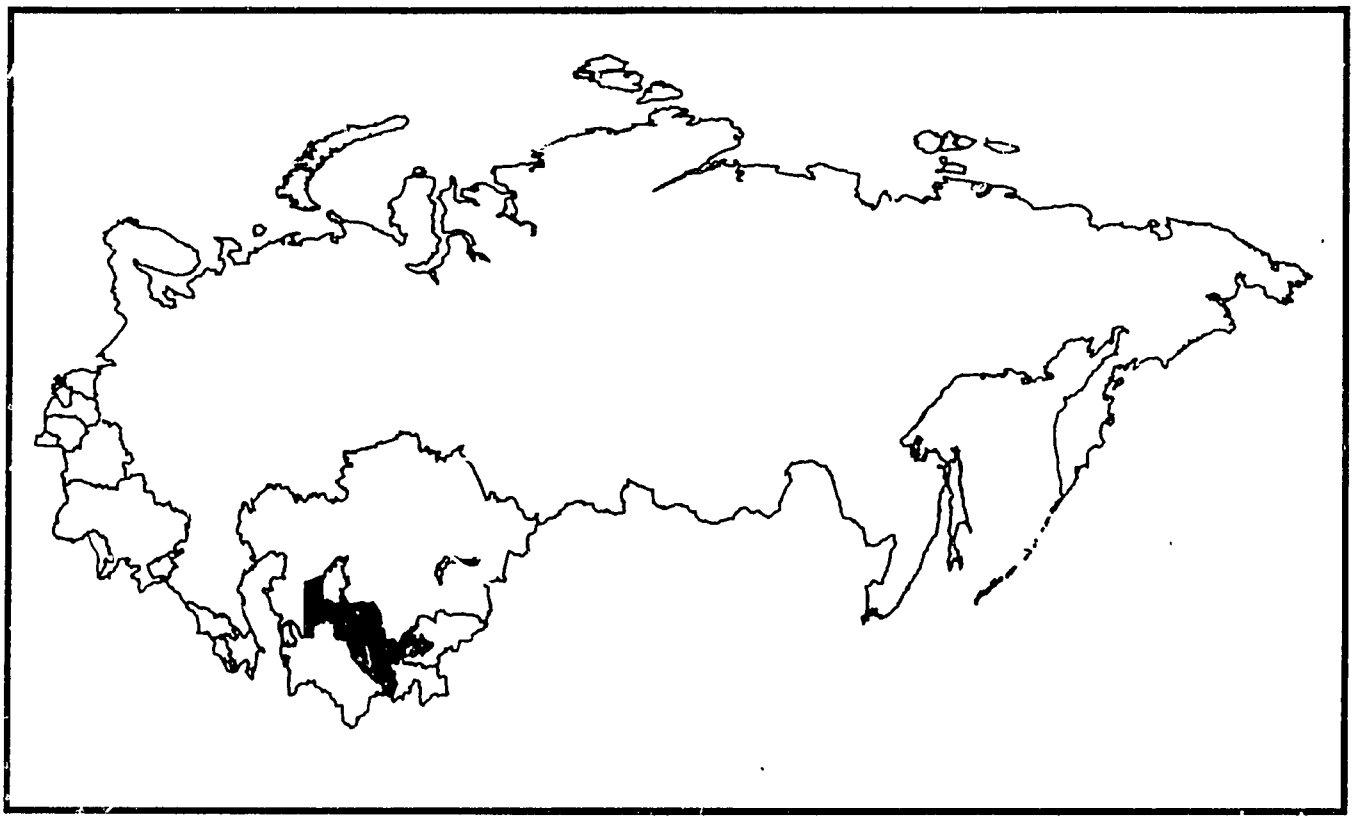
FINAL DRAFT

Uzbekistan

USAID Health Profile

(Selected Data)

April 24, 1992



Center for International Health Information/ISTI
USAID Health Information System
1601 N. Kent Street
Suite 1001
Arlington, Virginia 22209
(703) 524-5225

The Center for International Health Information, a division of ISTI, operates the USAID Health Information System under the Child Survival Action Program – Support project, #936-5951.13, contract number DPE 5951-Z-00-8004-00 with the Office of Health, Bureau for Research and Development, U.S. Agency for International Development.

The Center for International Health Information
Roy I. Miller, Ph.D.
1601 N. Kent Street, Suite 1001
Arlington, VA 22209
(703) 524-5225
FAX (703) 243-4669

Uzbekistan
USAID Health Profile
(Selected Data)
April 24, 1992

This is one of a series of country profiles produced by the Center for International Health Information (CIHI), a USAID resource managed by the International Science and Technology Institute (ISTI). U.S. Bureau of the Census (BUCEN) made available its extensive demographic data files. Each profile includes summary descriptions, tables and graphs about the demographic and health conditions in republics of the Commonwealth of Independent States (C.I.S.).

