Document of
The World Bank

Report No: 25062 UA

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$60 MILLION

TO

UKRAINE

FOR A

TUBERCULOSIS AND HIV/AIDS CONTROL PROJECT

NOVEMBER 22, 2002

Human Development Sector Unit
Ukraine, Belarus, Moldova Country Unit
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 21, 2002)

Currency Unit = Hrivnya
1 hrivnya = US$0.188
US$1 = 5.31 hrivnya

FISCAL YEAR
January 1 -- December 31

ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Anti-retroviral drugs
CDC	Centers for Disease Control
CSW	Commercial sex worker
DFID	Department for International Development
DOTS	Directly observed treatment, short course
FMR	Financial Management Report
FMS	Financial Management Specialist
FSU	Former Soviet Union
GMP	Good Manufacturing Practice
GOU	Government of Ukraine
HIV	Human immunodeficiency virus
IDU	Injecting drug user
IEC	Information, education, and communications
ILO	International Labor Organization
IPP	National Institute of Phthisiology and Pulmonology
MDR	Multiple drug resistant (in TB)
MOE	Ministry of Economy
MOF	Ministry of Finance
MOH	Ministry of Health
MOJ	Ministry of Justice
MSM	Men who have sex with men
NGO	Non-governmental organization
OSI	Open Society Institute
PIU	Project Implementation Unit
PLHA	People Living with HIV/AIDS
PPU	Project Preparation Unit
SDP	State Department of Prisons
SOE	Statement of Expenditures
STD/STI	Sexually transmitted disease/ Sexually transmitted infection
WHO	World Health Organization

(See also Annex 11 - Technical Terms)

Vice President:	Johannes Linn
Country Director:	Luca Barbone
Sector Director:	Annette Dixon
Sector Manager:	Armin Fidler
Task Team Leader:	Jean Jacques De St. Antoine

UKRAINE
TUBERCULOSIS AND HIV/AIDS CONTROL PROJECT

CONTENTS

Annexes

UKRAINE
Tuberculosis and HIV/AIDS Control Project

Project Appraisal Document

Europe and Central Asia Region
ECSHD
Ukraine, Belarus and Moldova Country Unit

Date: November 21, 2002
Sector Manager: Armin Fidler
Country Director: Luca Barbone
Project ID: P069857
Lending Instrument: Specific Investment Loan (SIL)

Team Leader: Jean J. De St Antoine
Sector(s): Health (96%), Other social services (4%)
Theme(s): Fighting communicable diseases (P) , Gender (S), Child health (S)

Project Financing Data

[X] Loan **[ ] Credit** **[ ] Grant** **[ ] Guarantee** **[ ] Other:**

For Loans/Credits/Others:
Loan Currency: United States Dollar
Amount (US$m): 60.0

Borrower Rationale for Choice of Loan Terms Available on File: ☒ **Yes**

Proposed Terms (IBRD): Variable-Spread Loan (VSL)

Financing Plan (US$m): Source	Local	Foreign	Total
BORROWER	17.00	0.00	17.00
IBRD	0.00	60.00	60.00
Total:	17.00	60.00	77.00

Borrower: UKRAINE
Responsible agency: MINISTRY OF HEALTH, SDP (UNDER THE CABINET OF MINISTERS)
Address: 7 Grushevskogo str., Kyiv 21, Ukraine
Contact Person: Vladimir Nakonechnyy
Tel: 38 044 253 6165 Fax: Email:

Estimated Disbursements (Bank FY/US$m):

FY	2003	2004	2005	2006	2007			
Annual	4.00	6.50	15.50	16.00	18.00			
Cumulative	4.00	10.50	26.00	42.00	60.00			

Project implementation period: 5 years
Expected effectiveness date: 03/15/2003 **Expected closing date:** 06/30/2007

A. Project Development Objective

1. Project development objective: (see Annex 1)

The objective of this project is reduced tuberculosis (TB) and HIV/AIDS morbidity and mortality through an effective National Strategy for TB Control Adapted to the World Standard, and an HIV/AIDS Program largely focused on prevention of transmission of the disease among high-risk groups.

2. Key performance indicators: (see Annex 1)

The main indicators would be as follows:

Tuberculosis:

(i) increase proportion of smear-positive TB cases among newly-recorded to at least 50 percent;
(ii) increase cure rate to at least 85 percent, excluding multidrug-resistant TB (MDR TB) cases (for civilian population); and
(iii) decrease fatality rate by 15 percent.

HIV/AIDS:

(i) reduce HIV/AIDS-related high-risk behavior among vulnerable populations.
(ii) strengthen AIDS Centers at the regional level so that they improve their coverage of preventive programs (in association with NGOs when necessary) and provide a broader range of medical services, including the treatment of opportunistic infections, and social support; and
(iii) implement a pilot program for the treatment of retroviral infection for adults and children.

Based on other countries' experience, the two epidemics may require 10 years or more to reach a point where both incidence and prevalence of the two diseases would have started to decrease. The project, to be implemented over a 4-year period, would: (i) provide the government with the means to stabilize the two epidemics; and (ii) strengthen Ukraine's capacity to control TB and HIV/AIDS. To that effect the project would help implement cost-effective prevention, diagnosis, and epidemic control strategies, and build institutional capacity to that effect by training health personnel and undertaking a systematic program of monitoring and supervision. The project's size and implementation period provide the government with the adequate means to start controlling the two epidemics. It would most likely need to be followed by a second operation that would consolidate the results of the first one.

Detailed outcome, output, and input indicators are presented in annex 1.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Document number: 20723-UA **Date of latest CAS discussion:** August 16, 2000

The joint IBRD-IFC Country Assistance Strategy for Ukraine for FY2001-2003 aims to assist the government and civil society in the implementation of a broad-based poverty reduction strategy and in attaining job-creating, sustainable growth. To do so, the strategy directly addresses the institution-building challenges faced by Ukraine both from the demand side (civil society) and supply (the government). The strategy seeks to move Ukraine closer to European Union standards, fostering environmentally sustainable development. As regards the provision of basic social services, Bank assistance will focus on addressing critical emergencies and strengthening community involvement in the provision of improved basic social services to the most vulnerable groups. The proposed project will benefit the general population through the control of two highly infectious diseases. Its main outcomes will most directly be observed in the most vulnerable population groups as marginalized groups will be specifically targeted for project activities due to the nature of the epidemics. The TB patients who serve as the "epidemiological pump" for the infection are often poor and sometimes imprisoned. The HIV epidemic is still highly concentrated amongst those who engage in high-risk behaviors, including injecting drug use and, to a lesser extent, commercial sex work.

2. Main sector issues and Government strategy:

Tuberculosis. Ukraine has had a long history of effectively controlling tuberculosis and other infectious

diseases. The specialized physicians and other medical workers are well-trained, and the system of tuberculosis control has a long and proud history. The system, however, has proven financially difficult to maintain in periods of economic uncertainty. Throughout the country, both in the Ministry of Health (MOH) and in prisons, TB facilities need to be modernized, especially laboratory services, so that TB cases can be detected faster and more effectively. Outpatient services also need to be improved so that treatment regimens can be better monitored and complied with. A detailed analysis of TB sector issues is presented in section B. 3. The objective of the tuberculosis component of the project is to help Ukraine control an expanding epidemic of TB. The project would help modernize the diagnostic and treatment capabilities of the current health service delivery system and make it more cost-effective. To that effect, Ukraine has adopted a new TB control strategy called "the National TB Strategy Adapted to the World Standard". This strategy includes the main elements of DOTS [directly observed treatment, short course, promoted by the World Health Organization (WHO)] as follows: (i) training and education of specialists; (ii) introduction of smear microscopy as an important diagnosis tool; (iii) introduction of standardized treatment regimen (except for drug-resistant cases) and direct observation of TB drugs intake; (iv) implementation of a standardized TB register and monitoring system; and (v) the implementation of a public awareness campaign.

Epidemiological Situation of Tuberculosis. As an outcome of its comprehensive and effective tuberculosis (TB) control system, in 1990, Ukraine reported its lowest number of TB cases in the modern era, 16,465 for a case rate of 32.0 per 100,000 population. As in many of the newly independent states, tuberculosis has increased dramatically in Ukraine following independence from the former Soviet Union. By 1999, the number of cases had reached 32,691, with a case rate of 65.0, a doubling of the rate compared to 1990. Case rates in the administrative regions ranged from 35.9 in Kiev to 72.9 in the Zaporozhye region. About 30 percent of all TB patients in Ukraine are in prison and pre-detention centers (SIZOs). The problems of over-crowding, malnutrition, late diagnosis and lack of drugs are particularly well-known in prisons and aggravate the TB situation. About 14,000 of the 200,000 prisoners in Ukraine have active TB (prevalence of an astronomical 7,000 per 100,000). Forty percent of deaths in prisoners are due to TB.

Drug-resistant TB, which is significantly more difficult and costly to treat, is also increasing rapidly. Preliminary results indicate that half of all patients have resistance to at least one drug, while resistance to isoniazid and rifampicin (referred to as multi-drug resistant TB, or MDR-TB, see annex 11, technical terms) is present in 10-15 percent of new cases.

Number of Tuberculosis Cases and Case Notification Rates (per 100,000 population) Ukraine, 1990-1999

Year	Cases	Case Notification Rate
1990	16,465	32.0
1991	16,713	32.0
1992	18,140	35.0
1993	19,964	38.2
1994	20,622	39.7
1995	21,459	41.6
1996	26,834	45.8
1997	27,204	49.1
1998	27,763	55.2
1999	32,691	65.0

Source: MOH, Government of Ukraine, WHO, USAID/CDC, 6-15 December, 1999: Joint Review of Tuberculosis in Ukraine.

Overall, 75-80 percent of cases occur in the 20 to 59 age groups. The ratio of reported cases of TB in men to women is 7 to 1. The disease had risen 141 percent in urban populations between 1990 and 1998, while the increase in rural populations was 67.2 percent. Cases of TB in Ukraine tend to be diagnosed at a much later, more advanced stage of the disease than in other areas of the world.

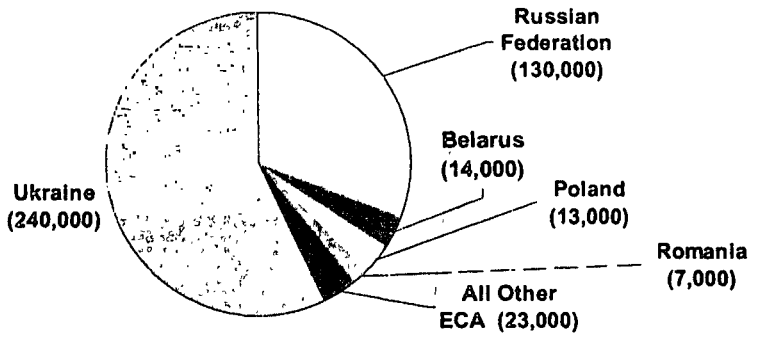
A combination of factors have contributed to the worsening epidemic. Treatment services were not sustainable during the period of economic decline. Access to care was reduced and treatment default rates increased with the decentralization of services to region and rayon dispensaries. And, an early merging of the TB and the HIV epidemics was witnessed. In 1997, about 30 percent of adults diagnosed with AIDS and 50 percent of adults dying from AIDS had tuberculosis. The increase in multi-drug resistant TB resulted from inadequate treatment and drug supply shortages.

HIV/AIDS. The objective of the HIV/AIDS component is to address the spread of the human immunodeficiency virus (HIV), the virus that causes AIDS. HIV is spread through unprotected sexual intercourse with an infected partner, sharing of unsterilized drug injecting equipment, by blood transfusion, and by transmission from an infected mother to her child. AIDS is a fatal disease for which there is neither a cure nor a preventive vaccine. Globally, it is estimated that 35.4 million persons are infected with HIV. AIDS is ranked as the largest infectious cause-of-death in the world, and the fourth leading cause overall.

With an adult prevalence rate believed to be around one percent, Ukraine still has the opportunity to prevent a widespread epidemic. Hence, the primary objective of the project is in the area of prevention of the further spread of the virus. The project design reflects that this can be best accomplished by concentrated activities which are directed toward those who are most likely to spread the virus. The project also considers that Ukraine will increasingly need to address the needs of persons already living with HIV/AIDS (PLHA). Activities are included in the areas of treatment, care and support for PLHA, and for the institutional strengthening of the anti-AIDS centers, although the financing in these areas is secondary to that of prevention.

Epidemiological Situation of HIV/AIDS. *Number of HIV Infections.* Until the mid-1990s, central and eastern European countries, including Ukraine, escaped the worst ravages of HIV. On the basis of data obtained from mass screening of large segments of the population (including high-risk groups), the total number of infections in Ukraine was reported to be 398 cases for the whole period 1987-1994. The situation changed dramatically thereafter. Since early 1995, HIV started to spread rapidly, especially among injecting drug users (IDU). By the end of 1995, a total of 1,500 diagnosed infections were reported. Just two years later, roughly 110,000 adults were estimated to be infected with HIV. Official government statistics show that, as of January 2002, 44,559 persons were HIV positive. Current estimates by UNAIDS that take into account estimates of under reporting show that about 240,000 are HIV positive. These estimates should be considered indicative and treated with caution, as a number of factors prevent the definitive estimation of these indicators. The first is the change in surveillance methods. Until 1991, HIV/AIDS surveillance was organized primarily through mandatory screening in subgroups of the population, together with contact tracing. Testing policies changed in 1991 with the introduction of anonymous voluntary testing. Testing remained compulsory for prostitutes, IDUs, sexually-transmitted diseases (STD) patients, blood donors, and "other population based on epidemiological considerations". The second factor is the under-reporting of the number of HIV cases officially registered. For instance, 30,388 HIV-infected persons have been officially registered in Ukraine by Jan. 1, 2000 while MOH estimates, based on survey and serosurveillance data, suggest 240,000 persons are infected.

Within the Europe and Central Asia region, up to 1999 Ukraine was the worst affected country, both in terms of the actual number of persons infected with HIV and the adult prevalence rate of HIV. As seen in the following chart, of the estimated 420,000 persons who are infected with HIV in the region, 240,000 are in Ukraine. *(Source: UNAIDS, end-1999 estimates; Poland data are adults only).* A detailed analysis of HIV/AIDS in the Europe and Central Asia Region is presented in annex 13.



Adult Prevalence Rates. The rates of HIV prevalence in the entire region, all less than one percent at end-1999, are low by international standards. Nonetheless, epidemiological data are particularly worrisome in the region because of the high rate of annual increase. Within the ECA region, Ukraine has the highest rate of adult infection rates, as detailed below:

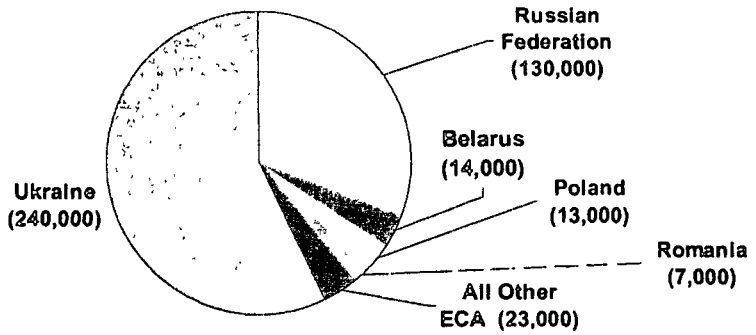
Adult (15-49 years) HIV/AIDS Rates in Europe and Central Asia (1999)

Rank within ECA	Country	Adult HIV/AIDS Rate
	Global Average	1.07
	ECA Region Average	0.21
1	Ukraine	0.96
2	Belarus	0.28
3	Republic of Moldova	0.20
4	Russian Federation	0.18
5	Latvia	0.11
6	Poland	0.07

Geographic and Age Dispersion. In the early years of epidemic, the majority of HIV cases were found in the regions of Odessa and Nykolayev, but cases have now been reported from all 27 regions of the country.

Risky Behaviors. Both case reporting and prevalence data suggest that the HIV/AIDS epidemic in Ukraine is being fueled by high-risk behaviors, particularly injecting drug use. Since drug injecting is illegal, it is difficult to estimate the size of the drug injecting population, let alone the extent to which it is linked with non-injectors through sexual networks. This lack of data makes it difficult to accurately determine how quickly the virus could spread further. However, as detailed below, there is both evidence that Ukraine may be the first country within the region to be facing the spread of HIV into the general population, and there are pre-conditions present that suggest that an exceptionally rapid spread of HIV is possible.

It is well known that sharing of drug injecting equipment without sterilization between uses is an extraordinarily efficient way of spreading HIV and has led to the spread of HIV through drug-injecting populations with unparalleled speed in other regions. The risk of infection to those who share injection equipment is extremely high – higher and more immediate than for any other group engaging in high-risk behavior. Rates of HIV prevalence in studies of the drug users have shown prevalence rates as high as 70 percent in Ukraine, amongst the highest in the region. Official government data for 1997 showed that about 83 percent of new cases of HIV had used injecting drugs. By 1998 and 1999, however, these proportions had decreased to 77 percent and 65 percent respectively, providing a possible indication of a transition of the HIV epidemic from one that was concentrated amongst those who used drugs to the more general population. The increase in women's share among the overall number of recorded HIV+ cases, from 27 percent in 1997 to 37 percent in 2000, shows the increased role played by the sexual channel in HIV transmission, and the growth in the number of HIV+ children is an evidence of HIV transmission from drug users to other population groups. Also, increasingly, HIV cases are being reported in blood donors, STD patients, and prisoners.



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HIV/AIDS

Sector Issues	Government Strategy	Project Strategy
Vulnerable Groups. Poor and socially stigmatized populations remain the engine that drives the epidemics. Measures such as needle exchange and distribution of condoms are necessary.	One of the main objectives of the government's Fourth Program of HIV/AIDS Prevention is to reduce risky behavior among young people.	Highest priority will be given to non-stigmatizing, preventive, and low-cost services that target the groups most likely to transmit HIV.
Engagement with NGOs. Poor and socially stigmatized populations tend to be difficult to identify and usually have limited access to health care services	The government acknowledges the leading role of NGOs in the implementation of harm reduction programs. It has started to work with NGOs that can reach high-risk groups more easily	The project will help associate AIDS Centers with NGOs and community organizations in service delivery.
Public Information. Mass media campaigns need to go beyond raising awareness of AIDS to persuading to adopt HIV/ AIDS prevention activities (e.g. consistent use of condoms). The government needs to be prepared to defend sensitive messages.	The MOH is prepared to undertake such activities.	The project will finance mass media campaigns to persuade adoption of HIV/AIDS prevention activities
Collaboration. Program implementation requires effective coordination between the MOH, Ministry of Finance (MOF), Ministry of Justice (MOJ), Ministries of Interior, Education and others. Up to recently, coordination was weak.	The government has created an Intersectoral Committee to steer the national program. The Committee has been very active.	In addition to specific financing for activities of the Intersectoral Committee, the project will support general strengthening of the project management capabilities of the involved Ministries
Treatment. Very high cost of antiretroviral treatment and need to ensure equal access to treatment under Ukrainian law. Few services offering other forms of care for persons living with HIV/AIDS	The government has been treating infected individuals on a highly-selective basis. Selection criteria need to be established. The government has received approval for financing from the Global Fund and hopes to obtain access to antiretrovirals at reduced prices.	The Project will expand treatment options as follows: (i) interventions to prevent transmission of HIV from infected mother to child; (ii) treatment of opportunistic infections; (iii) development of treatment protocols and training for provision of anti-retroviral drugs (ARVs); and (iv) a pilot project for delivery of ARVs to adults and children.
Information. Poor information base for planning and monitoring interventions, and variable managerial skills.	Recognition that wide-range of data collected is not being used for decision-making. Support for evidence-based management activities.	The project will finance sentinel surveillance, a monitoring and evaluation system, training, and research.

C. Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

The project includes three components: (i) control of tuberculosis (MOH); (ii) control of AIDS (MOH); and (iii) control of tuberculosis and AIDS in prisons.

Component I – Control of Tuberculosis - MOH (US$ 28.7 million, 37.2 percent of project cost). This component will help the MOH control the expanding epidemics of TB and MDR TB and upgrade the country's capabilities in these areas. It will provide the MOH with the means to implement its National TB Strategy Adapted to the World Standard and will strengthen the government's capacity both at the central level (MOH, Institute of Phthisiology and Pulmonology, and National Reference Laboratory) and that of the country's 27 regions. This component includes: (i) training and education; (ii) diagnosis; (iii) treatment; (iv) public awareness campaign; and (v) monitoring and evaluation.

The financing of drugs will be made largely by the government (US$7.6 million) as part of its counterpart financing. Additionally, an amount of US$ 2.6 million is included as part of the Bank financing in case of a larger detection of cases and need for additional drugs for treatment.

Component II – AIDS Control – MOH (US$ 32.2 million, 41.8 percent of project cost). Ukraine's Fourth Program of HIV/AIDS Prevention adopted on July 11, 2001 has the following objectives: (i) to stabilize the epidemiological situation in the country; (ii) to reduce risky behavior among young people; and (iii) to reduce the social tension in the society and negative consequences of the epidemic. The government has asked the Bank to provide financial and technical support to meet the most urgent needs of its program. Given the relatively early stage of the epidemic, highest priority and financing will be directed towards targeted interventions to prevent the further transmission of the virus.

Ukraine is also facing the ever-increasing need to develop and expand programs for PLHAs. To that effect, the project will finance a pilot project to help Ukraine develop capabilities to treat a limited number of adults and children HIV-infected persons with anti-retroviral drugs (ARVs). ARVs are expensive drugs and the successful implementation of this pilot would help Ukraine access additional funds from the Global Alliance.

Component III - Prisons Component (US$ 12.7 million, 16.5 percent of project cost). This component includes the financing of TB and AIDS control activities in the prisons system. It was designed as a separate component because of the institutional nature of the prison system, a self-contained and centrally managed system.

