101.5
	12 months	560.10	101.6

Note : GDP at current prices

Source : The State Committee for Forecasting and Statistics

Table 2.1.9 Estimate of GDP by World Bank

Year	GDP (bl. Rb.)	Growth Rate (%/year)	
Actual	1992	29,185	-9.57
	1993	26,767	-8.29
Estimate	1994	24,893	-7.00
	1995	23,897	-4.00
	1996	23,658	-1.00
	1997	24,131	+2.00
	1998	24,855	+3.00

Note : GDP at constant 1992 prices

Source : World Bank (June 1994)

(3) Economic Structure

The of GDP breakdown by sector for 1996 is: 38% for Services, 23% for Agriculture and 17% for Industry respectively as shown in Table 2.1.10. From the records since 1991, the share of the industry and agricultural sectors in 1996 decreased at 9% and 15% respectively, while the Service Sector revealed a dramatic increase.

Table 2.1.10 Breakdown of GDP by Sector

Breakdown	1991	1992	1993	1994	1995	1996
Total	100.0	100.0	100.0	100.0	100.0	100.0
Industry	26.3	26.6	22.4	17.0	16.4	17.4
Construction	10.4	9.5	9.0	7.2	7.8	8.1
Agriculture	37.2	35.4	27.9	34.5	28.5	22.5
Services	n.c.	n.c.	n.c.	n.c.	33.8	38.3
Net Taxes	n.c.	n.c.	n.c.	n.c.	13.5	13.7
Other	26.0	28.5	40.8	41.3	0.0	0.0

Note : n.c. = not classified

Source : The State Committee for Forecasting and Statistics

The current industrial output structure comprises principally fuel and energy, light metallurgy, mechanical engineering and metal-working as shown in Table 2.1.11.

Table 2.1.11 Industrial Output Structure by Branch

Items	1995	1996
Total	100.0	100.0
Fuel and Energy	27.5	26.2
Metallurgy	11.0	12.4
Chemistry and Petrochemistry	5.3	5.8
Mechanical engineering, Metal-working	8.2	10.8
Woodworking and Pulp and Paper	0.8	0.9
Building Materials	4.9	4.9
Light	19.9	20.0
Food Processing	7.2	7.8
Flour-grinding and Mixed feed	4.6	4.6

Source : The State Committee for Forecasting and Statistics

By province, in Table 2.1.12 shows that the city of Tashkent and the provinces of Fergana, Tashkent, Andizhan have a high production level for all sectors as compared with other provinces.

Production statistics by province indicate that, Kashkadarya and Navoi Province have a high level of Industrial Production, Samarkand Province of Consumer Goods Production while Samarkand and Namangan have a high trade turnover.

Table 2.1.12 Breakdown of Production Sectors by Province

Province	Industrial Production		Consumer Goods Production		Trade Turnover	
	bl. sums	as % of 1995	bl. sums	as % of 1995	bl. sums	As % of 1995
Total	444.1	106.0	147.5	108.1	236.4	121.0
Republic of Karakalpakstan	10.8	101.5	6.0	98.8	7.2	109.8
Andizhan	30.3	174.5	20.8	230.0	23.5	123.8
Bukhara	17.1	112.3	9.2	106.7	11.5	101.1
Djizhak	4.8	105.3	1.7	116.4	3.5	79.4
Kashkadarya	40.4	102.9	5.4	134.3	11.0	109.4
Navoi	40.9	118.3	3.3	105.6	5.9	140.1
Namangan	14.4	101.7	7.4	110.5	20.0	141.4
Samarkand	16.2	108.4	11.0	105.7	25.7	115.5
Surkhandarya	10.4	101.1	4.4	109.9	6.4	116.6
Sirdarya	5.4	108.5	2.1	101.9	6.2	121.1
Tashkent	54.3	112.0	20.1	105.2	16.7	85.7
Fergana	64.0	102.3	15.8	110.3	25.0	160.0
Khorezm	16.2	100.2	7.4	112.4	7.9	160.0
City of Tashkent	63.8	124.4	31.9	141.8	65.9	127.7

Source : The State Committee for Forecasting and Statistics

(4) Export and Imports

The volume of export and import has been increasing slightly year by year since independence, and is relatively well balanced, as shown in **Table 2.1.13**.