The series of profiles is intended to provide current and trend data in a concise format to project design teams, evaluation teams, technical consultants, and other interested individuals and organizations. As summary documents, they do not provide comprehensive descriptions of either the demographic profile or health sector of the republics. Furthermore, the incipient nature of the C.I.S. necessitates the reporting of information from the era of the former U.S.S.R. While dated in some instances, policy changes in the U.S.S.R. made in the latter part of the 1980's, including the introduction of new forms of health insurance and arrangements to encourage private health providers, may well provide the foundation for the shape of the health sector in the coming decade.

This first series of C.I.S. profiles was compiled rapidly with readily available data. Occasionally, where the background documentation of the source material was sketchy and time prevented further verification, the data was included anyway in hopes that the mere inclusion of the data would stimulate further clarification by the various users of the profiles. On behalf of USAID, CIHI is planning to update the C.I.S. profiles as rapidly as new data becomes available and in response to commentary on the data in the current profiles. Accordingly, the authors of the profiles request that any more recent or more accurate data be forwarded to CIHI at the address below or to CIHI care of the USAID, Bureau of Research & Development, Office of Health, SA 18, Room 1200, Washington, D.C. 20523-1817.

Requests for additional information regarding C.I.S. republic profiles, health and population profiles for selected developing countries, and other reports prepared by CIHI should be transmitted directly to CIHI or through USAID as described above.

CENTER FOR INTERNATIONAL HEALTH INFORMATION/ISTI
USAID Health Information System
1601 North Kent Street, Suite 1001
Arlington, Virginia 22209
Phone: (703) 524-5225

Uzbekistan
USAID Health Profile

CONTENTS

INTRODUCTION: An Overview of the C.I.S.

Of the 15 republics that once made up the Union of Soviet Socialist Republics, 11 joined together and formed the Commonwealth of Independent States (C.I.S.). The Republic of Georgia and the Baltic States -- Latvia, Lithuania and Estonia -- chose to remain outside the commonwealth and became independent countries. While this configuration has remained constant for many months, it is possible that the current commonwealth arrangement will be a transitional step to total separation.

While situations vary greatly from republic to republic, the recent political, economic and social transitions have created several challenges which are common throughout the entire C.I.S. The republics are moving from a totalitarian government and centrally controlled economy to a more democratic system based on free market principles. As a result, prices have risen rapidly and now far exceed individual and family incomes. The purchasing power of the population has fallen and it has become increasingly difficult to purchase essential goods.

The availability of goods has also been affected by the transition. While the former USSR achieved status as a large, industrialized nation, the structure of its economic network divided labor among republics and regions, so each republic had its own sector of emphasis. However, this specialized structure rendered republics dependent on each other and made self-sufficiency nearly impossible. Now that the republics have declared independence within the C.I.S., ties among republics have been interrupted and production, distribution and trade systems have broken down. Consequently, production capabilities and supplies of numerous essential goods in each republic have been threatened.

The combination of rising prices and a breakdown in trade and production has resulted in a shortage of even the most basic commodities. Food supplies have been particularly affected and, consequently, people are reducing their consumption. This trend further jeopardizes the already fragile health status of much of the C.I.S. population, as described below.

In the former USSR, selected population groups within each republic received subsidies from the national government. Due to the economic and social stresses of the transition, the number of people dependent on this assistance has increased. However, this increased demand for assistance comes at a time when public finance is stretched to its limit and new tax and revenue raising systems are not yet established. In addition, minimum wage is currently the criteria used to determine who should receive government support. Minimum wage, however, has not kept pace with rapidly rising prices and this criteria no longer accurately reflects who is actually in need of assistance. Likewise, new mechanisms must be created to respond to new problems: the dramatic increase of unemployment and destitution in the C.I.S.

Health services are threatened by the lack of hard currency and the breakdown of intra-republic trading. Without these two elements, supplies of essential drugs, vaccines and supplies are rapidly decreasing. While vaccination coverage rates have been relatively high in many republics, depletion of vaccine stocks has been particularly extensive and the potential exists for epidemics of infectious childhood diseases. Vaccine production has been hampered by inadequate, old facilities, shortages of specimens, and insufficient, outdated equipment. For the same reasons, essential drugs and medical supplies are limited and may soon be depleted.

The population of the C.I.S. receives little information on family planning issues. Limited availability and substandard quality of contraceptives have resulted in a high rate of abortion. The breakdown of intra-republic trade and trade with countries outside the C.I.S. has intensified the shortage of contraceptives.

INTRODUCTION (continued)

While severe hunger has been averted, the nutritional well-being of the C.I.S. population may be threatened. Rising food prices, little variety in available food and perceived scarcity all contribute to poor nutrition. Improper nutrition increases susceptibility to infections and anemia is common among pregnant women.

The state of the environment has a major impact on the health of the population. In many areas of the C.I.S., environmental contamination by chemical and radioactive pollutants is believed to be harming people's health and causing a variety of chronic conditions and birth defects.

