POINT OF VIEW

The HIV Epidemic in the CIS countries. Experiences from **Kazakhstan, Georgia and Armenia**

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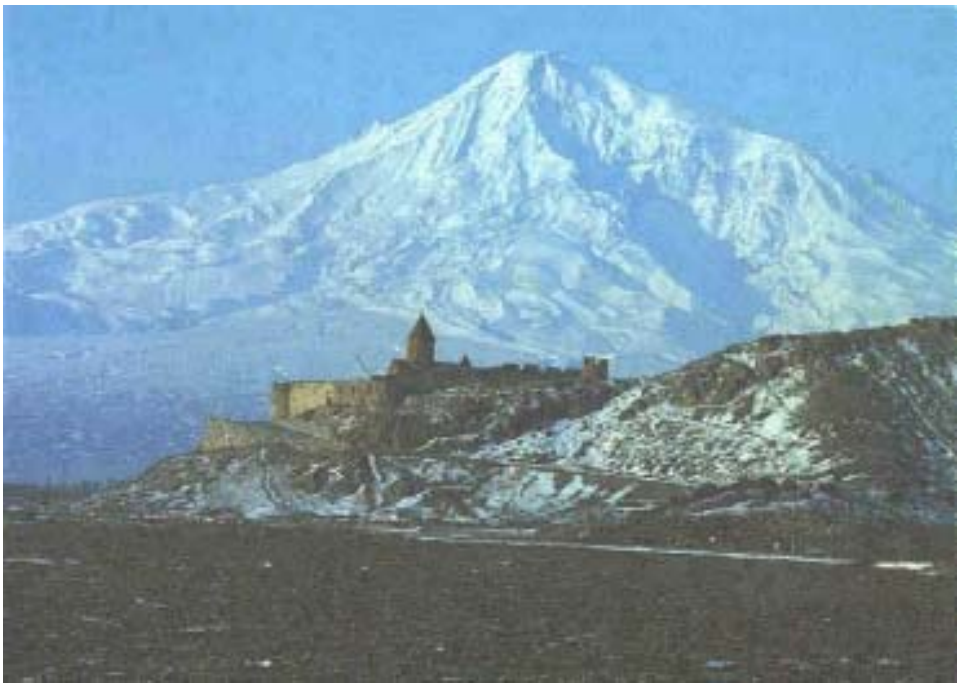


View at Mt. Ararat, Yerevan, Armenia. *Photo*: Souren Topchian

This Point of View is based on a UNAIDS mission to three former CIS countries in August 2002 to assist in the finalization of proposals to the Global Fund to Fight AIDS, TB and Malaria (GFATM). The countries visited were Kazakhstan, Georgia and Armenia. The views expressed are solely those of the author.

EASE International

The HIV Epidemic in the CIS countries: Experiences from Kazakhstan, Georgia and Armenia

By Lasse Chr. Nielsen

Introduction
At the Okinawa G8 Summit in July 2000 the Global Fund to Fight AIDS, TB and Malaria (GFATM) was established to create an international financial platform addressing the epidemics of the three major diseases.

It is intended that, by sharing resources and expertise across national boundaries and between the private and public sectors, an international effort can be made to fight the worlds' three great killer diseases: 3 million deaths from AIDS in 2000; 1.7 million deaths from tuberculosis in 2000; and, in the same year, more than 1 million deaths in Africa, mostly of children, from malaria.

Since the establishment of the Global Fund to Fight AIDS, TB and Malaria (GFATM), HIV/AIDS has been spreading at a faster rate in parts of Central Asia, Eastern Europe and the Commonwealth of Independent States (CIS) than anywhere else in the world. Since the onset of large scale reforms in the 1990s, this part of the world has been experiencing unprecedented economic, social and demographic crises; many of the newly independent countries are encountering serious difficulties in managing and financing an effective response to the challenge of the HIV/AIDS epidemic. If a human, demographic and economic catastrophe in the former Soviet Union and the Eastern European countries is to be avoided, it is imperative that an effective response be made at this initial stage of the epidemic.