Cotton fiber had been one of the major export items in Uzbekistan, but after 1992, its share in exports has gradually decreased. Currently, food products and machines and equipment are major import items and energycarriers, which had previously been one of the major import items up to 1994, have decreased after 1995.

Table 2.1.13 Structure of External Trade

Items of Trade	1991	1992	1993	1994	1995	1996
Total (US\$ mil.)	n a	3,084.2	4,629.1	5,299.4	6,001.7	9,311.3
% to previous year (%)	n a	n a	150.1	114.5	113.3	155.1
Exports (US\$ mil.)	n a	1,424.0	2,440.9	2,689.9	3,109.0	4,590.5
% to previous year (%)	n a	n a	171.4	110.2	115.6	147.7
Share of exports (%)	n a	46.2	52.7	50.8	51.8	49.3
Imports (US\$ mil.)	n a	1,660.1	2,188.1	2,609.5	2,892.7	4,720.8
% to previous year (%)	n a	n a	131.8	119.3	110.9	163.2
Share of imports (%)	n a	53.8	47.3	49.2	48.2	50.7
Export - Import balance (US\$ mil.)	n a	-236.1	252.8	80.4	216.3	-130.4
Exports structure (%)						
Cotton fiber	n a	62.8	49.8	48.9	48.4	38.1
Chemical products, plastics and goods	n a	6.1	4.3	3.1	2.5	2.4
Ferrous and non-ferrous Metals	n a	9.2	6.0	4.4	4.6	3.5
Machines and equipment	n a	7.0	9.1	5.7	2.0	2.8
Food products	n a	2.5	2.1	3.5	1.7	4.5
Energy products	n a	6.7	19.9	26.1	11.7	6.0
Others	n a	5.7	8.8	8.3	29.1	42.7
Imports structure (%)						
Food products	n a	46.4	33.9	32.6	18.2	29.5
Chemical products, plastics and goods	n a	5.7	8.1	7.5	9.3	12.5
Ferrous and Non-ferrous Metals	n a	8.8	10.0	8.3	5.7	6.7
Machines and equipment	n a	5.2	10.5	15.4	47.9	35.8
Energy products	n a	13.3	28.7	25.9	1.9	1.1
Others	n a	20.6	8.8	10.3	17.0	14.4

Note : n a. = not available

Source : The State Committee for Forecasting and Statistics

The structure of Uzbekistan's external trade by province in 1996 is shown in Table 2.1.14. As for export trade, the city of Tashkent, Tashkent Province and Kasahkaryana Province had a slightly large share of 8%, 7% and 6%, respectively, without any great difference among these cities and provinces. However, 58% of the import trade was shared by two regions, i.e. the city of Tashkent at 46% and Tashkent Province at 12%.

Table 2.1.14 Structure of External Trade by Province in 1996

(%)

Province	Exports	Imports
Total	100.0	100.0
Republic of Karakalpakstan	2.7	2.0
Andizhan	3.4	6.9
Bukhara	4.6	7.3
Djizhak	1.6	0.8
Kashkadarya	6.1	1.7
Navoi	4.5	5.7
Namangan	3.1	2.3
Samarkand	3.4	3.7
Surkhandarya	4.9	0.8
Sirdarya	2.8	1.2
Tashkent	7.4	12.4
Fergana	5.5	3.0
Khorozm	3.6	1.5
City of Tashkent	8.3	46.2

Source : The State Committee for Forecasting and Statistics

The structure of Uzbekistan's external trade for the CIS and non-CIS countries in 1996 is as shown in Table 2.1.15. The share of external trade with CIS countries was 28% and 72% with non-CIS countries. After 1993, share in both import and export trade with non-CIS countries has increased. Major non-CIS countries are as shown in Table 2.1.16.