While the challenges faced by the C.I.S. republics are similar in some aspects to those of other countries where international donor organizations work, their problems cannot be compared to those of developing countries. The republics present a unique situation: They have many capabilities but lack the necessary means to implement them. Many republics have access to modern, nationally developed technologies, but their facilities are old and unacceptable for production, the distribution and trade systems are disrupted, and lack of funding often renders continued production impossible.

As political reforms and economic privatization proceed, the nation's most vulnerable groups -- primarily women, children, aging adults and people with disabilities -- need protection. The basic needs of these groups must be met in order to avoid unnecessary human suffering and further social upheaval.

An Overview of the Central Asian Republics

In June 1990, the five Central Asian Republics (Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, and Kyrgyzstan) signed an agreement of mutual cooperation. Totaling approximately 4 million square kilometers, the Central Asian Republics comprised about 20 percent of the former USSR. The Central Asian Republics share a common Moslem identity. They spoke as a unit when the Central Asian Republics announced they would join the new Commonwealth of Independent States in December 1991.

A region of semi-arid and desert lands, approximately 11 percent of the Central Asian Republics' land is arable. Nonetheless, 40 percent of output in the region comes from agriculture, as compared to the former USSR's average agricultural output of 20 percent. One unexpected result of the Central Asian Republics being located far from Moscow's central control is that the private sector in agriculture is relatively strong. The Central Asian Republics are also resource rich, producing approximately half of the former USSR's output of oil and natural gas.

Within the Central Asian Republics, distribution of resources is unequal, providing incentive for economic integration among the republics. Kazakhstan, Turkmenistan and Uzbekistan are resource rich but their access to water sources is limited, whereas Tajikistan and Kyrgyzstan are relatively poor in resources, yet have the headwaters of major rivers within their borders.

Water scarcity and pollution may restrict growth of the Central Asian Republics economies. In addition, water rights and land issues contribute greatly to ethnic tension.

Given the former USSR strategy of economic specialization at the republic level, few of the now independent states have an adequately diversified economic base. As a result of this strategy, the Central Asian Republics' economies are heavily dependent on trade. Until new trade agreements are reached and commodities begin to flow freely, the Central Asian Republics will remain extremely vulnerable to economic and related political shocks.

Moreover, there is a risk that assistance strategies, designed by donor countries focusing on the European Republics, will overlook the unique ethnic, religious and geographic characteristics of the five Central Asian Republics.

UZBEKISTAN

Capital: Tashkent

President: Islam Karimov **Prime Minister: Abdulhakim Mutalov**

TERRITORY

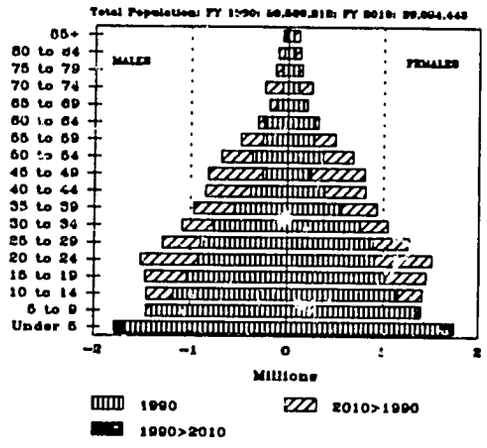
Size: 447,000 square km, mostly desert region
Percent of former USSR[1]: 2.0%

Uzbekistan is bordered by Kirgyzstan, Kazakhstan, Turkmenistan, Afghanistan, and the Caspian Sea.

POPULATION

Population: 20.3 million (1990)
Percent of former USSR[1]: 7%
In 1989 in Uzbekistan there were 9,823,000 males and 10,082,000 females. There were 974 males for every 1,000 females.[2]

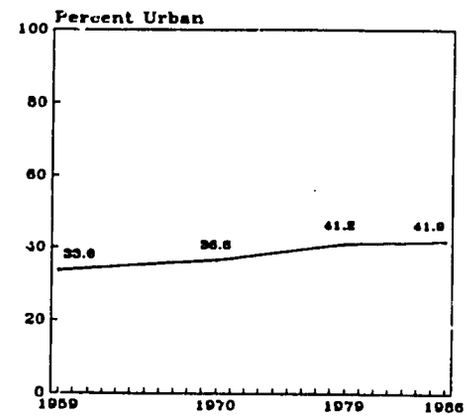
Figure 1:
Current and Projected Population by Age and Gender in Uzbekistan: 1990-2010



Level of urbanization

The proportion of people in Uzbekistan living in urban areas increased nearly 10 percent over the past thirty years.[3] Still, in 1989 only 8,111,000 of the 19,905,000 people in Uzbekistan lived in urban areas, less than 50 percent.[2]

Figure 2:
Urbanization in Uzbekistan



Population by nationalities

Ethnic Uzbek make up 71.4 percent of the republic's population; while 8.3 percent are Russian. Over the past ten years, the Uzbek population grew at a rate of 2.5 percent annually, while the Russian population decreased by the same amount.[1]

Nationalities in Uzbekistan[2] (1989)