The prison tuberculosis subcomponent (US$ 9.2 million) includes the improvement of organization, diagnosis, treatment, and monitoring. Training of physicians and other health workers would be undertaken in close collaboration with the MOH. Regarding treatment, the government will finance US$ 2.6 million of drugs. In addition, an amount of US$3.5 million is included under Bank financing and may be used for first or second-line drugs, as required. The State Department of Prisons has adopted a cautious strategy regarding the possible use of second-line drugs. It believes that it may not use these drugs until at least the third year of the project, given the time required to establish a well-functioning TB program and build the capacity to test drug-resistant patients. Treatment protocols to be used would adhere to WHO guidelines for DOTS Plus. DOTS Plus is a TB control strategy used when there are significant levels of MDR TB. It incorporate the basic elements of the DOTS strategy which is modified to incorporate the proper administration of second-line drugs.

The prison AIDS subcomponent (US$ 3.5 million) will help improve HIV prevention among prison inmates by: (i) expanding current prevention programs throughout the system, including the financing of information, education, and communication (IEC) materials, condom and bleach disinfectant; (ii) preventing mother-to-child transmission; and (iii) carrying out the treatment of children under three years.

Institutional support. The project will finance project staff for the PIU in the areas of procurement, disbursement, financial management as well as technical specialists. It will also finance monitoring and evaluation of

the implementation of each of the components, as well as audit services. These activities have been included as part of each of the three components of the project so that they relate directly to the specific areas that are being supported.

Component	Indicative Costs (US$M)	% of Total	Bank financing (US$M)	% of Bank financing
I. TB Component (MOH)	28.67	37.2	18.85	31.4
II. AIDS Component (MOH)	32.19	41.8	28.39	47.3
III. Prisons Component	12.71	16.5	9.33	15.6
Contingencies	3.43	4.5	3.43	5.7
Total Project Costs	77.00	100.0	60.00	100.0
Total Financing Required	77.00	100.0	60.00	100.0

2. Key policy and institutional reforms supported by the project:

TB Component

Establishment of the policy and institutional framework required for implementation of the National TB Strategy, including:

(i) technical and operational guidelines;

(ii) strengthening capacity of MOH, National Institute of Phthisiology and Pulmonology (including National TB Training Center and National TB Reference Laboratory for training, quality assurance, monitoring and surveillance), National TB Institute of State Department of Prisons;

(iii) quality assurance systems for culture and sensitivity, sputum smear microscopy, TB drugs:

(iv) central procurement and distribution system for TB drugs:

(v) national monitoring system for stock control; and

(vi) TB management information system compliant with internationally agreed case definitions, enabling regular cohort analysis of case finding and treatment outcome.

HIV/AIDS Component

Development of national plans for coordination of HIV/AIDS, STI and drug related services through integrated training, regular meetings, discharge planning and establishment of referral services:

(i) at the national level:

(ii) at the regional level, for each region.

Establishment of the policy and institutional framework required for rapid expansion of programs to prevent the transmission of HIV infection, including:

(i) quality control laboratory and monitoring system for condom testing:

(ii)· guidelines on the rational use of blood;

(iii) establish mechanisms for coordination of AIDS Centers, NGOs and community organizations to implement harm reduction programs through training, advocacy, resource center, providing international best practice on harm reduction; manage harm reduction and pilot program funding program; and

(iv) policies on innovative drug treatment for IDUs.

Establishment of institutions for clinical and other dimensions of care for PLHAs:
(i) self-help NGOs of PLHAs and their families; and

(ii) community and home-based care, hospices, shelters, and orphanages for PLHAs

3. Benefits and target population:

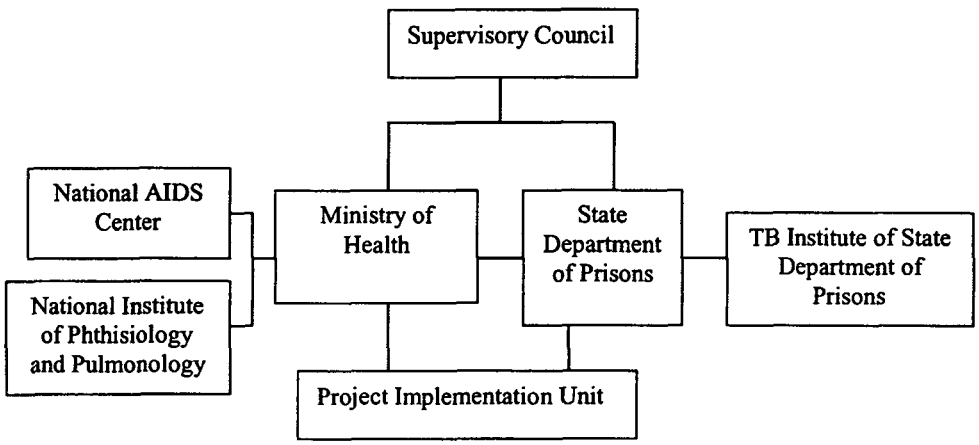
The benefits of the TB component would be: lives saved, disease prevented, disability avoided or diminished, reduced absenteeism from work, and health care costs saved. Adoption of treatment regimens that take account of MDR strains of TB could reduce the spread of MDR TB and help preserve the range of available options for treatment of TB worldwide. Among people at high risk of TB are those living in overcrowded, poor environments, such as the prison or inner city populations.

The HIV/AIDS component would benefit people at risk of or vulnerable to HIV/AIDS (IDU, CSW, MSM, children of pregnant women infected with HIV, youth, recipients of blood donations, sexual partners of PLHAs). Early and effective prevention programs would lead to significant savings in the cost of treatment and care of PLHAs. Reduced HIV infection would also reduce the spread of TB through immuno-compromised individuals.

Because TB and AIDS are diseases that largely affect the poor and marginalized sectors of society in Ukraine, the project would contribute to reduced poverty and discrimination for these vulnerable populations. In addition, the potential benefits for the general population should not be under-estimated. Tuberculosis is an infectious disease which can be easily contacted by being near a coughing patient on a bus, in a movie theatre, or at a sporting event. And, while HIV/AIDS had until recently been largely confined to persons who use injecting drugs, a cross-over into the general population is now being observed. In simplistic terms, some IDUs have non-injecting sexual partners. Some IDUs sell sex in exchange for drugs. Some commercial sex workers use contaminated needles for drug use. A non-injecting businessman might frequent a drug-using commercial sex worker.

4. Institutional and implementation arrangements:

The overall project management arrangements are as shown in the figure below. This structure has the advantage of leaving the day-to-day management of the project to technical, financial and procurement specialists while ensuring its integration into the government's regular health programs by the top management of the MOH and the State Department of Prisons, and a broad strategic overview and coordination by the Supervisory Council.



The Supervisory Council would be the main oversight committee coordinating the activities of the

ministries and departments involved in the project. It would be headed by the Vice Prime Minister and include representatives of the MOH, State Department of Prisons, the Presidency, the Ministry of Finance, the Ministry of Economy, the Parliament, NGOs and international organizations. The Supervisory Council would approve the project strategy, develop and ensure compliance with the project financing schemes, ensure conformity of the project activities with the government health sector policy, and monitor project implementation and schedule.

The MOH and the State Department of Prisons would each create a division comprising three or four full-time staff for each division. Its main functions will be to: (i) provide overall methodological guidance and coordination for the project components to be implemented by the MOH and State Department of Prisons respectively; (ii) provide methodological support for project implementation; (iii) collaborate with the PIU, coordinate the preparation and conducting of bidding, and provide timely clearance of project documents prepared by the PIU; (iv) review reports and proposals prepared under the project; (v) review project plans and progress reports; and (vii) prepare documentation and reports for decisions to be taken by the Supervisory Council. As appropriate, the MOH and the State Department of Prisons would draw upon the staff of the National Institute of Phthisiology and Pulmonology, the National AIDS Prevention Center, and the Department of Medical Provision and Sanitary-Hygiene Control of the State Department of Prisons (SDP), and the TB Institute of the SDP. They will play a major role with respect to protocols, training, monitoring and evaluation, and as reference laboratories.

The implementation strategy for TB control is described in Annex 14. The implementation of TB control components would be undertaken by the MOH for the civilian sector and the State Department of Prisons for the prison system. As the leading TB institute in the country, the National Institute of Phthisiology and Pulmonology (IPP) and the Department of Medical provision and Sanitary-Hygiene Control of the SDP would take the lead in organizing the training of TB specialists, laboratory technicians, GPs, epidemiologists, statisticians, and nurses. It would train an initial group of about 10-12 trainers who would replicate the training in 12 regional training centers. In total, about 1500 TB specialists, 1500 laboratory technicians, 1500 GPs, and 3000 nurses would be trained under the project. As it is in charge of the central reference laboratory, the IPP would be responsible for overseeing the strengthening of laboratory services in the country and for quality control. It would be responsible for the regular monitoring and evaluation of the implementation of the National TB Control Program. It will form its own monitoring and evaluation team that will conduct regular monitoring visits to the regions, using a monitoring manual. In turn, the regions would have their own monitoring and evaluation teams that would conduct regular visits to the rayons.

The implementation strategy for the prison system would follow the one used in the civilian population, with some modifications because of the specific characteristics of prisons. Implementation in the prison system would start simultaneously, which would allow to improve the referral of patients from prisons to the MOH. Training would start in the eastern part of the country where there are more prisons. The prison system would use the same TB registers as the MOH, but it would establish its own monitoring and evaluation team.

Activities to control HIV infection and AIDS would be implemented by the MOH for the civil population and SDP for the prison system. The implementation of outreach services for HIV/AIDS is described in Annex 12. The main executor of this component would be the Ukraine AIDS Center working with the 28 Regional AIDS Centers (RACs). They would contract agencies including NGOs, using competitive selection methods, to work with high-risk groups and implement outreach programs. Goods (including condoms, syringes, and needles) would be procured centrally and provided to NGOs. NGOs would submit proposals that would be evaluated according to criteria included in the Operational Manual. Ukraine has sufficient NGOs in number, type, implementation and technical capacity to carry out the outreach and other services contemplated by the project. There are currently 20 NGOs working directly on prevention of HIV/AIDS with high-risk groups and another 30 working in HIV/AIDS have the capacity to work with these groups. As many of the Regional AIDS Centers have been created recently, they will be strengthened by the project that will provide them with training, equipment, and prevention and information materials. The National AIDS Center will undertake monitoring and evaluation using indicators, surveys, and evaluation studies.

The Project Implementation Unit (PIU) will be in charge of the day-to-day implementation of the project. It will receive guidance from the two divisions to ensure that project activities are well integrated in the MOH and prisons regular programs and activities. Its tasks would include: (i) the preparation of the project implementation

plan; (ii) preparation of bidding documents and follow up of bidding process; (iii) disbursements of funds; (iv) financial management; (v) project monitoring; and (vi) reporting to the government and the Bank. It will be staffed with procurement specialists, financial officers, and technical staff. It will conduct the selection of national and international consultants as required during project implementation.

Financial Management (see Annex 6b for Financial Management Assessment Report)

The project design assumes that Ministry of Health and State Department of Prisons will be responsible for the loan administration. For the purposes of the financial management requirements and other implementation issues MOH will create a department (PIU), which is to deal with project implementation that includes disbursement, financial management arrangements, project monitoring, contract management, etc. PIU will be the central coordination unit between MOH and State Department of Prisons. Financial management issues related to the WB requirements are to be managed by the PIU in close cooperation with the local accounting staff. Taking in account a complex structure of implementation agencies involved in the project, the PIU will have a key playing role in managing financial management issues of MOH and State Department of Prisons.

Financial Reporting.

Financial reporting for the project includes two parts reporting. The first part of the reporting is to be prepared by the local accounting staff for the local reporting requirements. These reporting requirements are regulated by the National accounting standards. The PIU financial management staff will prepare reports in accordance with the WB financial reporting requirements. These reports are to be submitted quarterly to the WB and supervised by the local FMS. The Financial Management Reports will include the following forms: (a) Financial Reports; (b) Project Progress Reports; and (c) Procurement Management Reports. These financial reports will be submitted to the Bank within 45 days of the end of each quarter. The first quarterly FMRs will be submitted at the end of the first quarter in which disbursements commence.

Audit Arrangements. The audit will include a project audit. Audit of the MOH or State Department of Prisons is not anticipated, as they are the Government agencies, which are the object of the Supreme Audit Institution control. The project audit will include a separate opinion by the auditor on the operation of the Special Account, SOE and financial statements. An independent auditor, acceptable to the World Bank, will carry out this audit and the audit report will be sent to the Bank within six months of the end of the fiscal year. It is expected that the cost of audit will be financed from the loan proceeds.

Disbursements. Disbursements from the IBRD Loan will be made based on traditional disbursement methods (i.e., from the Special Account with reimbursements made based on Statements of Expenditures (SOEs) and full documentation, and direct payments from the Loan Account). The proceeds of the World Bank loan will be allocated in accordance with Table C (disbursement), Annex 6. To facilitate timely project implementation, the Government will establish, maintain and operate, under terms and conditions acceptable to the Bank, one separate Special Account denominated in US dollars. Currently no local banks in the country can be considered totally reliable and financially sound. It is recommended that the Government select a commercial bank outside Ukraine to hold the Special Account. The complex project implementation structure requires that two registration accounts should be opened in State Treasury to serve for the disbursement needs of the MOH and the State Department of Prisons. Each of the implementing units will be responsible for managing hryvna registration accounts in State Treasury. Taking in account that implementing entities are State authorities so these agencies will be required to use a Treasury accounts for local counterpart funds.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

TB - Undertaking a scaled-down civilian TB program until the results of the two pilots are known. This alternative was considered at an earlier stage of project preparation when it seemed that there was less support for DOTS. As the dialogue with the MOH evolved, the government's commitment to a sound TB control strategy became significantly stronger and it was decided to support a much broader program. A review of the strategy showed that what the MOH calls Ukraine's "National TB Strategy Adapted to the World Standard" does incorporate the basic elements of a sound TB control strategy: (i) diagnosis through increased use of smear microscopy; (ii)

standardized treatment regimen (except for MDR TB); (iii) direct observation of TB drugs intake; and (iv) standardized TB register and monitoring system. One of the reasons the name "DOTS" is not used is that it has come to be perceived by many FSU countries, including Ukraine, as a TB strategy for very poor countries and not for European countries, and using that name would have alienated some important stakeholders.

AIDS - A Project that addresses prevention only. There are good justifications for considering this option. In a relatively young HIV epidemic, there are significant potential humanitarian and cost benefits if a government is able to prevent an epidemic from spreading into the general population by targeting inventions and financial resources toward individuals who are at high risk of spreading the virus. However, even with the enhanced prevention activities recommended under the project, it is predicted that a considerable wave of sick people will overwhelm the health care system. Due to the very high cost of anti-retroviral drugs, large scale treatment would be prohibitively expensive. Nevertheless, there is a justified need to include some activities for treatment and care. Ukraine needs to develop a strategy to address how it will handle the inevitable upsurge in the number of HIV-infections and AIDS cases in the years to come. The government will need to develop treatment protocols and train physicians in the provision of anti-retrovirals and case management. To make this possible, the project includes a pilot project to treat a limited number of adults and children. If successful, this will increase Ukraine's chances of obtaining access to cheaper drugs through the Global Fund or other sources. The project will also provide treatment for many of the opportunistic infections that plague PLHA. The latter are more likely to be engaged with service delivery providers, and hence more likely to practice safer behaviors, if they are offered some treatment opportunities.

Choice of lending instrument. Given that the control of TB and AIDS was seen from the start as a long-term venture of at least 10 years, an Adaptable Program Landing (APL) had been contemplated at the beginning of project preparation. After analysis, both the government and the Bank concluded that there is still significant uncertainty about the evolution of the epidemics to design a project to be financed through an APL. Particularly difficult would be the setup of proper trigger indicators to justify a second operation. Thus it was considered preferable to consider financing the project through a specific investment loan.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed (This is the first Bank-funded health project in Ukraine)			
Community approach to services provision, NGOs and community-based organizations involvement into project implementation	Social Investment Fund Project	S	S
Other development agencies			
Development of a National TB Strategy	MOH, WHO, USAID, CDC Joint Review of TB in Ukraine		
Piloting DOTS	USAID; EU-TACIS pilot TB projects in two pilot sites (Kiev and Donetsk)		
Procurement of pharmaceuticals: GMP certification of local manufacturers, establishment of the National Certificate Inspectorate	EU-TACIS: TA support to local manufacturers to attain good manufacturing practice (GMP), and to establish the national agency to provide GMP certification		
Development of a National HIV/AIDS Strategy	MOH/Multi-agency/UNAIDS Strategic Planning Project (Situation Analysis completed; Strategic Plan of a National Response to AIDS epidemic prepared)		
HIV/AIDS prevention in target groups of population at local levels, establishment of an information center on HIV/AIDS prevention	Joint EU and USAID project on AIDS prevention in Ukraine		
Harm reduction programs targeted on high-risk groups	International Renaissance Foundation		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

Tuberculosis. Ukraine's National TB Strategy incorporates lessons learned from evaluations of TB projects throughout the world. These lessons show that five key elements contribute to successful TB programs: (i) Government commitment to an effective TB program; (ii) an increased focus on case detection through sputum microscopy; (iii) administration of standardized treatment regimens under direct observation of drug intake; (iv) a system of regular drug supply; and (v) an effective monitoring system for program management and evaluation. Ukraine has the basic health infrastructure well-suited to mounting a successful TB control program and achieve a high public health impact. However, the extent of success depends upon substantial additional resources and the strengthening of implementation capacity at the central and regional levels.

Training of health workers has been a key element of positive outcomes. Successful projects have started by training a small nucleus of committed individuals who themselves have convinced and transferred their knowledge to fellow professionals. Regions more advanced in the program have assisted with training. This is precisely the training strategy that has been adopted by the project.

Treatment of MDR TB has been effective in countries that have first been successful at treating normal TB and achieved cure rates of at least 80 percent. In addition, laboratory services need to have the capacity to provide drug susceptibility testing. There must be facilities to implement infection control, i.e. to isolate MDR patients from other patients. For these reasons, Ukraine is contemplating the introduction of MDR TB treatment not before the third year, which will allow it to have the proper infrastructure in place.

Strong HIV prevention measures need to be introduced because an increase in HIV would have an adverse impact on TB control. This is an essential part of the design of the proposed project.

HIV/AIDS. The experience of the past decade demonstrates that a number of countries around the world have managed to slow the spread of the virus with sound prevention policies and strategies. The design of the project is consistent with the general lessons learned from global experience, and outlined in the Bank report "Confronting AIDS", namely: (i) early, aggressive preventive intervention is the most effective strategy because of the high but hidden speed of HIV transmission; (ii) targeted interventions to poor and marginalized groups at risk, within a broader campaign, are the most effective way to reduce transmission because of multiplier effects of prevention to the general population; and (iii) HIV has strong linkages with other diseases such as TB and STDs, and preventing or treating these illnesses can markedly reduce the burden of HIV/AIDS. Experience in other countries has also demonstrated the comparative effectiveness of NGOs in reaching marginalized high-risk groups. The design of the project reflects these lessons with respect to the emphasis on prevention, the focus on high-risk groups, linking with TB and STD programs, and working with NGOs.

Overall lessons. Experience with preparation of other TB/AIDS project has underscored the necessity of giving attention to the following issues early during preparation: (i) allowing time for consensus to build around key policy features of the project, especially the TB control strategy and the inclusion of harm reduction methods for HIV prevention; (ii) engaging local experts in the development of specifics of diagnosis and treatment regimens as a tool to build understanding and acceptance of the project design; (iii) explaining to the client the Bank's procurement guidelines regarding competition and GMP certification required for drug suppliers allows to better design a procurement strategy; (iv) working with other donors who can bring financial and technical resources as well as operational experience to the national programs. These lessons have all been applied during the preparation of this project.

The Ukrainian context. An earlier failed attempt to prepare a health project in Ukraine has taught two important lessons. First, it is critical that Government counterparts be fully involved during the process of preparation in order to create ownership for the project. The first attempt to prepare a health project had been done mostly by the Bank team, with little input from the Government side, and this lack of ownership has been blamed for the ultimate failure of the preparation process. The second lesson relates to the importance of engaging representatives of the Parliament (Rada) early in the process of preparation, to avoid rejection of the project at the last stage of approval. Overall, the Bank has learned that the process of consensus-building is relatively difficult in

the Ukrainian context, and it is necessary to continuously assess the level of political support for a project and take these circumstances into account. The Bank will need to continuously monitor changes in the policy environment and be prepared to adjust its own position as local circumstances evolve.

4. Indications of borrower commitment and ownership:

The government's commitment to the project appears to be high. Meetings during appraisal with the Vice Prime Minister, MOF, Ministry of Economy (MOE), MOH and State Department of Prisons showed a strong support to the project by high government officials. Press reports on the project have been quite positive during the last year.

During the early part of project preparation, there were serious concerns within the MOH and the tuberculosis community about the project. They considered that the introduction of a pure DOTS approach may be detrimental to Ukraine, and had taken a cautious approach whereby DOTS would be tested in two pilot projects. One of these pilots has recently started in the Donetsk region. As discussions evolved, it was agreed that the project would support what came to be called by the government the "National TB Strategy Adapted to the World Standard" that incorporates the basic elements of a sound TB program, and consensus appears to have been reached. In the prison system, the TB control strategy was never an issue, and in fact the State Department of Prisons has recently started to implement DOTS.

There were also concerns about the financing of TB drugs under the loan because local manufacturers, who are regular suppliers of the MOH would no longer be assured of this market under Bank procurement guidelines (competition and need of GMP certification). This was resolved by deciding to have most of the drugs for the project financed by the government, but also including a smaller part under the Bank loan in case the program develops faster than anticipated. The resolution of this problem is the result of trust built between the government and the Bank team. When issues such as this have arisen, the government clearly expressed its concerns to the Bank, which has allowed for solutions to be jointly explored.

