

---

---

# Turkmenistan

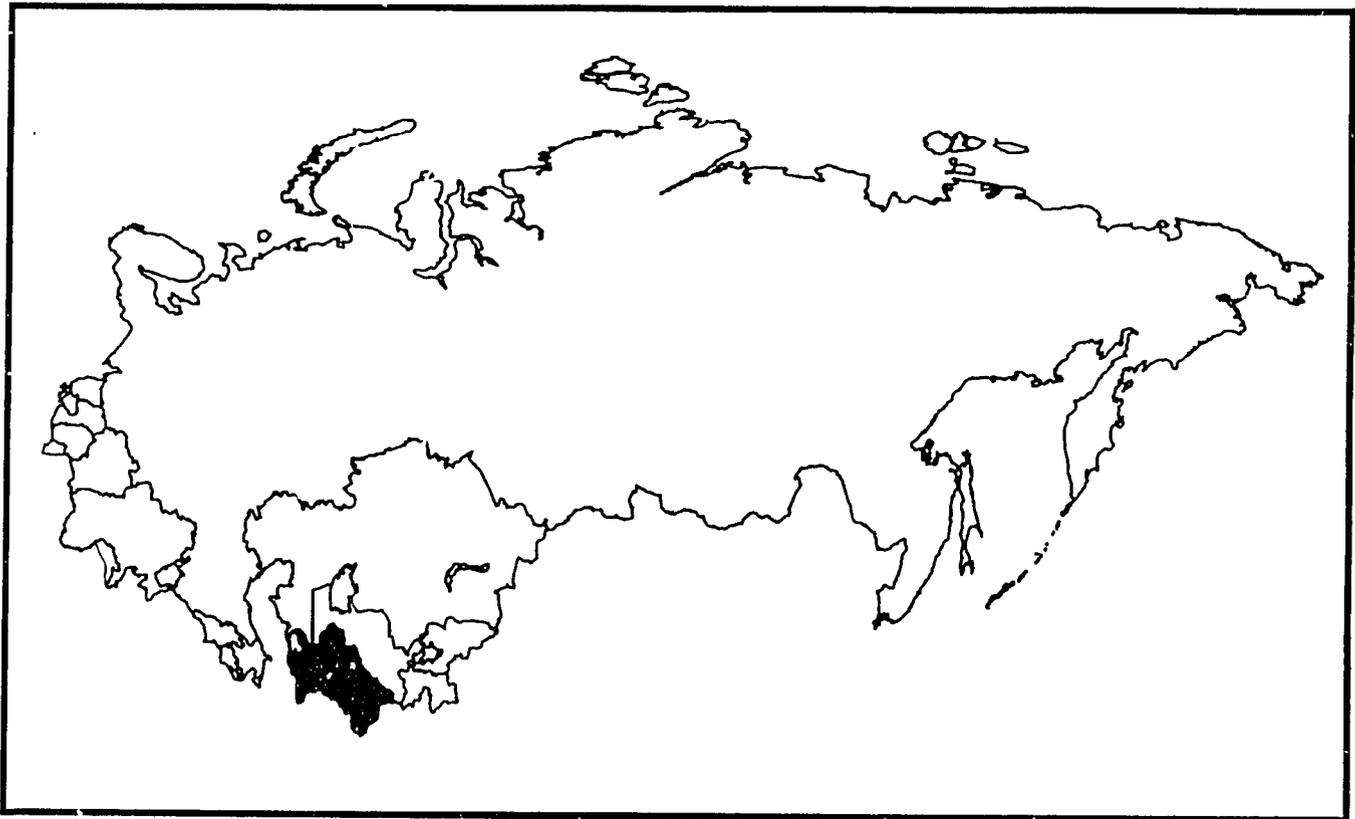
## USAID Health Profile

(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**

**Turkmenistan  
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

# Turkmenistan USAID Health Profile

---

## CONTENTS

	Page
<b>INTRODUCTION</b>	<b>1</b>
<b>I. TERRITORY</b>	<b>4</b>
<b>II. POPULATION</b>	<b>4</b>
Male/female distribution	
Level of urbanization	
Population by nationalities	
Table: Nationalities in Turkmenistan	
Language fluency	
<b>III. ECONOMIC OVERVIEW</b>	<b>5</b>
Production	
Table: Oil, gas and coal production in Turkmenistan	
<b>IV. INCOME OVERVIEW</b>	<b>5</b>
Income distribution	
<b>V. EMPLOYMENT OVERVIEW</b>	<b>6</b>
Employment distribution	
<b>VI. HEALTH OVERVIEW</b>	<b>6</b>
Life expectancy	
Mortality rate	
Causes of death	
Years of potential life lost by cause of death	
Disease profile	
Fertility rate	
Maternal health/mortality	
Infant mortality	
Table: Infant mortality rates	
Breastfeeding, family planning, contraception, and abortion	
Vaccination coverage	
Food and nutrition	
Environmental factors in health	
<b>VII. SOURCES</b>	<b>11</b>
<b>VIII. DATA NOTES</b>	<b>13</b>