Total	19,810,000
Republic Nationalities	
Uzbek	14,142,000
Russian	1,653,000
Ukrainian	153,000
Byelarusian	29,000
Kazakh	808,000
Georgian	5,000
Azerbaijani	44,000
Lithuanian	2,000
Moldovan	6,000
Latvian	1,000
Kyrgyz	175,000
Tajik	934,000
Armenian	51,000
Turkmen	122,000
Estonian	1,000
Other*	769,000
Autonomous Republic Nationalities	
Tartars	468,000
Dagestanis	3,000
Chechen-Ingush	35,000
Karakalpaks	412,000

* includes Germans, Jews and others

Language fluency

Approximately 33.4 percent of the population of Uzbekistan speaks Russian fluently, while 75.4 percent speak Uzbek. Only 4.6 percent of ethnic Russians living in Uzbekistan are fluent in Uzbek.[1]

ECONOMIC OVERVIEW

The economy of Uzbekistan is a relatively undeveloped, agrarian economy, which, because of its extensive integration into the former USSR, is a relatively open and highly vulnerable to external shocks. Uzbekistan is heavily dependent on trade, and the interruption of trade ties is hurting the economy.[6] Uzbekistan's president is committed to reform of the economy. However, his preference is to avoid shock therapy, in order to reduce the trauma on the large percentage of Uzbeks who are already living below the poverty line. His emphasis is to be on a step-by-step basis, with an emphasis on privatization and leasing.[4]

The main industry in Uzbekistan is cotton growing. Cotton is an important cash crop, and the Soviet Union encouraged cotton cultivation in the Central Asian Republics as a means of earning valuable hard currency. Uzbekistan produces two thirds of the cotton grown in Central Asian Republics, almost an equal amount as that produced in the entire United States. Cotton production accounts for more than 65 percent of the republic's gross output, uses up 60 percent of its resources, and employs 40 percent of the workforce. More than 70 percent of arable land in Uzbekistan is devoted to cultivation of cotton.[4]

A secondary resource of Uzbekistan's is natural gas. This republic produced 11 percent of the natural gas of the former Soviet Union.

Production

Over the last twenty years, Uzbekistan's G.N.P. ranged from 2.4 percent to 5.5 percent of the total for the former USSR. Primary areas of production are agriculture and construction.[1]:

Oil, Gas and Coal Production in Uzbekistan[5]

	Oil*	Gas**	Coal
1970	1.8	29.9	n/a
1975	1.4	34.7	n/a
1980	1.3	32.5	n/a
1985	2.0	32.2	n/a
1986	2.2	36.0	n/a
1987	2.3	37.1	n/a
1988	2.4	37.2	n/a
1989	2.7	38.3	n/a

* Crude oil production, including gas condensate, in million metric tons

** Natural gas production, in billion cubic meters

Uzbekistan produced 38.3 billion cubic meters of natural gas in 1989, and remains somewhat self-sufficient in energy.[1]

INCOME OVERVIEW

In 1989, 44 percent of Uzbekistan population earned less than 75 rubles, which was well below the poverty line for the former USSR. 46 percent earned between 75 to 150 rubles, and only 11 percent earned over 200 rubles. Per capita income levels in Uzbekistan average only 62 percent of the per capita income average for the USSR. Russia, in comparison, averages 110 percent of the USSR average.[6]

EMPLOYMENT OVERVIEW

Approximately 5.08 million people were employed in Uzbekistan in 1989. This total can be distributed as follows[7]:

Employment by Branch (1989)	
Industry	1,032,000
Agriculture*	858,000
Transportation	369,000
Communications	53,000
Construction	578,000
Public service**	648,000
Social security***	401,000
Education	764,000
Culture & art	84,000
Science & services	
Credit & state	98,000
insurance	27,000
Administration	109,000
Other	67,000

* includes employment on state farms and in forestry, does not include collective (self-financing farms

** includes employment in trade, public dining, material technical supply and procurement, housing and municipal economy

*** includes employment in health, physical, cultural and social security

HEALTH OVERVIEW

Total population[1]:	20.3 million	1990
Crude birth rate[9]:	33.6 births per 1,000 population	1990
Crude death rate[9]:	6.1 deaths per 1,000 population	1990
Infant mortality rate[10]:	45.9 deaths per 1,000 live births	1987
Maternal mortality ratio[11]:	42.8 deaths per 100,000 live births	1989

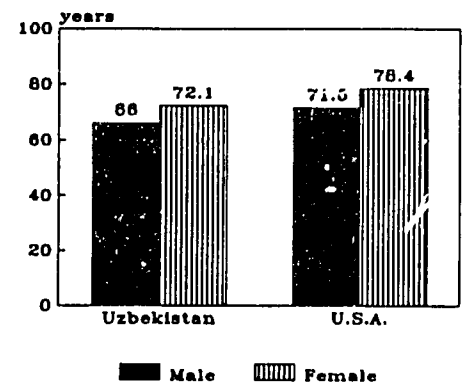
Uzbekistan exhibits morbidity and mortality patterns characteristic of both lesser developed and more developed countries. There is a high prevalence of communicable disease, together with a marked prevalence of degenerative, circulatory and cerebral vascular disease.