For the HIV/AIDS component, Government commitment has been strong, as evidenced by the establishment of the National Coordinating Council for AIDS in 2001, under the leadership of the Vice Prime Minister and including representatives from all major governmental agencies, international organizations, and NGOs. The Council has met on several occasions, and has taken its responsibilities seriously. Satisfactory progress with the strategic planning process with support from UNAIDS is further evidence of commitment. This was demonstrated by the completion of a Situation Analysis of very good quality, prepared with participation of a cross section of local public service and academic institutions as well as NGOs. Finally, commitment to solving the HIV/AIDS problem is evident in the willingness of the government to involve NGOs in project activities, and to try innovative approaches such as harm reduction.

With the participation of key stakeholders, the government has developed and approved a National Program of TB Epidemic Control and a Strategic Plan of National Response to the HIV/AIDS epidemic. The government has estimated the financial needs of both programs. The proposed Bank loan would cover those parts of the programs that are unlikely to be covered by the government budget or by other international donors.

Despite these favorable signs of commitment, the future of the TB and AIDS programs in general, and of the project in particular, will depend on continuous efforts to raise awareness of senior officials and to maintain the commitment at a high level.

5. Value added of Bank support in this project:

Financial support. The proposed project would enable the government to start controlling both epidemics by covering the populations and groups at risk throughout the country. The implementation of cost-effective strategies will increase the chances of containing the spread of the diseases.

International experience. The Bank has a unique international experience in providing financing to contain similar epidemics. At the same time, its experience of FSU countries has allowed it to adapt the experience to the context of Eastern European countries and of Ukraine in particular.

Donor coordination. The presence of the Bank has provided a vehicle for closer coordination among numerous donors already active or wanting to be active in TB or HIV/AIDS control, and facilitated donors' working relations with the MOH. Project preparation has benefited from financial or technical resources from WHO, UNAIDS, the Open Society Institute (OSI), USAID, CDC (US) and Department for International Development (DFID) - UK. The Bank loan will make possible large-scale expansion of activities started by WHO in TB Control and UNAIDS in HIV/AIDS control, as well as by numerous other donors that have supported NGOs or local health authorities in HIV/AIDS outreach and care activities.

E. Summary Project Analysis (Detailed assessments are in the project file, see Annex 8)

1. Economic (see Annex 4):

● Cost benefit NPV=US$241 million; ERR = for HIV/AIDS: 38% and TB: 170 % (see Annex 4)

○ Cost effectiveness

○ Other (specify)

A cost-benefit analysis was carried out for the project. It identified and quantified two types of benefits – direct and indirect – accruing from the project. Direct benefits are defined as the savings from treatment costs for TB and HIV/AIDS. Indirect benefits are defined as the gains from reductions in disability and death and associated economic productivity. Since TB and HIV/AIDS in Ukraine particularly strikes males in their most productive years (20-49), the calculation of indirect benefits is important. The first step in calculating benefits was modeling the epidemics and calculating the number of cases averted, and reduced fatality as a result of the interventions. This information was then applied to assumptions regarding treatment costs and worker productivity to derive direct and indirect benefits. These benefits are then compared with investment costs to obtain the net benefits and the internal rate of return (IRR). A sensitivity analysis was carried out to account for two scenarios: (i) timely implementation but poor quality of project, which is assumed to reduce net benefits by 20 percent and 40 percent, and (ii) a 2 and 3-year delay in project implementation.

Assumptions. The following parameters are relevant in estimating the economic benefits of the project: the length of the project horizon and the time to impact the health of the population, the size of the target population, the existing patterns of morbidity and mortality, the number of years of productive life added as a result of the percentage decrease in mortality, and the existing cost structure in the health sector. Given the medium-to-long-term effect of the changes, the estimates presented in terms of reduced morbidity, which assume an horizon of only seven years, are conservative. The analysis of the project uses the following assumptions to measure the direct and indirect benefits:

(i) TB civilian population targeted with basic package: 34,000

(ii) Prison population targeted with basic package: 7,388

(iii) Total IDU beneficiaries over 5 years: 200,000

(iv) Prevalence among IDU: 30 percent

(v) Cases with HIV among IDU: 20,000

(vi) No. of needle exchanges per day: 1.2

(vii) Total sex workers to benefit : 15,000

(viii) Prevalence among sex workers: 2.0 percent

(ix) No. of potential transmitters: 225

(x) Cost of TB basic package: $300

(xi) Discount rate: 10 percent.

(xii) Time horizon: 5 years and 7 years

HIV/AIDS Component: For the high-case scenario (higher HIV/AIDS incidence rates), the NPV of benefits over four years is US$3.4 million and total project benefits for the seven year period is US$140 million. The IRR for the high case scenario is 49 percent. For the low-case scenario, the NPV is US$795,000 for four years and a total of US$90 million with an IRR of 38 percent. The sensitivity analysis for the HIV/AIDS component shows that even in the context of low quality of project resulting in a 20 percent decline in project benefits (applied to the high case), the NPV would be US$69.5 million and the IRR 26 percent. In the case of a 40 percent decline in project benefits, the NPV would be US$ 31.8 million and the IRR 11 percent. The analysis shows that 2 and 3 years delays in implementation would greatly reduce benefits, resulting in a negative NPV and IRR.

TB Component: The cost-benefit analysis of the TB component shows that in four years, the proposed project would yield an NPV of US$40.9 million and in seven years a total NPV of US$152 million with an IRR of 170 percent. The sensitivity analysis for the TB component shows that even in the context of reduced benefits (20 percent and 40 percent) due to poor project quality and 2 and 3 year delays, the NPV and IRR for the TB component would remain positive.

2. Financial (see Annex 4 and Annex 5):
NPV=US$ 241 million; FRR = % (see Annex 4)

Fiscal Impact:

Fiscal Impact and Sustainability. The sustainability of the project's HIV/AIDS and TB components is high. In the case of the AIDS component, the activities would focus mostly on preventive measures, yielding minimal recurrent costs and significant returns. TB interventions are also sustainable given the high impact demonstrated by the application of the basic and enhanced strategies for treatment of TB. The fiscal impact analysis shows that the impact of project disbursements on the total health budget (public) is between 5-6 percent. Recurrent costs were estimated for a low rate of 7 percent and a high rate of 20 percent. The results show that the impact on the health budget is between 1.5-5 percent. There is strong economic justification for public funding for TB and HIV/AIDS. Taking this into account and the results of the analysis, it is concluded that the fiscal impact of the project on the government's health budget is small, and the conditions for sustainability are high.

3. Technical:

Tuberculosis. The project would support Ukraine's National TB Strategy. It would benefit from lessons learned worldwide and in the region in tuberculosis control programs (Section D.3) that have been incorporated in the project design. Technical training and support to the regions would be key to improve diagnosis and cure rates. Close linkages would be established between the prison and civilian TB services and between these and the general medical services for patient treatment and referral. The project design is flexible and would allow to adjust the provision of drugs and other inputs in function of the actual evolution of the epidemic, as tracked by the TB register and monitoring system. MDR TB would start to be addressed only as from the third year, after sufficient progress has been made in strengthening the system for control of normal TB.

HIV/AIDS. The project supports the government's strategy of combining preventive actions targeted on high-risk groups with broader actions of public education at the national level. The project gives a larger weight to targeted interventions (75 percent of component cost). This is justified as people with the riskiest behavior are most likely to contract and spread HIV and STIs. As a result, the indirect benefits are much larger when infections are prevented in riskier groups rather than in low-risk populations. STI prevention and control constitutes an essential element of the project design both to reduce the burden of STIs themselves and to reduce the risk of HIV infection and transmission by those infected with STIs. The project design for this component is as flexible as the one for TB. It would allow to reprogram the allocation of funds in function of the geographical evolution of the epidemic, as

observed by the surveillance system.

4. Institutional:

4.1 Executing agencies:

The institutional arrangements have been described in section C.4. At the national level, the roles of the MOH and State Department of Prisons would be to: (i) create public awareness of the national policy and strategy; (ii) train the trainers who would undertake training at the regional level; (iii) manage national reference laboratories; (iv) provide scientific guidance; and (v) monitor and supervise the overall program. Project activities would be coordinated through the Supervisory Council. The national strategy would be implemented at the regional level which would be in charge of: (i) prevention programs; (ii) training; (iii) diagnosis and treatment; and (v) monitoring and supervision.

4.2 Project management:

The project will be implemented by the two agencies involved: Ministry of Health and State Department of Prisons. These two agencies are independent and the day-to-day coordination will be undertaken by the PIU that will provide support, monitoring and coordination of procurement, disbursement and financial management. The PIU has a highly competent Director, well respected by higher government authorities. He has experience in Bank procedures as he has already been PIU Director of another project financed by the Bank. He is supported by a team including procurement specialists, financial management specialists, about four technical specialists for TB and AIDS, and one communications specialist.

4.3 Procurement issues:

As mentioned earlier, procurement issues regarding first-line drugs were solved by: (i) having the largest part of TB drugs financed by the government counterpart funds (US$10.2 million) and (ii) including a smaller portion (US$6.1 million) under the Bank loan either for the procurement of additional first-line drugs if required or second-line drugs for the prison system.

During project preparation, questions were also raised by the government about the procurement of condoms and syringes. During appraisal, the government informed the Bank that: (i) only one company in Ukraine produces condoms and it does not have a GMP certificate for condom production; and (ii) it has insufficient capacity to produce the 44 million condoms required for project implementation over a four year period. As regards syringes, there is no GMP requirement to participate in international competitive bidding, and thus Ukrainian producers are eligible to participate. In view of the above, the government requested that condoms and syringes be financed by the Bank, using competitive bidding procedures.

The PIU has developed significant experience with Bank procurement. It has started to develop experience with the procurement of health sector goods, but still has limited experience with large consultancy contracts. A number of actions will be taken to strengthen the procurement capacity of the PIU. First, procurement advisory services would help the PIU undertake the tasks of logistical planning, updating of procurement plans, training plan, and the preparation of operating procedures. Especially during the early part of the project, procurement of drugs, laboratory equipment and supplies would receive assistance for technical specifications. Second, the PIU and the MOH project management and procurement staff would be given the opportunity to attend intensive procurement training courses, such as the course offered by the ILO in Turin. Third, the Project Launch Workshop would be another important initiative to help build project implementation and procurement capacity. Finally, the project would be subject to intense supervision by the Bank.

4.4 Financial management issues:

A final review was undertaken in November 2002 by the FMS Kazakov Vitaly to determine whether the financial management arrangements within MoH and State Department of Prisons are acceptable to the Bank. A financial management assessment report is included in Annex 6b. A summary of the conclusion is included below.

On the base of the assessment provided it has been concluded that the project financial management arrangements

satisfy the Bank's minimum financial management requirements.

Financial flows. The draft accounting and financial flows for the Project are described in detail in Annex 6 (b). The financial flows will comprise mainly of: (a) Direct payments from the loan account (b) SOE based payments (c) Co financing payments, coming through the treasury account.
Financial Risks. From a financial management perspective, the Project is considered as high risk operation for the following reasons i) the amount of loan facility is significant and complex structure of implementing agencies involved; ii) low level of experience of PIU staff of complex WB projects implementation, iii) cofinancing requirements; iv) weak public sector financial management capacity, assets safeguard and eligible use of goods purchased under the project.

Mitigation of the specified risks actions:

- strengthening of control over the use of goods and funds of the project from the PIU, internal audit departments of implementing agencies by the periodic supervision of processes of assets safeguards in regions;
- external audit control over the processes of assets safeguards;
- training of the PIU and MOH and SDP relevant staff in financial management;
- coordination seminar of MOH, State Treasury, MOF and State Department of Prisons as to the project implementation;
- timely budget preparation and assurance of the cofinancing inclusing in the State Budget.

Project Financing Plan.
Financing plan of the project was review and found reasonable.

5. Environmental: Environmental Category: C (Not Required)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

There are no civil works or physical rehabilitation financed under the loan. No medical waste is expected.

5.2 What are the main features of the EMP and are they adequate?

N/A

5.3 For Category A and B projects, timeline and status of EA:
Date of receipt of final draft:

N/A

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

N/A

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

N/A

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

Both TB and HIV/AIDS are considered to be "socially dangerous diseases" in Ukraine. In both cases, the disease is concentrated among social groups that are at the margins of society, and in each case the disease threatens to spread to the rest of the population.

TB Component

TB is a disease of poverty. Although no data are available on the rates of TB among different income

groups in Ukraine, TB is recognized worldwide as a disease of poverty. People at high risk of TB are those living in overcrowded, poor environments, with a generally weak health and nutritional status. The fact that TB infection in Ukraine is particularly high in the prison population is a reflection of its tendency to thrive in such conditions. Visits from family members of prisoners often lead to the infection moving out of the prison and into the community. In addition, because prisoners are themselves often in and out of jail, this cycle of infection between the prison population and the community can continue, unless the patients are treated appropriately.

TB treatment has high socioeconomic costs to the patient. Once an individual is diagnosed with TB, the socioeconomic impact is severe. Under the present system, most patients are hospitalized initially for 3 to 4 months, and some for periods as long as one year or more. After discharge, the patient is required to come to a health facility on an intermittent basis, typically three times a week, to continue treatment for 9 to 12 month and possibly longer depending on the patient's progress. Following the completion of anti-TB treatment, patients also receive periodic treatment for two months for approximately two years following discharge for the original diagnosis. Finally, preventive therapy is given to a limited extent for high risk patients. Anti-relapse and preventive treatment could involve further hospitalization. During all periods of hospitalization, the patient is unable to work and is kept away from the family. This situation is expected to improve under the project as the proportion of outpatient visits will increase.

Although medication for TB is supposed to be free-of-charge, many patients have to purchase their own medicines when these are unavailable in the health facility. There is no data available on the level of out-of-pocket expenditures on TB drugs, but the cost of the drugs is often cited as a reason for non-completion of treatment. This situation is also expected to improve under the project strategy as the supply of drugs becomes more regular.

HIV/AIDS Component

Dealing with High-Risk Groups. The HIV epidemic in Ukraine is identified primarily with IDUs, with needle sharing believed to be the main risk factor involved. Most of the 20 percent of new HIV-positive individuals who are believed to have been infected through means other than injecting drug practices are either partners of drug users or children of these partners. However, there are indications that the disease is starting to spread to the general (heterosexual) population. Commercial sex workers are becoming an increasingly high-risk group. Men who have sex with men are less affected than in Western European countries.

Although the disease is spreading beyond the original high-risk groups, these groups remain the engine that drives the epidemic and the project intensifies prevention strategies that target them. Such a choice to focus on high-risk groups rather than concentrating resources on protecting the rest of the population has its political opponents. The project's public information campaign will address such opposition by sending the message that targeting high-risk groups is in fact the most effective means to protect the rest of the population. The campaign will also aim to reduce stigma and discrimination toward PLHAs. Several strong but difficult measures -- including needle exchange and distribution of condoms -- are necessary but again face potential opposition. The government appears to be prepared to defend and carry out such activities in the face of potential opposition.

Because little is known about needle sharing patterns and beliefs regarding the sharing of needles among IDUs or about their sexual practices, research activities under the project will aim to gather such information, which could help improve targeting.

Sensitive Messages in Mass Media Campaign. Following the findings of the Situation Analysis, mass media campaigns under the project would aim to go beyond raising awareness of AIDS (which is relatively high among the population) to persuading the general population to adopt HIV/AIDS prevention behaviors such as abstinence or consistent use of condoms. This campaign would include images of condoms and references to sexual behavior that some sections of society may find offensive. The government will have to be prepared to defend these sensitive public messages without which the campaign would not be effective. The Minister of Health has indicated that the MOH is prepared to undertake such activities, despite their potential sensitivities.

6.2 Participatory Approach: How are key stakeholders participating in the project?

TB Component. Technical discussions on the new National TB Strategy and on project design have involved an MOH-appointed Working Group including the Head or Deputy Head of the National Institute of phthisiology and Pulmonology, the Chief Medical Specialist of the prison system and the chief TB specialists from various regions.

HIV/AIDS Component. The preparation of the HIV/AIDS component has been undertaken with the active involvement of NGOs. NGO groups have been consulted with respect to the best way to improve working relations between NGOs and government agencies. In addition, NGOs will also play a critical role in the delivery of services to vulnerable groups. They will have a representative on the project's Supervisory Council.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

See Section E.6.2

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

See Section E.4.1

6.5 How will the project monitor performance in terms of social development outcomes?

Monitoring and evaluation activities under the project will measure the social impact of project activities, including out-of-pocket expenditures on TB drugs, impact of the project on attitudes towards PLHAs, and impact of information and education campaigns on risk behavior.

7. Safeguard Policies:

7.1 Do any of the following safeguard policies apply to the project?

Policy	Applicability
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	● Yes ○ No
Natural Habitats (OP 4.04, BP 4.04, GP 4.04)	○ Yes ● No
Forestry (OP 4.36, GP 4.36)	○ Yes ● No
Pest Management (OP 4.09)	○ Yes ● No
Cultural Property (OPN 11.03)	○ Yes ● No
Indigenous Peoples (OD 4.20)	○ Yes ● No
Involuntary Resettlement (OP/BP 4.12)	○ Yes ● No
Safety of Dams (OP 4.37, BP 4.37)	○ Yes ● No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	○ Yes ● No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)*	○ Yes ● No

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.

The project is in environmental category C.

F. Sustainability and Risks

1. Sustainability:

The fiscal impact is analyzed in section E.2. It shows that conditions for fiscal sustainability are high. Furthermore, over the medium term, cost savings may be achieved. By introducing mechanisms to guarantee the availability of TB drugs, significant cost savings would be generated by preventing the progression to the more expensive to treat MDR-TB. In addition, the faster pace at which an effective DOTS network can be shown to be effective, the faster local resources could be shifted away from the hospital infrastructure to the outpatient DOTS network. Investments in institution building for both TB and HIV/AIDS components should lead to the institutional sustainability of project interventions.

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
Lack of intersectoral cooperation between MOH, State Department of Prisons and other ministries.	H	Supervisory Council will oversee project implementation.
Capacity for implementing a large program to control two epidemics may be limited.	M	Project implementation arrangements; implementation plans, and procurement logistics prepared in advance. Significant training of staff of MOH and State Department of Prisons. Strengthening of service supervisory structures, and use of regular reporting systems. Flexibility in project design would allow to adapt to changing circumstances.
Health workers and patients comply with treatment regimen and complete course of treatment for TB.	M	(i) Training of health workers; (ii) Education of patients; and (iii) Public information campaigns.
Sufficient numbers of high-risk clients are reached to make an impact on HIV incidence.	H	(i) Development of mechanism to facilitate Government – NGO collaboration. (ii) Definition of priorities on basis of epidemiological factors; (iii) Maintaining up-to-date information on the evolution of the disease; and (iv) Start of harm reduction activities in areas where there is already strong political support.
Promotion activities are not effective in changing high-risk behavior.	H	Well-designed education programs and evaluations of their effectiveness.
From Components to Outputs		
Ineffective collaboration between the prison administration and the MOH regarding continuity of treatment of released prisoners.	M	At a broad level, the work of the Supervisory Council will help improve collaboration. The project includes activities to strengthen the referral system between the prison system and the MOH (see annex 2). Cooperation is usually

		better at the regional level.
Insufficient supplies of quality drugs are provided.	M	Government undertaking to finance at least US$10.2 million of drugs as counterpart funds is supplemented by contingency financing of US$6.1 million as part of the Bank loan.
Government maintains pro-active support for HIV/AIDS prevention	M	Advocacy campaign.
Law enforcement agencies allow activities with high risk groups to proceed without harassment.	S	Information campaign for law enforcement agencies.
Overall Risk Rating	H	Intense supervision.

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

3. Possible Controversial Aspects:

The project includes a number of elements that may cause controversy. With respect to HIV/AIDS, potential areas of concern may include the following:

(i) There are three major potential areas of activities in HIV/AIDS programs: prevention, treatment, and care. Given the early stage of the epidemic in Ukraine, there is strong technical evidence that the most effective and urgent interventions are in the area of prevention. The Bank-financed portion of the national program devotes significant resources towards these prevention activities, while still providing a limited amount in the area of treatment (pilot project to treat a limited number of adults and children with antiretrovirals, and prevention of mother to child transmission and care). Experience from other projects shows that activists are likely to criticize that more funds are not going towards expensive anti-retroviral drugs treatment and more care activities.

(ii) Perceived excessive focus on high-risk groups as opposed to the mainstream general population. The HIV/AIDS epidemic is still concentrated amongst individuals who engage in specific, often objectionable behaviors, including injecting drug use and commercial sex. Concentration of resources and attention on these individuals is justified because it is the more viable method to control the epidemic, but opponents will likely argue that resources should not be expended on such marginalized groups in the population when other needs are great.

(iii) Increased incidence of AIDS cases, including babies, despite gear-up of prevention activities under the project. This is the result of the inevitable time lag between measures and results.

Additional concerns may include: (iv) human rights abuses in dealing with vulnerable groups; and (v) the need to procure sensitive goods (condoms, syringes) and media messages.

With respect to the TB component, the most controversial discussions on TB control strategy appear to be over since the adoption of the "National TB Strategy Adapted to the World Standard". While this represents a good compromise for all stakeholders including the Bank, it is important to remember that a broad spectrum of opinions remains that spans from the most pro-DOTS (prison system, piloting regions) to those opposed to any change in the system (a number of TB specialists). To minimize adverse reactions, activities introduced by the project should be viewed as additional (e.g. smear microscopy) or representing gradual changes (e.g. increase in proportion of outpatient care).

While these kinds of controversies are inevitable, they would be mitigated by employing the following measures: (i) a national program of press and public relations to be implemented by the government to gain public and professional support. This would include press conferences, interviews with journalists of the broadcast and print media, distribution of easy-to-use fact sheets, regional meetings to conduct advocacy for local policy makers and NGOs; (ii) implementation of campaigns for the general population to raise awareness of TB and HIV in order to

foster a more supportive climate of opinion; and (iii) intensive supervision, including regular meetings with donors and NGOs to be organized by Bank missions.