## **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. Totalling 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.

# TURKMENISTAN

Capital: Ashkhabad

President: Sapamurad Niyazov

Prime Minister: vacant

## TERRITORY

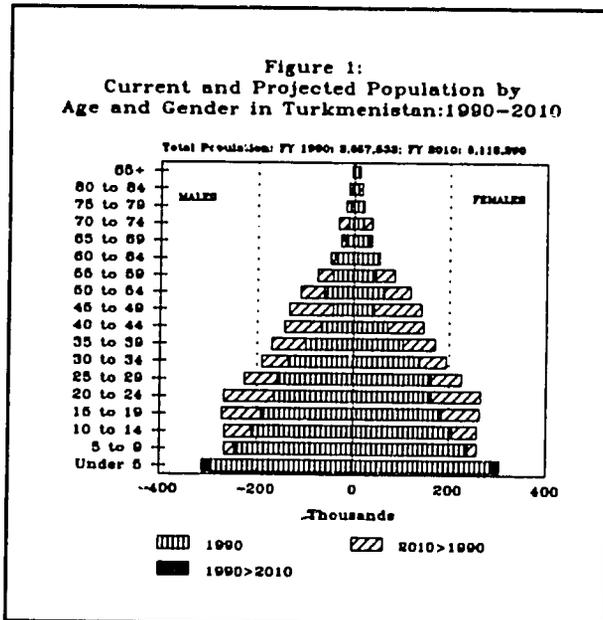
Size<sup>1</sup>: 488,000 square km in area, mostly desert region, with 11,000 sq. km of arable land.  
Percent of former USSR<sup>1</sup>: 2.2

Turkmenistan is bordered by Kazakhstan, Uzbekistan, Afghanistan, and Iran. Turkmenistan borders the Caspian sea, and its main seaport is Krasnovodsk. River transport is possible along the Amu-Darya river. Turkmenistan is rich in mineral resources, and is the third largest producer of natural gas.

## POPULATION

Population<sup>1</sup>: 3.6 million (1990).  
Percent of former USSR<sup>1</sup>: 1.3%

In 1989, there were 1,741,000 males and 1,793,000 females, with 971 males for every 1,000 females.<sup>2</sup>

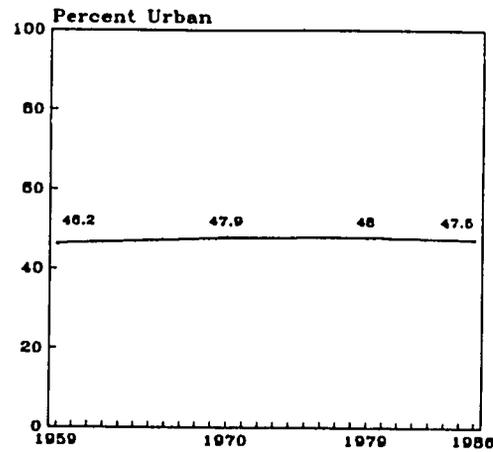


### Level of urbanization

The trend in urbanization in Turkmenistan increased approximately 1.25 percent over the past thirty years.<sup>3</sup> In 1989 less than 50 percent of the Turkmenistan population lived in urban areas, with