Hospitals in Uzbekistan are generally old, with outdated equipment, and usually not standardized. Sanitation is poor, with few toilets and no provision for waste-water disposal. The BCG vaccine unit of the Ministry of Health in Tashkent is no longer operational because of shortages of manpower, funding and equipment. Tuberculosis is increasing, in part because of a lack of BCG vaccine, and Hepatitis A and B are increasing also.[8]

Life expectancy

Life expectancy at birth in 1989 was 66.0 years for males and 72.1 years for females, compared to 71.5 and 78.4 years for males and females, respectively in the United States in 1987.[12]

Figure 3:
1989 Life Expectancy at Birth:
Uzbekistan Compared to U.S.A.*



*U.S.A. Data is for 1987

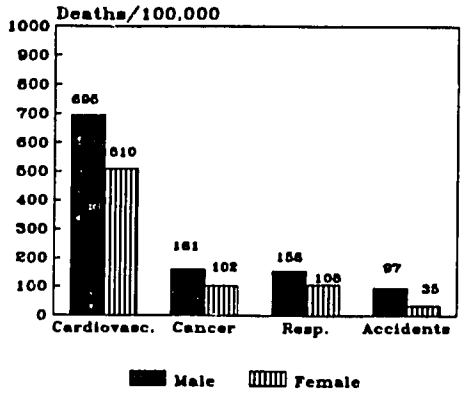
Mortality rates (age standardized)

In general, since the early 1970s, age standardized mortality rates in all of the former Soviet republics have followed the trends typical for the former USSR. Mortality rates generally worsened for more than a decade before steady improvement began in 1985-86, and by the late 1980s, Uzbekistan had mortality levels equal to the All-Union level.[13]

Causes of death

In 1988 the death rate was 1,300 per 100,000 population for males and 895 per 100,000 for females. Cardiovascular disease was the most common cause of death, followed by cancer, respiratory diseases, and accidents.[11]

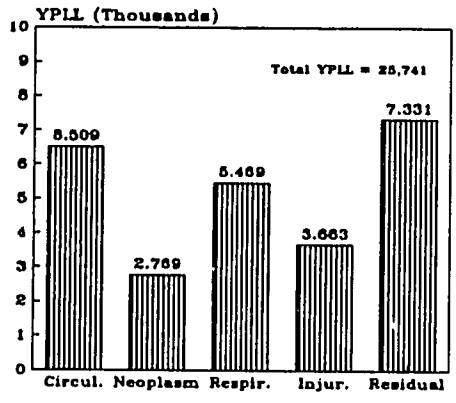
Figure 4:
Mortality Rates by Cause of Death in Uzbekistan



Years of potential life lost by cause of death (YPLL)

Each year in the Republic of Uzbekistan, males lose a total of 25,741 years of potential life per 100,000 population due to various causes of death. Circulatory conditions cause the greatest loss, causing 6,509 YPLL. Residual (other) causes account for 7,330 YPLL, respiratory conditions total 5,469 YPLL, injuries 3,663 YPLL, and neoplasms 2,769 YPLL.[14]

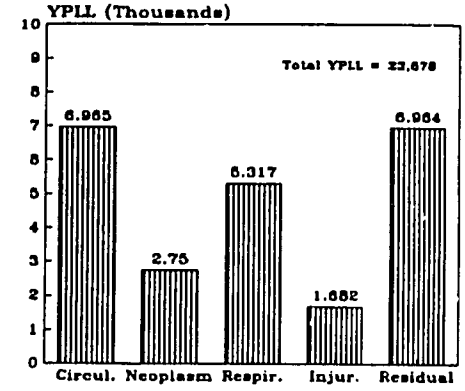
Figure 5:
Years of Potential Life Lost by Cause of Death in Uzbek Males



Figures are per 100,000 population

Females in Uzbekistan annually lose a total of 23,678 years of potential life per 100,000 population due to various causes of death. Circulatory conditions are the most common, causing 6,965 YPLL, residual conditions account for 6,965 YPLL, respiratory conditions total 5,317 YPLL, neoplasms 2,750 YPLL, and injuries 1,682 YPLL.[14]