G. Main Loan Conditions

1. Effectiveness Condition

(i) the submission of a legal opinion on the Loan Agreement, satisfactory to the Bank; and

(ii) confirmation that the Borrower has made available to the MOH and SDP the counterpart funds required during the first year of Project implementation

2. Other [classify according to covenant types used in the Legal Agreements.]

(i) adherence to Operational Manual;

(ii) mid-term review by March 2005, including review of use of contingency fund for drugs;

(iii) maintenance of PIU acceptable to the Bank; and

(iv) undertaking by the government to make budgetary allocations so that the MOH and the SDP have available first-line anti-TB drugs in an aggregate amount equivalent to US$10.3 million over the four-year period from January 1, 2003 to December 31, 2006.

H. Readiness for Implementation

☐ 1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
☐ 1. b) Not applicable.

☐ 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
☐ 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
☐ 4. The following items are lacking and are discussed under loan conditions (Section G):

NA.

I. Compliance with Bank Policies

☐ 1. This project complies with all applicable Bank policies.
☐ 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

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Team Leader	**Sector Manager**	**Country Director**

Annex 1: Project Design Summary

UKRAINE: Tuberculosis and HIV/AIDS Control Project

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Sector-related CAS Goal: The Country Assistance Strategy for Ukraine for FY2001-2003 aims to assist the government and civil society in the implementation of a broad-based poverty reduction strategy and in attaining job-creating, sustainable growth. As regards, the provision of basic social services, Bank assistance will focus on addressing critical emergencies and strengthening community involvement in the provision of improved basic social services to the most vulnerable groups. The proposed project will benefit the general population through the control of two highly infectious diseases. Its main outcomes will most directly be observed in the most vulnerable population groups as marginalized groups will be specifically targeted for project activities due to the nature of the epidemics.	**Sector Indicators:**	**Sector/ country reports:**	**(from Goal to Bank Mission)**

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Project Development Objective:	**Outcome / Impact Indicators:**	**Project reports:**	**(from Objective to Goal)**
TB Indicators			
Sector Indicators	Reduce prevalence, transmission of TB and mortality from the disease		
Program Indicators	<u>For general population in project area</u>		Capacity for project implementation builds up in pace with project requirements.
	Reduce TB mortality rate by 15 percent;	National and WHO statistics, Project baseline and evaluation studies, special studies	Good cooperation between MOH, State Department of Prisons, and other institutions
	Reduce by 20 percent the proportion of MDR TB		
	<u>For prisons</u>		
	Reduce TB mortality rate by 20 percent	TB mortality data	
Outcome/Impact Indicators	<u>For general population in project area</u>		Sufficient supplies of quality drugs are provided
	Proportion of smear positive TB cases among newly recorded should be at least 50 percent	Project reports, knowledge, attitudes, and practice surveys of population, patients and health workers.	Health workers and patients comply with treatment regimen and complete course of treatment for TB
	Conversion of 85 percent of cases from smear positive to negative (excluding MDR TB cases)	Quality assurance reports on laboratory testing and drug quality.	
	Reach a cure completion rate of 85 percent, excluding MDR TB cases	Surveillance reports on drug resistance.	
		Field supervision reports	
	90 percent of detected TB cases treated under the new standard regimen		
	<u>For prisons</u>	Project reports	
	Proportion of smear positive TB cases among newly recorded should be at least 50 percent	Project reports	
	Conversion from smear positive to smear negative in 90 percent of cases, excluding		

	MDR TB cases. Reach a cure completion rate of 80 percent, excluding MDR TB cases.		
HIV/AIDS Indicators			
Sector Indicators	Reduce incidence and prevalence of HIV infection		
Program Indicators	Improve knowledge, attitudes and practices of groups at risk and of the general population (for general population in at least 25 percent of the targeted population, and for prisons in at least 15 percent).	Special studies on specific target groups	
	For general population, deliver the full range of prophylactics and treatment in at last 4 AIDS centers.	Project reports	
Outcome/Impact Indicators	Reduce the rate of vertical transmission of HIV by 50 percent.	Project report providing the proportion of HIV infected children per number of pregnant women tested HIV+	

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Output from each Component:	**Output Indicators:**	**Project reports:**	**(from Outputs to Objective)**
Output Indicators for TB	<u>For general population</u>		
	Legal framework for TB control, based on National TB Strategy adapted to the international standard, is functional	Review of legal framework	Good intersectoral cooperation
	National technical/operational guidelines for TB control are operational.	Project reports	Central capacity is strengthened
	National guidelines and training materials for TB laboratories are operational.		
	1530 TB specialists trained.	Training evaluation report	Core group of trainers is competent and dynamic
	1530 TB laboratory specialists trained.		
	1500 GPs trained.		
	1500 nurses trained.		
	Quality assurance system for smear microscopy and culture and sensitivity analysis is operational.		There is a core group of experts experienced in TB control to provide technical assistance and motivate others
	95 percent of smear cases are confirmed by a higher-level laboratory.	Special survey	
	100 percent of health personnel follow National TB Strategy in the project area.		
	90 percent of TB diagnostic and treatment services provide regular, timely, accurate reports.		Timely establishment of reporting system
	210,000 booklets are distributed for public awareness campaign.	Project reports	The IEC materials are well prepared
	Eight film loops are distributed for public awareness campaign.		

	75,000 posters are distributed for the public awareness campaign. <u>For prisons:</u> National technical/operational guidelines for TB control adopted by prisons are operational Diagnostic services in prison health services are operational Treatment regimes based on TB direct observations are followed in at least 90 percent of the project areas Monitoring system of case finding and treatment outcomes is operational	Project reports	
Output Indicators for AIDS	<u>For general population:</u> National Mass media/PR campaigns completed 350-500 HIV+ mothers treated each year & 175-250 newborns prevented from becoming HIV+ 1000 doctors, nurses, midwives will have improved understanding of problems of pregnant IDUs & PLHA & of how to deal with them Reduce by 15% number of HIV+ persons offering blood for transfusion 30 harm reduction programs operational 25,000,000 of condoms distributed for IDUs At least 15 CSWs programs are operational 15,000,000 of condoms distributed for CSWs	Project reports. KAP surveys of population, high-risk groups, health workers. Client satisfaction surveys of PLHA and their families. Project baseline and evaluation studies Project reports	Implementation capacity for project implementation builds up in pace with project requirements. Sufficient numbers of high-risk clients are reached to make an impact on HIV incidence. Clients comply with safety precautions and change high-risk behavior. Non-stigmatizing, culturally acceptable interventions bring about lasting behavioral changes

	10 MSM programs operational Eleven new AIDS centers are equipped and functioning In one pilot, increase access for children for treatment of retroviral infection In one pilot, an increase in access of adult/children to treatment of opportunistic diseases 1000 health care staff trained Medical Information Program implemented Increase by 20 percent NGOs involvement into the project. <u>For prisons:</u> 26 HIV+ mothers treated and 14 newborns prevented from becoming HIV+ 19,000,000 condoms distributed 179200 prisoners provided with disinfectants 2,000,000 pieces of disinfectants distributed 690,000 prevention information materials distributed	Project reports Special report Training evaluation report Project reports Project reports	Awareness is correlated with change in patterns of risky behavior Commitment of central staff to provide sufficient decision making power to regional levels Capacity for planning, managing and supervision the pilots is adequate Collaboration between government and NGOs remains constructive The IEC materials are well prepared

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Project Components / Sub-components:	**Inputs: (budget for each component)**	**Project reports:**	**(from Components to Outputs)**
1. Control of tuberculosis (MOH)	US$28.7 million	Progress reports	
2. AIDS Control (MOH)	US$32.2 million	Progress reports	Timely and adequate counterpart funds
3. Prison component (TB and AIDS Control)	US$12.7 million	Progress reports	

Annex 2: Detailed Project Description
UKRAINE: Tuberculosis and HIV/AIDS Control Project

By Component:

Project Component 1 - US$28.70 million
(including contingencies)

Component I – Control of Tuberculosis - MOH (US$ 28.7 million, 37.2 percent of project cost). This component includes: (i) training and education; (ii) diagnosis; (iii) treatment; (iv) public awareness campaign; and (v) monitoring and evaluation.

Training and education (US$ 2.6 million). This subcomponent will be organized by the Institute of Phthisiology and Pulmonology in Kiev supported by 12 regional centers. They will train TB specialists, laboratory technicians, GPs, epidemiologists, statisticians and nurses in the detection and treatment of TB as well as in the proper monitoring and supervision of treatment and outcomes. It will finance the training of trainers at the central level and in the regions, vehicles, computer, and office equipment, materials, per diem, and travel.

Diagnosis (US$ 11.5 million). This subcomponent will finance the development of technical guidelines, the purchase of vehicles, computer, office, and laboratory equipment, including microscopes and supplies to undertake smear microscopy, and equipment for culture investigation at the regional level. The National Reference Laboratory will be strengthened so that it can implement laboratory quality control for the country, and undertake investigations including culture and drug susceptibility testing.

Treatment (US$ 10.2 million). This subcomponent will finance first-line drugs for the treatment of TB. The financing will be made largely by the government (US$7.6 million) as part of its counterpart financing. Additionally, an amount of US$ 2.6 million is included as part of the Bank financing in case of a larger detection of cases and need for additional drugs for treatment.

Public Awareness Campaign (US$ 1.1 million). This subcomponent will finance mass media public awareness campaigns, and training and educational materials to raise awareness of TB in the general population.

Monitoring and Evaluation (US$ 3.2 million). To ensure high cure rates and reduce the risk of MDR TB, compliance with treatment regimens needs to be monitored over a period of six months or more. In addition, patients who are released from the prison to the civilian system need to be monitored. The subcomponent will finance vehicles, travel and per diem, computer hardware and software, office equipment and supplies, training and educational materials, and incremental operating costs of to administer the overall TB component. It will also finance baseline studies, collection and analysis of data to monitor key project indicators, and audits.

Project Component 2 - US$32.20 million
(including contingencies)

Component II – AIDS Control– MOH (US$ 32.2 million, 41.8 percent of project cost). This component includes: (i) prevention activities; (ii) treatment activities; (iii) care and support for PLHA; and (iv) strengthening national capacity.

Prevention activities (US$ 22.9 million). This subcomponent will finance harm reduction programs among IDUs, CSWs, and MSM including training, advocacy, training and educational materials, peer education programs, vehicles, syringes, condoms and supplies, and dissemination of protocols for HIV prevention. It will evaluate the experience with establishing self-help groups for CSWs and review services offered to CSWs, by STI clinics. It will also finance test kits and equipment to improve blood safety, and preparation and distribution of guidelines on the rational use of blood. A public awareness campaign will be undertaken to increase information of the general population about HIV/AIDS prevention, encourage the use of protective measures, and reduce stigma about those infected.

Treatment activities (US$3.8 million). This subcomponent will finance: (i) the development of treatment protocols; (ii) prevention of transmission of HIV from infected mothers to children; (iii) drugs and supplies for the treatment of opportunistic infections; (iv) training of staff on attitudinal issues, psycho-social care and support of HIV/AIDS patients; and (v) laboratory equipment.

This subcomponent will also finance a pilot project to help Ukraine develop capabilities to treat HIV-infected persons with anti-retroviral drugs (ARVs) so as to improve their quality and length of life of HIV-infected persons. It will finance the development of clinical protocols, training of physicians and clinical workers, a program to pilot test the provision of ARVs to a limited number of adults and children, including the purchase of drugs, and the monitoring of outcomes. ARVs are expensive drugs and the successful implementation of this pilot would help Ukraine's chances to access funds from the Global Alliance.

Care and Support of PLHA (US$ 2.3 million). This subcomponent would increase access to services to improve the quality of life of PLHAs. This would be accomplished through: (i) the training of psychologists, social and welfare workers, and GPs; (ii) the review and revision of curricula for physicians, nurses and other health workers; (iii) the establishment of a self-help group of PLHAs and their families to provide psycho-social care and support, counseling, peer education and training, and piloting of non-hospital based care alternatives; and (iv) the printing of training and educational materials.

Strengthening national capacity (US$ 3.2 million). This subcomponent will help the national and regional AIDS Centers carry out their mandates. It will help: (i) integrate HIV/AIDS, narcology, and STI services with the primary health care system, notably through the training of GPs and nurses and the provision of vehicles, medical, technical and office equipment; (ii) establish mechanisms to enhance cooperation between government entities and NGOs in the delivery of HIV and harm reduction services; and (iii) evaluate the best practices of pilot programs for possible replication.

Project Component 3 - US$ 12.70 million
(including contingencies)

Component III - Prisons Component (US$ 12.7 million, 16.5 percent). This component includes the financing of TB and AIDS control activities in the prison system. It was designed as a separate component because of the institutional nature of the prison system, which is self-contained and centrally managed.

A. Tuberculosis subcomponent (US$ 9.2 million). The prison subcomponent includes the improvement of organization of TB control, diagnosis, treatment, and monitoring of outcomes, entailing the training of physicians and other health workers, the upgrading of laboratory equipment, the adoption of cost-effective treatment protocols, the printing of training and educational materials, the provision of first and second-line TB drugs, computer and office equipment, and the monitoring of treatment results. Training will be undertaken in close collaboration with the MOH. As for treatment, the government will finance US$3.2 million of drugs. In addition, an amount of US$3.0 million is included under Bank financing and may be used for first or second-line drugs, as required. The State Department of Prisons has adopted a cautious strategy regarding the possible use of second-line drugs. It believes that it may not use these drugs until at least the third year of the project, given the time required to establish a well-functioning TB program and build the capacity to test drug-resistant patients.

B. AIDS subcomponent (US$ 3.5 million). This subcomponent will help improve HIV prevention among prison inmates by: (i) expanding current prevention programs throughout the system, including the financing of IEC materials, condom and bleach disinfectant, and laboratory equipment and supplies; (ii) preventing mother-to-child transmission; and (iii) financing drugs for the treatment of children under three years.

Annex 3: Estimated Project Costs
UKRAINE: Tuberculosis and HIV/AIDS Control Project

Component	Costs (US$ million)	% of total	Bank financing (US$ million)	% of Bank financing
I. TB Component (MOH)				
Training and education	2.556	3.3	2.398	4.0
Diagnosis	11.479	14.9	9.442	15.7
Treatment	10.233	13.3	2.599	4.3
Public awareness campaign	1.132	1.5	1.132	1.9
Monitoring and evaluation	3.279	4.3	3.279	5.5
Total	28.679	37.2	18.850	31.4
II. AIDS Component (MOH)				
Prevention activities	22.854	29.7	19.435	32.4
Treatment activities	3.835	5.0	3.835	6.4
Care and support for PLHA	2.285	3.0	2.154	3.6
Strengthening national capacity	3.211	4.2	2.968	4.9
Total	32.185	41.8	28.392	47.3
III. Prisons Component				
A. Tuberculosis				
Improvement of organization	0.335	0.4	0.137	0.2
Diagnosis	1.671	2.2	1.671	2.8
Treatment	6.155	8.0	2.989	5.0
Monitoring	1.045	1.4	1.044	1.7
Total	9.206	12.0	5.841	9.7
B. AIDS				
Information of prison officers	0.276	0.4	0.276	0.5
Training of physicians	0.161	0.2	0.151	0.3
Training of supervisors	0.180	0.2	0.180	0.3
Condoms and disinfectants	2.786	3.6	2.786	4.6
Mother-to-child transmission	0.009	0.0	0.006	0.0
Treatment of children	0.093	0.1	0.093	0.2
Total	3.505	4.6	3.492	5.8
Total Prisons	12.711	16.5	9.333	15.6
Contingencies	3.425	4.5	3.425	5.7
Grand Total	77.000	100.0	60.000	100.0

Component	Local	Foreign	Total
I. TB Component (MOH)			
Training and education	0.2	2.4	2.6
Diagnosis	2.1	9.4	11.5
Treatment	7.5	2.3	10.2
Public awareness campaign	-	1.1	1.1
Monitoring and evaluation	-	3.3	3.3
Total	10.2	18.5	28.7
II. AIDS Component (MOH)			
Prevention activities	3.5	19.4	22.9
Treatment activities	-	3.8	3.8
Care and support for PLHA	0.1	2.2	2.2
Strengthening national capacity	0.2	3.0	3.2
Total	3.8	28.4	32.2
III. Prisons Component			
A. Tuberculosis			
Improvement of organization	0.2	0.1	0.3
Diagnosis	-	1.7	1.7
Treatment	2.5	3.6	6.2
Monitoring	-	1.0	1.0
Total	2.8	6.4	9.3
B. AIDS			
Information of prison officers	-	0.3	0.3
Training of physicians	0.1	0.1	0.2
Training of supervisors	-	0.1	0.1
Condoms and disinfectants	-	2.7	2.7
Mother-to-child transmission	0.1	-	0.1
Treatment of children	-	0.1	0.1
Total	0.2	3.3	3.5
Total Prisons	3.0	9.7	12.7
Contingencies	-	3.4	3.4
Grand Total	17.0	60.0	77.0

Annex 4: Cost Benefit Analysis Summary
UKRAINE: Tuberculosis and HIV/AIDS Control Project

Introduction. This annex presents the economic analysis of proposed TB and HIV/AIDS project in Ukraine and provides the justification for Bank funding of the project.

The objectives of the project for the **HIV/AIDS component** are to:

(i) increase awareness among the general population about HIV/AIDS;
(ii) reduce HIV/AIDS-related high-risk behavior among vulnerable populations, namely intravenous drug users (IDU), men who have sex with men (MSM) and commercial sex workers (CSW).
(iii) strengthen AIDS Centers at the regional level so that they improve their coverage of preventive programs and provide a broader range of medical services, including the treatment of opportunistic infections, and social support; and
(iv) implement a pilot program for the treatment of retroviral infection for adults and children.

The objectives of the project for the **TB Component** are to:

(i) increase the proportion of smear-positive TB cases among newly-recorded to at least 50 percent;
(ii) increase the cure rate to at least 85 percent (excluding MDR TB cases) for the civilian population; and
(iii) decrease fatality rate by 15 percent.

Project Benefits. The HIV/AIDS component would directly benefit those groups at highest risk of being infected by HIV as well as the general public. Through its targeted interventions, the project will directly benefit socially excluded groups such as IDUs, MSM and CSW. In addition, the benefits from the public awareness campaign supported through the project are particularly important since studies show that HIV/AIDS has begun to spread among the general population of Ukraine.

The direct benefits of the TB component include: lives saved, disease prevented, disability avoided or diminished, reduced absenteeism from work, and savings from health care costs for treatment. Since people at high risk of TB typically live in over-crowed areas such as inner cities or prisons, as in the case of the HIV/AIDS component, there are direct benefits for poor and socially marginalized groups.

Fiscal Impact of the Project. This section analyzes the estimated recurrent cost implications of the project on the budget of the MOH. The majority of project costs are allocated for goods (e.g. pharmaceuticals, laboratory equipment and consumables, needles, syringes, disinfectants, condoms, test kits). No civil works are financed through the loan. In addition, the loan will finance incremental costs (e.g. travel and per diem of supervisors) during the life of the project. The incremental costs are already factored into the project costs. The specific recurrent costs (measured in terms of operations and maintenance) for the project are low given the nature of the investments. However, from the sustainability perspective, in order to maintain the benefits obtained from the project, the recurrent costs could be high (pharmaceuticals, condoms, rapid HIV/AIDS testing kits). If the preventive programs are successfully implemented, the demand for these commodities will increase. The proposed project will not increase the number of staff in the health sector, bur rather re-channel their activities. In addition, the project covers incremental costs on a declining basis. It is also assumed that Government contributions (approximately US$17 million in total and US$4 million per year) would have to continue. Taking price inflation into account, this means approximately US$ 6.3 million per year. Recurrent costs on Bank investments at calculated at a base rate of 7 percent and higher (12 percent and 20 percent).

Health Expenditures in Ukraine. In 1999-200, Ukraine spent approximately 5.0 percent of GDP on health care, of which 71 percent was public and the remainder private. Public expenditures on health constitute approximately 8 percent of total government expenditures (table 1). Ukraine spends approximately US$42 per capita at current exchange rates. For the fiscal impact analysis, it is assumed that the GDP will continue to grow at the predicted rates

(4 percent per year). Each year, the government spends more than it is able to collect, which contributes to a budget execution problem. Therefore, in the context of a growing nominal GDP, it is assumed that public expenditures on health will remain at the lower levels (1998 levels).

Table 1: Relevant Economic Date for Ukraine

	1997	1998	1999	2000	2001	2002
Nominal GDP (US$ billion)	50,142	41,823	31,569	30,351	--	--
GDP growth (%)	-3.0	-1.9	-0.2	4.2	4.0 (projected)	4.0 (projected)
Total Government Expenditures (US$ billion)	--	39,714	47,150	59,553	68,366	79,242 (projected)
Public Expenditures on Health (in billions of US$)		3,620	3,861	4,619	5,518	6,237
Health as % of total government. expenditures		9.1%	8.1%	8.0%	8.0%	7.9%

Source: International Monetary Fund (IMF), 2001

Results. The results of the analysis (Table 2) show that the fiscal impact of the project (Bank plus government contributions) is only about 5-6 percent of the total health budget. Government contributions are approximately 1.4 percent of the total health budget (approximately US$5 million per year). This is one indication that the fiscal impact of the project is minor for the Ukrainian health budget. The calculation of recurrent costs on Bank investments shows that the impact at 7 percent (US$ 3.85 million per year, 1.1 percent of health budget), 12 percent (6.6 million per year, 1.8 percent of health budget), and 20 percent (11 million per year, 3.0 percent of health budget) is marginal. Even when this is combined with continued government investments of approximately US$6 million per year, the total is approximately in the range of 2.5 - 5.0 percent of total health budget. Given the public health nature of the interventions supported through the project and their large externalities, the government should in any case be supporting activities in HIV/AIDS and TB control, even if that means reducing spending on other health activities for which public finance is less justified. Based on this analysis, it is concluded that the fiscal impact of the project is marginal, and conditions for fiscal sustainability are high.