Table 2.1.15 Structure of External Trade with CIS and non-CIS countries

(%)

	1991	1992	1993	1994	1995	1996
Total	n.a.	100.0	100.0	100.0	100.0	100.0
CIS countries	n.a.	41.0	58.4	57.8	42.3	27.6
Non-CIS countries	n.a.	59.0	41.6	42.2	57.7	72.4
Exports	n.a.	100.0	100.0	100.0	100.0	100.0
CIS countries	n.a.	37.9	61.8	61.7	41.2	22.9
Non-CIS countries	n.a.	62.1	38.2	38.3	58.8	77.1
Imports	n.a.	100.0	100.0	100.0	100.0	100.0
CIS countries	n.a.	43.7	54.7	53.7	43.5	32.1
Non-CIS countries	n.a.	56.3	45.3	46.3	56.5	67.9

Note : n.a. = not available

Source : The State Committee for Forecasting and Statistics

Table 2.1.16 Structure of External Trade with non-CIS Countries

(%)

Countries	Export			Import		
	1994	1995	1996	1994	1995	1996
Total	100.0	100.0	100.0	100.0	100.0	100.0
Austria	4.1	1.7	1.2	2.3	0.6	0.7
Afghanistan	--	0.7	0.6	--	0.1	0.3
Belgium	0.7	--	1.9	1.3	0.3	0.8
Bulgaria	--	0.5	0.1	--	0.4	0.3
Hungary	0.1	0.1	0.4	7.3	8.9	1.5
Great Britain	17.4	9.7	10.4	1.5	1.7	3.3
Germany	3.2	1.5	2.7	14.8	22.9	18.1
Denmark	--	0.1	--	--	0.6	0.8
India	--	0.2	0.3	--	0.9	1.0
Israel	1.1	0.2	0.2	0.2	0.4	0.6
Iran	--	0.1	0.6	--	0.2	1.6
Ireland	--	--	0.7	--	0.1	0.3
Italy	2.6	3.3	3.1	2.0	1.4	1.0
China	7.7	1.5	3.6	7.4	1.4	1.0
Korea	4.0	6.0	7.6	2.2	26.7	10.2
Liechtenstein	--	--	1.3	--	--	0.2
Netherlands	15.2	6.4	3.8	4.4	1.5	2.1
UAE	--	0.4	0.3	--	4.3	5.7
Pakistan	--	0.1	0.2	--	0.6	1.2
Poland	2.1	1.1	0.3	1.5	0.3	0.3
Rumaria	--	0.2	0.1	--	0.6	0.8
Singapore	--	0.1	0.1	--	0.3	1.0
Syria	--	--	--	--	1.5	1.0
USA	2.1	0.5	8.0	7.9	1.9	13.6
Turkey	4.2	4.5	1.2	5.7	5.3	11.2
France	0.1	--	1.1	0.9	0.9	1.7
Czech Republic	--	0.1	0.4	--	2.0	0.8
Switzerland	22.3	17.4	9.3	26.9	7.3	5.7
Japan	0.5	0.1	0.2	2.0	2.7	1.7
Others	12.4	43.5	40.3	11.8	4.2	11.5

Source : The State Committee for Forecasting and Statistics

(5) Employment Situation

The number of the employed by employment sector in 1995 and 1996 is as shown in Table 2.1.17. The unemployment share of the State enterprises and institutions and

non-state enterprises and institutions is 30% and 70% respectively, and share of the former decreased slightly against 1995.