Figure 6:
Years of Potential Life Lost by Cause of Death in Uzbek Females



Figures are per 100,000 population

Infectious disease

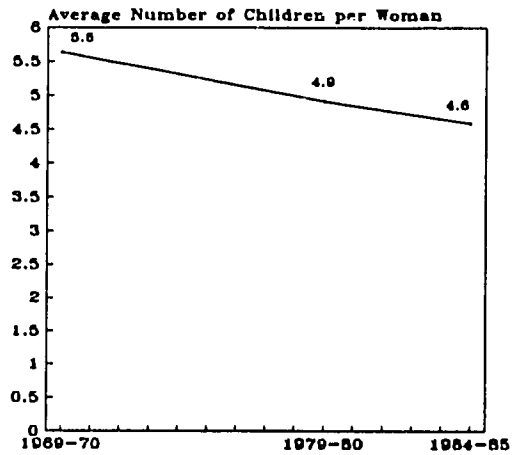
Diarrheal diseases, hepatitis, and tuberculosis are common in Uzbekistan, and remain major health problems. With 20 percent of homes in Uzbekistan still having no access to sewer systems or running water, water-borne diseases are a critical problem, especially for child health. The incidence of water-borne diseases follows a seasonal cycle, with many children being stricken in the warm summer months. Dehydration is a major problem for the children, and although ORS is prescribed, the supplies are not guaranteed.[6] The potential for water contamination is very high, for even most of the infectious disease hospitals in Uzbekistan have no plumbing at all; and if the construction of water supply systems continues at today's rate, the percentage of Uzbeks having access to potable drinking water will drop from 50 to 32 percent by the end of the century.[4]

Fertility rate

The total fertility rate (TFR) in Uzbekistan is declining. In 1969-70, the average number of

children a woman would give birth to during her lifetime was 5.9. In 1979-80 the number decreased significantly to 4.9 per woman, and in 1984-85 the TFR was 4.6 children per woman.[3] The birth intervals are short, with over 80 percent of women giving birth less than two years apart. Fertility rates tend to be lower in cities, with an average TFR of 2.3 in Tashkent in 1990.[8] To account for underregistration of births, the Bureau of the Census (BUCEN) adjusted the total fertility rates for 1990 to 4.1 children per woman. The projected TFR for 2010 is 2.4 children per woman.[17]

Figure 7:
Total Fertility Rate in Uzbekistan



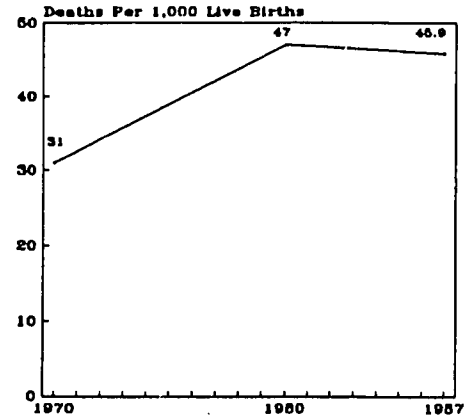
Maternal mortality

The maternal mortality ratio for 1989 was 42.8 deaths per 100,000 live births.[11] According to a UNICEF site report, recent maternal mortality rate estimates are as high as 73 deaths per 100,000 live births. Maternal anaemia is very high, with approximately 70 percent of pregnant women having anaemia, the percentage in rural areas being even higher. The prevalence of anaemia can be partly attributed to poor diet and diarrhea and infections resulting from a lack of potable water and poor sanitation practices.[8]

Infant mortality

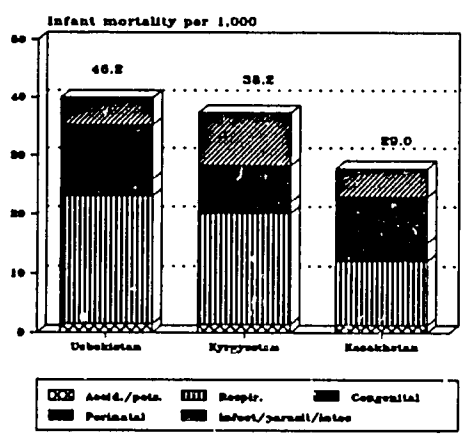
Infant mortality in Uzbekistan had been rising, but appears to be falling again. In 1970 it was 31.0 per 1,000 live births, in 1980 it reached 47.0 per 1,000 live births, and in 1987 it was 45.9 deaths per 1,000 live births, the third highest in the former USSR.[10] According to a different source, infant mortality further decreased in 1990 to 34.6 per 1,000 live births. 1991 preliminary data shows a slight increase to 35.5 per 1,000.[8]

Figure 8:
Infant Mortality Rate in Uzbekistan



Leading causes of infant death are acute respiratory infections, perinatal conditions, and diarrheal disease. In 1986, of the 46.1 infant deaths (per 1,000 live births), 21.7 were respiratory, 9.6 were infectious, parasitic and intestinal disease, 2.8 were from congenital anomalies, 9.2 were perinatal conditions, and 1.5 were caused by accidents or poisonings.[13]

Figure 9:
Infant Mortality Rates (1988) by Cause
In Uzbekistan, Kyrgyzstan & Kazakhstan



Infant Mortality Rates (per one thousand live births)[14] According to Place of Residence (1975-86) Uzbekistan vs. Former USSR

	1975		1980		1986	
	Uzbek.	USSR	Uzbek.	USSR	Uzbek.	USSR
Urban	53.6	25.8	44.4	23.5	40.6	21.1
Rural	53.8	37.0	48.1	32.5	48.8	31.4