Table 2: Fiscal Impact of the Project

	2003	2004	2005	2006	2007	2008	2009
Total health expenditures (public) (US$ million)	362	362	362	362	362	362	362
Project disbursements as a % of health budget and recurrent costs	22.8 million (6%)	19.6 million (5%)	17.1 million (4.7%)	17.5 million (4.7%)	17.5 million (4.7%)	17.5 million (4.7%)	17.5 million (4.7%)

Cost-Benefit analysis of the HIV/AIDS Component.

Methodology and Approach. The objective of the cost-benefit analysis is to quantify the direct and indirect benefits from the implementation of the project. Once the benefits are quantified, these are combined with the present value of investments. This is needed to derive net benefits (i.e. benefits net of project costs). The investment costs for the project are US$77 million over a four year period. Of the US$ 77 million, 45 percent of total investment costs are allocated for the HIV/AIDS component.

The epidemic was modeled using the Aids Impact Model (AIM) approach. This model was developed by the Futures Group International (John Stover et al.) and is well accepted internationally. It is in the public domain. In order to calculate the benefits, it is necessary to derive the number of new cases each year and the number of AIDS deaths,

The assumptions, described at the end of this analysis, were modified for Ukraine. In cases where information was not available for Ukraine, the default value was used. Data on HIV/AIDS prevalence and number of new cases each year and number of deaths from HIV/AIDS was obtained from the government.

The direct benefits are estimated based on the reduced burden on the health care system resulting from the reduction in morbidity and the associated costs of seeking care for opportunistic infections from full-blown AIDS. For Ukraine this was calculated at US$900 per case. This is consistent with the health expenditure figures for Ukraine (US$42 per capita) and available costs of hospitalization and treatment. In order to estimate the total direct cost savings (direct benefits), the analysis calculated the annual treatment costs multiplied by the annual number of HIV/AIDS cases averted under the intervention scenario.

In addition to the direct benefits, indirect benefits were also calculated. Indirect benefits are defined as the savings associated with reduced morbidity and mortality and the impact on the quality of life and the positive economic benefits associated with the reduced cost of illness and death of adults during their prime working years. The indirect benefits estimated for the project include the cost of the loss of production for the Ukrainian economy as implicated by the number of cases. The assumptions for the direct and indirect benefit calculations are described below:

- Discount rate: 10 percent
- Cost of treatment of HIV/AIDS per case: US$ 900. Average hospitalization costs in Ukraine are 6 dollars per day which includes 1 dollar for the cost of drugs. It is expected that in between outpatient visits, drugs and hospitalization for a patient with full-blown AIDS, a conservative estimate is US$900 per case. This does not include the costs of antiretrovirals.
- Mean age of death: 27 years
- Disability adjusted Life Years (DALY at age 27): 22.7 years
- Value per life saved: GDP per capita for Ukraine 2000 ($ 894.04) World Bank Data Base (SIMA), 2002. times the DALYs (22.7 years) equals $ 20,295

Regarding the effectiveness of interventions, it was assumed that 70 percent of all HIV/AIDS cases could be eliminated through a comprehensive program. Under this scenario with intervention, the percentage of HIV cases averted would be zero in the first two years of project implementation, 10 percent in the third year, 20 percent in the fourth, 40 percent in the fifth, 60 percent in the sixth, and 70 percent from the seventh year onwards.

Results. The analysis of direct and indirect benefits from the project is presented in Table 3. It shows that the project, if successfully implemented, could avert up to 23,448 HIV/AIDS cases until 2009 and 6,210 cases during the life of the project. The present value of direct benefits from the project for the high and low case scenario is US$13 million and US$8.9 million, respectively. The present value of indirect benefits is US$ 164 million under the high case scenario and US$ 118.5 million under the low case scenario.

Table 3: Direct and Indirect Benefits from HIV/AIDS Interventions

Direct Benefits

	High				Low			
Year	*Cost of Treatment per Case*	*AIDS Cases Averted*	*Saved Costs (US $)*	*Present Value of Saved Costs*	*Cost of Treatment per Case*	*AIDS Cases Averted*	*Saved Costs (US $)*	*Present Value of Saved Costs*
2003	900				900			
2004	900				900			
2005	900	525	472,500	390,496	900	399	359,100	296,777
2006	900	1,955	1,759,500	1,321,938	900	1,543	1,388,700	1,043,351
2007	900	3,730	3,357,000	2,292,876	900	2,800	2,520,000	1,721,194
2008	900	6,502	5,851,800	3,633,507	900	4,428	3,985,200	2,474,496
2009	900	10,736	9,662,400	5,454,173	900	6,754	6,078,600	3,431,211
Total PV				13,092,991				8,967,029

Indirect Benefits

	High				Low			
Year	*Value per Life Saved*	*AIDS Deaths Averted*	*Indirect Benefits (US $)*	*Present Value of Indirect Benefits*	*Value per Life Saved*	*AIDS Deaths Averted*	*Indirect Benefits (US $)*	*Present Value of Indirect Benefits*
2003	20,295				20,295			
2004	20,295				20,295			
2005	20,295	77	1,562,693	1,291,481	20,295	88	1,785,934	1,475,979
2006	20,295	608	12,339,182	9,270,610	20,295	458	9,294,976	6,983,453
2007	20,295	2,072	42,050,635	28,721,149	20,295	1,609	32,654,185	22,303,248
2008	20,295	3,869	78,520,225	48,754,882	20,295	2,874	58,326,991	36,216,472
2009	20,295	6,650	134,959,808	76,181,293	20,295	4,502	91,366,775	51,574,163
Total PV				164,219,417				118,553,315

Investment Costs and Calculation of Net Benefits. Table 4 presents the investment costs for the project and Table 5 the cost-benefit analysis for the HIV/AIDS component. The results show that the stream of benefits yields a net present value around US$ 140 million with an internal rate of return of over 49 percent for the high case scenario. For the low-case scenario, the stream of benefits in net present value is around US$ 90 million with an internal rate of return of 38 percent.

Table 4: Net Present value of Investment Costs

Year	*Value of Investment (US $)*	*PV of Investment (US $)*
2003	12,540,000	12,540,000
2004	10,780,000	9,702,000
2005	9,405,000	8,464,500
2006	9,625,000	8,662,500
2007		
2008		
2009		
PV of Investment	42,350,000	39,369,000

Table 5: Cost-benefit analysis of HIV/AIDS High and Low Case Scenario

High Case

Year	*Project Investment*	*Direct Benefits (US $)*	*Indirect Benefits (US $)*	*Total Benefits (US $)*	*Net Benefits*	*Present Value of Net Benefits*
2003	12,540,000				-12,540,000	-12,540,000
2004	10,780,000				-10,780,000	-9,800,000
2005	9,405,000	472,500	1,562,693	2,035,193	-7,369,807	-6,090,750
2006	9,625,000	1,759,500	12,339,182	14,098,682	4,473,682	3,361,144
2007		3,357,000	42,050,635	45,407,635	45,407,635	31,014,026
2008		5,851,800	78,520,225	84,372,025	84,372,025	52,388,390
2009		9,662,400	134,959,808	144,622,208	144,622,208	81,635,466
NPV						139,968,275
IRR (%)						49.06

Low Case

Year	*Project Investment*	*Direct Benefits (US $)*	*Indirect Benefits (US $)*	*Total Benefits (US $)*	*Net Benefits*	*Present Value of Net Benefits*
2003	12,540,000				-12,540,000	-12,540,000
2004	10,780,000				-10,780,000	-9,800,000
2005	9,405,000	359,100	1,785,934	2,145,034	-7,259,966	-5,999,972
2006	9,625,000	1,388,700	9,294,976	10,683,676	1,058,676	795,399
2007		2,520,000	32,654,185	35,174,185	35,174,185	24,024,442
2008		3,985,200	58,326,991	62,312,191	62,312,191	38,690,968
2009		6,078,600	91,366,775	97,445,375	97,445,375	55,005,374
NPV						90,176,211
IRR						37.77

Low Case

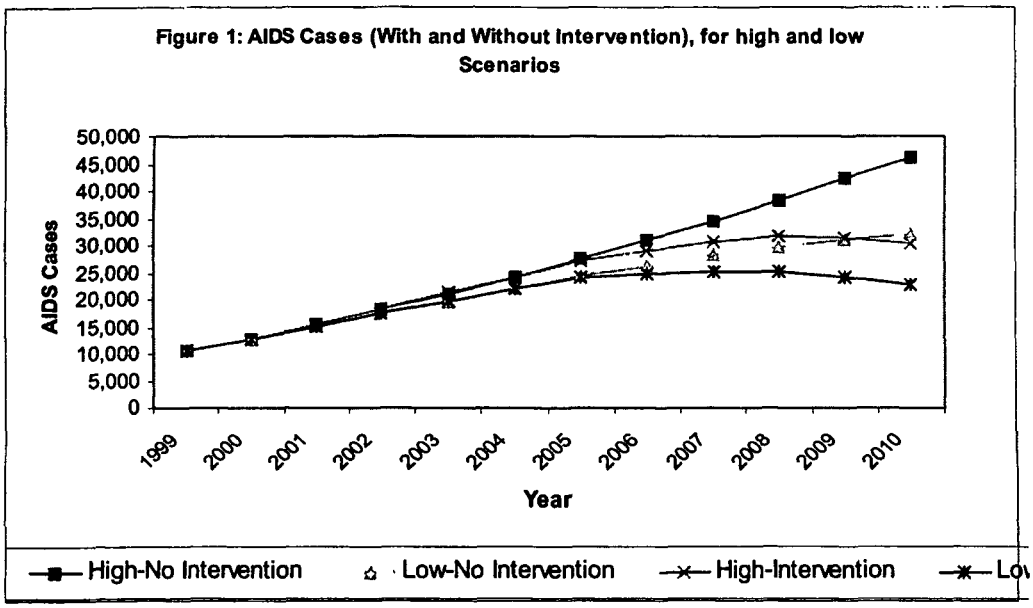
Figure 1: AIDS Cases (With and Without Intervention), for high and low Scenarios
AIDS Cases
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
Year
High-No Intervention
Low-No Intervention
High-Intervention

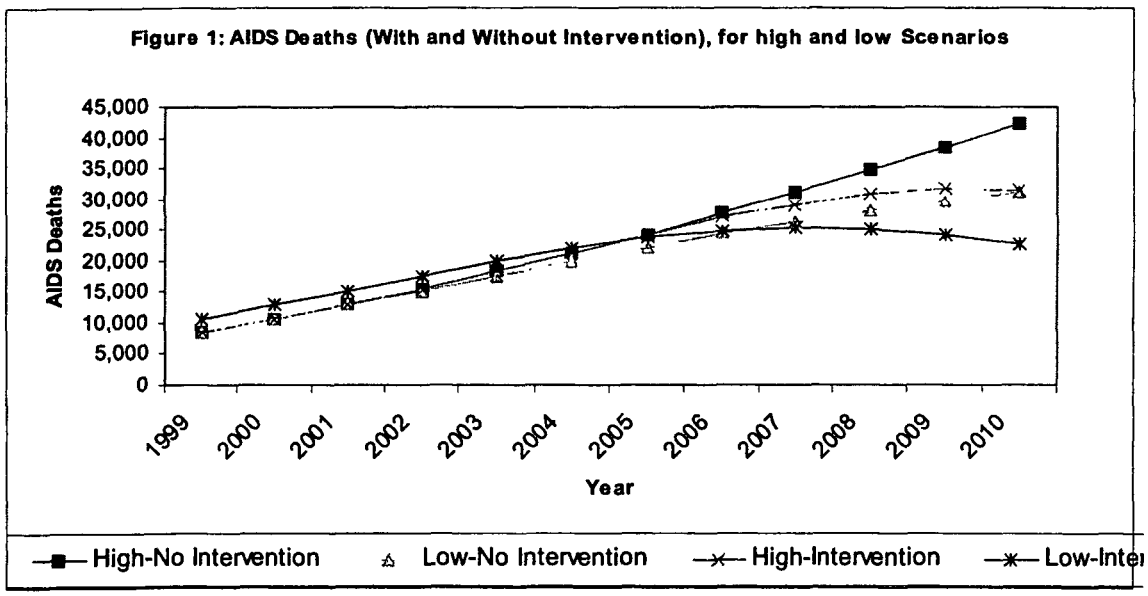
Figure 1: AIDS Deaths (With and Without Intervention), for high and low Scenarios
AIDS Deaths
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
Year
High-No Intervention
Low-No Intervention
High-Intervention

Sensitivity Analysis. The net benefits and internal rate of return discussed above assumes that the project will be implemented without any problems. The sensitivity analysis was carried to determine project cost-benefit under conditions where the project is implemented on time, but the quality of project interventions is not adequate with implications for the total benefits to be derived from the project. Table 6 describes these results. It shows that for a 20 percent and 40 percent reduction in total benefits both for the high and low case scenario, the net benefits are still positive as is the internal rate of return. However, the calculations for a 2 and 3 year project delay shows that this would yield a negative internal rate of return. This analysis assumes that the project would only start disbursing in 2005 and 2006 with resultant implications for the benefits to be obtained from the project within the stated time period (2003-2009). Since the results are negative for the high case scenario, they would naturally be even more negative for the low case scenario.

Table 6: Sensitivity Analysis for HIV/AIDS Component

	High		Low	
Type of Sensitivity Analysis	NPV	IRR	NPV	IRR
Reduction in Benefits:				
20 % reduction	69,501,024	26.04	77,185,095	29.96
40 % reduction	31,778,836	11.14	36,389,404	13.77
Delay in Implementation:				
2-year delay	-21,793,985	-5.60		
3-year delay	-15,735,200	-3.50		

Cost-Benefit Analysis of the TB Control Component. The objectives for the cost-benefit analysis of the TB component are similar to those of the HIV/AIDS component, i.e., to determine the direct and indirect benefits from project interventions, and compare them with the investment costs to obtain the net benefits and the IRR. In this case too, the starting point for the analysis is to determine the incidence and prevalence of the disease and predict the number of new cases in the presence and absence of the intervention. In 2000, the number of new TB cases in Ukraine was 27,000. Because of under-reporting, the actual number may be closer to 34,000. Incidence is closely related to socio-economic conditions which is unlikely to improve much over the next 4 years to have any impact on the total number of new cases. Also, as diagnosis will improve under the project, incidence may further increase. For these reasons, it is considered reasonable to maintain a number of new cases treated per year at a constant 34,000 over the next 4 years. The number of new cases under the TB treatment to be supported through the project is presented in Table 7. The benefits are both direct and indirect.

Direct Benefits. The National TB Strategy approach involves 2 months of hospitalization followed by 4 months of outpatient treatment compared to 8 months of hospitalization for all patients under the previous system. The direct benefits to be derived from the TB component consist of a reduction in the cost of treatment. The project life is 4 years.

One hospital day costs US$5 per patient (everything included, i.e. hotel services, medical staff time, drugs etc.). The cost of drugs included in the above is US$1 per day. It includes not only TB drugs, but vitamin injections and other drugs provided as a matter of course to TB patients in Ukrainian hospitals. Cost of treatment per patient under the present system = 8 months x 30 days x $5 = $1,200.

Under the project, patients would be hospitalized for two months and this would be followed by 4 months of outpatient treatment. The cost of drugs for this six-month period is estimated at $60. Cost of treatment per patient under the project = (2 months x 30 days x $4) + $60 (cost of drugs over 6 months) = $300.

Savings per case = 1200 – 300 = $900. This multiplied by the number of TB cases treated per year with a discount rate of 10 percent provided the present value of direct benefits (or saved costs).

Indirect Benefits. The second benefit is the economic benefit derived from reduction in mortality (both civilian and prisons). Total annual number of deaths from TB = 7,850 and this is projected to decrease by 2 percent a year, even without project, based on recent trends. The project is estimated to reduce TB fatality rate by 15 percent over 4 years for the civilian population and by 20 percent for the prison population. To be conservative, a rate of 15 percent is assumed. Indirect benefits are calculated in terms of the gain in economic productivity using the assumptions for the HIV/AIDS component. Since TB also affects adult males in their prime years of economic productivity, these assumptions for the TB component are correct.

Table 7: Direct and Indirect Benefits from the TB Component

Direct Benefits

Year	*Cost of Treatment per Case*	*TB Cases Averted*	*Saved Costs (US $)*	*Present Value of Saved Costs*
2003	900			0
2004	900	10,200	9,180,000	8,345,455
2005	900	20,400	18,360,000	15,173,554
2006	900	30,600	27,540,000	20,691,210
2007	900	34,000	30,600,000	20,900,212
2008	900	34,000	30,600,000	19,000,192
Total PV				84,110,622

Indirect Benefits

Year	*Value per Life Saved*	*TB Deaths Averted*	*Indirect Benefits (US $)*	*Present Value of Indirect Benefits*
2003	20,295			0
2004	20,295	493	10,005,291	9,095,719
2005	20,295	1,039	21,086,202	17,426,613
2006	20,295	1,717	34,846,014	26,180,326
2007	20,295	1,717	34,846,014	23,800,296
2008	20,295	1,717	34,846,014	21,636,633
Total PV				98,139,587

Results of the Cost-Benefit Analysis of the TB Component. As Table 8 shows, the benefits from the TB component amount to US$ 152 million with an IRR of 170 percent. As in the case of the HIV/AIDS Component, a sensitivity analysis was carried out to account for potential delays in project implementation and reduced benefits (20 percent and 40 percent) The sensitivity analysis for the TB component (Table 9) shows that even with reduced project benefits (20 and 40 percent and delays in implementation), the net benefits and the IRR would remain positive.

Table 8: Cost-Benefit Analysis of the TB Component

Year	*Project Investment*	*Direct Benefits (US $)*	*Indirect Benefits (US $)*	*Total Benefits (US $)*	*Net Benefits*	*Present Value of Net Benefits*
2003	10,260,000	0	0	0	-10,260,000	-10,260,000
2004	8,820,000	9,180,000	10,005,291	19,185,291	10,365,291	9,422,992
2005	7,695,000	18,360,000	21,086,202	39,446,202	31,751,202	26,240,662
2006	7,875,000	27,540,000	34,846,014	62,386,014	54,511,014	40,954,931
2007		30,600,000	34,846,014	65,446,014	65,446,014	44,700,508
2008		30,600,000	34,846,014	65,446,014	65,446,014	40,636,825
NPV						151,695,618
IRR (%)						170.43

Table 9: Sensitivity Analysis for the TB Component

Type of Sensitivity Analysis	NPV	IRR
Reduction in Benefits:		
20 % reduction	125,505,878	133.99
40 % reduction		
Delay in Implementation:		
2-year delay	22,804,492	71.92
3-year delay	4,047,422	25.98

Key Assumptions Included in the AIMS Model. There are five special parameters that need to be specified for each AIM projection, which include: (i) the start year of the epidemic, (ii) the perinatal transmission rate, (iii) the percentage of infants with AIDS who die in the first year of life, (iv) life expectancy after AIDS diagnosis, and (v) the reduction in fertility related to HIV infection.

1. Start Year of the Epidemic. The first year of the epidemic is the year in which the first cases of HIV were detected. In this projections we used the year 1990 as the start year of the epidemic since, as reported by UNAIDS (2000) with only 4 cases detected.

2. Perinatal Transmission Rate. The perinatal transmission rate is the percentage of babies born to HIV-infected mothers who are infected themselves. Studies have found that this percentage ranges from about 13 to 32 percent in industrialized countries and 25 to 48 percent in developing countries (Bryson, 1996; Dabis et al., 1993). AIM uses a default value of 32 percent, typical of developing countries. If country-specific studies are available, this figure can be changed by the user. It may also be changed for future years if the country implements programs to prevent mother-to-child transmission of HIV. In our projection for Ukraine we used the default value since data on perinatal transmission rate is not available.

3. Percentage of Infants with AIDS Dying in the First Year of Life. AIM uses a distribution of the incubation period (discussed below) to calculate the number of people progressing from HIV infection to AIDS. This information can be used to calculate the number of infants infected perinatally that develop AIDS at each age. In

order to calculate the impact on the infant mortality rate, it is necessary to know how many infants who develop AIDS die before their first birthday. This percentage is only used to determine the impact on the infant mortality rate; it does not affect any other aspect of the projections. The default value in AIM is 67 percent and should be used unless some country-specific information is available. The impact of this factor on the infant mortality rate depends on the incubation period for children. If the incubation period assumptions specify that 25 percent of HIV-positive children develop AIDS in the first year of life, then using the default value for this parameter means that 16 percent (25 x 0.67) of infected infants would die before their first birthday. If the incubation assumption is higher or lower, then the percentage dying as infants will also change. Our projection uses this default value.

4. Life Expectancy After AIDS Diagnosis. Life expectancy after AIDS diagnosis is the average number of years a person will live after developing AIDS. In the developing world, this period ranges from six to 18 months. The default value in AIM is one year. Changes in this parameter generally have little effect on the overall projections. The default value is used for the Ukraine projection.

5. Percent Reduction in Fertility for HIV-Positive Women. It is not clear how the total fertility rate might be affected by an HIV/AIDS epidemic. The default value in AIM is that fertility among 15-19 year old women is 50 percent higher among HIV-positive women than HIV-negative women and that fertility among women 20-49 is 20 percent lower among HIV-positive women than HIV-negative women. We used this default value for the Ukraine projection.

Incubation Period. The incubation period describes the amount of time that elapses from the time a person becomes infected with HIV until he or she dies from AIDS. AIM uses the cumulative distribution of the incubation period. This distribution is defined as the cumulative proportion of people infected with HIV who will die from AIDS, by the number of years since infection. For example, it might be that for all people infected in a certain year, 1 percent will die; 3 percent will die within two years; 7 percent within three years; etc. The incubation period can be specified for up to 20 years. The cumulative percentage dying from AIDS by year 20 will be the percentage that ever dies from AIDS. Thus, if this value is equal to 95 percent, it implies that 5 percent of people infected with HIV will never die from AIDS. AIM uses separate incubation distributions for adults and children. The Ukraine projection uses AIM incubation periods.