1,603,000 living in urban areas and 1,931,000 in rural.<sup>2</sup>

Figure 2:  
Urbanization in Turkmenistan



### Population by nationalities

Ethnic Turkmen make up 72 percent of the republic's population; while 9.5 percent are Russian and 9 percent are Uzbek. Over the past ten years, the Turkmen population grew at a rate of 3.5 percent annually, while the Russian population decreased by 3.1 percent.<sup>1</sup>

Nationalities in Turkmenistan<sup>2</sup>  
(1989)

Total	3,523,000
<b>Republic Nationalities</b>	
Turkmen	2,536,000
Russian	334,000
Ukrainian	36,000
Byelarussian	9,000
Uzbek	317,000
Kazakh	88,000
Georgian	1,000
Azerbaijani	33,000
Lithuanian	0
Moldovan	2,000
Latvians	1,000
Kyrgyz	1,000
Tadjiks	3,000
Armenians	32,000
Estonians	0
Other*	85,000

\* includes Germans and others

## TURKMENISTAN: USAID Health Profile (continued)

Nationalities in Turkmenistan <sup>2</sup> (continued)	
Autonomous Republic Nationalities	
Tartars	39,000
Dagestanis	13,000
Baskirs	5,000

### Language fluency

Approximately 38 percent of the population of Turkmenistan speaks Russian fluently, while 75 percent speak Turkmen. Only 2.5 percent of ethnic Russians living in Turkmenistan are fluent in Turkmen.<sup>1</sup>

### ECONOMIC OVERVIEW

Turkmenistan is a major producer of cotton (1 1/2 million tons/year), along with natural gas (83 billion cubic meters/year) and oil (5 million tons/year). There is also currently a plan to build a factory to make bandages from the cotton for use in the republic, and for export. Phoenix International (USA) expects to have a factory built within 18 months.<sup>4</sup>

In December 1991, the President of Turkmenistan announced his intentions to rapidly privatize industry and transfer enterprises to joint stock companies. This illustrates a commitment to a market economy, but the pace of transition is slow. Turkmenistan is probably the most vulnerable of the C.I.S. republics as it relies heavily on imports for the most basic commodities. Urban dwellers with no land to grow food, and fixed income families, particularly those with many children will be most adversely effected by the rapid price increases.

The government of Turkmenistan has identified the most vulnerable groups: the sick, disabled, unemployed, elderly, and large or poor families, as their first priorities. Establishment of minimum wage, improvement of pensions, and the provision of rations of basic staples at affordable prices provide an important measure of security for the at-risk population.<sup>5</sup>

Oil, Gas and Coal Production in Turkmenistan <sup>5</sup>			
	Oil*	Gas**	Coal
1970	14.5	12.2	n/a
1975	15.6	48.3	n/a
1980	8.0	65.7	n/a
1985	6.0	77.5	n/a
1986	5.9	78.9	n/a
1987	5.8	82.1	n/a
1988	5.7	82.3	n/a
1989	5.8	83.8	n/a

\* Crude oil production, including gas condensate, in million metric tons  
 \*\* Natural gas production, in billion cubic meters

Turkmenistan produced 83.8 billion cubic meters of natural gas in 1989, and remains largely self-sufficient in energy. However, they import approximately 60 percent of their food and consumer goods.<sup>1</sup>

Refineries exist for processing oil, but until now, butane and other precious by-products of gas and oil were not extracted. There is great interest in production and sale of these elements. Inefficiencies exist in processing agricultural goods, with only 8 percent of fruits and vegetables being processed. Much of the produce spoils because processing plants are located too far from the farms.<sup>4</sup>