Table 2.1.17 Structural Breakdown of Employment by Employment Sector

Type of Employment	1995		1996 (*)	
	'000	%	'000	%
Total employed in economy ('000)	8,449.2	100.0	8,558.3	100.0
State enterprises and institutions	2,860.1	33.9	2,548.6	29.8
Non-state enterprises and institutions	5,589.1	66.1	6,009.7	70.2
(including) Private sector	335.8	4.0	419.7	4.9
Public institutions and funds	19.1	0.2	16.5	0.2
Joint-ventures	33.6	0.4	65.0	0.8
Enterprises and institutions with mixed form of ownership and others	57.2	0.7	62.4	0.8

Note : (*) provisional data

Source : The State Committee for Forecasting and Statistics

The structure of employment by sector in 1996 as shown in Table 2.1.18 indicates that 41% are employed in agriculture, forestry and fishery, 34% in the service sector and 13% in industry.

Table 2.1.18 Structure of Employment by Economic Sector

Category	1995		1996 (*)	
	'000	%	'000	%
Total employed in the economy	8,449.2	100.0	8,558.3	100.0
Industry	1,087.2	12.9	1,097.2	12.8
Agriculture, Forestry, Fishery	3,484.7	41.2	3,494.8	40.8
Construction	528.1	6.3	529.0	6.2
Services	2,879.4	34.1	2,922.3	34.1
(including) Trade, Catering, Material Supply, Sales, Procurements	705.1	8.3	700.0	8.2
Housing and Public utilities and Non-productive types of employment for general services	214.1	2.5	226.0	2.6
Health Care, Physical Culture and Social Security	487.1	5.8	498.0	5.8
Transport and Communication	347.5	4.1	348.0	4.1
Education, Culture and Art, Science and Scientific Research	1,053.6	12.5	1,065.6	12.5
Other branches of the Economy	496.8	5.9	515.0	6.0

Note : (*) provisional data

Source : The State Committee for Forecasting and Statistics

The number of unemployed in 1996 was 34 thousand, with an unemployment rate of 0.5%. Although the number of unemployed has increased since 1993, the rate of unemployment has leveled off, as shown in Table 2.1.19.

Table 2.1.19 Number of Unemployed and Unemployment Rate

	1993	1994	1995	1996
Registered Unemployed ('000)	28.9	29.4	31.0	33.9
Unemployment Rate (%)	0.3	0.3	0.4	0.4

Source : The State Committee for Forecasting and Statistics

The average monthly wage as of 1996 is shown in Table 2.1.20. The average wage for all sectors rose by 260% in the 12 month period from January to December 1996.

Table 2.1.20 Average Monthly Wage of Employees by Sector

Category	1996		December 1996 to January 1996 (%)
	January	December	
Total	1,403.8	3,656.0	260.4
Industry	2,087.5	4,936.3	236.5
Agriculture	690.9	1,982.1	286.9
Forestry	661.0	2,090.8	316.3
Construction	2,078.7	6,719.1	323.2
Transport	1,821.3	5,919.1	325.0
Communication	2,075.9	6,708.1	323.1
Trade, Catering, Material supply and Sales, Procurements	938.8	2,472.7	263.4
Housing and Public utilities, Non-productive types of employment for general public services	1,509.5	4,007.2	265.5
Health care, Physical Culture and Sports, Social Security	926.8	1,856.1	200.3
Education	990.9	2,189.8	221.0
Culture and Art	1,029.5	2,495.0	242.4
Science and Scientific research	1,444.4	4,349.0	301.1
Credit and State insurance	2,242.2	8,490.3	378.7
Authorities (State, Cooperative, Public)	1,361.2	3,801.4	279.3
Other branches	1,349.1	4,466.4	331.1

Source : The State Committee for Forecasting and Statistics

(6) Exchange Rate Trend

The current exchange rate of the Sum against the US Dollar is as shown in Table 2.1.21. The official rate as of January 1997 is Sum 60.65/US\$. On the other hand, the unofficial rate as of January 1997 is Sum 100/US\$, with a gap of 165% between both rates.