1. Adult Incubation Period. A number of studies have calculated the distribution of the incubation period for different groups of adults (Alcabes et al., 1994; Buchbinder et al., 1994; 1996; Chevret et al, 1992; Chiarotti et al., 1994; Downs et al., 1991; Hendriks et al., 1992, 1993; Hendriks, Satten et al., 1996; Law, 1994; Operskalski et al., 1995; Veuglers, 1994). Estimates of the median time from infection to AIDS range from 6.5 to 16.1 years, with most of the estimates at 9-10 years. Estimates of the mean time to AIDS generally are slightly longer. Differences are due to a variety of factors. Progression to AIDS occurs faster in older people and in those infected through male homosexual contact. Aside from these factors, the mode of infection does not seem to affect the progression to AIDS.

Cumulative Proportion Progressing from HIV Infection to Death AIDS, by Time Since Infection, for Adults

Years Since Infection	Fast Men	Fast Women	Slow Men	Slow Women
1	0.00	0.00	0.00	0.00
2	0.03	0.01	0.02	0.01
3	0.07	0.03	0.05	0.03
4	0.12	0.07	0.10	0.05
5	0.19	0.12	0.15	0.10
6	0.27	0.19	0.22	0.15
7	0.36	0.27	0.29	0.22
8	0.45	0.36	0.37	0.30
9	0.54	0.46	0.45	0.38
10	0.62	0.56	0.53	0.47
11	0.69	0.65	0.61	0.56
12	0.76	0.73	0.68	0.64
13	0.82	0.81	0.74	0.72
14	0.86	0.86	0.79	0.79
15	0.90	0.91	0.84	0.84
16	0.93	0.94	0.88	0.89
17	0.95	0.96	0.91	0.93
18	0.97	0.98	0.93	0.95
19	0.98	0.99	0.95	0.97
20	0.99	0.99	0.97	0.98

Source: Stover, J. (1999)

Incubation Period for Children. Children who are infected perinatally generally progress to AIDS faster than adults. Studies have reported median time from birth to AIDS to range from one year to 6.3 years (Auger et al., 1988; Commenges et al., 1992; Downs, Salamini, and Ancella Park, 1995; Jones et al., 1989; Lui et al., 1988; Oxtaby et al., 1992; Pliner, Weedon, and Thomas, 1996; Salamini et al., 1992;). Several of these studies have found that some children (perhaps 40 percent) progress to AIDS within a few months while the rest take considerably longer. A UNAIDS review of available evidence (UNAIDS 2001B) suggests that the survival is best described by a rapid progression from infection to death for some children and much slower progression for others. The default pattern used in AIM is shown in the Table below.

Cumulative Proportion Developing AIDS, by Time Since Birth

Years Since Birth	
1	0.36
2	0.49
3	0.55
4	0.57
5	0.59
6	0.60
7	0.61
8	0.64
9	0.72
10	0.85
11	0.97
12	1.00
13	1.00
14	1.00
15	1.00
16	1.00
17	1.00
18	1.00
19	1.00
20	1.00

Source: Stover, J. (1999)

Age and Sex Distribution of Infections. To calculate HIV incidence from the prevalence input, AIM needs to have some information on the distribution of infection by age and sex. This information is provided through two editors, one for the ratio of female to male prevalence and one for the ratio of prevalence at each age group to prevalence in the 25-29 age group. In most epidemics, there are more male than female infections early in the epidemic. As the epidemic matures, the numbers become more equal and then, in heterosexual epidemics, there will eventually be more female than male infections. This pattern is especially noticeable in areas such as the Caribbean and Latin America, where the early infections were primarily among homosexual and bisexual men and the epidemic later spread to male and female heterosexuals.

HIV surveillance surveys will usually provide estimates of prevalence by age. These figures can be used to calculate the ratio of prevalence in each five-year age group to prevalence in the 25-29 age group. If prevalence by age is not available, reported AIDS cases can be used to estimate these ratios, although AIDS cases refer more closely to HIV incidence than to prevalence. Although AIDS cases are usually under reported and female cases may be even more under reported than male cases, the reported cases may be useful for examining the distribution of cases by age within each sex, unless there is some reason to suspect strong age or sex biases in reported cases. Since AIDS cases are a reflection of infections that occurred 5 to 10 years earlier, it is necessary to adjust the figures for this time lag. Thus, the distribution of new AIDS cases reported in 1995 should be used to determine the distribution of prevalence in 1985.

AIM has two default patterns, one for heterosexual epidemics and one for epidemics that are driven by transmission

among men who have sex with men or injecting drug use. The default distributions are shown in the Table below.

AIM Default Ratios of HIV Prevalence by Age and Sex

Age Group	Male	Female
0-4	0.00	0.00
5-9	0.00	0.00
10-14	0.00	0.00
15-19	0.16	0.36
20-24	0.30	0.93
25-29	1.00	1.00
30-34	1.30	0.86
35-39	1.33	0.73
40-44	1.10	0.62
45-49	0.87	0.51
50-54	0.55	0.32
55-59	0.23	0.09
60-64	0.14	0.05
65-69	0.07	0.03
70-74	0.00	0.00
75-79	0.00	0.00
80+	0.00	0.00

Source: Stover, J. (1999)

Summary of Benefits and Costs:

Main Assumptions:

Sensitivity analysis / Switching values of critical items:

Annex 5: Financial Summary
UKRAINE: Tuberculosis and HIV/AIDS Control Project

	Total	Year 1[1]	Year 2	Year 3	Year 4
Project Cost					
I. TB Control (MOH)	28.7	5.2	7.7	7.9	7.9
II. AIDS Control (MOH)	32.2	5.6	8.3	8.2	10.1
III. Prisons component	12.7	2.0	3.0	3.5	4.2
Contingencies	3.4	0.6	0.9	0.9	1.0
Total Financing Required	77.0	13.4	19.9	20.5	23.2
Project Financing					
Bank	60.0	10.5	15.5	16.0	18.0
Government	17.0	2.9	4.4	4.5	5.2
Total Project Financing	77.0	13.4	19.9	20.5	23.2

[1] Financing for "Year 1" is combining financing for both financial years 2003 and 2004

Annex 6: Procurement and Disbursement Arrangements
UKRAINE: Tuberculosis and HIV/AIDS Control Project

Procurement

Procurement. Goods and related technical services under the IBRD financed components of this project would be procured in accordance with the Bank's Guidelines: *Procurement under IBRD Loans and IDA Credit published in January 1995* including all revisions up to January 1999. Contracts for Consulting Services required for the Project would be awarded following the World Bank Guidelines *"Selection and Employment of Consultants by World Bank Borrowers" dated January 1997,* revised in September 1997, January 1999 and May 2002. The project elements, their estimated cost and procurement methods, are summarized in Table A. Other procurement information, including capability of the implementing agency, estimated dates for publication of GPN and the Bank's review process is presented in Tables B and C. Project activities not financed by the Bank will be procured in accordance with procurement rules of respective financing organizations subject to the provisions under paragraph 1.5 of the Procurement Guidelines.

1. Goods. Goods, drugs and related technical services (approximately US$44.1 million) consisting of equipment and consumables for laboratory; pharmaceuticals (drugs) for the treatment of HIV/AIDS (for the prevention of mother-to-child transmission and treatment of adults and children under a pilot program); AIDS prevention and control supplies (needles, syringes, disinfectant, condoms, test kits etc.); office equipment and computers with software; vehicles and technical services of drug and supplies storage, handling and distribution and printing for education-training materials would be grouped to the extent possible and considering project objectives, in package sizes that would encourage competitive bidding. For firms wishing to participate in bidding for condoms and for distribution services for drugs and supplies, a pre-qualification process would be used to identify qualified bidders, up-dated every two years. In-country storage and handling of drugs and project goods would be managed and contracted as described further. The following methods of procurement would be followed:

(i) **International Competitive Bidding (ICB)** procedures would be used for contracts above US$100,000 equivalent for a total amount of US$34.7 million for the procurement of pharmaceuticals and condoms, laboratory equipment and supplies, information systems, computers and office equipment, and vehicles. **Technical Services** of a logistics firm would be competitively bid by ICB to provide services of warehousing, receipt of goods, specialized storage, delivery to project sites, including local transportation and insurance, inventory control, reporting and auditing of end use for drugs, laboratory and other medical and information technology equipment and supplies (US$1.0 million). Technical services for printing of education-training materials under contracts above US$100,000 would be competitively bid by ICB (US$1.0 million). Technical services required would be clearly defined in the technical specifications and this would provide clear criteria for the lowest evaluated bid to be selected. **Pre-qualification** will be carried out for the supply of condoms and for the technical services of a logistics firm.

(ii) **Limited International Bidding (LIB)** procedures would be used to provide HIV/AIDS drugs for a total of US$1.7 million for a pilot project to treat HIV+ adults and children. These drugs would be provided under LIB because there are only a limited number of suppliers for these goods. Bids would be sought from a list of potential suppliers broad enough to assure competitive prices.

(iii) **National Competitive Bidding (NCB)** procedures would be used for the printing of training-education materials for contracts under US$100,000 equivalent, for an aggregate amount of US$0.82 million.

(iv) **International Shopping (IS).** This procedure would be used for the purchase of equipment

for laboratories, reagents, drugs, and office equipment and supplies, and publications which are needed for small quantities of off-the-shelf goods and standard commodities, estimated to cost less than US$100,000 per contract for an aggregated amount of US$0.34 million. This procedure would also be used for second-line anti-TB drugs as described in para. 1 (viii) of this annex, up to an aggregate amount of US$3,000,000. Shopping, which requires to obtain three quotations from at least two countries, would be used here because more competitive methods are not justified on the basis of cost or efficiency. The ECA Regional sample format for international shopping "Invitation to Quote" available on the ECA Procurement Web Site will be applied.

(v) **National Shopping (NS).** These procedures would be used for contracts up to US$50,000 equivalent to an aggregate of US$ 0.12 million, for the purchase of supplies and goods readily available in the local market, publications, books and supplies needed by the PIU to meet project requirements. The ECA Regional sample format for international shopping "Invitation to Quote" available on the ECA Procurement Web Site will be adjusted for national shopping.

(vi) **Direct contracting (DC).** Supplies of anti-TB second-line drugs which are of a proprietary nature and obtainable only from one source, costing $ 500,000 equivalent or less in the aggregate, may, with the Bank's prior agreement, be procured in accordance with the provisions of paragraph 3.7 of the Guidelines, s described in para. 1 (viii) of this annex.

(vii) **Procurement under Special Arrangements (SA) with WHO.** Procurement of HIV/AIDS test kits (up to an aggregate of US$1.03 million) would be undertaken through a special arrangement with WHO as contemplated under para. 3.9 of the Procurement Guidelines because it would be the most economical and efficient way of procuring these goods. The latter has a bulk purchase scheme whereby it purchases a wide range of test kits at vastly reduced prices. These test kits can then be purchased by national organizations involved in AIDS reduction programs at the listed price. It makes sense for the project to buy test kits from WHO because: (i) WHO have a selection of all the most effective kits; (ii) the products are already quality assured by WHO; and (iii) prices from WHO would be significantly lower because the project's requirements would not be sufficient to allow bulk discounts as large as those obtained by WHO.

(viii) **Procurement of TB Drugs.** First-line TB drugs estimated to cost US$10.2 million would be procured by the Borrower using Borrower's funds and procurement methods. In addition, an amount of US$2.6 million is included as part of the Bank financing as a contingency in the case that Borrower-procured first-line drugs for MOH patients would not be sufficient. This is included in the procurement table under the goods category and would be procured under ICB.

A contingency of US$3.5 million for TB patients is also included as part of the Bank financing for the prison component in case requirements for treatment exceed the Borrower's drug availability. These funds would be used either for first-line drugs or, if necessary, for second-line drugs for the treatment of drug-resistant patients. Procurement of first-line drugs would be undertaken under ICB.

The State Department of Prisons has adopted a cautious strategy regarding the possible use of anti-TB second-line drugs. It believes that it may not use these drugs until at least the third year of the project, given the time required to establish a well-functioning TB program and build the proper capacity to treat drug-resistant patients. Second-line anti-TB drugs would be procured by a procurement agent competitively selected by WHO through a working group called the Green Light Committee (GLC). The GLC is composed of representatives of a number of institutions recognized for their scientific knowledge of TB and experience with TB control around the world. The GLC includes WHO, Médecins sans Frontières, Centers for

Disease Control, Harvard, Royal Netherlands Tuberculosis Association (KNCV), and a representative of the National TB Program of a high-burden country. It assesses the readiness of country programs to implement DOTS+ programs and helps improve access to quality-assured second-line TB drugs at discounted prices. Because of the unique nature of the market for second-line drugs characterized by a limited number of suppliers, the procurement agent would have to rely on international shopping or direct contracting methods of procurement to be conducted in accordance with paragraphs 3.5, 3.6 and 3.7 of the Bank procurement guidelines.

The implementation of the TB control program needs periodic monitoring of adherence to international standards for DOTS+ projects. To that effect, there will be a need to grant an exception to the eligibility rule concerning government agencies to allow single-source contracting of the National TB Institute for the monitoring. Individual national or international consultants (with technical qualifications satisfactory to WHO) may be subcontracted to assist the National TB Institute in the monitoring.

The use of the contingency fund would be reviewed with the Bank at mid-term review and it would be decided whether to use the funds for drugs or whether they should be reallocated for other uses such as equipment or training. The financing of TB drugs would be as follows.

	Bank	Government	Total
MOH	2.6	7.6	10.2
Prisons	3.5	2.6	6.1
Total	6.1	10.2	16.3

2. **Civil Works.** Minor civil works for the rehabilitation of health facilities will be financed by the Borrower using Borrower procedures. Estimated value of rehabilitation to be completed under the Project is US$2.3 million.

3. **Selection Procedures for Consulting Services.** Contracts for consulting services for a total of US$14.67 million (of which US$4.1 million is for training as described below in paragraph 4) would be packaged to combine related skills and services, in order to make them attractive, increase competition, and to reduce the number of contracts to be managed by the PIU. The following methods of procurement would be followed:

(i) **Quality and Cost-based Selection (QCBS)** procedures would be used for contracting consultant services related to TB and HIV/AIDS strategy development, laboratory quality control, surveillance, civilian and prison treatment programs, training, public awareness programs and STI prevention and control, up to an aggregate amount of US$6.76 million.

(iii) **Consultant Qualification** procedures would be used for contracting specialized firms for contracts, largely devoted to in-country training facilitation contracts, monitoring and evaluation, software development and research under US$100,000 for an aggregated amount of US$2.2 million.

(iii) **Least Cost Selection** procedures would be used for auditing services contracts for annual audit throughout the life of the project for an aggregate value of US$0.08 million.

(iv) **Individual Consultants** would be hired in accordance with Section V of the Guidelines. Individual consultants would be used for small assignments of short-term duration such as evaluations, and for consultants of the PIU implementing the project for an aggregate amount

of US$0.82 million.

(v) **Single Source** procedures would be used for the direct contracting of authorized government TB and HIV/AIDS training institutes, and for services for the moitoring under the TB control program of the adherence to international standards for DOTS+, described in paragraphs 1 (viii) above and para. 4 below, up to an aggregate of US$0.18 Million.

(vi) **Fixed Budget Selection (FBS)** procedures would be used for services on public awareness campaign including design and implementation of the PAP for an aggregate value of US$ 4.63 million. Two phases of selection are planned as detailed in Table C. The procedures will be carefully handled with a precisely defined TOR and an evaluation committee composed of external professionals in such fields. Upon first phase, the experience and lessons of first phase will be taken into account to decide on procurement approach to proceed with the second phase.

4. Training. In-country training is estimated to cost a total of US$4.1 million. Of this total, US$0.26 million would represent the actual costs of designing and organizing the training, and the difference of US$3.83 million is for direct costs of training (per diems, travel, hotels, supplies), which will be mostly contracted to firms through QCBS or CQ selection procedures.

For contracts with authorized government TB and HIV/AIDS training institutes such as the Ukraine AIDS Center and Institute of phthisiology and Pulmonology, estimated to cost an aggregate of US$0.15 million, single source procedures would be used. For other contracts, Consultant Qualifications (CQ) would be used for contracts under US$100,000, and QCBS would be used for contracts over US$100,000. Contracts would be packaged to encourage regional contracts of larger value covering several regions.

As is the case around the world, because of the "public good" nature of TB and AIDS control, there are cases when training of health workers would be undertaken by government institutes such as the TB Institute and AIDS Center. Their services are of unique and exceptional nature, must be provided in the local language, and no suitable alternatives from private sector consultants are available.

The training plan would be up-dated by the Borrower annually and approved by the Bank prior to execution.

Expenses for study tours and training costs paid by PIU under the project shall be covered under training category and disbursed based on SOEs up to an aggregates of US$0.43 million.

5. Incremental Operating Costs. Travel and per diem costs of PIU consultants and related staff directly associated with supervision and monitoring of project activities, rent and upgrading of office premises, fuel for and maintenance of vehicles, office materials and supplies, communications would be financed under the Loan for the duration of the project (US$0.11 million) on a declining basis starting at 100 percent in the first year and 75 percent in year 4 and thereafter.

6. Notification of Business Opportunities. A General Procurement Notice (GPN) would be published in the UN "Development Business" around the period of Loan Negotiations and would be annually updated. For ICB goods contracts and large-value consultants contracts (of more than US$200,000), a Specific Procurement Notice would be advertised in the Development Business and national press, and in the case of NCB, in a major local newspaper in the national language.

7. Review by the Bank of Procurement Decisions

Scheduling of Procurement. Procurement of goods and services for the project would be carried out in accordance with the agreed procurement plan (Table C), which would be updated annually, included in the progress report, and reviewed by the Bank.

8. Prior Review

(i) *Goods and Technical Services.* Prior review of bidding documents, including review of evaluation, recommendation of award and contract would be conducted for all *ICB, LIB, DC, and UN Special Arrangements.* Prior review will also be required for all pre-qualification procedures. The first two NCB, IS and NS contracts would require prior review, regardless of the cost.

(ii) *Consulting Services.* Terms of reference for all consulting assignments would be subject to prior Bank review. Requests for Proposal (RFP), short lists, terms of condition of contracts as well as evaluation reports and recommendation for award would be prior reviewed by the Bank for contracts for individual consultants above US$50,000, firms above US$100,000, and training to be selectd on the basis of single source. All documents and recommendations involving sole source contracting would be subject to Bank prior review.

(iii) *Training.* Eligibility of government training institutes other than the approved organizations listed in paragraph 4 as being selected to implement specialized training of medical personnel would require Bank prior review.

After award of contracts, should any material modifications or waiver of terms and conditions of a contract resulting in an increase or decrease above 15 percent of the original amount, the Bank would undertake a prior review of such modifications (including modifications to contracts for consulting services).

9. Custom Duties and Taxes. All custom duties and taxes for goods specifically imported for the project and for all technical assistance would be financed by the Borrower.

10. Action Plan for Strengthening Agency's Capacity to Implement Project Procurement. The following actions would be taken to strengthen the procurement capacity of the PIU:

(i) Procurement advisory services would assist the PIU to undertake tasks of logistical planning, development of procurement plans, training plan, and preparation of operating procedures for this activity. Early procurement of drugs, laboratory equipment and supplies would require assistance for medical specifications. Contractual arrangements for these services would be competitively tendered for the first three years of the project during crucial periods of the procurement cycle. The role of the consultant would be to provide assistance on specific procurement assignments and to assist the PIU in preparing the bidding documents according to Bank guidelines and on schedule.

(ii) Initiating a Project Launch Workshop before the loan effectiveness, as part of the project implementation and capacity building initiatives, especially in procurement.

(iii) The project would be subject to intense supervision by the Bank. During the first year of project implementation, there would be at least two supervisions.

(iv) The PIU and MOH project management and procurement staff would be given the opportunity to attend intensive procurement training, by the time of loan effectiveness, such as the course offered by the ILO in Turin, to be financed under PHRD grant.

(v) Periodic ex-post review by the Bank of 1 in 5 contracts during the supervision missions.

Procurement methods (Table A)

Table A: Project Costs by Procurement Arrangements
(US$ million equivalent)

Expenditure Category	Procurement Method				
	ICB	NCB	Other	N.B.F	Total Cost
1. Works	-	-	-	2.3 (0.0)	2.3 (0.0)
2. Goods (including health products and drugs)	34.7 (34.7)		6.7 (6.6)	10.2 (0.0)	51.6 (41.3)
3. Consulting Services	-	-	11.7 (11.1)	3.6 (0.0)	15.3 (11.1)
4. Technical Services	2.0 (2.0)	0.8 (0.8)		-	2.8 (2.8)
5. Training	-	-	4.1 (4.1)	-	4.1 (4.1)
6. Incremental Operating Costs	-	-	0.2 (0.1)	0.1 (0.0)	0.3 (0.1)
7. Front-end Fee	-	-	0.6 (0.6)	-	0.6 (0.6)
Total	36.7 (36.7)	0.8 (0.8)	23.3 (22.5)	16.2 (0.0)	77.0 (60.0)

Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies and taxes and are rounded.

Other includes:
1. Goods: "Other" includes packages to be procured through Special Arrangements (SA) with WHO, LIB, DC, International and National Shopping.
2. Consulting Services: "Other" includes international training, consultant services, to be contracted through selection procedures of QCBS, CQ, fixed budget, least cost, single-source and individual consultants.
3. Training: "Other" includes all costs associated with in-country training to be procured (and for direct costs, disbursed from the project) under Agreed Procedures developed by the Borrower and approved by the Bank.
4. Incremental Operating Costs comprise travel and per diem costs of PIU consultants and related staff directly associated with supervision and monitoring of project activities, rent and upgrading of office premises, fuel for and maintenance of vehicles, office materials and supplies, and communications.
5 Non-Bank Financed includes US$2.3 million civil works, US$10.2 million for first line TB drugs, U$3.6 million services, and US$0.1 operating costs to be financed by Borrower using its own funds and contributed to the Project over the four year period.