### INCOME OVERVIEW

A 1989 budget survey revealed that 78.6 percent of collective farm families with one or more children were below the poverty line (at that time 75 rubles per family member), for families with more than five children, 98.6 percent were below the poverty line.<sup>5</sup> As a result of inflation, current monthly wages average 500 rubles. The Government is trying to raise it to 2,000 rubles/month to keep up with price increases.<sup>4</sup>

The retail price index for state and cooperative shops rose by 90 percent in 1990 and preliminary figures for 1991 show increments were three times higher for food and five to six times for non-food. In the same period, wages and pensions rose only by 2.9 times.<sup>5</sup>

## TURKMENISTAN: USAID Health Profile (continued)

### EMPLOYMENT OVERVIEW

Approximately 860,000 people were employed in Turkmenistan in 1989. This figure does not include the substantial number of workers on collective farms. This total can be distributed as follows<sup>7</sup>:

Employment by Branch (1989)	
Industry	132,000
Agriculture*	56,000
Transportation	98,000
Communications	15,000
Construction	141,000
Public services**	126,000
Social security***	73,000
Education	124,000
Culture & art	24,000
Science & services	22,000
Credit & state insurance	5,000
Administration	26,000
Other	17,000

- \* includes employment on state farms and in forestry
- \*\* 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

In Turkmenistan health care has been free, with an emphasis on preventive care. Because of relative isolation from the outside world, the care providers techniques are often outdated by western standards. Shortages of medical equipment (ranging from the basic: gloves, sutures, to the specific: ultra-sound, dental equipment) further compromise the quality of medical care. Drugs and vaccines previously provided by Moscow are now running out, and permanent arrangements for procuring medicines elsewhere have not been made. Limited availability of potable water and a lack of sewage treatment systems contribute to a high prevalence of diarrheal

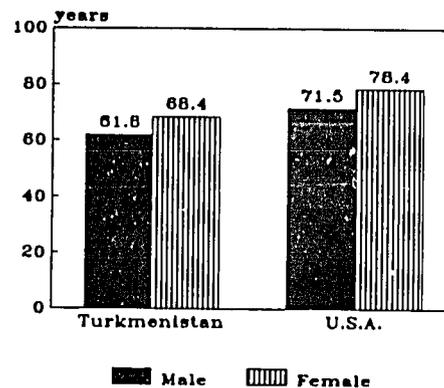
diseases with gastro-enteric disease now a major health problem and frequent cause of death. Tuberculosis and acute respiratory infections (ARI) are widespread in the republic.<sup>5</sup> There is already a shortage of medical supplies and drugs, and anecdotal evidence exists of operations being canceled for lack of anesthesia.<sup>4</sup>

Total population <sup>1</sup> :	3.6 million	1990
Crude birth rate <sup>2</sup> :	34.1 per 1,000 population	1990
Crude death rate <sup>3</sup> :	12.1 per 1,000 population	1990
Infant mortality rate <sup>4</sup> :	47 per 1,000 live births	1991
Maternal mortality ratio <sup>5</sup> :	55.2 per 100,000 live births	1989

#### Life expectancy

Life expectancy at birth in 1989 was 61.8 years for males and 68.4 years for females, compared to 71.5 and 78.4 years for males and females, respectively in the United States in 1987.<sup>10</sup>

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



\*U.S.A. Data is for 1987

#### Mortality rates

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 but, by the late 1980s,

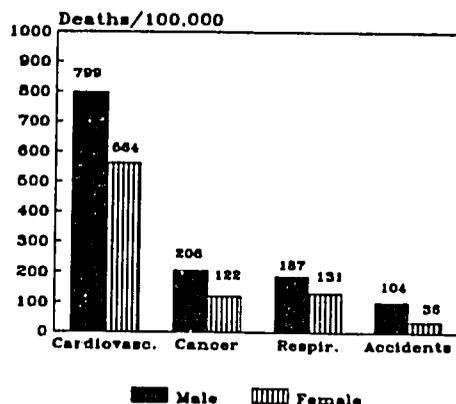
## TURKMENISTAN: USAID Health Profile (continued)