Table 2.1.21 Exchange Rates

	(Sums/\$)					
	Mar. 1995	Oct. 1995	Jul. 1996	Oct. 1996	Dec. 1996	Jan. 1997
Official Rate	25.0	34.4	38.0	40.5	56.1	60.6
Black Market	40.0	47.0	51.0	70.0	100.0	100.0

Source : JICA

2.2 Current Status of Transportation

2.2.1 Transportation Situation in Uzbekistan

(1) Passenger Transportation

As shown in Table 2.2.1, passenger traffic by public transportation breaks down as follows: 85% by bus, 14% by urban electrical, 0.5% by railway and 0.1% by air respectively. After independence, passenger traffic has shown a slight decreasing trend for every type of public transport.

The average transport distance per passenger is more than 1,500 km by air, more than 300 km by railway and 10 km by bus as shown in Table 2.2.2 This shows that long distance transport is covered mainly by air, medium distance transport by rail and short distance transport by bus services.

Table 2.2.1 Passenger Traffic by General Transport

	(ml. persons (%))						
Mode	1990	1991	1992	1993	1994	1995	1996
Total	2,865.5 (100.0)	2,870.6 (100.0)	2,758.9 (100.0)	2,866.1 (100.0)	n.a. (100.0)	2,690.6 (100.0)	2,673.4 (100.0)
Rail	14.6 (0.5)	15.6 (0.5)	17.3 (0.6)	18.6 (0.6)	n.a. (n.a.)	14.4 (0.5)	14.0 (0.5)
Bus	2,351.1 (82.1)	2,377.0 (82.8)	2,242.2 (81.3)	2,347.4 (81.9)	n.a. (n.a.)	2,286.9 (85.0)	2,278.6 (85.2)
Air	6.3 (0.2)	6.1 (0.2)	3.0 (0.1)	1.4 (0.1)	n.a. (n.a.)	1.3 (0.1)	1.3 (0.1)
Urban Tram	493.5 (17.2)	471.9 (16.5)	496.4 (18.0)	498.7 (17.4)	n.a. (n.a.)	388.0 (14.4)	379.5 (14.2)

Note : n.a.= not available

Source : The State Committee for Forecasting and Statistics

Table 2.2.2 Average Transportation Distance of 1 Passenger

	(km)						
Mode	1990	1991	1992	1993	1994	1995	1996
Total (*)	14	14	11	9	n.a.	n.a.	n.a.
Rail	267	332	319	311	n.a.	n.a.	n.a.
Bus	9	9	8	7	n.a.	n.a.	n.a.
Air	1,825	1,726	1,414	1,770	n.a.	n.a.	n.a.

Note : excluding Urban Electrical

n.a.= not available

Source : The State Committee for Forecasting and Statistics

Table 2.2.3 Passenger Turnover by General Transport

(bl. passenger/km)

Mode	1990	1991	1992	1993	1994	1995	1996
Total (*)	37.2	37.5	28.7	25.7	n.a.	n.a.	n.a.
Rail	3.9	5.2	5.5	5.8	n.a.	n.a.	n.a.
Bus	20.4	20.6	18.6	17.1	n.a.	n.a.	n.a.
Air	11.5	10.5	4.2	2.5	n.a.	n.a.	n.a.

Note : excluding Urban Electrical, n.a. = not available

Source : The State Committee for Forecasting and Statistics

(2) Cargo Transportation

As shown in Table 2.2.4, cargo traffic by public transport breaks down as follows: 83% by road, 15% by railway and 0.01% by air respectively. After independence, as seen in the passenger traffic, cargo traffic shows also a slight decreasing trend for every mode of public transport.

The average transportation distance per cargo per ton in 1993 was 4,455 km by air, more than 688 km by railway and 13 km by road, as shown in Table 2.2.2. This shows that long distance transportation is covered mainly by air, medium distance transport by rail and short distance transportation by road.