Prior review thresholds (Table B)

Overall Procurement Risk Assessment: High

Table B: Summary of Procurement Activities

	ICB	LIB	NCB	IS	NS	Other methods
Goods, Drugs and Technical Services Procurement thresholds Individual and aggregate	Above $100,000 Aggregate $36.7 million	Aggregate US$1.7 million	Below $100,000 for printing Aggregate $0.34 million	Aggregate of $3,000,000 for second-line TB drugs (all packages) For other: Below $100,000 Aggregate $0.34 million	Below $50,000 Aggregate $0.12 million	DC for second line drugs aggregate $0.5 million (all packages) SA with WHO Aggregate $1.03 million
Prior review	All packages	All packages	First 2 contracts	First 2 contracts	First 2 contracts	All SA packages
	QCBS (firms)	**Fixed Budget**	**CQ**	**Least Cost**	**Single Source**	**Individual consultants**
Consultants	Aggregate $6.76 million	Aggregate US$0.4.63 million	Aggregate $2.2 million	Aggregate $0.08 million	Aggregate $0.18 million	Aggregate $0.82 million
Prior review	Shortlist, TORs, evaluation reports and draft contracts for all contracts	Shortlist, TORs, evaluation reports and draft contracts for all contracts above US$100,000	Shortlist, TORs, evaluation reports and draft contracts for all contracts above $100,000	Shortlist, TORs, evaluation reports and draft contracts for audit contracts	TORs and draft contracts for government training institutes and all other contracts	Shortlist, TORs, evaluation reports and draft contracts for all contracts above $50,000

Table B1: Procurement Plan

Goods and Services	Pack	Cost	SPN	Prep.	Issue	Open	Eval.	Aw.	Sign
TB drugs (contingency)	ICB6	8,799,217							
AIDS test kits	WHO1	453,846		Mar-03	Mar-03	May-03	Jun-03	Jul-03	Jul-03
	WHO2	576,374		Apr-04	Apr-04	May-04	Jun-04	Jul-04	Jul-04
Antiretrovirals	LIB1	771,350		Sep-02	Oct-02	Nov-02	Jan-03	Feb-03	Mar-03
	LIB2	941,760		Jan-04	Jan-04	Mar-04	May-04	Jun-04	Jul-04
AIDS drugs (opp. infections)	ICB13	1,030,854	Jan-04	Jan-04	Jan-04	Mar-04	May-04	Jun-04	Jul-04
Drugs for opp. Infections	ICB3	1,059,271	Aug-02	Aug-02	Aug-02	Oct-02	Dec-02	Jan-03	Feb-03
Quality checks of drugs	CQ30	40,000		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	CQ36	40,000		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
Condoms	ICB2	2,367,086	Jun-02	Aug-02	Oct-02	Nov-02	Dec-02	Dec-02	Jan-03
	ICB12	2,901,486	Nov-03	Dec-03	Jan-04	Apr-04	May-04	May-04	May-04
Inspection condoms, drugs	CQ2	80,000		Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	Mar-03
	CQ17	80,000		Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	Mar-05
Syringes/needles	ICB4	1,113,000	Aug-02	Aug-02	Aug-02	Oct-02	Dec-02	Jan-03	Feb-03
	ICB14	1,749,000	Feb-04	Feb-04	Feb-04	Apr-04	Jun-04	Jul-04	Aug-04
Disinfectant	ICB5	1,033,300	Aug-02	Aug-02	Aug-02	Oct-02	Nov-02	Dec-02	Dec-02
	ICB15	1,396,100	Mar-04	Mar-04	May-04	Jun-04	Aug-04	Sep-04	Oct-04
Swabs	ICB7	210,000	Aug-02	Aug-02	Aug-02	Oct-02	Nov-02	Dec-02	Dec-02
	ICB17	330,000	Feb-04	Feb-04	Feb-04	Apr-04	Jun-04	Jul-04	Aug-04
Lab. equip. and reagents	ICB1	10,150,141	Aug-02	Aug-02	Aug-02	Oct-02	Dec-02	Jan-03	Jan-03
	ICB11	2,952,282	Feb-04	Feb-04	Nov-03	Jan-04	Mar-04	Apr-04	Apr-04
Vehicles	ICB8	1,504,960	Mar-03	Mar-03	Mar-03	Apr-03	May-03	Jun-03	Jun-03
	IS6	20,000		Mar-03	Mar-03	Apr-03	May-03	May-03	Jun-03
Computers and software	ICB9	1,183,093	Feb-03	Feb-03	Feb-03	Apr-03	Jun-03	Jul-03	Aug-03
	ICB16	336,633	May-04	May-04	May-04	Jul-04	Sep-04	Oct-04	Nov-04
	IS1	83,030		Jan-02	Jan-02	Feb-02	Mar-02	Mar-02	Apr-02
Software development	CQ10	80,000		May-03	Jun-03	Jul-03	Aug-03	Sep-03	Aug-03
	QCBS13	228,250	Aug-03	Aug-03	Aug-03	Oct-03	Dec-03	Jan-04	Feb-04
	QCBS13	50,000	Aug-03	Aug-03	Aug-03	Oct-03	Dec-03	Jan-04	Feb-04
Office equipment	ICB10	650,910	Feb-03	Feb-03	Apr-03	May-03	Jul-03	Jul-03	Jul-03
	IS2	52,625		Dec-02	Dec-02	Jan-03	Feb-03	Feb-03	Mar-03
	IS3	15,180		Apr-03	Apr-03	May-03	Jun-03	Jun-03	Jul-03
	IS5	68,300		Dec-02	Dec-02	Jan-03	Feb-03	Feb-03	Mar-03
	NS3	5,460		Dec-03	Dec-03	Jan-04	Feb-04	Feb-04	Mar-04
Office equipment (training)	IS4	5,876		Feb-02	Feb-02	Mar-02	Apr-02	Apr-02	May-02
Furniture	NS1	54,230		Dec-03	Dec-03	Jan-04	Feb-04	Feb-04	Mar-04
Conditioners	NS2	4,000		Feb-03	Feb-03	Mar-03	Apr-03	Apr-03	May-03
Materials for hospice	NS4	43,000		Jun-03	Jun-03	Jul-03	Aug-03	Aug-03	Sep-03
Distribution and storage	ICBTS3	500,000	Nov-04	Nov-04	Dec-04	Jan-05	Mar-05	Apr-05	May-05
	ICBTS4	500,000	Jul-02	Sep-02	Oct-02	Dec-02	Feb-03	Mar-03	Apr-03
Printing of ed. material	ICB18	1,310,525	Mar-03	Jun-03	Jul-03	Aug-03	Sep-03	Sep-03	Sep-03
	ICB19	496,385	Nov-04	Nov-04	Dec-04	Jan-05	Mar-05	Apr-05	May-05
Survey, public opinion	CQ1	98,780		Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	Mar-03
	CQ15	81,280		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	CQ3	52,000		Apr-03	May-03	Jun-03	Jul-03	Aug-03	Jul-03
Public Information Campaign	ICBTS1	1,769,220	Oct-02	Oct-02	Oct-02	Dec-02	Feb-03	Mar-03	Apr-03
	ICBTS2	1,769,220	Nov-02	Nov-02	Dec-02	Jan-03	Mar-03	Apr-03	May-03
	ICBTS6	380,000	Dec-04	Dec-04	Dec-04	Feb-05	Apr-05	May-05	Jun-05
	ICBTS7	380,000	Dec-02	Dec-02	Dec-02	Feb-03	Apr-03	May-03	Jun-03
	CQ11	110,000		Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	Mar-03
PIC creation and quality control	QCBS16	520,000	Apr-05	Apr-05	May-05	Jun-05	Aug-05	Sep-05	Oct-05
	QCBS17	570,000	Oct-02	Oct-02	Oct-02	Dec-02	Feb-03	Mar-03	Apr-03
PAP design	CQ14	90,000		Apr-05	May-05	Jun-05	Jul-05	Aug-05	Jul-05
PAP - comm. and impl.	ICBTS5	307,252	Apr-03	Apr-03	May-03	Jun-03	Aug-03	Sep-03	Oct-03
	ICBTS8	307,252	Nov-04	Nov-04	Dec-04	Jan-05	Mar-05	Apr-05	May-05
Design training program	CQ62	10,000		Mar-03	Apr-03	May-03	Jun-03	Jul-03	Jun-03
	CQ63	10,000		May-03	Jun-03	Jul-03	Aug-03	Sep-03	Aug-03
Training of trainers	CQ9	57,500		Mar-03	Apr-03	May-03	Jun-03	Jul-03	Jun-03
	CQ42	57,500		Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Sep-05
Training of physicians	CQ5	84,000		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
	CQ16	81,000		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	QCBS8	326,800	Apr-03	Apr-03	May-03	Jun-03	Aug-03	Sep-03	Oct-03
	CQ19	12,804		May-05	Jun-05	Jul-05	Aug-05	Sep-05	Aug-05
	QCBS10	326,800	Jul-03	Jul-03	Jul-03	Sep-03	Nov-03	Dec-03	Jan-04
	IC18	4,523		May-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
	QCBS5	142,450	Apr-03	Apr-03	May-03	Jun-03	Aug-03	Sep-03	Oct-03
	CQ45	38,411		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
	CQ52	18,637		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
	CQ53	18,189		Feb-05	Mar-05	Apr-05	May-05	Jun-05	May-05
Training of nurses	CQ55	13,446		Mar-03	Apr-03	May-03	Jun-03	Jul-03	Jun-03
	IC9	4,482		Mar-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03
	IC19	4,482		May-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05

Training of nurses	CQ55	13,446		Mar-03	Apr-03	May-03	Jun-03	Jul-03	Jun-03
	IC9	4,482		Mar-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03
	IC19	4,482		May-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05
Training of nurses/feldshers	QCBS9	326,800	Jun-03	Jun-03	Jul-03	Aug-03	Oct-03	Nov-03	Dec-03
Training in statistics	CQ6	89,944		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
	IC26	1,827		Jun-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
Training in counseling	CQ7	62,000		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
	CQ21	54,000		May-03	Jun-03	Jul-03	Aug-03	Sep-03	Aug-03
	CQ27	35,000		Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Jan-04
	CQ48	28,000		Apr-04	May-04	Jun-04	Jul-04	Aug-04	Jul-04
Training of laboratory staff	CQ20	12,804		May-00	Jun-00	Jul-00	Aug-00	Sep-00	Aug-00
	CQ46	38,411		Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	Mar-04
	IC20	4,482		Apr-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03
Training of leaders TB/Lab	CQ49	24,344		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
Training of managers	CQ51	20,214		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
	IC24	2,817		Jun-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
Training prevention programs	IC8	8,574		Mar-03	Apr-03	May-03	Jun-03	Jun-03	Jun-03
Seminars sex industry	CQ64	7,500		Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Oct-05
	CQ41	22,060		Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Oct-03
	CQ43	38,120		Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Oct-05
Training seminars	IC17	9,083		May-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
	IC25	2,286		Jun-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
	IC27	9,083		Dec-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05
	IC33	5,037		Mar-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05
	QCBS11	268,440	Jul-03	Jul-03	Jul-03	Sep-03	Nov-03	Dec-03	Jan-04
	QCBS21	141,720		Sep-03	Oct-03	Nov-03	Jan-04	Feb-04	Mar-04
	QCBS12	125,982	Mar-03	Mar-03	Mar-03	May-03	Jul-03	Aug-03	Sep-03
	QCBS22	125,982	Mar-05	Mar-05	Mar-05	May-05	Jul-05	Aug-05	Sep-05
Training lab and GPs	QCBS7	326,800	Apr-03	Apr-03	May-03	Jun-03	Aug-03	Sep-03	Oct-03
Training of cell leaders	QCBS20	180,000		Aug-03	Aug-03	Oct-03	Dec-03	Jan-04	Feb-04
Training MTCT	SS1 - A	77,000		Mar-03	Apr-03	May-03	Jun-03	Jun-03	Jun-03
Study tours	TRNG1	56,000		Apr-03	Apr-03	Apr-03	Apr-03	Apr-03	Apr-03
	TRNG2	56,000		Aug-00	Aug-00	Aug-00	Aug-00	Aug-00	Aug-00
Training for PIU staff	TRNG3	56,000		May-03	May-03	May-03	May-03	May-03	May-03
	TRNG8	20,000		Oct-03	Oct-03	Oct-03	Oct-03	Oct-03	Oct-03
Training hlth proc. mgmt.	TRNG4	38,790		Aug-03	Aug-03	Aug-03	Aug-03	Aug-03	Aug-03
	TRNG4	25,000		Feb-03	Mar-03	Apr-03	May-03	May-03	May-03
Training warehouse/dist.	TRNG5	30,000		Aug-03	Aug-03	Aug-03	Aug-03	Aug-03	Aug-03
Training visits overseas	TRNG6	12,600		Sep-03	Sep-03	Sep-03	Sep-03	Sep-03	Sep-03
	TRNG9	12,600		Oct-03	Oct-03	Oct-03	Oct-03	Oct-03	Oct-03
International conferences	TRNG7	45,200		Oct-03	Oct-03	Oct-03	Oct-03	Oct-03	Oct-03
	TRNG10	45,200		Oct-03	Oct-03	Oct-03	Oct-03	Oct-03	Oct-03
	TRNG14	8,500		Jul-05	Jul-05	Jul-05	Jul-05	Jul-05	Jul-05
	TRNG17	8,500		Jul-03	Jul-03	Jul-03	Jul-03	Jul-03	Jul-03
	TRNG13	8,500		Jul-05	Jul-05	Jul-05	Jul-05	Jul-05	Jul-05
	TRNG16	8,500		Jul-03	Jul-03	Jul-03	Jul-03	Jul-03	Jul-03
Training courses	TRNG11	1,589		Oct-03	Oct-03	Oct-03	Oct-03	Oct-03	Oct-03
	TRNG15	1,793		Jul-05	Jul-05	Jul-05	Jul-05	Jul-05	Jul-05
Monitoring AIDS prevalence	CQ4	51,147		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
Monitoring of PAP	CQ8	72,000		Mar-03	Apr-03	May-03	Jun-03	Jul-03	Jun-03
	CQ18	72,000		Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Nov-03
TA for procurement	CQ12	54,900		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	IC3	24,000		Jan-03	Feb-03	Mar-03	Apr-03	Apr-03	Apr-03
Consultants	CQ13	51,429		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	CQ23	51,429		Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Oct-05
Research sex workers (beh.)	CQ22	52,000		Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Oct-03
Lab testing	CQ25	40,000		Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	Mar-03
	CQ37	40,000		Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Sep-05
Help Group	CQ26	35,716		Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Feb-04
	CQ38	35,716		Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Sep-05
Supervision of TB regions	CQ28	34,098		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	CQ61	34,098		Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Sep-04
Outpatient counseling	CQ29	34,000		Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Sep-03
	CQ39	34,000		Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Oct-05
Seminars for MVD	CQ31	85,746		Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Oct-03
Research on behavior prisoners	CQ32	50,000		Feb-05	Mar-05	Apr-05	May-05	Jun-05	May-05
	CQ33	50,000		May-05	Jun-05	Jul-05	Aug-05	Sep-05	Aug-05
Creation self training centers	CQ34	50,000		Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Oct-03
	CQ58	40,000		Feb-05	Mar-05	Apr-05	May-05	Jun-05	May-05
TA storage and distribution	CQ35	45,500		Jan-03	Feb-03	Mar-03	Apr-03	May-03	Apr-03
Polls and surveys	CQ40	32,000		Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Oct-05
Conference	CQ44	40,000		Mar-03	Apr-03	May-03	Jun-03	Jul-03	Jun-03

	CQ56	10,000		Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Dec-03
Workshops for mass media	CQ47	33,944		Feb-03	Mar-03	Apr-03	May-03	Jun-03	May-03
TA to implement program	CQ57	501,429		Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	Mar-03
Brochures for prison officers	CQ59	38,207		Apr-03	May-03	Jun-03	Jul-03	Aug-03	Jul-03
	CQ60	38,207		Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Feb-05
Evaluation visits	IC1	17,000		Sep-03	Oct-03	Nov-03	Dec-03	Dec-03	Dec-03
	IC2	17,000		Sep-05	Oct-05	Nov-05	Dec-05	Dec-05	Dec-05
	IC14	5,671		Jun-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
	IC31	5,671		Mar-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05
	IC31	5,671		Mar-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05
Inspection visits	IC4	11,650		Mar-03	Apr-03	May-03	Jun-03	Jun-03	Jun-03
	IC12	11,650		Sep-05	Oct-05	Nov-05	Dec-05	Dec-05	Dec-05
Tech Assistance	IC5	22,500		Mar-03	Apr-03	May-03	Jun-03	Jun-03	Jun-03
	IC10	22,500		Jul-05	Aug-05	Sep-05	Oct-05	Oct-05	Oct-05
	QCBS1	545,893	Mar-03	Mar-03	Mar-03	May-03	Jul-03	Aug-03	Sep-03
ST local TA	IC6	20,000		Jan-03	Feb-03	Mar-03	Apr-03	Apr-03	Apr-03
	IC11	20,000		Aug-05	Sep-05	Oct-05	Nov-05	Nov-05	Nov-05
Organization of hospice	IC7	10,500		Oct-03	Nov-03	Dec-03	Jan-04	Jan-04	Jan-04
	IC13	10,500		Oct-05	Nov-05	Dec-05	Jan-06	Jan-06	Jan-06
Obs. HIV in TB patients	IC15	5,478		Jun-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
	IC32	5,478		Mar-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05
Trips/per diem lab inspection	IC21	3,546		Aug-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00
	IC28	7,777		Jan-05	Jan-05	Feb-05	Mar-05	Apr-05	May-05
Monitoring visits	IC22	3,546		Sep-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04
	IC16	3,546		Jun-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
	IC29	7,777		Jan-05	Jan-05	Feb-05	Mar-05	Apr-05	May-05
	IC30	7,777		Jan-05	Jan-05	Feb-05	Mar-05	Apr-05	May-05
Web-site development	IC23	3,000		Oct-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04
Project Audit	LC1	80,000		Aug-03	Sep-03	Oct-03	Nov-03	Nov-03	Nov-03
Training center HIV/AIDS	QCBS2	124,400		Jan-00	Jan-00	Mar-00	May-00	Jun-00	Jul-00
	QCBS4	189,600	May-03	May-03	May-03	Jul-03	Sep-03	Oct-03	Nov-03
TA fin. mgmt, procurement	QCBS3	300,000	Jul-02	Jul-02	Aug-02	Sep-02	Nov-02	Dec-02	Jan-03
Capacity building	QCBS6	102,793	Jun-03	Jun-03	Jul-03	Aug-03	Oct-03	Nov-03	Dec-03
Monitoring program effect.	QCBS14	201,600	Mar-03	Mar-03	Mar-03	May-03	Jul-03	Aug-03	Sep-03
	QCBS19	201,600	Aug-05	Aug-05	Aug-05	Oct-05	Dec-05	Jan-06	Feb-06
Research behavior IDUs	QCBS15	100,000	Mar-03	Mar-03	Mar-03	May-03	Jul-03	Aug-03	Sep-03
Dev. training prog. for TB	SS2 - TB	75,000							
PIU costs		338,600							
		338,600							
Total		$60 million							

Procurement Information

Ex-post Review	Ex-post review mechanism: Review carried out in accordance with Para. 4 of Appendix 1 of the Bank's Guidelines and reviews during supervision missions.
	Section 2: Capacity of the Implementing Agency in Procurement and Technical Assistance requirements
	Brief statement Overall responsibility for Project management and coordination would rest with the PIU. The PIU would be supported by Technical Assistance consisting of: PIU Director, Procurement Specialists, Financial Management, consultants for HIV/Aids and TB, including Information Systems. An assessment of MOH procurement capacity has been conducted, as a newly established department under it would be directly involved in the procurement management by providing clearance to each contract, the report indicates "High" risk based on the fact that the MOH has very limited experience of procurement, their procurement staff are untrained and unfamiliar with World Bank procurement practices and are inexperienced even in public procurement under Ukrainian legislation. Some experience has been gained by the local procurement consultant working on the PHRD Grant for project preparation, but he has no experience with procurement of Health Sector Goods and the large consultancy contracts and special services agreements. The capacity of MOH and the PIU without outside support and immediate training would be inadequate to handle the procurement activities workload under the project. Therefore, procurement training plan and hiring of an international procurement advisor would assist to build procurement capacity for the project. The project will also contribute to procurement capacity building for local public procurement within the MOH and Prisons Department.
Country Procurement Assessment Report or Country Procurement Strategy Paper status A CPAR for Ukraine has been completed. For this Project, the Government would follow the agreed Bank procurement procedures as described in this document and in the Development Loan Agreement.	Are the bidding documents for the procurement actions for the first year ready? Yes. RFPs and bidding documents for the first year of project implementation are being prepared and would be ready by Loan effectiveness.
	Section 3: Training, Information and Development on Procurement
	Estimated date of Project Launch Workshop: November 2002 Estimated date of publication of General Procurement Notice: June 2002 Indicate if there is procurement subject to mandatory SPN in Development Business: Yes Domestic Preference for Goods: Yes Domestic Preference for Works, if applicable: No Retroactive financing: No Advance procurement: Yes. Advance procurement will be carried out for pre-qualification of suppliers of condoms and for distribution agents. Documents are already prepared.
	Explain briefly the Procurement Monitoring System: All procurement related documentation that requires Bank's prior review

	would be cleared by Procurement Accredited Staff (PAS) and relevant technical staff. Packages above mandatory review thresholds would be reviewed by the RPA. The PIU would maintain complete procurement files, especially for the contracts subject to Post-review, which would be reviewed by Bank's supervision missions. The Procurement Plan would be updated annually. Procurement information would be recorded by the PIU and submitted to the Bank as part of the quarterly and annual progress reports. This information would include: revised cost estimates for the different contracts; revised timing of procurement actions, including advertising, bidding, contract award, and completion time for individual contracts; as well as compliance with aggregate limits (within 15%) on specific methods of procurement. A Management Information System (MIS), with a procurement module would help the PIU monitor all procurement information. Co-financing: No
	Section 4: Procurement Staffing
	Indicate name of Procurement Staff or Bank's staff part of Task Team responsible for the procurement in the Project: Name: Yingwei Wu Ext: 35291 Explain briefly the expected role of the Field Office in Procurement : A procurement specialist has been hired at the Resident Mission in Kiev, who will be giving advice to the PIU to facilitate procurement implementation.