Turkmenistan, as well as Moldova has higher mortality rates than in the 1970s.<sup>11</sup>

### Causes of death

In Turkmenistan in 1988, the death rate was 1,520.9 per 100,000 population for males and 1,018.2 per 100,000 population for females. Cardiovascular disease was the most common, followed by cancer, respiratory diseases, and accidents as causes of death.<sup>9</sup>

Figure 4:  
Mortality Rates by Cause  
of Death in Turkmenistan

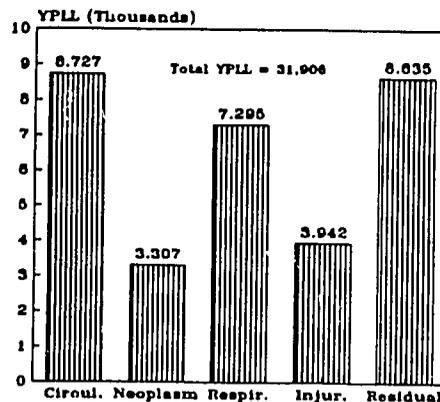


### Years of potential life lost by cause of death (YPLL)

Each year in the Republic of Turkmenistan, males lose a total of 31,906 years of potential life per 100,000, with circulatory conditions causing the greatest loss, causing 8,727 YPLL. Respiratory conditions total 7,295 YPLL, injuries 3,942 YPLL, neoplasms 3,307 YPLL, and residual (other) causes account for 8,635 YPLL.<sup>12</sup>

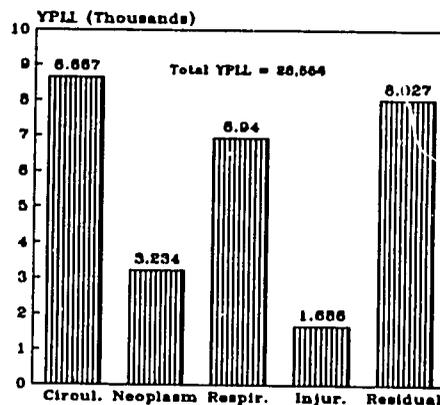
Females in Turkmenistan annually lose a total of 28,556 years of potential life per 100,000 population. Circulatory conditions are the most common, causing 8,667 YPLL, residual conditions account for 8,027 YPLL, respiratory conditions total 6,940 YPLL, neoplasms 3,234 YPLL, and injuries 1,688 YPLL.<sup>12</sup>

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



\* Figures are per 100,000 population

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



\* Figures are per 100,000 population

### Disease profile

The major health problems in Turkmenistan are anaemia, diarrheal diseases, hepatitis, and tuberculosis. With 53 percent of homes in Turkmenistan having no indoor plumbing, running water or central heat, 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

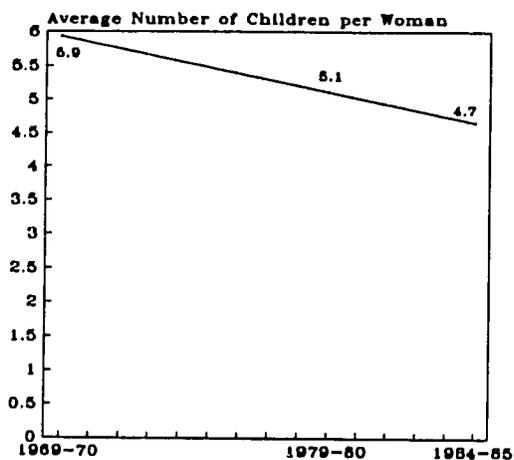
## TURKMENISTAN: USAID Health Profile (continued)

prescribed, as it is not produced in Turkmenistan, the supplies are not guaranteed.<sup>13</sup>