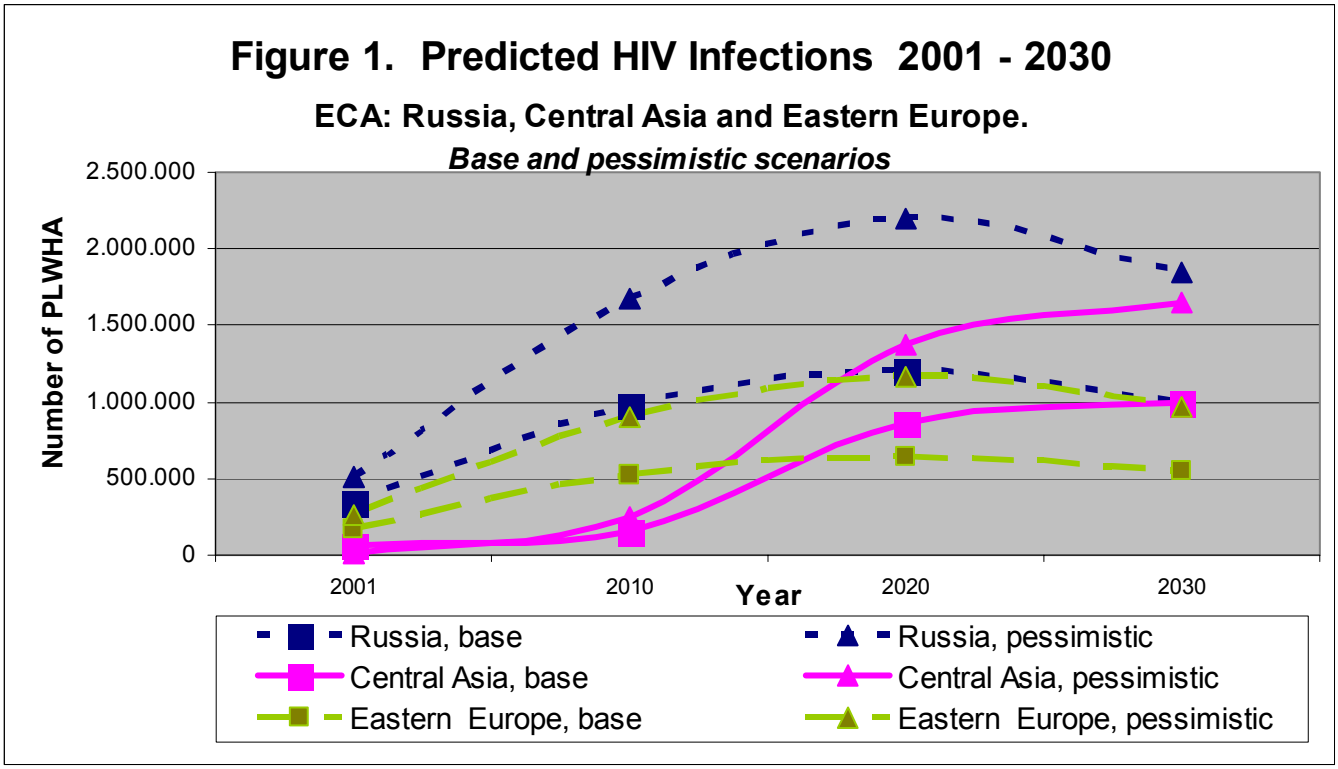
The HIV/AIDS epidemic in the CIS countries and expected future scenarios
The UNICEF report (2002) indicates that HIV/AIDS is spreading at a faster rate in parts of Central Asia, Eastern Europe and the Commonwealth of Independent States than anywhere else in the world. The report, tracking the well-being of children and young people in the region, warns that HIV/AIDS constitutes the greatest threat to their health as it moves, virtually unchecked, into the mainstream population in a number of countries.

The implications for the region's economic growth and social stability are alarming: HIV/AIDS is targeting the young of the region. Young people account for the majority of new infections; their low levels of HIV awareness, combined with increasingly risky behaviour, herald a potential catastrophe. Several reports and analyses demonstrate that the gravity of the situation has been underestimated and that precious time has been lost. Without immediate and radical action, there is little to stop the spread of the disease.

