HIGHLIGHTS ON HEALTH IN TAJIKISTAN

Country Highlights give an overview of the health and health-related situation in a given country and compare, where possible, its position in relation with other countries in the region. The Highlights have been developed in collaboration with Member States for operational purposes and do not constitute a formal statistical publication. They are based on information provided by Member States and other sources as listed.

CONTENTS

TECHNICAL NOTES

Highlights on Health provide an overview of the health of a country's population and the main factors related to it. When possible, comparisons are made with other countries in WHO's European Region, as one means of assessing the country's comparative strength and weaknesses. As a rule, data have been taken for this purpose from one common international source; nevertheless, even under these circumstances the comparability of data may be limited owing to differences in national definitions, registration systems, etc. Unless otherwise mentioned, the main source of all data is the "Health for All" (HFA) database of the WHO Regional Office for Europe (June 1999 version).

Where necessary, specific data from national sources are cited in the Highlights.

Two main types of graphical presentation are used in the Highlights to illustrate comparisons between countries:

- line charts, showing the trend in a particular indicator in the country in question (thicker line) compared with reference countries (thin lines);
- bar charts, showing a particular country's ranking compared with reference countries. The latest available data are used (i.e. the last year for which data are available may differ from one country to another). This type of chart is sensitive to small differences in the value of an indicator and should accordingly be interpreted with a certain amount of caution. For instance, a given country's position relative to other countries may change sharply one way or another when more recent data are included.

There are 51 Member States in WHO's European Region. It is not always appropriate to include all these countries in comparisons. For that reason, the charts mentioned above show a limited number of (usually geographically neighbouring) countries, which have certain similarities caused by their historical developments. In this case, comparisons are made with the other 14 countries that were formerly republics of the Soviet Union, with the average for all 15 newly independent states (NIS) formed following the break-up of the USSR, with the average for the five central Asian republics (CAR), and with the average for the 15 countries that are members of the European Union (EU).

Mortality data are the most complete and comparable, and they therefore constitute the main component of international comparisons. However, even in this case there is often some doubt about the completeness of the recording of deaths, especially at very young and old ages, and regarding the accuracy of coding of causes of death.

Unless otherwise stated, the charts are based on mortality rates standardized for the European standard population structure (for further details, see any issue of the *World Health Statistics Annual*). In most cases, so-called "premature mortality" in the age group 0–64 years is used.

In order to ensure comparability, the majority of indicators have been calculated at the WHO Regional Office for Europe (WHO/EURO), using a uniform methodology and software. For that reason, the values of some indicators in the HFA database may differ somewhat from national assessments based on other methods. This is true in particular for indicators such as life expectancy and maternal mortality.

Only a relatively small amount of the data contained in the HFA database is used in the Highlights. If further data are needed, readers are recommended to make use of the database itself, which can be downloaded from WHO/EURO's web site (www.who.dk.Country Information).

A list of references and a glossary are given at the end of this document.

OVERVIEW

Although the natural growth of the population in Tajikistan has shown a downward trend in recent years, it remains one of the highest in the Region by reason of a high birth rate coupled with relatively low overall mortality.

Life expectancy and mortality trends in Tajikistan have been strongly affected by the civil war, which interrupted an earlier upward trend in life expectancy and led to a sharp fall during 1992–1993. Cessation of the conflict and the resulting drop in mortality pushed life expectancy up to 68.3 years in 1995, a higher figure than the average for the newly independent States (NIS) and the central Asian republics (CAR). It should be borne in mind, however, that there is considerable underreporting of deaths (by some 10%) in Tajikistan.

As in other CAR, infant and maternal mortality rates in Tajikistan continue to be among the highest in the European Region of WHO. The country's percentage of newborn infants with low body weight (under 2500 g) is the highest in the CAR.

Diseases of the circulatory system are the principal cause of death. However the rise in premature deaths from cardiovascular disease in the 1990s was less pronounced than the average trend in the NIS and CAR. Premature mortality rates from these diseases in Tajikistan are the lowest among the CAR and lower than in most NIS.

Mortality from cancer in Tajikistan is one of the lowest in the Region and gradually declined during the period 1991–1995. The cause of this phenomenon has not yet been fully explained. It could be either a natural process or an artefact associated with incomplete recording of cause of death or incorrect coding. Mortality from cancer of specific locations (trachea/bronchus/lung) in Tajikistan is also among the lowest in the Region.

The pattern of mortality from external causes of injury and poisoning in Tajikistan is directly linked to the war and has been conditioned by the numbers killed. A sharp rise in fatalities was seen in 1992–1993 followed in 1994–1995 by a fall to almost the previous level, even though this had been considerably lower than the average for the CAR and NIS. Mortality from road traffic accidents in Tajikistan is one of the lowest in the European Region.

The number of hospital admissions and the mortality rates from infectious diseases in Tajikistan are among the highest in the Region. The situation has worsened in particular as a result of the armed conflict. From the early 1990s work on prevention of infectious diseases largely ceased, which led to a sharp increase in morbidity from malaria and typhus. In addition, breakdown of the water supply system and failure to chlorinate water led to an increase in the number of cases of acute intestinal disease. Following the introduction, in cooperation with international organizations, of a number of preventive measures, the epidemiological situation had improved somewhat by 1998 (according to data from the Tajik Ministry of Health) but remained unsatisfactory.

Malaria and diphtheria incidence in Tajikistan were the highest in the European Region in 1997.

In recent years the incidence of tuberculosis and sexually transmitted diseases has been rising.

The rise in mortality from respiratory diseases was halted in Tajikistan in 1994, but remains among the highest in the Region. A similar situation prevails with regard to mortality from diseases of the genito–urinary system.

As in other CAR and NIS, the number of hospital beds and the number of hospital admissions in Tajikistan have been falling steadily since the early 1990s. According to recent data, the number of beds is close to the average for the CAR and for countries of western Europe, but the number of hospital admissions is substantially lower than their average figures. The number of doctors, which was comparatively low even in the 1980s, has continued to fall throughout the 1990s and at present is one of the lowest in the European Region.

THE COUNTRY AND ITS PEOPLE

The Republic of Tajikistan is bordered on the west by Uzbekistan, on the north by Kyrgyzstan and Uzbekistan, on the east by China and on the south by Afghanistan. The capital of the Republic of Tajikistan is Dushanbe, which has a population of some 600 000.

The Republic of Tajikistan, which was once part of the former Soviet Union, achieved independence in 1991. The Head of State (president of government) Emomali Rahmonov was elected President in 1992. In the same year a new Constitution was adopted under which the President has authority over Government and Parliament. 1992 saw the onset of civil war, which formally ended in June 1997 following the signing of an agreement between the Government and the forces of the united Tajik opposition. A number of prominent members of the opposition entered the Government and Parliament. A Committee of National Reconciliation is in operation.

In November 1999, presidential elections were held in the country which were won by Emomali Rahmonov.

| Basic data on Tajikistan and the WHO European Region		
	Tajikistan (1998)*	Europe (1996)
Population (millions)	**6.2**	
Population aged		
• 0–14 years, %	**42.0**	20.4
• 15–64 years, %	**50.8**	66.2
• ≥ 65 years, %	**7.2**	13.4
Area, km^2	**143.1**	
Population density per km^2	**43.2**	31
Urban population (%)	**26.6**	71.6[a]
Births per 1000 population	**20.9**	11.34
Deaths per 1000 population	**4.8**	11.15
Natural growth rate per 1000 population	**16.1**	0.19
Gross domestic product (GDP) per person in US$, PPP*	**943**[a]	11 742[a]
[a] – 1995 * – Preliminary data PPP – purchasing power parity		

Age pyramid, 1981 and 1996
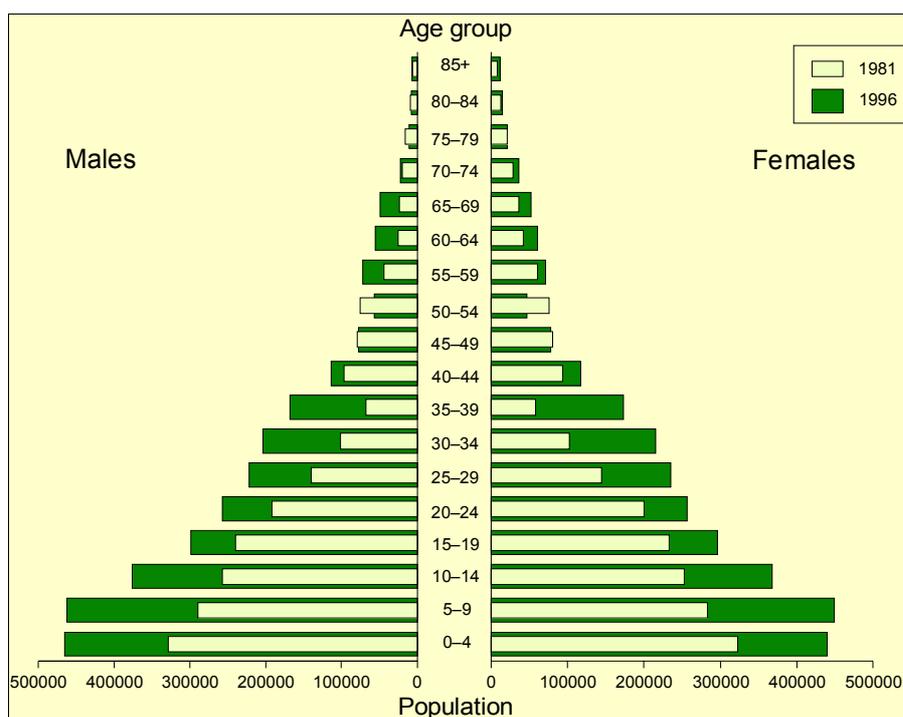
Demography

The natural growth of population in Tajikistan remains one of the highest in the European Region of WHO. However, a slowdown has been observed since 1990, to some extent as the result of the social, political and economic circumstances affecting the country. Nevertheless, a high birth rate coupled with low overall mortality ensure a "young" age structure of the population. Almost half the population of Tajikistan (42.0%) is under 15 years of age. In view of the fact that most of the territory of the Republic is mountainous, the actual population density is substantially higher than the figures would indicate. At the same time the percentage of the population living in urban areas is the lowest among the countries of the European Region of WHO.

Family structure

Since 1990 the number of registered marriages has fallen from 9.5 to 5.6 per 1000 population in 1997, while the number of divorces has fallen from 1.4 to 0.8 per 1000 population.

Migrant population and ethnic profile

Emigration was at its highest in 1992, when the numbers leaving the Republic came to around 144 000, due to the civil conflict.
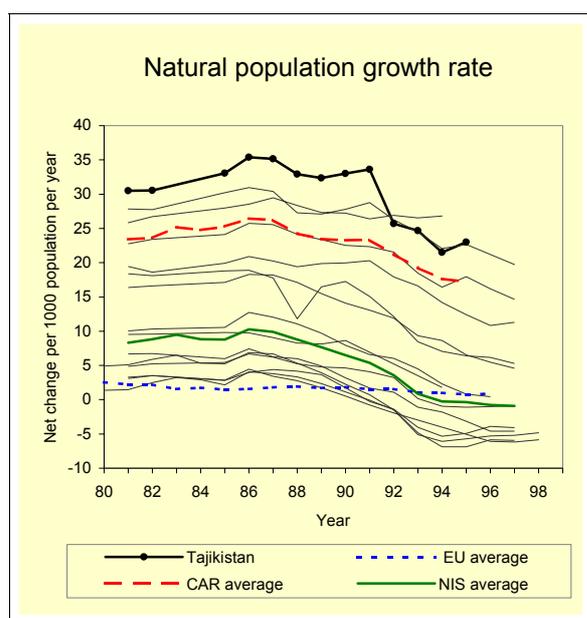
In 1995 there were approximately 45 000 emigrants.

Most of the population is made up of Tajiks (68.4%) and Uzbeks (24.8%). Russians account for 3.2%. The remainder (3.6%) are Kyrgyz, Tatars, Koreans and other nationalities. (*WHO Liaison Office in Tajikistan, 1999*).