### Fertility rate

The government has historically endorsed a pro-natalist position, and still encourages large families. The total fertility rate (TFR, or the average number of children per woman) in 1969-70 was 5.9. The TFR has fallen steadily, in 1979-80 the TFR was 5.2, and in 1984-85 it dropped to 4.7. According to a recent report, 54 percent of families today have at least 5 children, and "Mother Heroines" (10 or more children) are not unusual. Birth intervals are short, averaging under 1.5 years.<sup>4</sup> To account for underregistration of births, the Bureau of the Census (BUCEN) adjusted the total fertility rates for 1990 to 4.4 children per woman. The projected TFR for 2010 is 2.6 children per woman.<sup>18</sup>

Figure 7:  
Total fertility Rate in Turkmenistan



### Maternal health/mortality

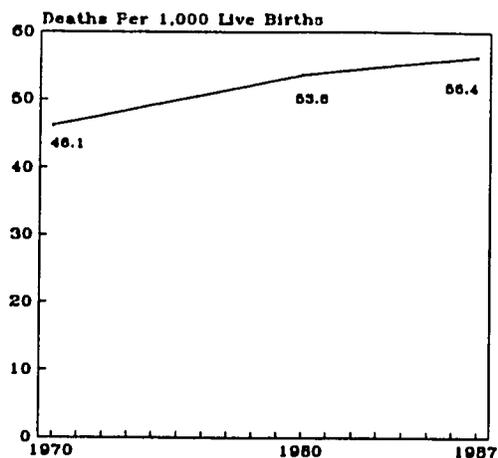
The maternal mortality ratio for 1989 was 55.2 deaths per 100,000 live births. Women's health status is generally poor, with anemia being found in 60 percent of urban pregnant women, and 75-80 percent of rural pregnant women. Women have a heavy workload outside the home, and also bear the majority of household and child rearing duties.<sup>9</sup>

### Infant mortality

Infant mortality in Turkmenistan has been rising.

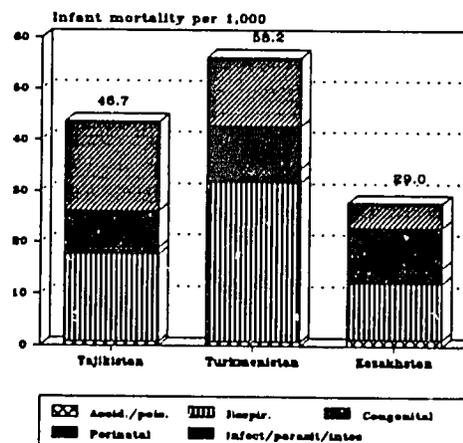
In 1970 it was 46.1 per 1,000 live births, and in 1987 it was 56.4 deaths per 1,000 live births, the highest in the former USSR.<sup>14</sup>

Figure 8:  
Infant Mortality Rate in Turkmenistan



In 1986, of the 58.2 infant deaths (per 1,000 live births), 30.9 were respiratory, 13.4 were infectious, parasitic and intestinal disease, 8.2 were perinatal conditions, 2.9 were from congenital anomalies, and 0.8 were caused by accidents or poisonings.<sup>13</sup> Deaths due to ARI have decreased 41 percent in the past 5 years, while death due to perinatal complications has increased by 75 percent and digestive system causes have increased by 182 percent.<sup>5</sup>

Figure 9:  
Infant Mortality Rates (1986) by Cause  
in Turkmenistan, Tajikistan & Kazakhstan



## TURKMENISTAN: USAID Health Profile (continued)

**Infant Mortality Rates (per one thousand live births)<sup>13</sup>  
According to Place of Residence (1975-86)  
Turkmenistan vs. Former USSR**

	1975		1980		1986	
	Turkmen.	USSR	Turkmen.	USSR	Turkmen.	USSR
Urban	54.5	25.8	57.4	23.5	56.5	21.1
Rural	58.0	37.0	51.0	32.5	59.3	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 adjusted infant mortality for 1990 to 94 per 1,000 live births, and has projected a decrease by 2010 to 40 deaths per 1,000 live births.<sup>18</sup>