In the CIS, almost 80 per cent of new infections between 1997 and 2000 were registered among people under 29 years old. The UNICEF report finds that in Estonia 38 per cent of newly registered infections are among those aged under 20, and 90 per cent among those under 30 (UNICEF 2002).

The World Bank has developed a model to examine the HIV epidemic in Belarus and Moldova. The model is mechanical and is based on simple behavioral assumptions. This allows the application of

the model to predict potential future scenarios for the other countries in the ECA region[1]. The model projections cover scenarios for Russia, the Central Asian countries and the Eastern European countries (Former socialist economies in Eastern Europe).



Source: World Bank 2002

The model predicts 1.7 million PLWHA by the year 2010, from a base of 520,000 in 2001 in the region as a whole. The epidemic is expected to peak in year 2022, with roughly 2.8 million people infected with HIV, see figure 1. This is equivalent to a prevalence rate of 1.3 per cent of a predicted regional adult population of just over 200 million.

For the next 20 years the majority of these infections is expected to occur in Russia. By 2010, Russia will have nearly 980,000 HIV infections, and 1.2 million by 2020. By 2030, however, the number of HIV infections in the Central Asian republics is expected to exceed the number in Russia. From an initial level of about 6,600, the epidemic among the Central Asian countries will grow at an alarming rate: to 160,000 in 2010; 860,000 in 2020; and nearly one million by 2030. As the epidemic in Russia is expected to wane by 2020, the Central Asian countries will have the dubious honor of surpassing Russia, as its infection rate will have surpassed that of the Eastern European countries by 2020. This corresponds to an average growth rate of 17 per cent per year, relative to an average growth rate of 3.5 per cent among the Eastern European countries and Russia. Similarly, prevalence will be significantly higher among the Central Asian countries by 2020 (1.6 per cent, relative to 1.2 per cent and 1.1. per cent in Russia and Eastern Europe, respectively).

[1] See map of ECA countries on http://lnweb18.worldbank.org/eca/eca.nsf/66d6f5004ed085ca852567d10011a8b8/61daeed268fc41fe85256c470067d8c7?OpenDocument

In the *pessimistic case* (figure 1) it is assumed that initial prevalence is three times greater than the official estimates, that higher initial values and growth for the population of injecting drug users are used together with a higher STI co-factor. In this scenario, the region's epidemic has already reached nearly 800,000 in 2001; and it is expected to reach a peak of more then 4.8 million in 2023. This corresponds to a prevalence of 2.2 per cent of the adult population. Under this pessimistic scenario, peak prevalence nearly doubles from the base (to 2.3 per cent in Russia and Eastern Europe and to 2 per cent in the Central Asian countries). It must be noted that the present pessimistic estimates are more conservative (i.e. lower) than others, which range from 2 to 5 million by 2005 to 15 million by 2015. This discrepancy may be due to any number of differences in base assumptions, such as higher initial HIV prevalence, larger number of IDUs, higher STI cofactor, more frequent contacts, higher rates of partner change.

The economic costs of HIV in Russia

Aside from the human suffering, the disease can have *serious economic costs*. Economic costs are different from the costs of prevention and treatment. They arise because the prevalence of HIV and AIDS affects the factors of production of national wealth, *labor* and *physical capital*. Compared to the other CIS countries, Russian Federation has experienced the fastest growth rates of the HIV/AIDS epidemic, but several other CIS countries are expected to follow the same epidemic trail as Russia unless radically effective measures are taken.

HIV affects productivity directly and indirectly. The direct effects include increased sick leave, related diseases and diminished ability to perform. According to data from the AIDS Centre in Moscow, the duration of clinical manifestations of the initial HIV infection is 5 to 44 days, with primary manifestations (symptoms of other diseases, often not recognized) accounting for one to two weeks in nearly 50 per cent of all cases. With rapid epidemic development (e.g. in Russia in 2000 - 2001) "acute respiratory diseases", "pharyngitis" and other diseases causing temporary disability are detected. Secondary diseases and later AIDS lead to decreasing labour participation over time. In addition, anxiety, the need to maintain support systems, the need to provide home care, etc. will indirectly have a negative effect on productivity and the effective labour supply. This diversion of resources occurs despite the fact that HIV infected individuals are theoretically capable of maintaining a full work load, reflecting the extent to which HIV affects not only those infected, but their immediate environment (friends and families) as well.