Table 2.2.4 Cargo Traffic by Common Use Transport

(ml. tons (%))

Mode	1990	1991	1992	1993	1994	1995	1996
Total	366.0 (100.0)	371.9 (100.0)	295.2 (100.0)	277.0 (100.0)	269.4 (100.0)	266.7 (100.0)	n.a. (100.0)
Rail	82.9 (22.7)	88.1 (23.7)	63.8 (21.6)	59.8 (21.6)	40.1 (14.9)	46.1 (17.3)	n.a. (n.a.)
Road	283.0 (77.3)	283.8 (76.3)	231.4 (78.4)	217.2 (78.4)	229.3 (85.1)	220.6 (82.7)	n.a. (n.a.)
Air (thou. Ton)	69.8 (0.01)	49.1 (0.01)	22.6 (0.01)	16.8 (0.01)	12.0 (0.01)	10.6 (0.01)	n.a. (n.a.)

Note : n.a. = not available

Source : The State Committee for Forecasting and Statistics

Table 2.2.5 Average Transportation Distance as per 1 ton of Cargo

(km)

Mode	1990	1991	1992	1993	1994	1995	1996
Total (*)	171	210	154	159	n.a.	n.a.	n.a.
Rail	682	848	648	688	n.a.	n.a.	n.a.
Road	21	20	17	13	n.a.	n.a.	n.a.
Air	1,425	1,806	3,105	4,455	n.a.	n.a.	n.a.

Note : including Pipeline

n.a. = not available

Source : The State Committee for Forecasting and Statistics

Table 2.2.6 Cargo Turnover by General Transport

	(bl. ton/km)						
Mode	1990	1991	1992	1993	1994	1995	1996
Total (*)	62.7	76.4	45.5	44.1	n.a.	n.a.	n.a.
Rail	56.5	70.6	41.3	41.1	n.a.	n.a.	n.a.
Road	5.9	5.5	4.0	2.9	n.a.	n.a.	n.a.
Air	93.2	88.7	70.2	74.6	n.a.	n.a.	n.a.

Note : including Pipeline

n.a.= not available

Source : The State Committee for Forecasting and Statistics

(3) Railway Transportation

Railway transportation is managed and operated by the National Railway Company, "Uzbekistan Temir Yullari". The railway system is relatively well-developed, with a total rail net of 3,655 km (double track line : 680 km, electrified line : 489 km). However, it has a competitive edge against road transportation due to the low speed of the trains and the poor obsolete facilities of the railway system.

At present, new connecting lines are being constructed between Guzar-Boisum-Kunkragan (223 km), Navoi-Uchukuduk—Sultanzhidag-Nukus, including improvements of the existing lines (792 km), and the Angeren-Pap stretch (163 km). Electrification of the existing lines is being carried out on three lines with a total length of 226 km, with completion in scheduled 1997. The improvement of a further 4 lines (641 km) is also planned and due to be completed of 2005.

A study for a maintenance shop is being conducted by the Japan International Cooperation Agency, but, a long-term development plan related to the railway transportation system has not yet been prepared. The Government of Uzbekistan wants Tashkent to be a railway transportation center for the Central Asian countries, and a principal cross point for the Trans-Asian Railway between Istanbul and Peking, offering access to the Indian Ocean, Persian Gulf and China.

(4) Road Transportation

The road network in Uzbekistan is relatively well-developed for a Central Asian Country. Most parts of the country are connected by road. The road density is relatively high in the cities.

The total length of the road network in Uzbekistan is about 84,000 km (paved roads : 71,100 km), including 3,243 km of international roads, 18,582 km of state roads and 21,492 km of local roads.

Construction and maintenance is managed by the Uzavoyul, UZ-AVTO-TRANS for domestic cargo transportation and UZ-VNESHAVTO-TRANS, UZ-INTRANS and CETRAL EISHA TRANS for international cargo transportation respectively.

A long-term development plan related to the road network at the national level does not exist. Main roads are gradually being rehabilitated. At present, major roads, including tunnels between Tashkent and Fergana are being constructed, and after completion, road travel time from Tashkent to Fergana Valley is expected to be within about 2 hours.