### Breastfeeding, family planning and contraception

Breastfeeding is on the decline in Turkmenistan. A survey of recent mothers revealed that 38 percent breastfeed their children exclusively, 45 percent breastfeed partially, and 27 percent do not breastfeed at all. In the past, breastfeeding was an integral part of the tribal culture of Turkmenistan, often lasting into the second year, which effectively limited fertility and helped space births. Hospitals in Turkmenistan do not actively facilitate or encourage breastfeeding.<sup>5</sup>

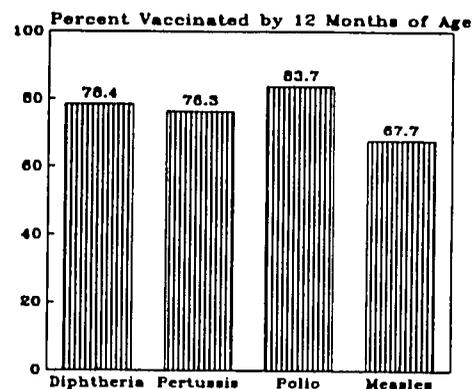
Family planning was introduced in the late 1980s, but only with the proclaimed goal to lengthen birth intervals, not reduce fertility. The current birth interval which was more than three years in the 1960s, has shortened to 1.5 years. The Ministry of Health introduced legislation so women would receive bonuses if they had birth intervals longer than 2 years. The proposal was vetoed by the Parliament, because of prevalent opinion that high population growth is desirable.<sup>5</sup>

Access to modern contraceptive practices is limited, with IUDs and abortion being most used. However, abortion in Turkmenistan is used much less than in the European parts of the former USSR, for after seven weeks, the woman must seek permission from either her husband or her mother-in-law. Sterilization is only performed at the time of a caesarian section.<sup>5</sup>

### Vaccination coverage

By 1989, vaccination coverage of infants up to 12 months of age in Turkmenistan had reached the following reported levels: 83.7 percent were vaccinated against polio, 78.4 percent against diphtheria, and 76.3 percent against pertussis. Vaccination coverage against measles in children by 24 months of age was 67.7 percent.<sup>15</sup>

**Figure 10:  
1989 Vaccination Coverage  
in Turkmen Infants**



\*Children up to 2 yr for measles vaccine

The collapse of intra-republic trade ties and the resulting shortages of vaccines, drugs and equipment, is causing serious consequences for the health delivery system. 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. Recently measles vaccination coverage has dropped below 60 percent due to vaccine shortages. Normal vaccine supplies are not assured for the near future, for even if the suppliers were able to produce sufficient quantities, the price increases will prevent the Ministry of Health from purchasing the amounts needed.<sup>16</sup>

### Food and Nutrition

Turkmenistan's food supply is vulnerable, since it relies on outside procurement for 60 percent of food requirements. Delays in delivery of foodstuffs will put most of the population at risk.<sup>5</sup>

There is currently rationing of meat, rice, flour and sugar in the capital city of Turkmenistan. Every

## TURKMENISTAN: USAID Health Profile (continued)

two to three days meat coupons are issued, while the rest are issued once a month. The effects of the market deregulation are evident, for even the Deputy Minister has a small garden to grow vegetables that are very expensive at the markets. Officials maintain that there is sufficient food for everyone, even though it may only be soup and bread.<sup>4</sup>

### Environmental factors in health

Turkmenistan's drinking water is highly contaminated with runoff from the cotton fields. Water tested in wells in the Tashauz Province showed sulfite levels 50 times higher than normal, chlorides 40 times higher, calcium 17 times higher and magnesium 10 times higher than normal. The drinking of contaminated water is responsible for hundreds of lives lost a year. Vegetables grown near the cotton fields have elevated nitrite levels, and pesticide residue is even showing up in breastmilk.<sup>17</sup> The incidence of viral hepatitis, salmonella, asthma, and gastro-intestinal disease is also on the rise in Turkmenistan. Obviously the Central Asian Republics must work together to find an appropriate solution to balance their water needs and the preservation of the Aral sea. As an important first step, on June 22-23, 1990, the leaders of the Central Asian republics gathered in Alma-Ata to discuss solutions to these pressing problems.<sup>17</sup>