In addition, HIV/AIDS affects disproportionably younger cohorts who, without the disease, would remain in the labour force for an extended period, and/or would continue to build up human capital and expertise. By December 2001, 62 per cent of male HIV+ and 57 per cent of female HIV+ individuals in Russia were between 20 and 30 years of age.

According to the model estimations[2], where the epidemiological figures are projected to be somewhat worse that in the model projections above (WB 2002):

[2] Building a scenario model for the economic consequences of HIV in the Russian Federation was supported by a grant from the Department for International Development (DFID) of the United Kingdom to the World Bank for technical work on the HIV/AIDS in Russia, see http://www.worldbank.org.ru/eng/statistics/hiv/default.htm#1f

- GDP in 2010 would be up to 4.15 per cent lower and in 2020 the loss would have risen to 10.5 per cent. Perhaps more significant for long term development, the uninhibited spread of HIV would diminish the long term growth rate of the economy, reducing half a percentage point annually by 2010 and a full percentage point annually by 2020 (WB 2002).
- *Investment* would decline by more than production. In the pessimistic scenario, investment level would decline by 5.5 per cent in 2010 and 14.5 per cent in 2020, an increasing impediment to future growth.
- *Effective*, i.e. quality adjusted *labour supply,* would decrease over time. However, a breakdown reveals that the overall decline would be due more to a reduction in the number of workers ("total labour supply") than to the productivity losses associated with those parts of the work force that would be HIV infected. This reflects the assumption that HIV lowers productivity only by a moderate 13 per cent.

Kazakhstan

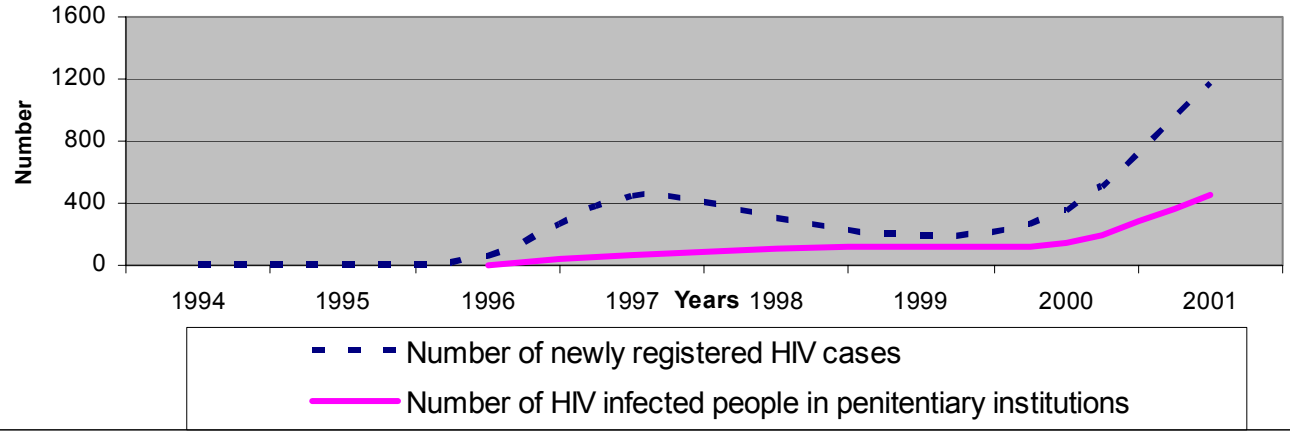
Epidemiological situation and routes of transmission

By 31 December 2001 there were 2,522 HIV+ cases officially registered. During 2001 there were three times more persons with HIV registered than in the year 2000, with the same type and number of people screened (see fig. 2 below). The prevalence of new HIV+ cases in 2000 was 3.5 per 100,000 screened; in 2001 this rose to 11.2. According to Government estimates, the actual number of people living with HIV in Kazakhstan by the end of 2001 was as high as 20,000. In January alone another 63 HIV-infected people were reported. In 2001, while people in custody made up less than 1 per cent of the population, 25 per cent of all registered HIV positive people were from the prison population.