Education, language, religion

Among the population over 15 years of age literacy stood at 98% in 1997. Under the Constitution, the official language of the State is Tajik (the Persian/Farsi variant). Russian is the language of international use and, in practice, the second language of the State. In rural areas settled by Uzbeks and Kyrgyz, people use their native languages. Sunni Moslems make up 90% of the population, but a considerable proportion of the population of Gorno-Badakhshansk oblast (Pamir) are Ismailis. In addition to Islamic mosques, there are also Christian churches serving Orthodox, Catholics, Baptists and others.
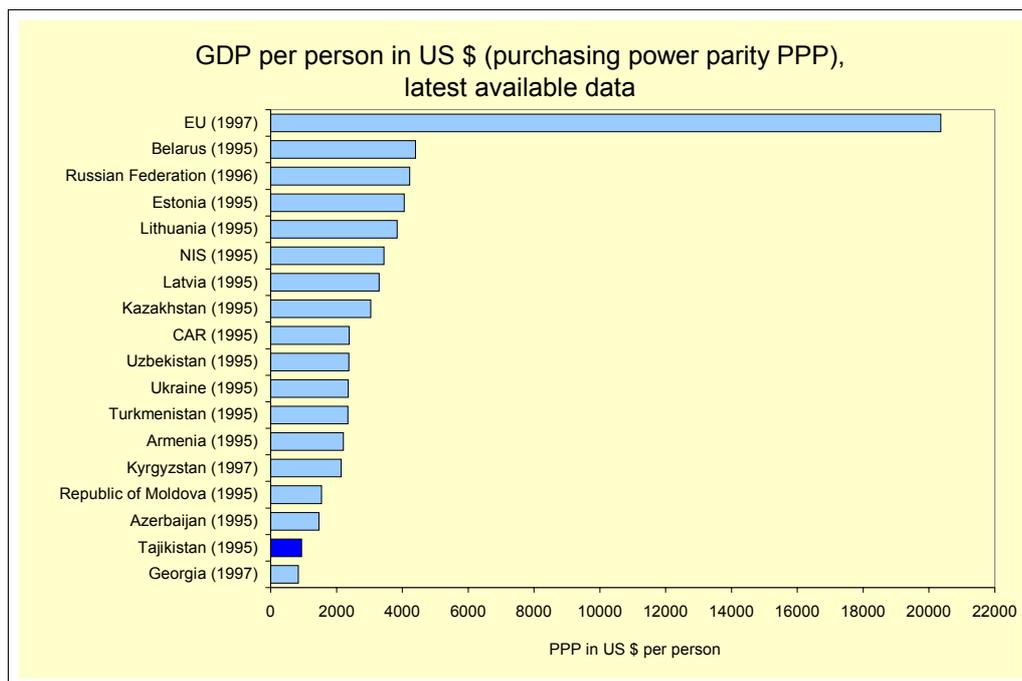
Economy

In the early 1990s Tajikistan was one of the poorest countries in the former USSR. The break-up of the Soviet Union and the civil war led to a sharp drop in production and rising inflation, which in 1993 exceeded 1000%.

In 1996, the Government managed to stabilize the economy through economic reform measures supported by the World Bank.

The level of inflation has now fallen, but remains substantially higher than in most countries in the European Region. The average monthly wage in 1998 did not exceed US$ 7.

According to official data, average unemployment stands at 3.2%, which is considerably lower than in Europe as a whole. However, when hidden unemployment is taken into account the level is closer to 14% (*WHO Liaison Office in Tajikistan, 1999*).

GDP per person in US $ (purchasing power parity PPP), latest available data

Country	PPP in US $ per person
EU (1997)	
Belarus (1995)	
Russian Federation (1996)	
Estonia (1995)	
Lithuania (1995)	
NIS (1995)	
Latvia (1995)	
Kazakhstan (1995)	
CAR (1995)	
Uzbekistan (1995)	
Ukraine (1995)	
Turkmenistan (1995)	
Armenia (1995)	
Kyrgyzstan (1997)	
Republic of Moldova (1995)	
Azerbaijan (1995)	
Tajikistan (1995)	
Georgia (1997)	

PPP in US $ per person

HEALTH STATUS

The health status of the population in Tajikistan has been largely determined by the aftermath of the civil war and adverse social and economic conditions. This finds expression, in particular, in the predominance of external causes of injury and poisoning, infectious diseases and respiratory diseases in the trends of life expectancy and mortality for Tajikistan. Furthermore, the war may well have affected the quality of medical and demographic information in Tajikistan (completeness of recording and quality of coding of causes of death, population counts, etc.).

Although the available data show the situation to have improved somewhat in recent years, mortality from such causes as infectious and respiratory disease remains the highest in the Region.

Infant and maternal mortality rates remain among the highest in the European Region of WHO, after Kyrgyzstan and Turkmenistan, despite a substantial decline since 1992.

Mortality from cancer is one of the lowest in Europe.

Morbidity from malaria, diphtheria and a number of other infectious and parasitic diseases is very high.

Life expectancy

The life expectancy in Tajikistan was considerably affected by the civil war in 1992–1993. During this period the upward trend in the indicator gave way to a sharp drop. The decline was, of course, more pronounced for males than for females. Subsequently, the

Selected heath indicators in Tajikistan and the European Region		
	Tajikistan (1995)	Europe (1996)
Life expectancy	68.3	72.8
• Men	65.5	68.6
• Women	71.2	77.1
Infant mortality per 1000 live birth	23.4[b]	12.6
Maternal mortality per 100 000 live birth	66.5[b]	19.8
Standardized death rate (SDR) for all causes of death per 100 000 population	1157.5	1013.7
SDR for cardiovascular diseases per 100 000 population	592.6	497.9
SDR for malignant neoplasms per 100 000 population	65.9	188.3
SDR for injuries and poisoning per 100 000 population	57.6	93.1
SDR for diseases of the respiratory organs per 100 000 population	181.4	65.8
SDR for diseases of the digestive system per 100 000 population	47.5	40.3
SDR for infectious and parasitic diseases per 100 000 population	21.7	13.7
New cases of tuberculosis per 100 000 population	40.3[b]	40.8[a]
New cases of syphilis per 100 000 population	21.7[b]	86.5[a]
New cases of malaria per 100 000 population	318.6[b]	7.0[a]
New cases of diphtheria per 100 000 population	2.7[b]	0.9[a]
New cases of AIDS per 100 000 population	0.0[b]	2.0[a]
[a] 1997 [b] 1998. Preliminary data		

Life expectancy at birth in years, latest available data

Country	Life expectancy (years)
Sweden (1996)	
France (1997)	
Iceland (1994)	
Switzerland (1994)	
Italy (1996)	
Israel (1996)	
Greece (1997)	
Spain (1996)	
Austria (1998)	
Netherlands (1997)	
Norway (1995)	
EU (1996)	
Germany (1997)	
Malta (1997)	
Luxembourg (1996)	
United Kingdom (1997)	
Finland (1996)	
Belgium (1994)	
Denmark (1996)	
Ireland (1995)	
Portugal (1998)	
Slovenia (1998)	
Armenia (1998)	
Czech Republic (1998)	
Albania (1993)	
Slovakia (1998)	
FYM (1997)	
Croatia (1998)	
Poland (1996)	
Georgia (1994)	
Lithuania (1998)	
CCEE (1998)	
Azerbaijan (1998)	
Bulgaria (1998)	
Hungary (1998)	
Estonia (1998)	
Romania (1998)	
Latvia (1998)	
Turkey (1997)	
Uzbekistan (1998)	
Ukraine (1998)	
Belarus (1998)	
Tajikistan (1995)	
Republic of Moldova (1998)	
NIS (1998)	
CAR (1998)	
Russian Federation (1998)	
Kyrgyzstan (1998)	
Turkmenistan (1998)	
Kazakhstan (1998)	

FYM: the former Yugoslav Republic of Macedonia

CCEE: countries of central and eastern Europe

NIS: newly independent states of the former USSR

CAR: central Asian republics

Life expectancy (years)

figure rose to 68.3 in 1995, and although not returning to the pre-war level, life expectancy in Tajikistan is now higher than the average for the NIS and CAR (although some of the increase may be attributable to unrecorded deaths). In 1995, life expectancy for males in Tajikistan (65.5 years) was three years below the European average. Life expectancy for females in Tajikistan in 1995 was 7 years below the European average. In comparison to other countries, the situation for men is substantially better than for women.

Main causes of death and disease

As in most other countries, cardiovascular diseases are the most frequent cause of death, both in the age group up to 65 years and at older ages. It is noteworthy that the proportion of total mortality that is attributable to mortality from cancer before 65 years is about one third of the European Region average.

For injury and poisoning, the proportion is also half the European average. On the other hand, the share of premature death attributable to respiratory, infectious and parasitic diseases is some three times higher than the European average.

Life expectancy at birth, males

Life expectancy at birth, females
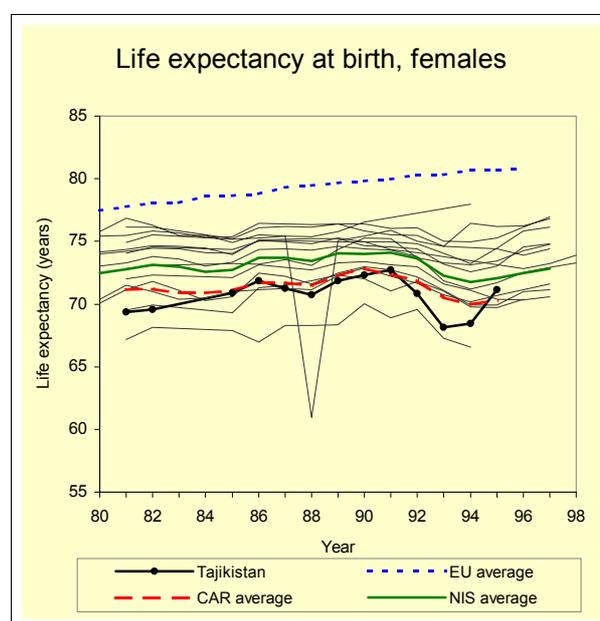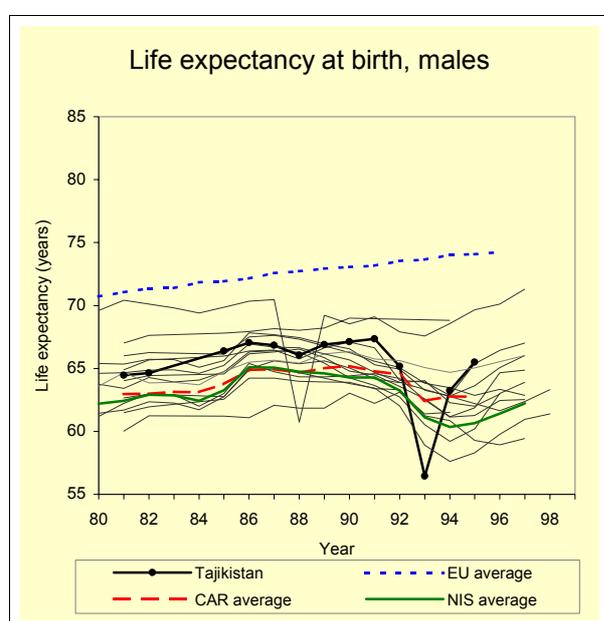
Structure of mortality (in %) by main cause of death and age group in Tajikistan (1995), compared with the average for the European Region (1997)				
Cause of death	0–64 years		65 years and above	
	Tajikistan	Europe	Tajikistan	Europe
Cardiovascular diseases	32.8	30.7	64.6	59.9
Malignant neoplasms	7.9	22.8	4.1	16.5
Accidents, injury and poisoning	10.2	19.5	1.2	2.6
Diseases of the respiratory system	16,6	5.6	15.0	7.0
Infectious and parasitic diseases	9,4	3.0	2.4	0.5
Diseases of the digestive system	6.3	5.7	2.5	3.0
Ill-defined conditions	5.3	2.7	6.4	4.3
Other diseases	11.7	10.0	3.8	6.1