Water is very scarce in this arid republic, and water pollution is severe. Currently cotton irrigation requires 12 cubic meters of water per hectare, whereas with modern international irrigation practices, that could be reduced to 7 cubic meters per hectare. The water, once diverted from the Amu-Darya is sent through unlined pipes, which allows seepage and mineral transfer. 40 percent of the diverted water is lost in arterial channels, and even more on the way from arterial channels. Such irresponsible irrigation practices to support the cotton monoculture have led to salination and mineralization of farm land and water tables, a decreased flow of the republics' principal water source, the Amu-Darya river, and degradation of the Aral Sea.<sup>5</sup>

## TURKMENISTAN: USAID Health Profile (continued)

### Sources

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. U.S. Information Agency. "Turkmenistan: Fact Sheet."</li> <li>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.</li> <li>3. Joint Economic Committee. Congress of the United States. "Gorbachev's Economic Plans." Vol. 1. November 23, 1987.</li> <li>4. Site reports by John W. Hoffman, OFDA consultant, from Ashkabad, Turkmenistan sitrep, Feb 92.</li> <li>5. UNICEF/WHO Collaborative Mission with participation of UNFPA, UNDP and WFP. "Republic of Turkmenistan," February 17-February 21 1992.</li> <li>6. U.S. Bureau of the Census. U.S. Department of Commerce. "USA/USSR: Facts and Figures." 1988-89.</li> <li>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.</li> <li>8. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. 1990.</li> <li>9. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Commonwealth of Independent States: Health Status." January 1992.</li> <li>10. Kingkade, W. Ward. "Health." Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. August 1991.</li> <li>11. 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.</li> <li>12. Kingkade, W. Ward. "Regional Variations in Soviet Mortality by Cause of Death: An</li> </ol> | <ol style="list-style-type: none"> <li>Analysis of Years of Potential Life Lost." Center for International Research. U.S. Bureau of the Census. Department of Commerce. August 1991.</li> <li>13. Landy, Laurie. "Official Donor Aid to the Former Soviet Union -- The Central Asian Republics (CAR): Economic Background and Initial Programming Thoughts."</li> <li>14. Rowland, Diane, and Alexandre V. Telyukov. "Soviet Health Care from Two Perspectives." Health Affairs. Fall 1991:71-86.</li> <li>15. World Health Organization/Expanded Program on Immunization. February 1991.</li> <li>16. "Draft reporting cable from Ashkabad to AIDW" in FAX from Robert Steinglass and David Bassett, 5 April 1992.</li> <li>17. 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).</li> <li>18. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Turkmenistan 1989-2050 using Adjusted Population, Fertility, Mortality, and Migration." April 1992.</li> </ol> <h3 style="text-align: center;">Figures</h3> <ol style="list-style-type: none"> <li>1. U.S. Bureau of the Census. March 1992.</li> <li>2. Center for International Research. U.S. Bureau of the Census.</li> <li>3. Center for International Research. U.S. Bureau of the Census.</li> <li>4. Center for International Research. U.S. Bureau of the Census.</li> <li>5. Center for International Research. U.S. Bureau of the Census.</li> <li>6. Center for International Research. U.S. Bureau of the Census.</li> <li>7. U.S. Bureau of the Census.</li> <li>8. Soviet Health Data.</li> </ol> |
|---|---|

## TURKMENISTAN: USAID Health Profile (continued)

### Figures (continued)

9. Statistical Yearbook 1987. Moscow 1988. Cited in Mezentseva and Rimachevskaya, Soc. Sci. Med. 31(8).
10. Expanded Program on Immunization/World Health Organization.

## TURKMENISTAN: USAID Health Profile (continued)

### 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 expectancy 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



14