Presently all oblasts (regions) of Kazakhstan are now affected by the HIV epidemic with the largest number of registered HIV cases being in Karaganda, Kostanai, Pavlodar and South-Kazakhstan oblasts.

The majority of people with HIV are youths aged between 15 and 29 (68.6 per cent); women make up 20.3 per cent of the registered cases. The main risk behavior is injecting drugs with contaminated needles, with IDU comprising 86.7 per cent of those with HIV.

Figure 2. Number of new infected with HIV and infected in penitentiary institutions
Kazakhstan
1987 - 2001



Source: Ministry of Health, Kazakhstan

The Ministry of Interior estimates the prevalence of HIV among Injecting Drug Users (IDU) who were placed under arrest on suspicion of crime, to be 3 per cent (11,117 people screened) overall. According to preliminary data of the sentinel epidemiological surveillance conducted in selected settlements of Kazakhstan in December 2001 to January 2002, the HIV prevalence among IDU was 0.3 per cent and 4.6 per cent.

The economic potential to fight HIV/AIDS in Kazakhstan

As in other CIS countries the new countries of Central Asia were hit by a triple-transition after gaining independence in 1991caused by: 1) adjustment to the economic shock of the break-up of the former USSR; 2) transition from state planning to market-driven economies; and 3) ongoing political transition. According to World Bank analysis Kazakhstan is relatively well recovered from the immediate shocks of the dissolution of the USSR and currently has the brightest economic future of the Central Asian countries, comparable to Russia and Ukraine.

Kazakhstan Fact Box	**Year**	**Estimate**
Total population (thousands)	**2001**	**16,095**
Population aged 15-49 (thousands)	**2001**	**8,866**
Annual population growth	**2001**	**-0.5**
GNI per capita (US$)	**1999**	**1,250**
% of Government budget spent on health care	**2001**	**13.4**
Government health expenditures as percentage of GDP (%)	**1999**	**2.4**
Male secondary School Enrolment Ratio	**1996**	**82.2**
Female secondary School Enrolment Ratio	**1996**	**90.9**

Sources: **UNAIDS Epidemiological Fact Sheet, Kazakhstan. World Bank.**

In the future Kazakhstan will be economically and financially better positioned to sustain and scale up HIV activities and interventions as well as other health programs, thereby increasing the share of government health expenditures as percentage of GDP. Regarding financial needs for combating and mitigating the future HIV epidemic, these economic prospects comparatively represent "a window of opportunity" for Kazakhstan.

Georgia

Epidemiological situation and routes of HIV transmission

By 1 July 2001 the AIDS and Clinical Immunology Research Centre registered that 49 out of 225 HIV-infected persons had developed AIDS and that 34 had died; the majority of patients were 18-40 years old. In 2000, two cases of mother-to-child transmission (MTCT) of HIV infection were reported.

The officially registered 225 HIV+ cases are far from fully reflecting the actual situation in Georgia. The national and WHO experts estimate that the real number of HIV/AIDS cases might exceed 1,000. If radical urgent measures are not taken immediately, rapid growth of the infection is inevitable, incurring the severe social and economic consequences of a wide scale epidemic (UNICEF 2001).

The registered HIV cases can be attributed to the following groups: intravenous drug use, 68 per cent; heterosexual contacts, 24 per cent ; homo/bisexual contacts, 4 per cent; blood recipients, 2 per cent; unknown, 1.5 per cent; and vertical transmission MTCT, 0.5 per cent.

The economic potential to fight HIV/AIDS in Georgia

Georgia regained its political independence in 1991 and is now a presidential republic. The political system with its executive, legislative, and legal structures is based on the model of the classical democracy.