Tajikistan is one of the few countries in the Region where premature death from respiratory disease is second in order of importance to cardiovascular disease. A comparatively high figure for mortality from ill-defined conditions indirectly confirms the relatively low quality of mortality statistics in Tajikistan. This is also a characteristic feature of the mortality structure for persons aged 65 years and above.
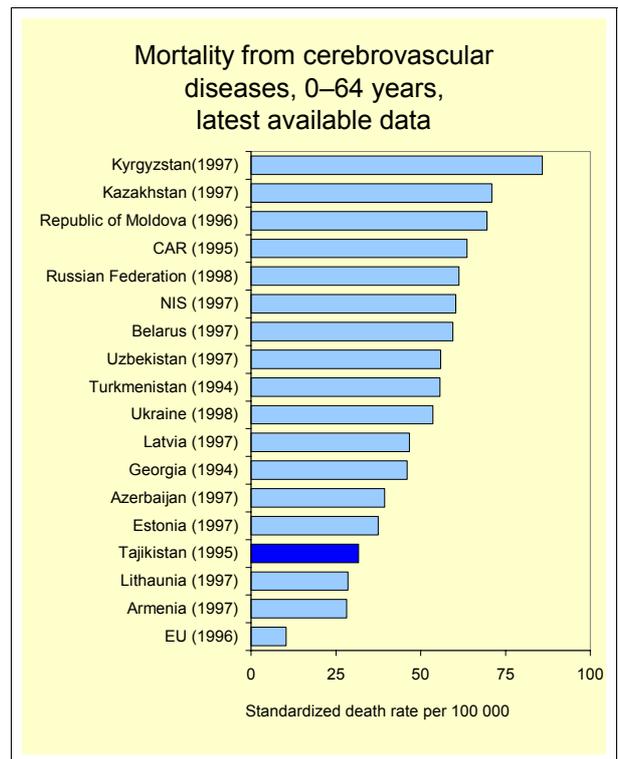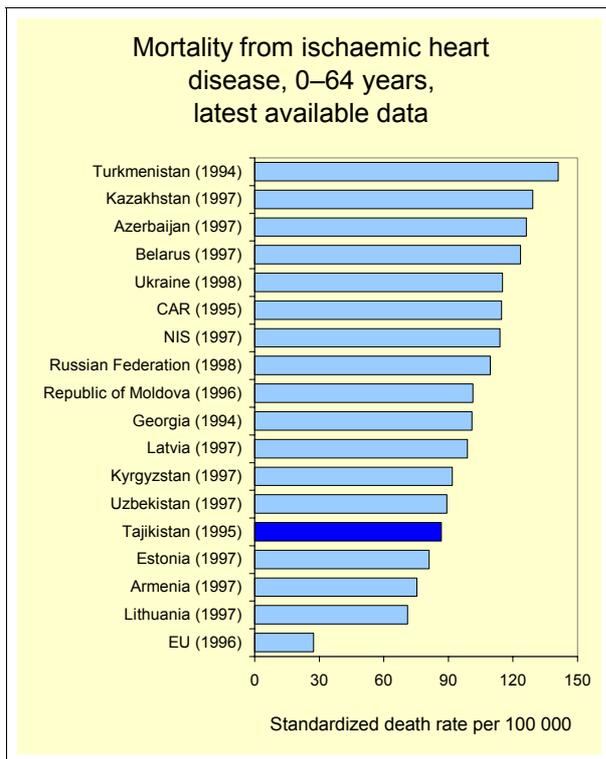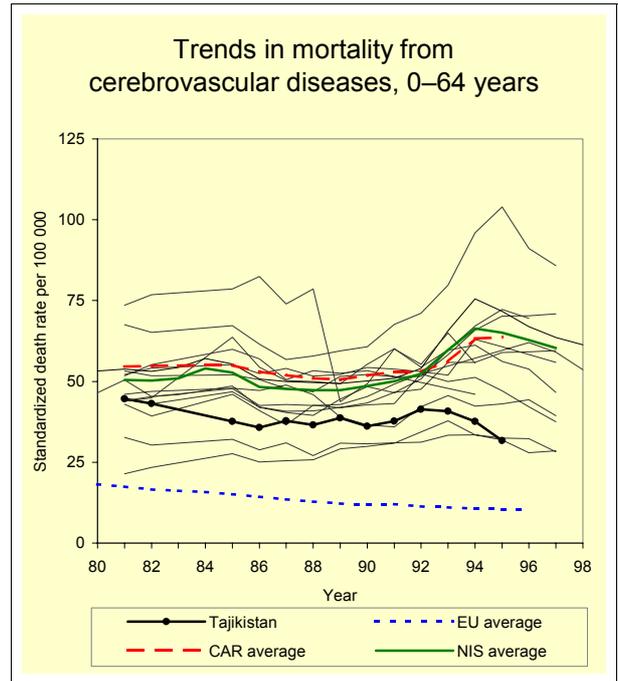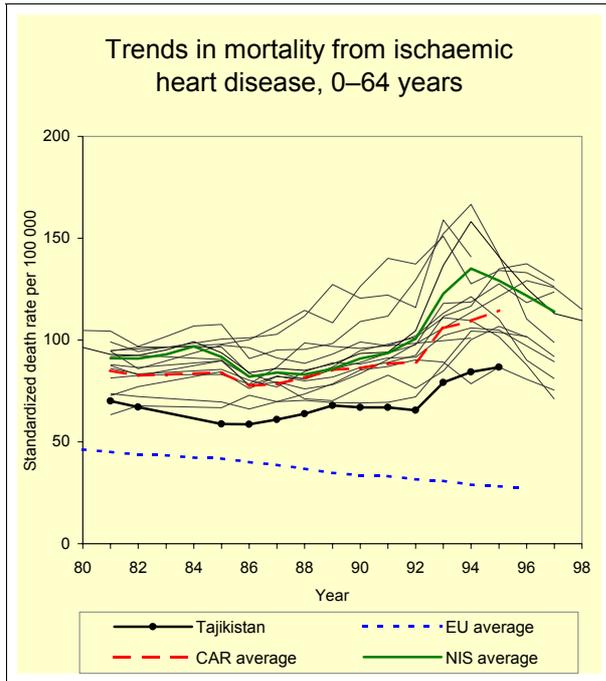
A notable feature is the substantial difference from the European average in the number of hospital admissions. As in other CAR, the number of hospital admissions for infectious and parasitic diseases in Tajikistan is one of the highest in the European Region.

Cardiovascular diseases

The trend in premature mortality from cardiovascular diseases in Tajikistan shows a much flatter rise than the average for the CAR. This rise halted in 1994 at the lowest level in all the CAR. Before 1994, the increasing mortality from cardiovascular diseases in Tajikistan was generally attributable to ischaemic heart disease and other diseases of the circulatory system. On the other hand, mortality from cerebrovascular diseases fell to one of the lowest levels in the NIS. However, this could also be a result of changing practices in coding for causes of death.

Trends in mortality from cardiovascular diseases, 0–64 years

Mortality from cardiovascular diseases, 0–64 years, latest available data

Inpatients by disease category (% of all patients hospitalized)		
Disease category	**Tajikistan**	Europe
Infectious and parasitic diseases	**10.1**	3.5
Malignant neoplasms	**1.4**	6.5
Cardiovascular diseases	**10.9**	11.7
Diseases of the respiratory system	**8.8**	10.0
Diseases of the digestive system	**9.9**	9.7
Injury and poisoning	**5.3**	8.3
Other diseases	**53.6**	50.3

Trends in mortality from ischaemic heart disease, 0–64 years

Trends in mortality from cerebrovascular diseases, 0–64 years

Mortality from ischaemic heart disease, 0–64 years, latest available data

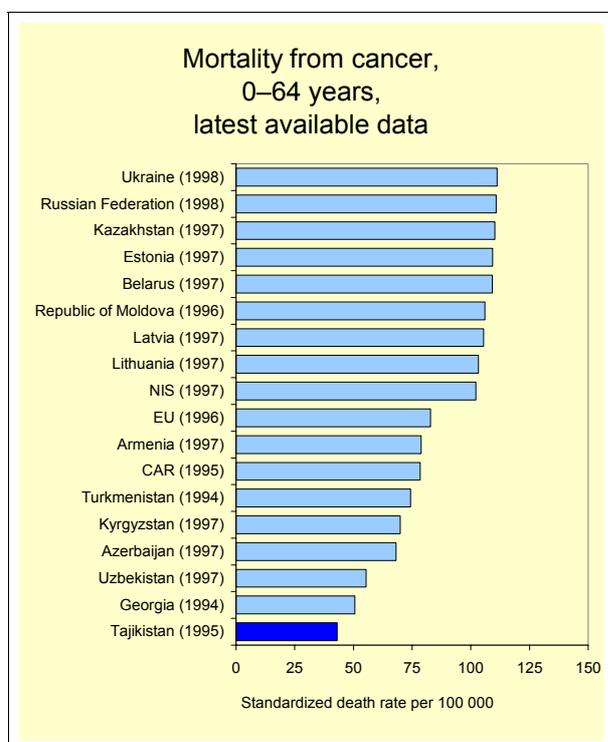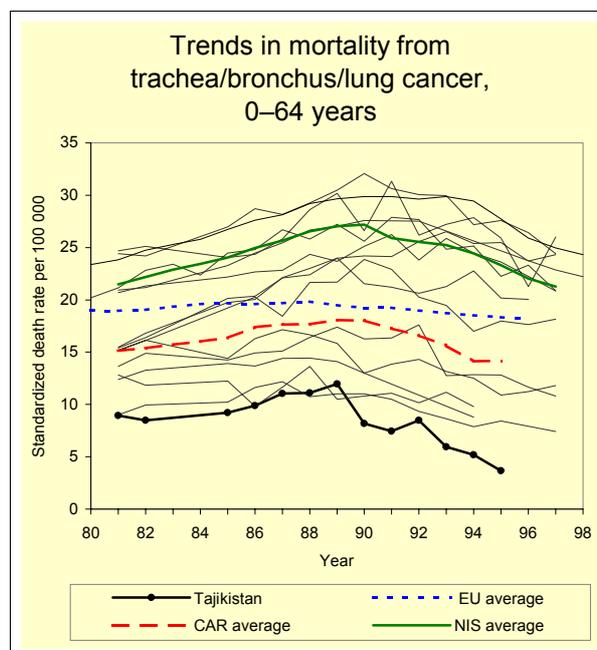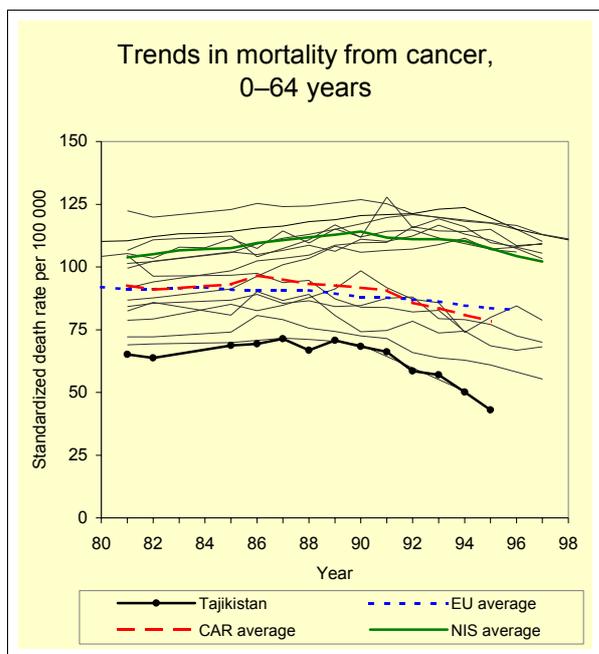Mortality from cerebrovascular diseases, 0–64 years, latest available data
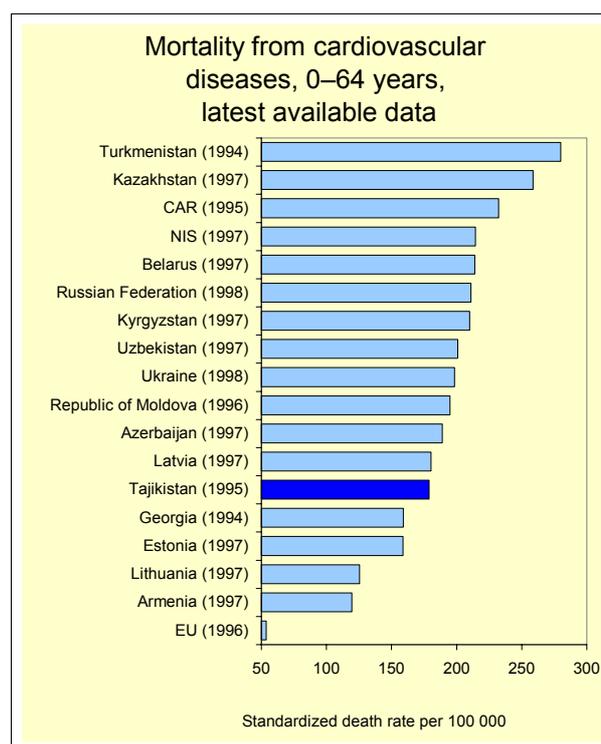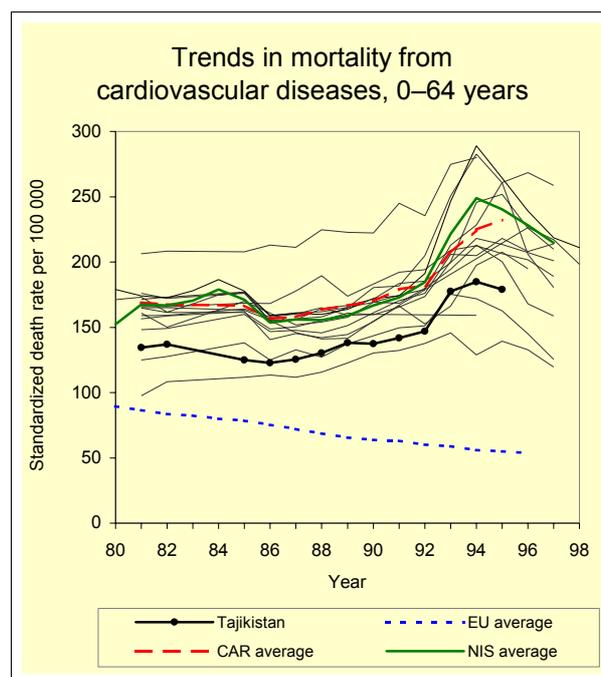
Cancer