The official Soviet statistics for infant mortality rates understate the actual levels by approximately 50 percent, according to BUCEN estimates. The definition of infant mortality in the former USSR varied significantly from the standard international definition from WHO. BUCEN projects infant mortality for 1990 to be 64 per 1,000 live births, and a projected decrease by 2010 to 27 deaths per 1,000 live births.[17]

Breastfeeding, family planning and contraception

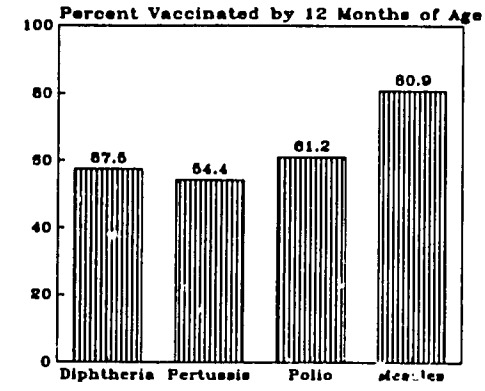
80 percent of Uzbek women breastfeed their children. However, the duration of breastfeeding is, on the average, only four months. In many cases milk products or porridge are introduced after two months. Women had relied on breastfeeding as a means to prevent conception in the past. With the shortened interval of breastfeeding, the contribution to better birth spacing made by breastfeeding has been lost and other contraceptive practices have not been adopted.[8]

Modern methods of contraception were formally introduced only in 1990, and then only in the urban areas. The main method being promoted is the IUD. The number of women using contraceptives is reported to have increased from 4,000 in 1991 to 62,000 in 1992. There is a high failure rate due to ineffective IUDs which are imported from various sources. The total abortion rate for Uzbekistan was 1.5 abortions per woman of childbearing age. Mini-abortions, performed under anesthesia until the seventh week of pregnancy, have been introduced in recent years. Urban women tend to have more abortions, approximately 5 in a lifetime.[8]

Vaccination coverage

By 1989, vaccination coverage of infants up to 12 months in Uzbekistan had reached the following reported levels: polio, 61.2 percent; diphtheria, 57.5 percent; pertussis, 54.4 percent. Vaccination coverage against measles in children by 24 months of age was 80.9 percent.[15]

Figure 10:
1989 Vaccination Coverage
in Uzbek Infants



*Children up to 2 yr for measles vaccine

Vaccination coverage for children has been high in the past, but it may become very difficult to maintain high levels of coverage without an assured supply of vaccine. Measles vaccine has not been available since late 1991, when production was cut back at the single plant in the former USSR. There is no assured supply of measles vaccine. Currently, a measles epidemic is in progress in Kashkadar Oblast, an epidemic brought about by the shortage of viable vaccine. In addition to problems in vaccine supply, there are serious problems with the cold chain in Uzbekistan. These are potentially easy to rectify by obtaining appropriate refrigeration equipment.[16]

Food and Nutrition

There is not a current food shortage in Uzbekistan, but the future quality of diet is uncertain. Despite the fact that Uzbekistan was a major exporter of fruit and vegetables to the former USSR, prices have jumped 2 to 10 times in the few months preceding February, 1992, and produce is now seen as a luxury. There is a gradual shift to cultivation of food crops on land previously used for cotton. Whereas, only 224,000 hectares were formerly in private farms, land transfers have been occurring

over the past two years, and by the end of 1992 the plan is to have 714,000 hectares under private cultivation.[8] Grain will still need to be imported to meet the needs of humans and livestock.

Environmental factors in health

Cotton cultivation is extremely resource and time intensive, and has detrimental effects on the environment when the fields are not allowed to lie fallow periodically. In Uzbekistan, where the fields are constantly utilized, the soil has become depleted. To combat the decreasing yields, the farmers are using more fertilizers and pesticides, which have grave implications for the water table. The runoff from the cotton fields is increasingly poisonous to the environment, for the pesticide residue, and nitrite levels are extremely high. The water often collects in ditches or small ponds, where it dries in the sun, and the chemical pollutants become airborne.

The major supplies of water for Uzbekistan are the Amu and Syr Dara and Bosu rivers. The Aral sea, located partly in Uzbekistan territory is the 4th largest inland body of water. As a result of over utilization of the Amu-Darya river for irrigation, the Aral, once an extremely fertile and productive sea, is dying. The banks of the Aral have receded by 80-100 km, leaving salt flats. Estimates of damage range as high as 3 million hectares of land ruined by the receding sea. Winds lift the salts and minerals from the exposed sea bed, and increase land and air pollution.[8] Many of the fishermen are unemployed, for the increasingly salinized Aral now yields only 4 of its original 24 species of fish.[4] Respiratory complications are increasing in villages near the Aral, especially in the Karakalpak autonomous region, where some 45 percent of citizens are said to be affected. In the summer months the mineralization of the water, coupled with poor treatment of sewage and a high water table, enables sub-surface water from open wells to spread diseases.[8]