According to the World Bank the Gross National Income (GNI) per capita in Georgia comprises US$ 620 (2000 data).

The first years of independence proved critical for the country with the eruption of civil war and armed conflicts in Abkhazia and Samachablo and the fundamental transformation of the economy. Despite the existing difficulties, since the democratic elections of 1995 there has been a growing tendency towards political and economic stabilization.

The transitional circumstances of the last decade affected all fields of development in the country including provision of basic health and social services. Public health services were affected when extreme financial austerity resulted in deterioration of service quality and decreased accessibility by the population to basic social services. Since the mid 1990s GDP per capita share allocated for public health services decreased from 4 per cent to 2.3 per cent in 1998 yielding US$ 6-7 per person.

Georgia Fact Box	**Year**	**Estimate**
Total population (thousands)	**2001**	**5,239**
Population aged 15-49 (thousands)	**2001**	**2,726**
Annual population growth	**2001**	**-0.3**
GNI per capita (US$)	**1999**	**490**
% Government Budget spent on health care	**1998**	**2.3**
Government health expenditures as percentage of GDP (%)	**1999**	**2.3**
Male secondary School Enrolment Ratio	**1996**	**77.6**
Female secondary School Enrolment Ratio	**1996**	**76.1**

Sources: **UNAIDS Epidemiological Fact Sheet, Georgia. Ministry of Health, Georgia. World Bank.**

The driving forces for the increase of HIV/AIDS cases in the country have been identified as being directly related to the recent period of political and social transformation. The high unemployment rate (20-25 per cent in Georgia), poverty (43 per cent of the population live below the poverty line), increased political and social dislocation (population of 300,000 IDP and refugees) have all contributed to the increased vulnerability of the population, leaving the young particularly susceptible to the dangers of high risk behaviour (IDUs, labour migration, etc.).

Armenia

Epidemiological situation and routes of HIV transmission

From 1988 to 1 June, 2002, 193 HIV carriers were registered in the Republic of Armenia with men representing 152 cases (78.8 per cent), women representing 41 cases (21.2 per cent) and three cases of HIV infection among children (1.6 per cent). All the known modes of HIV transmission have been reported in the country; the main HIV transmission modes are through injecting drug use (49.7 per cent) and through heterosexual contacts (39.4 per cent), whereas mother-to-child transmission stands at 1 per cent. The main transmission mode for women is through heterosexual contact.
The majority of the HIV carriers (80.9 per cent) belong to the age group of 20-39. 29 HIV-infected individuals are diagnosed with AIDS. Since the beginning of the epidemic 21 cases of death from HIV/AIDS have been registered, five of them in 2000 and four in 2001.

The number of HIV/AIDS and death cases reported within the recent three years exceeds the number of the cases registered during the whole previous period of registration. Seven TB cases have been registered among HIV-infected individuals since 1997. In 2002 47 patients at the Republican TB Centre were tested for HIV, as a result of which three were diagnosed with HIV.

Due to lack of finances, people living with HIV/AIDS in Armenia are not provided with antiretroviral therapy. Laboratory diagnostics, specific prevention and treatment of opportunistic infections are also affected by financial restrictions.

According to the data of the Epidemiological HIV Surveillance conducted in the format of Second Generation HIV Surveillance in 2002, HIV prevalence among injecting drug users is 15 per cent (in the range of 11-20 per cent).

Data from the Epidemiological HIV Surveillance conducted in the format of the Second Generation HIV Surveillance in 2002 indicates HIV prevalence among female sex workers (FSWs) at about 3 per cent.

Armenia Fact Box	**Year**	**Estimate**
Total population (thousands)	**2001**	**3,788**
Population aged 15-49 (thousands)	**2001**	**2,152**
Annual population growth	**2001**	**0.1**
GNI per capita (US$)	**1999**	**490**
% Government Budget spent on health care	**1999**	**7.5**
Government health expenditures as percentage of GDP (%)	**1999**	**1.5**
Male secondary School Enrolment Ratio	**1996**	**99.9**
Female secondary School Enrolment Ratio	**1996**	**79.0**

Source: **UNAIDS Epidemiological Fact Sheet, Armenia. Ministry of Health, Armenia. World Bank.**

According to the estimations of the specialists of the National Centre for AIDS Prevention the number of people living with HIV/AIDS in the country is about 2,200-2,400.