Mortality from cancer in Tajikistan is one of the lowest in the Region and has steadily declined since 1991.

Mortality from cancer of the trachea/bronchus/lung in Tajikistan is also substantially lower than the averages for the countries of the NIS and the EU and remains one of the lowest in the European Region of WHO.

Trends in mortality from cancer, 0–64 years

Trends in mortality from trachea/bronchus/lung cancer, 0–64 years

Mortality from cancer, 0–64 years, latest available data

Mortality from trachea/bronchus/lung cancer, 0–64 years, latest available data
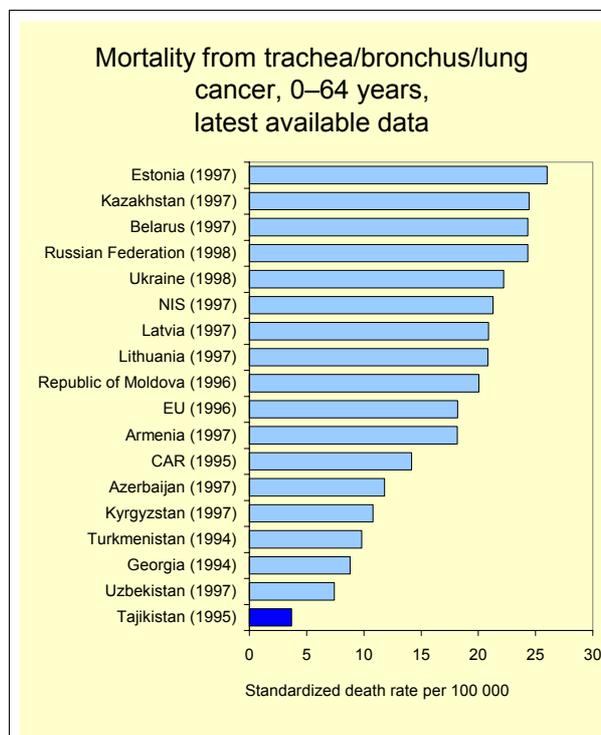
Injury and poisoning

The trend in mortality rates for external causes of injury and poisoning in Tajikistan was strongly influenced by the war and has been determined by the changing rates of death from homicide.

A sharp increase in the rate occurred in 1992–1993 followed by a drop to almost the pre-war level in 1994–1995.

This level is substantially lower than the average in the CAR and NIS.

Mortality from road traffic accidents in Tajikistan is one of the lowest in the European Region.

Trends in mortality from external causes

Trends in mortality from homicide

Mortality from external causes, latest available data

Mortality from homicide, latest available data
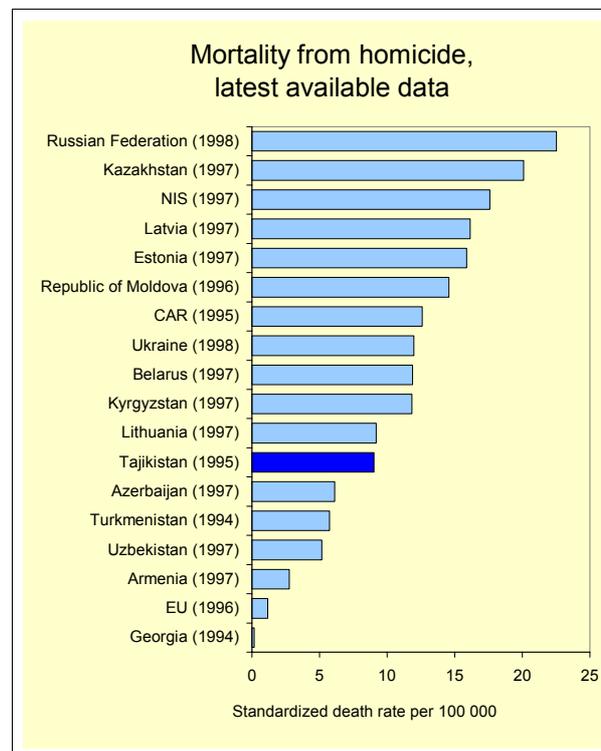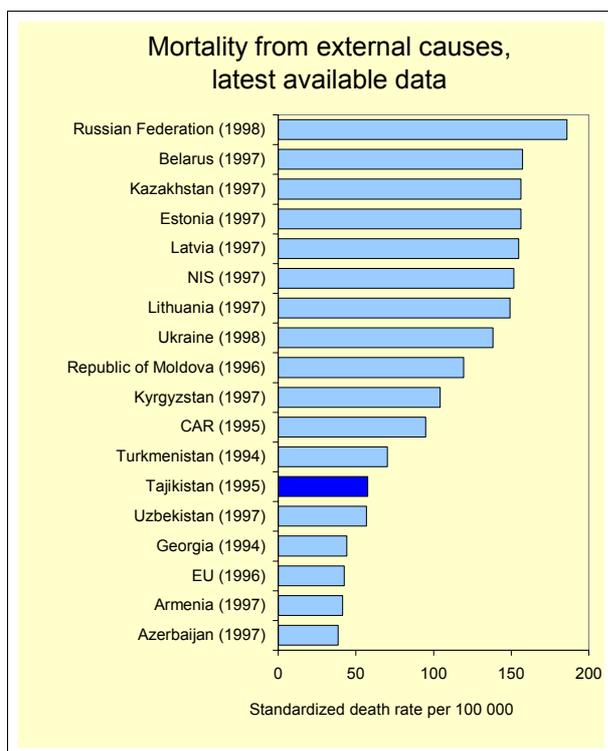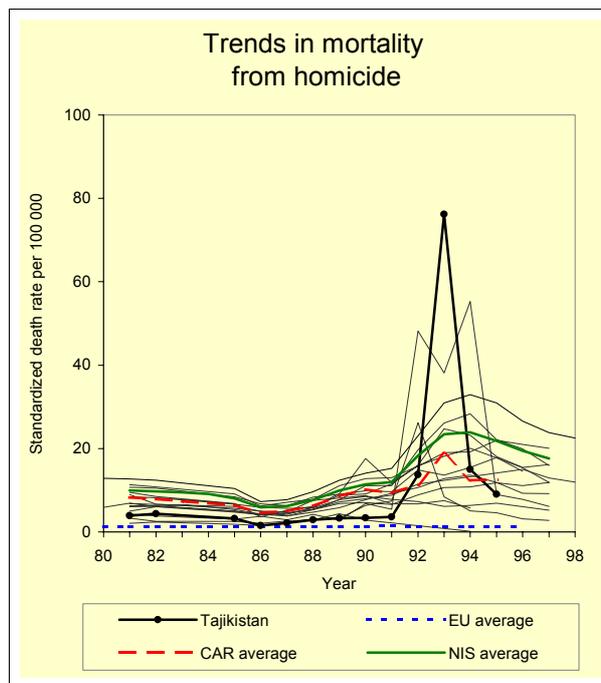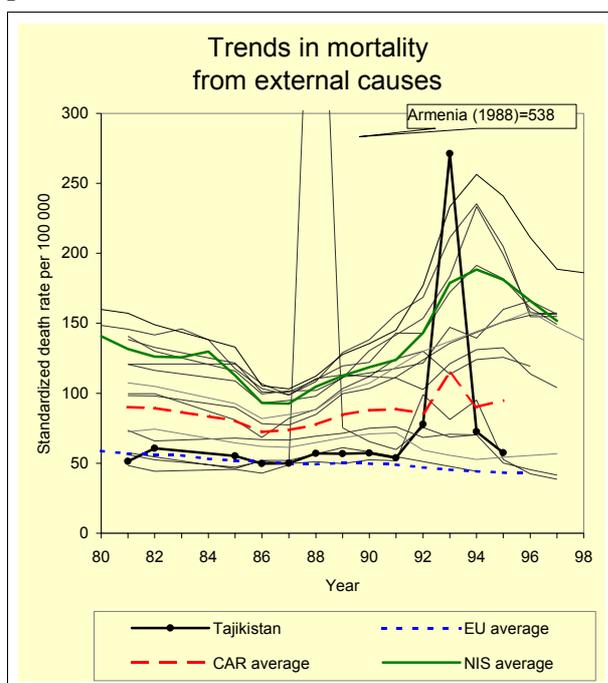
Mental health

According to available data, morbidity from mental disorders rose sharply in Tajikistan during 1992–1994 (up to 311 per 100 000 population), which could have been a consequence of the fighting. In 1995–1997, the incidence of mental disorders fell and in 1998 was 207 per 100 000 population. Mortality from suicide in Tajikistan is substantially lower than in most European countries.