Sources

1. U.S. Information Agency. "Uzbekistan: Fact Sheet."
2. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Supplement to USA/USSR: Facts and Figures." October 1991.
3. Joint Economic Committee. Congress of the United States. "Gorbachev's Economic Plans." Vol. 1. November 23, 1987.
4. The U.S. Center for Soviet-American Relations. "Cleaning UP the Environment in the Soviet Union and Eastern Europe." USCSAR Reports 1.4 (Fall 1991).
5. U.S. Bureau of the Census. U.S. Department of Commerce. "USA/USSR: Facts and Figures." 1988-89.
6. Landy, Laurie. "Official Donor Aid to the Former Soviet Union -- The Central Asian Republics (CAR): Economic Background and Initial Programming Thoughts."
7. Heleniak, Tim. "Employment by Branch for the USSR and Republics: 1960 to 1989." Center for International Research. U.S. Bureau of the Census. May 1990.
8. UNICEF/WHO Collaborative Mission with participation of UNFPA, UNDP and WFP. "Republic of Uzbekistan." March 1992.
9. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. 1990.
10. Rowland, Diane, and Alexandre V. Telyukov. "Soviet Health Care from Two Perspectives." Health Affairs. Fall 1991:71-86.
11. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Commonwealth of Independent States: Health Status." January 1992.
12. Kingkade, W. Ward. "Health." Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. August 1991.
13. Mezentseva, Elena, and Natalia Rimachevskaya. "The Soviet Country Profile: Health of the U.S.S.R. Population in the 70s and 80s-An Approach to a Comprehensive Analysis." Social Science and Medicine 31.8 (1990):867-877.
14. Kingkade, W. Ward. "Regional Variations in Soviet Mortality by Cause of Death: An Analysis of Years of Potential Life Lost." Center for International Research. U.S. Bureau of the Census. Department of Commerce. August 1991.
15. World Health Organization/Expanded Program on Immunization. February 1991.
16. "Draft reporting cable from Tashkent to AIDW." via FAX from Robert Steinglass and David Bassett, 5 April 1992.
17. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Uzbekistan: 1989-2050 using Adjusted Population, Fertility, Mortality and Migration." April 1992.

Figures

1. U.S. Bureau of the Census. March 1992.
2. Center for International Research. U.S. Bureau of the Census.
3. Center for International Research. U.S. Bureau of the Census.
4. Center for International Research. U.S. Bureau of the Census.
5. Center for International Research. U.S. Bureau of the Census.
6. Center for International Research. U.S. Bureau of the Census.
7. U.S. Bureau of the Census.
8. Soviet Health Data.
9. Statistical Yearbook 1987. Moscow 1988. Cited in Mezentseva and Rimachevskaya, Soc. Sci. Med. 31(8).
10. Expanded Program on Immunization/World Health Organization.

Data Notes
Indicator Definitions

DEMOGRAPHIC INDICATORS

TOTAL POPULATION: Mid-year estimate of the total number of individuals in a country.

YEARS OF POTENTIAL LIFE LOST: The weighted difference between the number of years of life expectany in absence of all preventable mortality and the number of years lost due to preventable mortality. Since deaths of children result in a greater loss of life span than deaths of adults, the differences in loss of potential life are taken into account by using a type of measure which heavily weights the importance of child death.

LIFE EXPECTANCY AT BIRTH: An estimate of the average number of years a newborn can expect to live. Life expectancy is computed from age-specific death rates for a given year. It should be noted that low life expectancies in developing countries are, in large part, due to high infant mortality.

MORTALITY RATE: Basic cause-specific death rates are usually expressed in deaths per 100,000 because for most causes of deaths the rates of occurrence are so low.

CHILDREN UNDER 1: Mid-year estimate of the total number of children under age one.

INFANT MORTALITY RATE (IMR): The estimated number of deaths in infants (children under age one) in a given year per 1,000 live births in that same year. An IMR may be calculated by direct methods (counting births and deaths) or by indirect methods (applying well-established demographic models).

MATERNAL MORTALITY RATIO: The estimated number of maternal deaths per 100,000 live births where a maternal death is one which occurs when a woman is pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management. Although sometimes referred to as a rate, this measure is a ratio because the unit of the numerator (maternal deaths) is different than that of the denominator (live births). Extremely difficult to measure, maternal mortality can be derived from vital registration systems (usually underestimated), community studies and surveys (requires very large sample sizes) or hospital registration (usually overestimated).

TOTAL FERTILITY RATE: An estimate of the average number of children a woman would bear during her lifetime given current age-specific fertility rates.

VACCINATION COVERAGE RATES

VACCINATION COVERAGE IN CHILDREN: An estimate of the proportion of living children between the ages of 12 and 23 months who have been vaccinated before their first birthday -- three times in the cases of polio and DPT and once for both measles and BCG. Vaccination coverage rates are calculated in two ways. Administrative estimates are based on reports of the number of vaccines administered divided by an estimate of the pool of children eligible for vaccination. Survey estimates are based on sample surveys of children in the target age group and may or may not include children without vaccination cards whose mothers recall that their children had been vaccinated.

Commonwealth of Independent States

801974 (545499) 1 92