The economic potential to fight HIV/AIDS in Armenia

Armenian GDP per capita equals US$ 2,350 (including PPP), which is three times smaller than GDPs of Latin American and Caribbean countries, 1.5 times smaller than those of East Asian and Pacific Ocean countries and almost equal to countries in Sub-Saharan Africa and South Asia (UNDP/GOV Armenia 2002).

Education has traditionally been one of the central national values in Armenia. As a soviet Republic Armenia managed to overcome illiteracy and established a well-functioning educational system which produced an army of qualified specialists for the Armenian Soviet as well as the rest of the USSR. Though the present state of the Armenian economy has generated poverty, even among people with post-secondary and higher education, the inherited high educational level constitutes a potential window of opportunity and represents a comparative advantage in the fight against HIV/AIDS.

In 2000 Armenia ranked 72 on the global Human Development Index (HDI) scale among 162 nations. GDP per capita was US$ 503.6, which indicates negative tendency in the country's economic development. Unemployment level, according to independent evaluation, was 34.4 per cent.

The standard of living studies conducted by the Government with the support of the World Bank in 1996 and 1999 did not detect any tendency towards reduction of poverty: the percentage of the population living under the poverty line in 1996 stood at 54.73; in 1999 at 55.05. In the Republic of

Armenia the process of impoverishment of a considerable part of the population is accompanied by unprecedented strengthening of social polarization. In Armenia, the Gini coefficient, characterizing the inequality level of a population's income distribution, is one of the highest in the world.

In the aftermath of the 1988 earthquake, one third of the country's territory was partially or totally destroyed, and the wrecked national economy has still not been completely reconstructed, in spite of continuous work on its reconstruction. Many families live in temporary homes: one-roomed premises adjusted for dwelling. The unemployment level in the disaster zone is higher than the country average by a factor of 2.1.

Thus, objective socio-economic preconditions exist for the spread of the HIV/AIDS epidemic in the country.

Despite positive economic growth rates in recent years, the percentage of health expenditures (HE) according to GDP has declined in Armenia. In the latest available figures government HE constituted about 1-2 per cent of GDP and 7-8 per cent of the State Budget.

The Government does not have the means to purchase test-kits in sufficient quantities; this raises critical difficulties in ensuring blood testing, accessibility of anonymous testing for the general population, qualitative Epidemiological Surveillance, as well as laboratory HIV testing for diagnostics.

Though the low share of HE to GDP and state budget only partially reflects the present situation, various other indications and activities need to be taken into account to provide a comprehensive picture of political commitment, e.g. the adoption of a National HIV/AIDS programme on prevention approved by the President of Armenia.

Future challenges for the CIS countries: a summary of the problems and the funding requirements

- All the countries were characterized by low levels of government spending on health in relation to GDP (between 1.4 and 2.4 per cent) reflecting low political commitment to addressing national health issues. General political commitment to addressing resource needs will be highlighted in the review process when the Technical Review Panel (TRP) of the GFATM reviews country proposals. The TRP rejected a country proposal submitted in the first round because of *low political commitment* defined by government health expenditures as percentage of GDP. In the present case the share was less than 2.4 per cent. Though share of public expenditures on health relative to GDP is an approximate measurement, it is a well recognized indicator of the relative political priority of the health care sector. In order to attract donor grants and resources from sources external to the State Budget, an increase in the share of health spending in relation to GDP will constitute a promoting factor to attract foreign resources since the relative size of government expenditures on health signals political priority. An increase in future government allocations to health will fertilize the ground for external aid and grants that will supplement or support the national AIDS strategic plans and TB interventions. In countries where government expenditures on health relative to GDP are low, there exists a potential economical incitement for the Government to marginally raise allocations to health to attract external aid and funding.