Infectious diseases

The epidemiological situation in Tajikistan during 1990–1997 was marked by a sharp rise in morbidity from infectious and parasitic diseases, including diseases such as anthrax, typhus and malaria. The number of cases of malaria in 1997 exceeded 30 000.
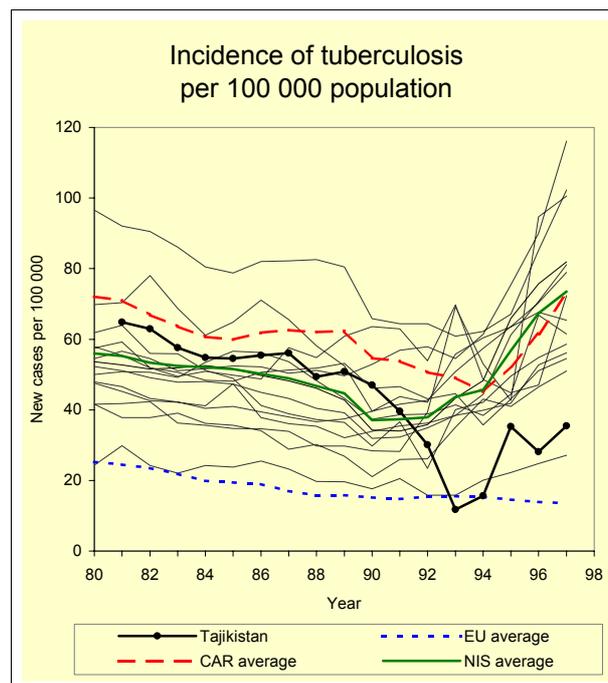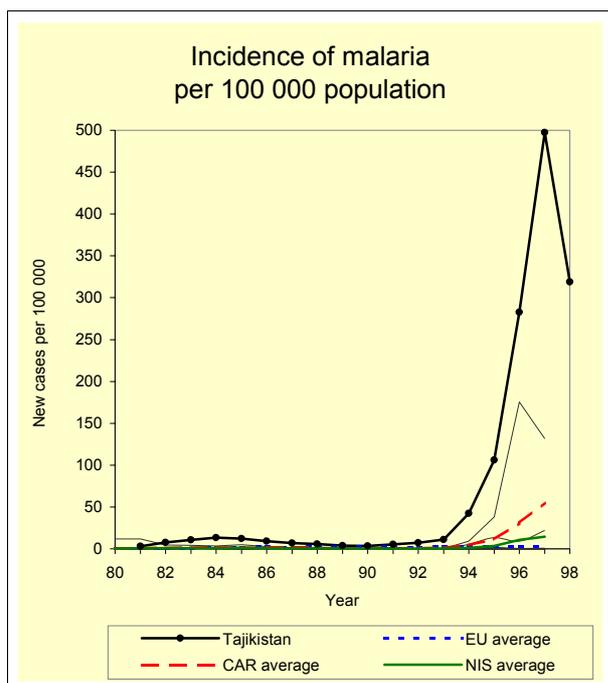
Efforts to prevent infectious diseases in Tajikistan were hampered, particularly before 1998, by the aftermath of the fighting and the

Trends in mortality from suicide and self-inflicted injury

Trends in mortality from infectious and parasitic diseases

Mortality from suicide and self-inflicted injury, latest available data

Mortality from infectious and parasitic diseses, latest available data
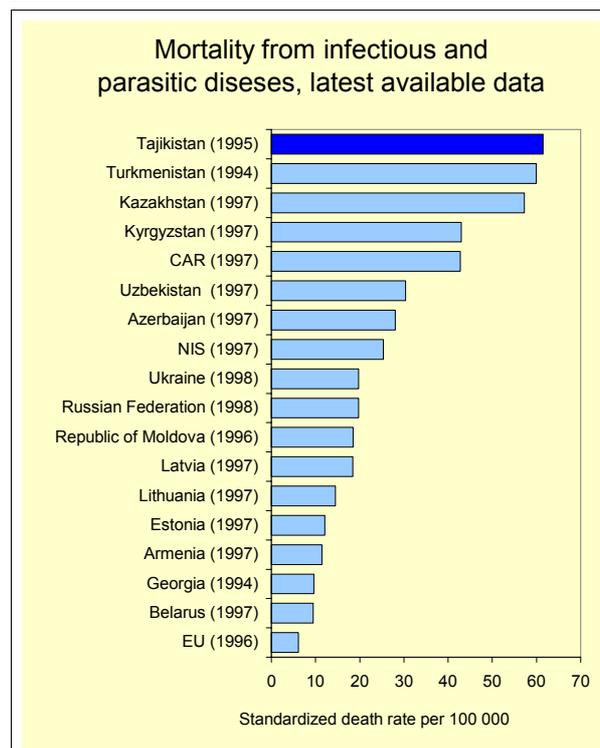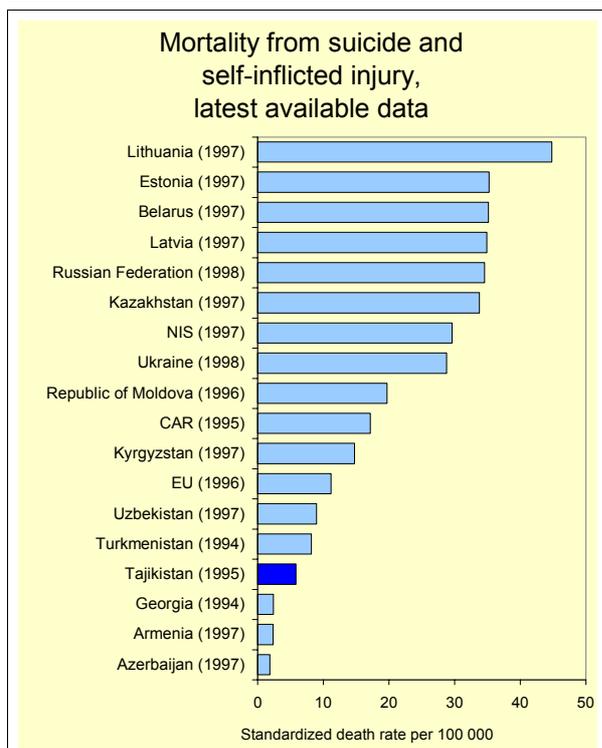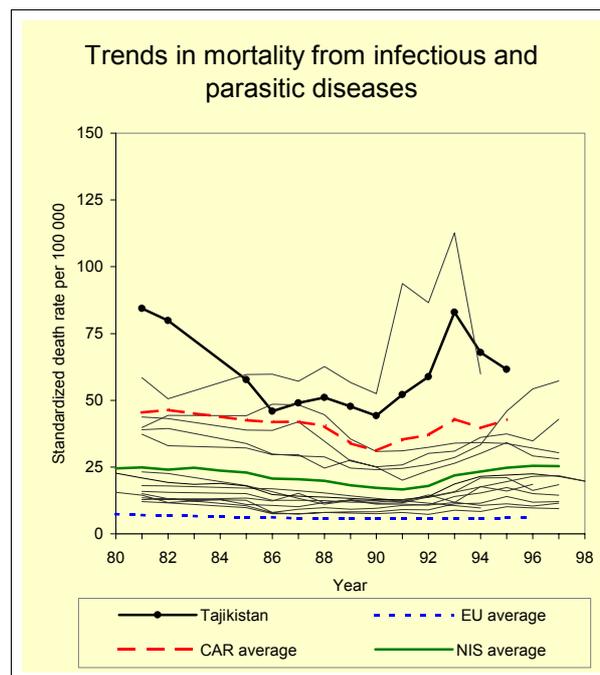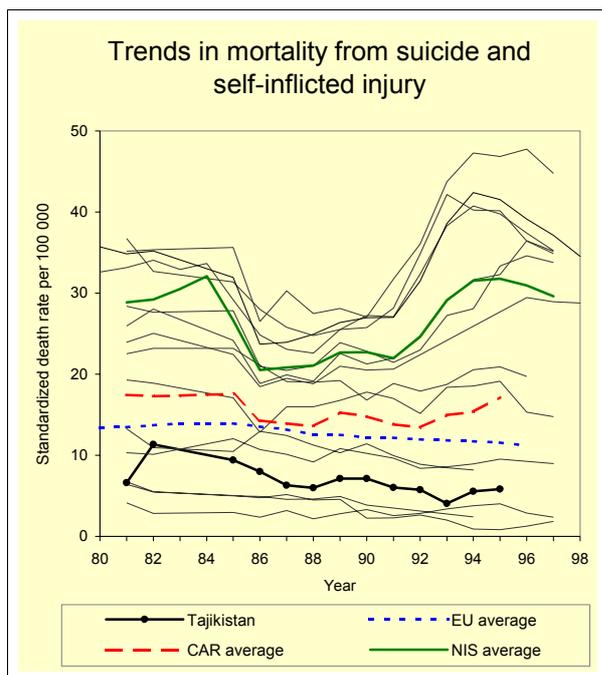
very difficult financial situation. In addition, the destruction of the water supply system and the lack of chlorinated water caused an increase in acute intestinal diseases and cholera. Following the introduction in 1998 of a number of preventive measures (water chlorination, mosquito control, etc.) with the cooperation of international organizations, the epidemiological situation has somewhat improved.

According to data from the Tajik Ministry of Health, morbidity from malaria in 1998 had fallen by some 30% below the 1997 level.

However morbidity remained high from acute intestinal diseases. Morbidity from viral hepatitis in Tajikistan, as in other CAR, is among the highest in the European Region of WHO. (*WHO Information Centre for the CAR, 1998*).

Incidence of malaria per 100 000 population

Incidence of tuberculosis per 100 000 population

Incidence of viral hepatitis per 100 000 population

Incidence of diphtheria per 100 000 population
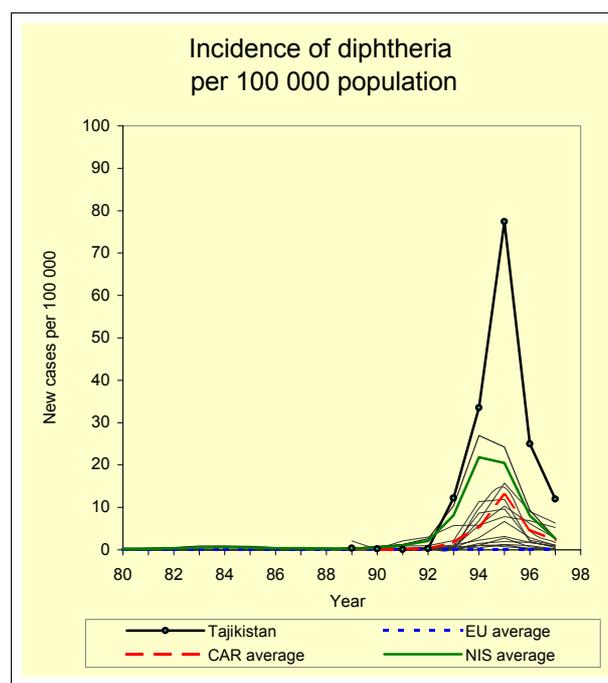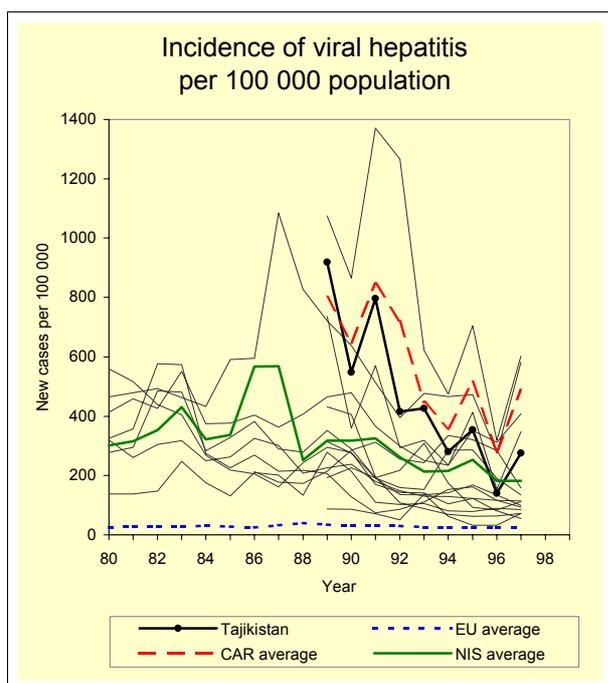
Morbidity from tuberculosis has begun to rise after a long period of decline (1981–1994). According to data from the Tajik Ministry of Health, the number of cases of active tuberculosis had risen by 1998 to 40.3 per 100 000 population.

An epidemic of diphtheria which occurred in Tajikistan in 1993–1995 was halted by an extensive immunisation campaign carried out with WHO support. In 1997, diphtheria morbidity in Tajikistan still remained the highest in the European Region of WHO. According to data from the Tajik Ministry of Health, diphtheria morbidity in 1998 fell to 2.7 per 100 000 population.

There was a marked rise in morbidity from syphilis, although the rate of increase was substantially lower than in most other NIS and CAR.
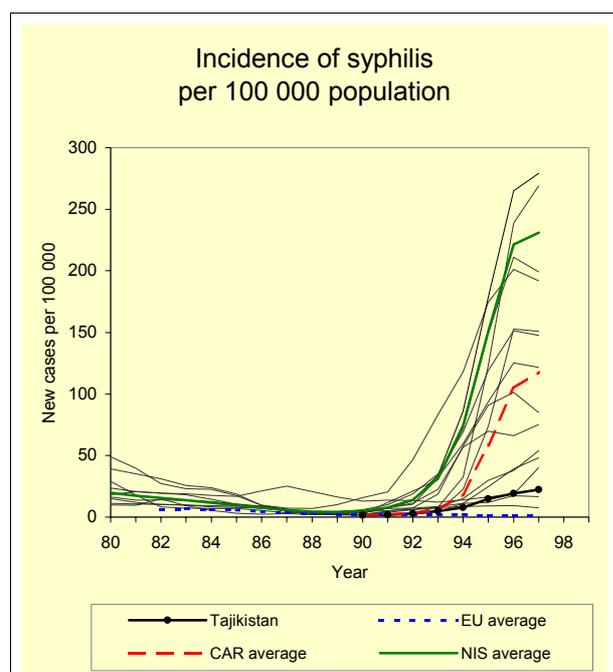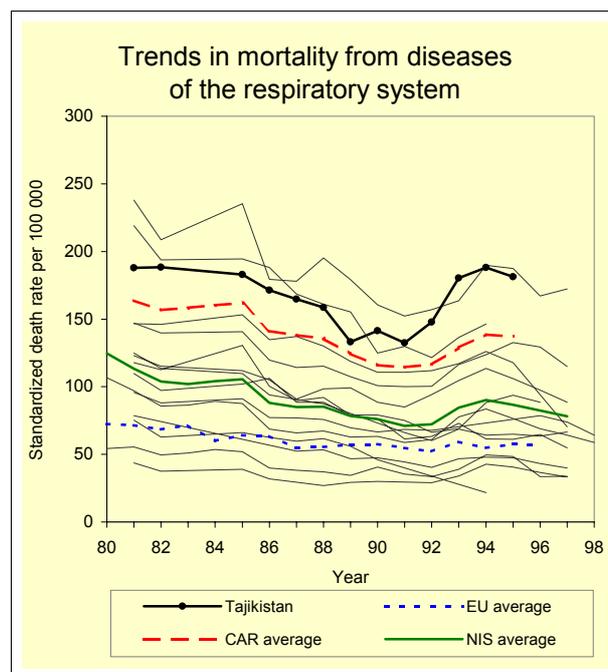
Until recently AIDS was not a problem in Tajikistan. In 1998, four carriers of HIV-infection were recorded in the Republic.

Other diseases

Mortality from respiratory diseases declined steadily in Tajikistan during the 1980s. In the first half of the 1990s the rate rose again until 1994 and then halted. Mortality from

respiratory diseases in Tajikistan, as in other CAR, remains among the highest in the Region.

Mortality from diseases of the digestive organs has shown an upward trend since the late 1980s but has remained below the rates for other CAR.

Trends in mortality from diseases of the respiratory system

Incidence of syphilis per 100 000 population

Mortality from diseases of the respiratory system, latest available data
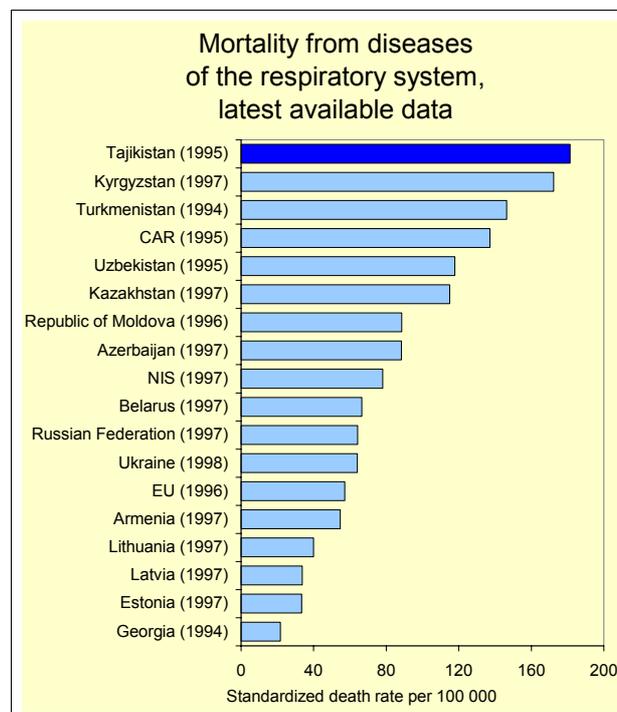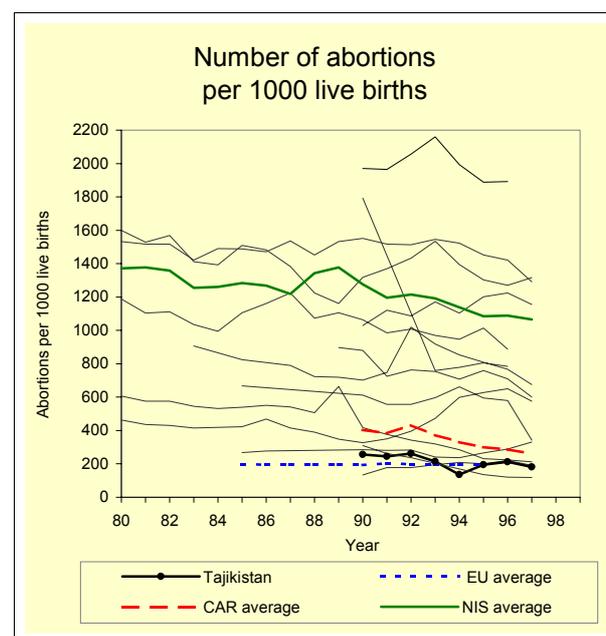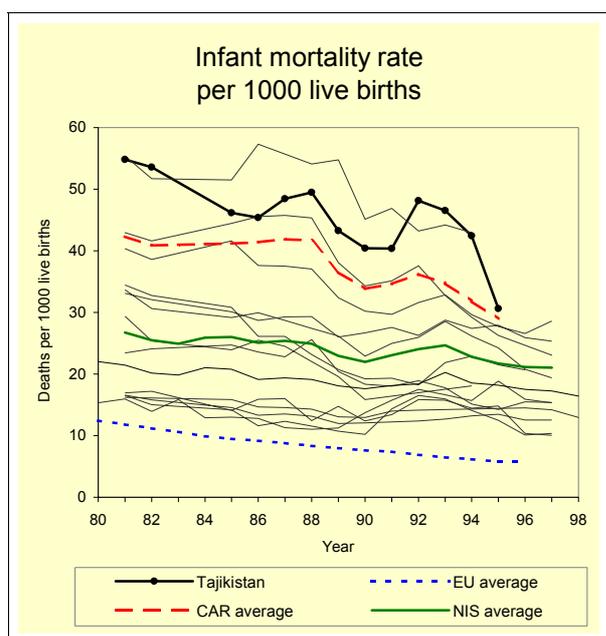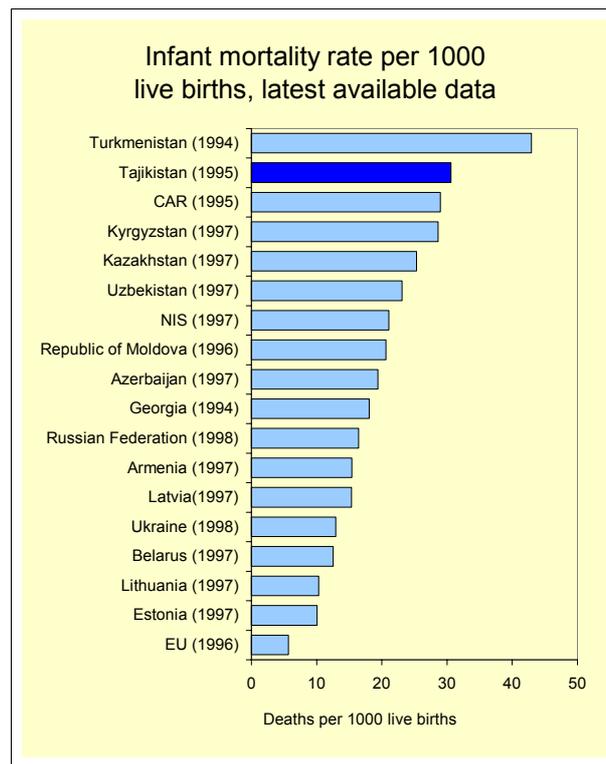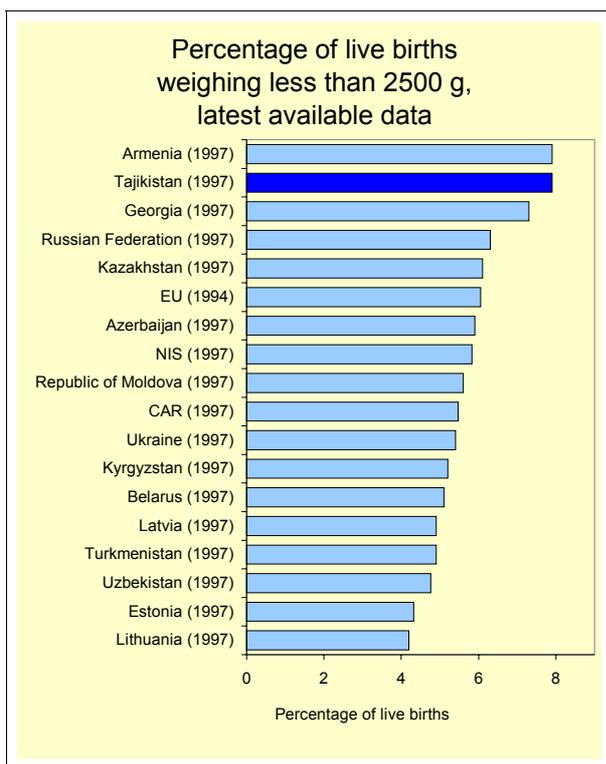
Health of children and adolescents

Infant mortality in Tajikistan has been falling steadily since 1992 but, as in other CAR, continues to be among the highest in the European Region.

According to data from the Tajik Ministry of Health, the principal causes of infant death are respiratory disease, intestinal infection and perinatal disorders.

The percentage of live births with low birth weight (under 2500 g) is among the highest in the European Region.

In 1997, immunisation coverage of children under one year of age against diphtheria and tetanus was 100%, against measles and whooping cough was 95% and against tuberculosis and poliomyelitis was close to 91%.

Percentage of live births weighing less than 2500 g, latest available data

Country	
Armenia (1997)	
Tajikistan (1997)	
Georgia (1997)	
Russian Federation (1997)	
Kazakhstan (1997)	
EU (1994)	
Azerbaijan (1997)	
NIS (1997)	
Republic of Moldova (1997)	
CAR (1997)	
Ukraine (1997)	
Kyrgyzstan (1997)	
Belarus (1997)	
Latvia (1997)	
Turkmenistan (1997)	
Uzbekistan (1997)	
Estonia (1997)	
Lithuania (1997)	

Percentage of live births

Infant mortality rate per 1000 live births, latest available data

Country	
Turkmenistan (1994)	
Tajikistan (1995)	
CAR (1995)	
Kyrgyzstan (1997)	
Kazakhstan (1997)	
Uzbekistan (1997)	
NIS (1997)	
Republic of Moldova (1996)	
Azerbaijan (1997)	
Georgia (1994)	
Russian Federation (1998)	
Armenia (1997)	
Latvia(1997)	
Ukraine (1998)	
Belarus (1997)	
Lithuania (1997)	
Estonia (1997)	
EU (1996)	