> ***With the creation of international health funds like the GFATM the potential government strategy of increasing public allocations to health care has come to the fore. This is especially the case for the CIS countries characterized by historical low political prioritization of health care relative to other public sectors.*** *Now, in a constrained financial environment, it is essential to get the best value for money from the health care systems and to increase the share of public health expenditures out of total public expenditures and relative to GDP, thereby providing a sound basis for reconstruction of the transitional economies.* ***By marginally increasing the public allocations to health, government will stimulate a resource accumulating process leading to increased total resources available to promote population*** *health. By signaling* ***increased political willingness and commitment the CIS governments will pave the way for further international donations and development loans.***

- Many of the CIS countries have developed national AIDS Strategic Plans. Generally the resource needs to implement these plans have not yet been determined. The implication of this is at least threefold (Alban, 2002): 1) *De facto* a great deal of preparation is required before these plans can be operationalized, e.g. the inter-link between "spelling out" the plan and the costing of the response is generally undefined. 2) The costing procedure is based on the operationalisation of the plan; coverage needs should be decided during the costing process so that the total cost and the costing process steps are arrived at simultaneously. 3) These plans represent the central response to the challenge of the evolving HIV/AIDS epidemic; GFATM proposals are intended only to supplement national AIDS intervention schemes. Costing the national AIDS response plans is therefore of primordial importance not only to attain operational level for implementation but also to signal to potential donors the country's willingness and readiness to engage in HIV/AIDS prevention and care activities.

> ***By costing national AIDS plans and programs a significant step towards realization and implementation of plans are taken. This step will also include a signal value wit h potential effect to the outside world: the plans are genuine and meant to be realized. The written plans will thereby signal a much stronger action oriented profile by governments and less as mere decoys to attract foreign aid and GFATM***

- After gaining independence the new countries of Central Asia were hit by a triple-transition: 1) adjustment to the economic shock of the break-up of the former USSR; 2) transition from state planning to market-driven economies; and 3) ongoing political transition. Unlike Georgia and Armenia, Kazakhstan is relatively well recovered from the transitional crisis with currently the brightest economic future among the Central Asian countries and comparable to Russia and Ukraine, not least because of the economic potential due to some of the worlds' largest oil deposits. The collapsed economies of Georgia and Armenia are characterized with poverty rates of 50-55 per cent which is comparable to a number of African and Asian countries with extremely low literacy rates. But Georgia and Armenia have inherited a well educated population with 98-99 per cent literacy rate. When compared to most countries in Africa and Asia at the same economic level, the inherited educational level in the CIS countries could prove to *be a highly valuable resource and potential determining factor* in the fight against HIV/AIDS and in general health promotion.

The inherited high educational level of the populations of CIS countries could prove to be by far their best weapon against the kind of HIV/AIDS epidemic experienced and projected for Russia. If the valuable resource of a highly educated population is utilized intelligently and with respect to gained international experience, this favourable comparative advantage will be a conclusive factor in the future development of HIV /AIDS in the countries of the former USSR .

All three country proposals over the first two years were approved during the Global Fund's 4th Board meeting in Geneva January 29-31, see links to country proposals below.

Important links and key references:

Matthias K.A. Lundberg, The epidemiological and economic impact of HIV/AIDS in ECA, Initial estimates. Proposal Study on HIV/AIDS in Central Asia (Draft). World Bank, 2002.

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Georgia proposal to the Global Fund to Fight AIDS, TB and Malaria, 2nd round: http://www.globalfundatm.org/fundingproposals/georgiauk.pdf

Kazakhstan proposal to the Global Fund to Fight AIDS, TB and Malaria, 2nd round: http://www.globalfundatm.org/fundingproposals/kazakhstanuk.doc

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"*Situation Analysis on HIV/AIDS in Georgia*", Georgian AIDS and Clinical Immunology Research Center and UNAIDS, UNICEF Tbilisi 2001, see http://www.aids.gol.ge

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"National Programme on HIV/AIDS Prevention", Republic of Armenia, Yerevan 2002.

"*Education and Poverty***"** Oxfam, see http://www.oxfam.org.uk/educationnow/poverty.htm