Deaths per 1000 live births

Infant mortality rate per 1000 live births

Deaths per 1000 live births / Year

- Tajikistan
- EU average
- CAR average
- NIS average

Number of abortions per 1000 live births

Abortions per 1000 live births / Year
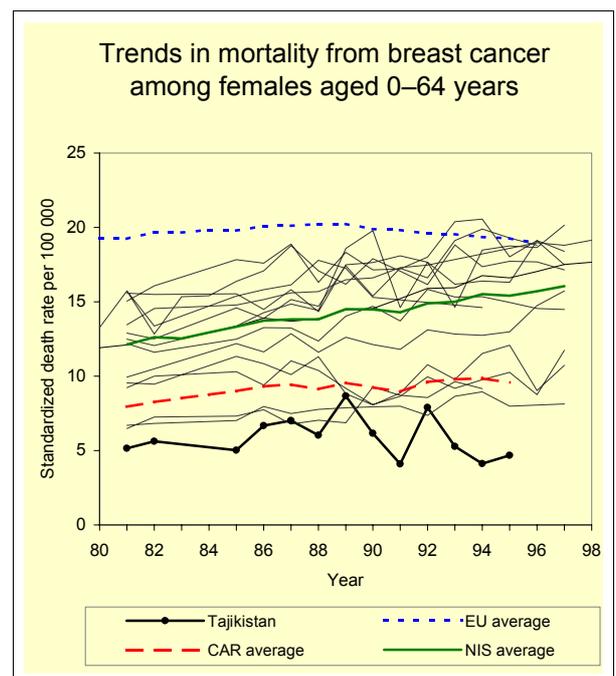
- Tajikistan
- EU average
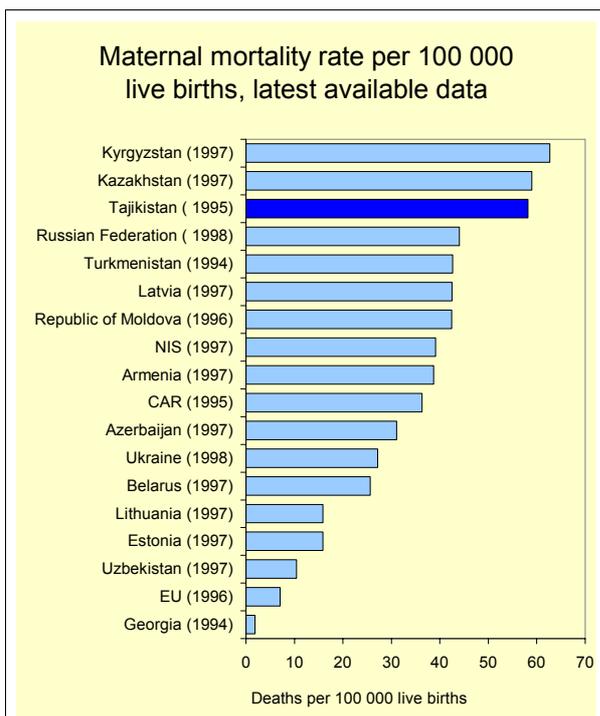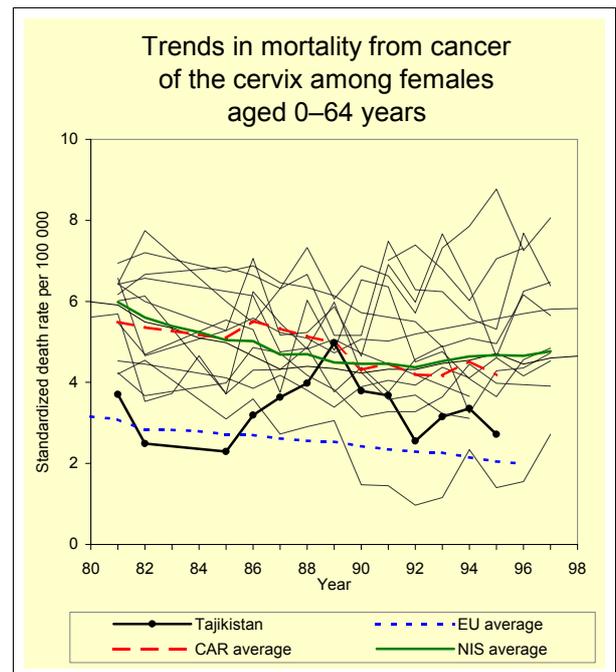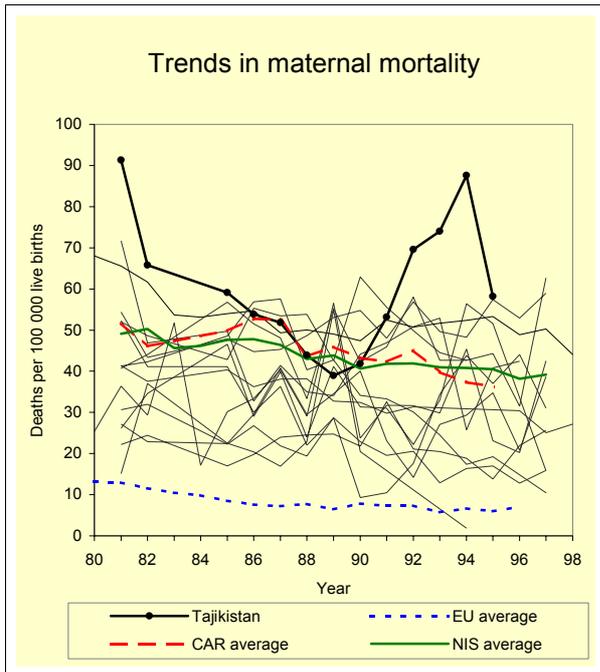- CAR average
- NIS average

Women's health

Women in Tajikistan live on average 5.7 years longer than men. However, mortality among women is among the highest in the European Region (as it is in the other CAR).

Over a third of all deaths in the 0–64 age group were caused by diseases of the circulatory system, a rate higher than the average for Europe. Among women in Tajikistan premature mortality from respiratory disease is 2.5 times that from cancer. Cancer causes over 9% of premature mortality among women in Tajikistan, while the average rate in Europe is 28%.

According to the available data, maternal mortality has varied widely in the past few years and, as in Kazakhstan and Kyrgyzstan, remains among the highest in the Region.

Trends in maternal mortality

Trends in mortality from cancer of the cervix among females aged 0–64 years

Maternal mortality rate per 100 000 live births, latest available data

Trends in mortality from breast cancer among females aged 0–64 years

According to Ministry of Health data, the principal causes of maternal mortality in Tajikistan are haemorrhage (33.3%), eclampsia (33.6%), infection (17.0%), abortion (11.1%), severe anaemia and heart failure (5%).

The abortion rate in the Republic is much lower than in most CAR and NIS. In 1998 it was 161.3 per 1000 live births.

Mortality from breast cancer in Tajikistan is, according to the available data, the lowest in the Region.

Following a marked rise in the second half of the 1980s, mortality from cervical cancer had by 1995 fallen almost to the average for the countries of the EU.

LIFESTYLES

Tobacco consumption

National data on the prevalence of smoking in Tajikistan is unavailable. According to data from research on the prevalence of smoking among school pupils in senior classes, 28% are found to smoke cigarettes. In rural areas 21% of schoolchildren use *nas* (chewing tobacco). In Tajikistan, advertising of tobacco products is prohibited in all mass media (*WHO Regional Office for Europe, 1997*).

Alcohol consumption

Data is lacking on alcohol consumption in Tajikistan. Morbidity from drug-related disorders and alcoholic psychosis in Tajikistan (24.6 per 100 000) is lower than in other CAR. An exception is the Gorno-Badakhshan Autonomous Oblast, where the incidence of chronic alcoholism and alcoholic psychosis is 97.3 per 100 000 population. (*WHO Information Centre for the CAR, 1998*).

Nutrition

According to recent FAO data, the average daily calorie consumption per head is one of the lowest in the European Region.

A major nutrition problem in Tajikistan is a lack of trace elements such as iron and iodine. According to data from recent investigations, iodine deficiency affects 35% of the population of the Republic.

Iron deficiency particularly affects pregnant women and nursing mothers. According to data from the Tajik Ministry of Health, the prevalence of anaemia among pregnant women is as much as 90%, and among children under 14 years is 36% (*WHO Liaison Office in Tajikistan, 1999*).

In Tajikistan, almost 8% of children are born with a body weight under 2500 g. This is one of the highest rates in the European Region.

ENVIRONMENT AND HEALTH

The environmental situation in the Republic of Tajikistan remains critical despite the decline in production and the reduction in discharges from industrial premises.

Major problems are pollution of water resources and the air, pollution by radioactive substances and the processing and storage of waste, including radioactive waste.

Air pollution

The principal sources of air pollution in Tajikistan are industry and motor traffic.

The entry of harmful substances from stationary sources into the air was 67% lower in 1998 than in 1991. The level of emissions of CO_2 in Tajikistan is one of the lowest in the European Region of WHO (*UN ECE 1999*).

The total volume of emissions is 33 thousand tonnes, comprising 6.5 thousand tonnes of solid pollutants and 26.5 thousand tonnes of liquid and gaseous pollutants.

A special part in air pollution is played by the mining, processing, chemical, construction and cotton-ginning industries.

The contribution by motor vehicle and railway traffic to air pollution in Tajikistan is as much as 40%. According to data from periodic checks, the levels of harmful substances in exhaust gases exceeds health standards in almost 80% of vehicles tested.

Water management and sanitation

The problem of water and drinking water supply is the key one among all other environmental health problems in the Republic of Tajikistan. Provision of drinking water from centralized water supply sources in the Republic was 63.5% in 1996, but only 48% in 1998 (*WHO Liaison Office in Tajikistan, 1999*).

A piped water supply is provided for 95% of the urban population and 35% of the rural population. Some 30% of the piped water network is not operating for various reasons. Almost 49% of the population get their drinking water from open bodies of water, the majority of which do not meet sanitary requirements with respect to bacterial and chemical indicators (*National Environment and Health Action Plan, Republic of Tajikistan*).

The unsatisfactory sanitary and technical state of water supply installations and networks, combined with a shortage of chlorine-containing reagents and coagulants has an adverse effect on the quality of piped water.

In 1998 the proportion of samples of piped water that did not meet hygiene standards for microbiological indicators was 63.3%.

In the Republic as a whole, the centralized removal of waste water continues to operate unsatisfactorily. In Tajikistan, only 8.9% of housing is on main drainage (*WHO Information Centre for the CAR, 1998*).

The effectiveness of treatment installations is no greater than 30–40%. This is one of the causes of the high morbidity from acute intestinal infections and viral hepatitis.

Morbidity is highest in Dushanbe and in Leninabad and Hatlon oblasts.

In the Republic as a whole 40 million cubic metres of waste water were discharged into water catchment areas in 1997. The most polluted rivers are the Syr-Darya, the Vakhsh and the Kofarnikhan (*UNDP, 1998*).

Waste and soil

The storage, utilization, neutralization and burial of waste is a major problem in Tajikistan.

Every year the Republic produces over 4 million tonnes of solid domestic waste, industrial waste and various types of mining wastes. Only 10% of the waste produced is recycled. (*National Environment and Health Action Plan, Republic of Tajikistan*). The figure for developed European countries is as much as 40–50%.

The soil of agricultural land in Tajikistan is heavily polluted with pesticides from their overuse, especially in the 1970s and 1980s. In

1992 the average rate of application of pesticides in Tajikistan was 19 kg per hectare, the highest in the Region. In other NIS the rate was 2–3 kg per hectare. In the past few years a sharp reduction has been observed in the use of pesticides and chemical fertilisers. In 1995, pesticide application was 0.3 kg per hectare, which has cut pesticide concentrations in the soil and in food products.

Radioactive pollution

The Republic of Tajikistan has since the late 1940s been engaged in mining and processing uranium ore, as a result of which Leninabad oblast has accumulated a large amount of low level radioactivity waste (of the order of 1×10^6 curie/kg). In housing near the dumps natural background gamma radiation has risen to 60–100 microroentgens/hr).

The sanitary and epidemiological service of the Republic does not have the equipment needed to measure levels of radon and its decay products either in dwellings or in underground workings.

In addition, it is not possible to measure the total radioactive fallout associated with the testing of nuclear weapons in China since the radiometric equipment for measuring low-level radioactive pollution is out of order (*National Environment and Health Action Plan, Republic of Tajikistan*).

Occupational health

The level of industrial injuries in Tajikistan, as in other CAR, is low in comparison with the rest of the European Region.

However, in most plant currently in operation workers are often not provided with individual protective equipment, special clothing, special footwear or special food.

At the same time, because of financial difficulties and the departure of skilled specialists to other NIS, the system of health care for workers in major industrial plant is barely operational, the same is true of safety inspection and monitoring of occupational safety and health and hygiene standards.
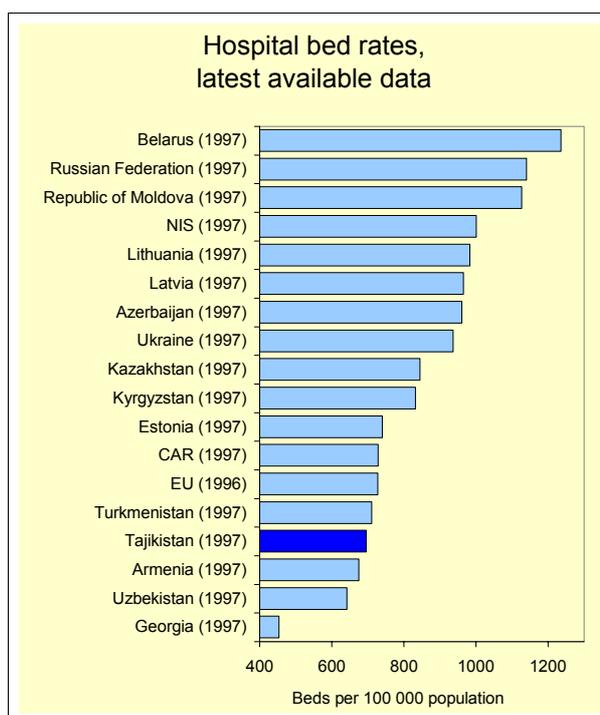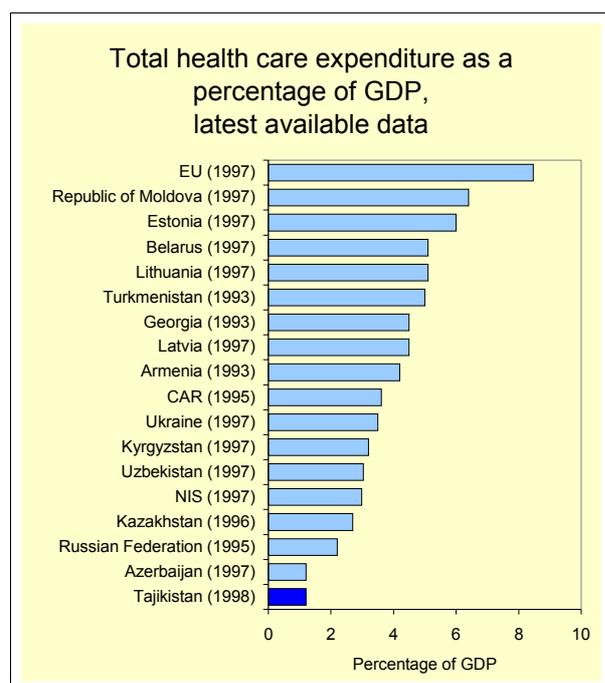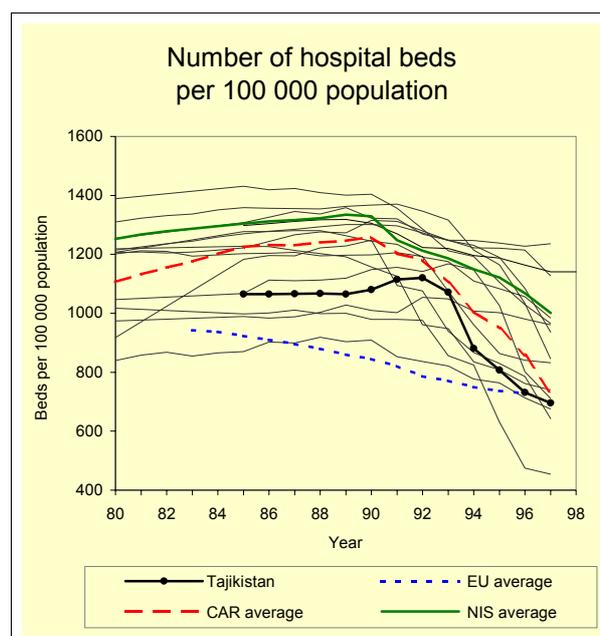
Occupational diseases in the Republic are principally reported in Dushanbe and Leninabad oblast, in coal-mining and in light industry. The main occupational diseases are acoustic neuritis (43.5%), osteochondrosis of the spine (16.6%), chronic dust-related bronchitis (10.4%) and silicosis (9.7%) (*National Environment and Health Action Plan, Republic of Tajikistan*).

HEALTH CARE SYSTEM

During the Soviet period the health care system in Tajikistan was based on centralized management and funding. A number of steps are currently being taken to reform the health care system and adapt it to the new conditions. In 1995, experts from the Tajik Ministry of Health together with WHO began work on a national strategy under the Health for All programme. In 1997 the Tajik Government adopted a National Health for All Strategy for the period up to 2005. A National Programme for Reform of the Health Care System in

Tajikistan was prepared in 1998 to implement this strategy. In 1999, experts from the Ministry of Health of the Republic of Tajikistan began work under the WHO Health-21 strategy on a new national health for all strategy for the period to the year 2010.

Health care resources and their utilization in Tajikistan, compared with European averages		
	Tajikistan (1998)*	Europe (1996)
Hospital beds per 100 000 population	**676.0**	828.0
Physicians per 100 000 population	**204.0**	352.0
Hospital admissions per 100 population	**9.9**	18.5
Average hospital stay, days	**14.0**	12.9
Health care expenditure as a percentage of GDP (1997)	**1.2**	6.0
* Preliminary data		

Number of hospital beds per 100 000 population

Total health care expenditure as a percentage of GDP, latest available data

Hospital bed rates, latest available data

Health system reform

The main thrusts of reform of the health case system in Tajikistan for the period 1995-2005 are as follows:

- to restructure inpatient care and cut the number of hospital beds by 30%;
- to improve and extend primary health care
- to decentralize management;
- to introduce self-financing by medical establishments.
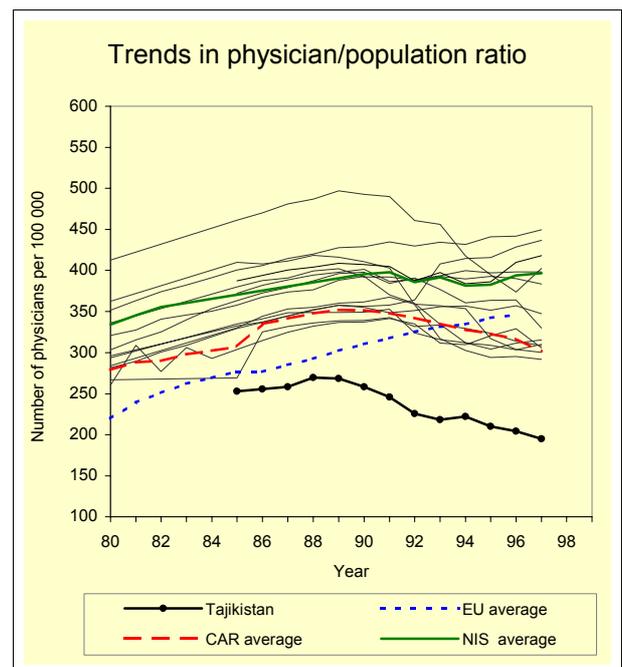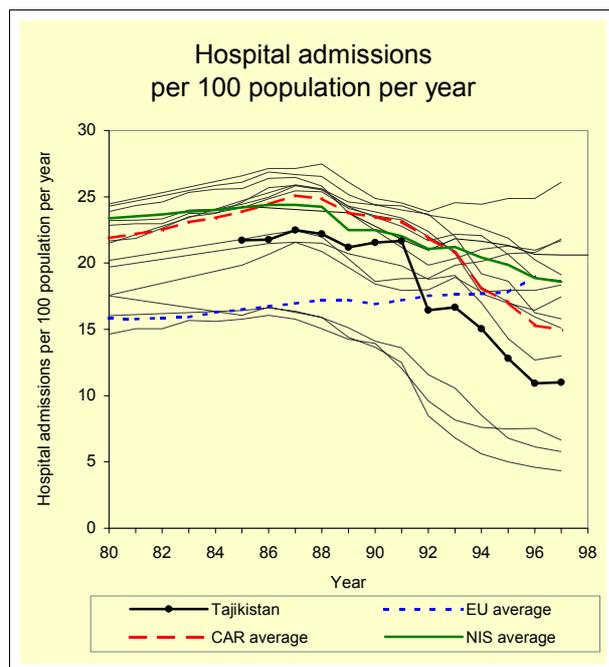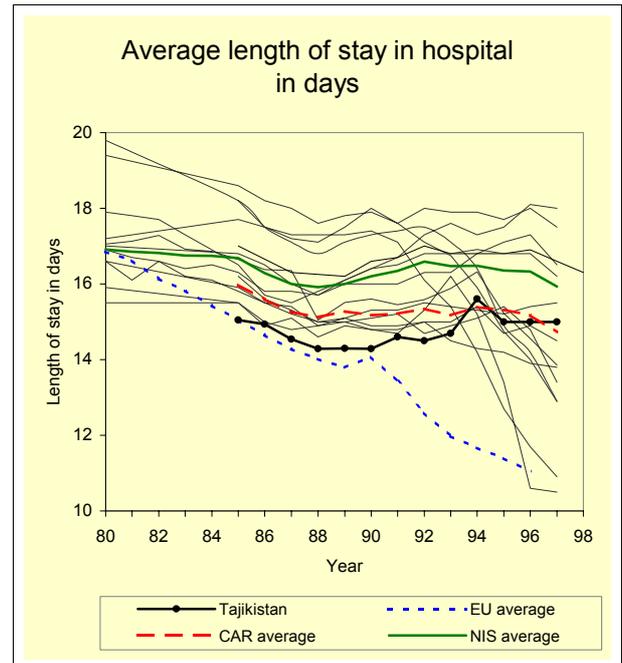
(*WHO Regional Office for Europe, 1996*).

Health care expenditure and health system funding

The difficult political and economic situation in Tajikistan has had repercussions on the funding of health care in the Republic.

According to data from the Ministry of Health, expenditure on health care came to 1.2% of GDP in 1998. Centralized funding covered no more than 65.2% of expenditure on health care. The remaining resources came from humanitarian assistance, borrowings, etc.

Outpatient services

In 1998 there were 1630 outpatient and polyclinic establishments. In accordance with the reform of the health care service currently under way, the list of medical specialities has been expanded to include physicians' assistants, visiting district nurses and visiting nurses for social issues. In addition, primary health care is provided in rural areas through 480 medical outpatient facilities.

Average length of stay in hospital in days

Hospital admissions per 100 population per year

Trends in physician/population ratio

Inpatient services

As in other CAR and NIS, the hospital bed stock has been falling steadily since the early 1990s. The bed stock in Tajikistan had by 1998 reached a level close to the average for CAR and the EU. This is the result of the policy for reform of inpatient services in Tajikistan.

The number of hospital admissions has fallen sharply since 1992 and in 1998 was lower than in the other CAR and most other countries in the European Region. According to preliminary data, the average stay in hospital in 1998 had fallen somewhat and came to 14 days.

Medical personnel

Since the early 1990s the number of doctors in Tajikistan has been gradually declining and in 1998 was one of the lowest in the European Region of WHO.

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GLOSSARY

Incidence rate: the number of new cases of a disease occurring in a population per 100 000 people during a specified period (usually 1 year).

Infant mortality rate: the yearly number of deaths of children aged less than 1 year per 1000 live births.

Life expectancy at birth: an estimate of the average number of years a newborn child can expect to live provided that the prevailing age-specific patterns of mortality at the time of birth were to stay the same throughout the child's life.

Prevalence rate: the total number of people in a population who have a disease or any other attribute at a given time or during a specified period per 100 000 of that population.

Purchasing power parity (PPP): a standardized measure of the purchasing power of a country's currency, based on a comparison of the number of units of that currency required to purchase the same representative basket of goods and services in a reference country and its currency (usually US dollars) The EU uses the purchasing power standard to measure this.

Standardized death rate (SDR): a death rate (usually per 100 000 population) adjusted to the age structure of a standard European population.

Total fertility rate: the average number of children that would be born alive per woman during her lifetime if she were to bear children at each age in accordance with prevailing age-specific birth rates.