Management and Control of the Logistics Element

Justification. Laboratory equipment, including microscopes, must be delivered on time, and early during the life of the project so that diagnosis of TB can be improved. Also, providing drugs on time to patients is at the heart of the success of this project. Drugs must be delivered on time because: (i) if regions do not receive the drugs on time, patients cannot be treated and, as a result either the delayed treatment becomes more costly or, in some cases, the patient may even die; (ii) if treatment is interrupted because a batch of drugs has not arrived on time, the patient may develop drug resistance and (iii) drugs have an expiry date after which their use becomes dangerous. Under the proposed scheme, drugs would be procured through ICB and delivered at one Ukrainian entry point. There would be a logistics contract with a firm that would be in charge of clearing customs, warehousing and then ensuring final delivery to different locations in up to 27 participating regions throughout the vast territory of Ukraine. Also, as the project does cover both the civilian and the prison populations, a part of the equipment and drugs would need to be delivered to the regional MOH and another part to the prison system.

The processing of imported equipment and drugs for delivery to different regions involves: (i) obtaining of import licenses; (ii) clearance of cargo through customs; (iii) obtaining of licenses for storage and distribution of drugs; (iv) storage and delivery to regions; (v) insurance of cargo; and (vi) certification and tests. Storage and transport are not a minor issue in the case of drugs because the latter are perishable. In some cases, special temperature conditions may be needed. To avoid pilferage, security issues must be addressed through reinforcement of walls, proper locking systems, protective alarms, or specialized guards. To be able to do all this requires a strong management capacity, a good knowledge of the key players in Ukraine, and an understanding of what kind of transport is available for different destinations. At the present time, drugs are transported through various means: by rail (using carloads, containers or baggage load shipments), by air, or by truck. The methods selected depend on distances, topography, time of the year, weather, and obviously cost. The situation would vary for each region.

Leaving that task to several different foreign and local suppliers may not ensure that the right drugs would be delivered in the right places at the right time. Not all companies produce all the TB and AIDS drugs so that drugs would end up coming from more than one supplier who would (if it had the capacity to do so) deal with several

would end up coming from more than one supplier who would (if it had the capacity to do so) deal with several delivery agents. The same argument applies for laboratory and other medical and information technology equipment, condoms, syringes and supplies. Such a scheme would require that the government (the MOH and PIU) plan and monitor this complex process. They would have to work continuously with hundreds and possibly thousands of interlocutors and firms in all regions of the country. This entails a planning and management capacity that the MOH and the PIU clearly do not have. The result could be significant delays in project implementation and increased costs.

Using a logistics company ensures the reliable execution of every supply phase such as obtaining import licenses, customs clearance, storage, contracting of transport companies (or using their own fleet), monitoring the movement of goods, keeping up-to-date and complete records of which drugs are where at what time etc. The scheme is optimum in terms of Bank and government monitoring of the process because the Borrower would deal with only one operator.

There are a number of logistics companies in Ukraine. A number of Ukraine or foreign companies have licenses for the storage and distribution of pharmaceutical products. Some are partly state-owned, some are private with or without foreign share holding and have a broad coverage. A state-owned company cannot participate unless it meets eligibility criteria.

Proposed Procurement Arrangements. The PIU would prepare detailed specifications of technical services and issue a tender ICB technical services documents for the provision of required services for the duration of the project.

The services would include:

A. The provision of a central warehouse located at a point suitable for receiving imported drugs and equipment, to be Kiev. The warehouse would manage the processes of cargo receipt, random sample testing, customs clearance, checking and interim storage. It would also control the distribution of the drugs to regions and prisons in accordance with delivery schedules to be agreed once short-term drugs requirements are defined.

B. Receipt, customs clearance and distribution of medical equipment, laboratory equipment, and computers and office equipment for medical facilities. Goods will be consolidated before being shipped to the final destinations, for instance condoms, syringes, and disinfectants required for AIDS prevention activities in the regions can be consolidated and shipped together, saving on distribution costs.

C. A computer system capable of monitoring all events within the logistics cycle as well as providing data transfer to the MOH.

D. Provision of insurance services, covering the goods from receipt in Ukraine through to acceptance at the agreed responsibility hand-over point.

E. Transportation of goods from the central warehouse to regional destinations or the prison system. This may include temporary storage in the regions and would therefore require suitable available warehousing in the regions.

F. Collection of proof of delivery documents and delivery to the MOH.

G. Availability of all necessary licenses and permission to carry out the tasks within Ukraine

Either one or a combination of international and local firms with appropriate licenses and facilities could be well placed to offer a comprehensive service to the MOH. The tender would be advertised and open to any firm eligible to bid under Bank Procurement Guidelines.

The estimated cost of these services of receipt, storage, handling, insurance, testing, distribution and monitoring, including transportation to final points of distribution has been calculated to be approximately 2.5 percent of the value of goods procured. The availability of funds for these services must be readily available to ensure prompt, efficient, timely and verifiable delivery of drugs and supporting goods to the regions.

The implementation of the logistics contract would be supervised on a continuous basis by the PIU who would contract an individual consultant to that effect.

Disbursement

Allocation of loan proceeds (Table C)

Expenditure Category	Amount (US$ million)	Financing percentage
Goods (excluding drugs)	30.970	100% of foreign expenditures 100% of local expenditures (ex-factory cost) 80% of local expenditures for items procured locally
Contingency for drugs	9.970	100% of foreign expenditures 100% of local expenditures (ex-factory cost) 80% of local expenditures for items procured locally
Consulting services (foreign consulting firms and individual consultants)	1.170	100%
Consulting services (local consulting firms	9.130	87%
Consulting services (local individual consultants)	0.750	92%
Technical services	1.000	100% of foreign expenditures 100% of local expenditures (ex-factory cost) 80% of local expenditures for items procured locally
Training	4.105	100%
Incremental operating costs	0.105	100% through June 30, 2003, 90% through June 30, 2004, 85% through June 30, 2005, 80% through June 30, 2006, 75% thereafter
Front-end fee	0.600	1% of total loan
Unallocated	2.200	
Total	60.000	

It is expected that the proceeds of the Loan will be disbursed over a period of 5 years, which includes six months for the completion of accounts and the submission of withdrawal applications. Disbursement and withdrawal procedures are detailed in the *World Bank Disbursement Handbook* (2001 edition). All disbursements are subject to the conditions of the Loan Agreement and the procedures defined in the Disbursement Letter. Disbursements will follow the transaction-based method. FMR-based disbursements will not be introduced at this stage of the project, because of significant risks relating to (i) project financial management development and lack of capacity in implementing entities to provide adequate planning and currency risk management; (ii) corruption perception; and (iii) control risks. This documentation will be made available for the required audit as well as to the Bank supervision missions, and will be retained by the PIU for at least one year after receipt by the Bank of the audit report for the year in which the last disbursement was made under the project. The processing, disbursement and monitoring of the allocations of the proceeds of the Loan and Borrower counterpart financing will be managed by the PIU in coordination and consultation with the Ministry of Finance.

Issues and recommendations. It is required that the PIU and implementing agencies have introduced a common planning mechanism, which will incorporate timing of procurement procedures, preparation of disbursement documents and coordination of payments with the Treasury.

Special account:

To facilitate timely project implementation, the Government will establish, maintain and operate, under terms and conditions acceptable to the Bank, one separate overseas Special Account denominated in US dollars in a foreign commercial bank. The Government will be responsible for the appropriate accounting of the funds provided under the Loan, for reporting on the use of these funds, and for ensuring that audits of the financial statements or reports are submitted to the Bank. For the purposes of spending in local currency MOH and State Department of Prisons will open a transit account in local Ukrainian bank. The authorized allocation for the Special Account will be US$ 1.0 million with the initial depositing of US$ 0.5 million. Once the total disbursement from the SA has reached an aggregate amount of US$ 2.5 million, the initial allocation will be increased to the authorized amount of US$ 1.0 million. Replenishment applications will be submitted monthly and will be fully documented. This will include also bank statements and reconciliation statements, except for the expenditures claimed on the Statements of Expenditure (SOEs) base. Independent auditors appointed under the relevant Bank procurement arrangements would audit the Special Account annually. A conversion 'transit' account may also be established in accordance with the rules and regulations of the National Bank of Ukraine to facilitate the payment of local suppliers and contractors, but transfers into such account from the Special Account shall only be made to the extent that sums in local currency are due to be paid.

Government Contribution. The Borrower will provide its contribution on a regular basis through the Treasury system in accordance with Ukrainian legislation. The Government will be asked to ensure that annual budgets are sufficient to maintain the regular supply of pharmaceuticals to be provided as counterpart funds to the project.

Disbursements Mechanism. Accounting, procurement, disbursement and audit will be linked for effective financial management, so that the Bank can receive accurate and timely information on the Project and, at the same time, reduce administrative burden and ensure better client services.

Financial Management Assessment Report

1. Executive Summary and Conclusion.

This project is aimed to provide support under the national programs and activities in TB and AIDs control and medical treatment. The project has TB and AIDs major components and is to be implemented by two implementing agencies: Ministry of Health and State Department of Prisons.

A final review was undertaken in November 2002 by the FMS Kazakov Vitaly to determine whether the financial management arrangements within MoH and State Department of Prisons are acceptable to the Bank. A financial management assessment report is included in Annex 6b. A summary of the conclusion is included below.

On the base of the assessment provided it has been concluded that the project financial management arrangements **satisfy the Bank's minimum financial management requirements.**

A summary of financial management assessment and conclusions are as follows:

Financial Management Assessment	*Rating*	*Comments*
1. Implementing Entity	Satisfactory	Design, control and accounting procedures are well defined and followed according to the rules stated for the State Government agencies. These agencies have accounting departments, internal control departments. They are also the subject for Accounting Chamber revision and Central Controlling Department revision.
2. Funds Flow	Satisfactory	The funds flow will be organized using Special account for WB financing and Treasury account for co financing and local currency payments. This represents a traditional scheme of funds flow. The only complication is the need for two registration accounts in Treasure maintenance for needs of two implementing agencies local currency spendings.
3. Staffing	Satisfactory	It is planned that PIU will play the major coordinating and consulting role for the implementing agencies. The PIU staff will need additional training on IAS and FMRs based reporting. It is considered that PIU will have three specialists dealing with financial management and accounting.
4. Accounting Policies and Procedures	Satisfactory	Implementing agencies are under the general rules for accounting in budget organization. They both have accounting policy and procedures regulated by the Government. They use Local accounting standards, and their accounting and reporting requirements are standard for the state agencies. The PIU accounting policy is based on the WB requirements and cash basis applied.
5. Financial manual	Satisfactory	Each of implementing agencies has a set of internal instructions that regulate operations, including financial and accounting. Financial manual was developed for the project needs, which is to prescribe operations and procedures to be followed while implementing project according

		to the requirements of IBRD.
6. Internal Audit	NA	No reliance placed on internal control.
7. External Audit	Satisfactory	The project will be the subject of annual audit by the audit company acceptable to WB.
8. Reporting and Monitoring	Satisfactory	Draft FMR reports have been agreed
9. Information Systems	Satisfactory	FIS of the project has two components of recording and reporting. MOH and SDP will record transactions in their accounting systems, while PIU will provide accounting, budgeting and reporting. Preliminary, FIS will be based on EXCEL program with a following transfer to a specialized software.
10. Disbursement	Satisfactory	The project will use a SOE based disbursement procedures. PIU staff has got an experience on the WB disbursement requirements, while implementing Grant.
11. Risk Management	Satisfactory	See below for risk management
Overall Financial Management Rating	Satisfactory	

2. **Project Description Summary.** The project is proposed as a Specific Investment Loan. This project will be implemented over four years. The project has three components. TB component in total amount of US$28.68 million. The total amount of spending for the AIDS component is US$32.18 million. Due to the nature of the expenses required dealing with TB/AIDS problems within the prisons it is decided to separate expenses related to State Department of Prisons into the one component. The expenses of State Department of Prisons component will comprise the amount of US$12.7. These costs include funds sources, IBRD loan and Ukraine counterpart co financing. The total financing of the project is US$77 million, and US$60 million is funded by the World Bank loan.

3. **Country Financial Management Issues.** Country financial management issues are more closely developed in the CFAA (country financial accountability assessment). This assessment identified the major areas of accountability problems within the Public finance sector. One of the problem that have a direct influence on the TB/AIDS project implementation is a weak external control over the spending in the medical establishments, that was proved by the results of the Control and Revision Department recent check. This check showed a low level of control over the regional medical establishments in the sphere of budget money spending, breach of the rules of accounting and safeguarding of medicines, etc. CFAA study showed that MoH as one of the line Ministries which did not have an Internal Control and Revision Department, that may course a lack of control over the use of assets, that is proved to some extent, by the information received from the Control and Revision department.

4. **Financial Management System Assessment**

4.1 **Project Management and Coordination.** The project will be implemented by the two agencies involved: Ministry of Health and State Department of Prisons. These two agencies are independent and the question of coordination is to be solved by authorizing PIU group to provide support, monitoring and coordination of different aspects of procurement, disbursement and financial management. The PIU group will be created in the Ministry of Health as a separate department, which will include employees of the Ministry of Health and consultants, which are to be hired to provide services and support for the project implementation.

The PIU will also be responsible for overall project financial management and accounting. It would maintain books of accounts for the project, prepare and disseminate financial statements and financial management reports, and ensure timely audit of the financial statements. The PIU should keep copies of all the financial documents. Original financial documents may be stored at the accounting departments of implementing agencies for the local accounting

financial documents may be stored at the accounting departments of implementing agencies for the local accounting requirements needs.

Financial management and internal organization controls were reviewed by visiting the MoH and State Department of Prison, as well as PIU. The purpose of the visit was to evaluate the presence of capable employees, their educational and professional levels, existence of written standards and procedures, including clear responsibilities and levels of authority description, audit arrangement and financial management and reporting system.It was concluded that financial management arrangements currently **satisfy the Bank's minimum financial management requirements to the project.**

4.2 Staffing of the Accounting/Finance Function. Each of the participating implementing agencies has separate accounting departments, which are responsible for the reporting and controlling needs of the Ministries. These accounting departments will play a major role in the recording, monitoring and reporting for the local needs as well as they will provide assets safeguard in the Ministries, including provision of the control over the project assets in the regions. PIU group staff will include financial management specialist whose responsibilities include running of the accounting and financial management issues in the format required by the World Bank. The financial manager is to provide accounting according to IAS and prepare quarterly reports in the FMRs format. There are also two other specialists to be hired to deal with accounting and financial management issues.

Issues and recommendations

It is necessary to provide training to the specialist in PIU in the new FMRs preparation as well as financial management issues training for the implementing agencies staff.

4.3 Accounting and Internal Controls. Accountings of the implementing entities are based on the local accounting standards, which were developed on the base of major IAS. It is declared that National accounting standards should not contradict IAS that gives some confidence to the nature of accounting information. A set of rules on accounting and reporting was developed for the purposes of state budget organization, which represents accounting policy to be followed. PIU accounting policy is based on IAS requirements with limitations placed by the cash accounting system, which is used for the state budget agencies. PIU accounting policy and procedures are included in the financial manual. Financial manual also describe the system of internal control and subordination including functional obligations of the PIU staff and their accountability.

4.4 Computerized Accounting Systems. Financial information system of the project will include three separate components. It includes accounting system in MoH, which is based on the 1C accounting program and completely tailored for the local accounting need; accounting system of the State Department of Prisons, which also tailored for the needs of the local accounting and reporting requirements, and PIU financial information system. It is not planned to purchase a standalone financial system or to develop a tailor made financial system for the needs of the project that will increase the financial risks of the project. The PIU financial information system will be developed on the base of Excel program and will provide financial reports in the format required by the WB. It is considered that some funds may be directed for the financial system development, which is to change Excel based financial information system.

Issues and recommendations

It is recommended to purchase a financial information system to install in PIU for the need of financial management. In case of Excel based financial system installation, it is required to have full description of the model implemented with a controlling tools and authorizations

5. **Accounting and Financial Flows.** Accounting of the project will include three parts that reflects the implementation structure of the project. It is anticipated that MoH and State Department of Prisons will keep all the primary documents related to their components expenditures and save them according to the procedures regulated by the local legislation. For the purposes of the WB requirements, these primary documents are to be saved for at least one year after the closing project audit. The copies of the primary documents are to be saved in PIU. Financial reporting of the implementing agencies will include their part of the project spending and they will report to the controlling authorities according to the local rules and regulations. PIU will maintain accounting records of the whole project spending and will prepare, on the base of these records, financial reports in the format required by the WB.

Financial flow of the project is comprised of the two major components, which are WB loan proceeds and Ukraine Government co financing. The project account will be opened to administrate the WB loan proceeds. This account will be used for direct payments under the project and transfers to Special Account. The project will also use a Special Account payment mechanism. This Special account will be used to support the need of the both independent implementing entities. For the purposes of local currency payments MOF will identify the local commercial bank to provide convertion services. It is also agreed that entities will have their own registration accounts in the Treasure for the local currency payments. Co financing funds flow will be administered by the implementing entities and will go through the Treasury system.

6. **Financial Monitoring Reports.** The PIU will maintain accounts of the Project and will ensure appropriate accounting of the funds provided. It has been agreed that the PIU will be responsible for designing appropriate financial monitoring reports (FMRs) and preparing FMRs on a quarterly basis. The FMRs include: (a) Project Sources and Uses of Funds, (b) Uses of Funds by Project Activity, (c) Project Balance Sheet (where appropriate), (d) Special Account Statement Plus Local Bank Account Statement, (f) Physical progress report, and (g) Procurement report. The format of the financial reporting forms has been agreed and the preliminary model for the FMRs reporting was developed. It is agreed that PIU financial reporting system will be based on the local chart of accounts, that will help to ensure integration of PIU accounting system with implementing agencies accounting systems. It is also decided to use special chart of accounts for financial system in PIU to automate preparation of FMRs for the purposes of WB reporting. All these accounts are to be fully documented and their implication is to be described in the operational manual in its financial part.

Issues and recommendations

Physical progress report's indicators are to be monitored and review on the annual base as well as costs associated.

7. **Financial Risk Analysis**

From a financial management perspective, the proposed TB/AIDS is considered a high-risk project. A summary of the consolidated risk assessment for the project is as follows:

Risk	Rating	Comments
Inherent Risk		
Country specific		
1. Country Financial Management Risk	High	Based on CFAA, the public finances have accountability problems that include controlling over the proper use of public funds.
Project specific		
2. Project Financing Issues	High	Timely counterpart funding could be a major issue due to the Treasury and Budget money involvement.
3. Project complex structure	High	Project assume a significant number of procurement of small value goods with a following dissemination

		in the regions.
4. Perceived corruption	High	CFAA notes and overall perception of high corruption This issue has a direct implication to the TB/AIDS project due to the complex structure of the Ministries involved that anticipates dissemination of the medical support to the regional divisions. Low salary structure of implementing agencies creates risk of misuse of goods puchased.
Overall Inherent Risk	High	
Control risk		
1. Implementing Entity	High	Both agencies have a complex structure with a significant amount of divisions.
2. Funds Flow	Moderate	The funds flow scheme is quite transparent and obvious. The Treasury controlling procedures backs documentation and controls over counterpart financing funds flow and the Bank controlling procedures back Bank loan disbursement.
3. Staffing	Substantial	PIU employees have a background experience in dealing with WB grant, but taking in account the complexity level of project it is assessed that initial control risk of staff is substantial.
4. Accounting Policies and Procedures	Substantial	Extensive training and strong local accounting team may mitigate low experience in WB procedures.
5. Internal Audit	N/A	No reliance is placed on the Control and Revision Departments within implementing agencies.
6. External Audit	Substantial	This audit will be provided according to the WB procedures by the audit firm acceptable to the WB. External audit will be provided on the annual base, but taking in account that Project has a high inherent risks and substantial to high control risks, the audit risk is considered as substantial.
7. Reporting and Monitoring	Substantial	Reporting format has been agreed and developed in Excel. PIU will submit quarterly reports to the WB for review. PIU wil aslo submit reports to the MoF and provide accounting for MoH.
8. Information Systems	High	Information system of the PIU is Excel based, that does not give a convenient level of assurance for appropriate level of controls and authorization of operation requirements.
Overall Control Risk	Substantial	

Taking in account that inherent risk of the project is assessed as high and control risk of the project is assessed as substantial to high the overall project risk related to financial controls is assessed as high. The following risks are to be underlined and addressed: i) the amount of loan facility is significant and complex structure of implementing agencies involved; ii) low level of experience of PIU staff of complex WB projects implementation, iii) cofinancing requirements; iv) weak public sector financial management capacity, assets safeguard and eligible use of goods purchased under the project.

Mitigation of the specified risks actions:

- strengthening of control over the use of goods and funds of the project from the PIU, internal audit departments of implementing agencies by the periodic supervision of processes of assets safeguards in regions;
- external audit control over the processes of assets safeguards;
- training of the PIU and MOH and SDP relevant staff in financial management;

- coordination seminar of MOH, State Treasury, MOF and SDP as to the project implementation;
- timely budget preparation and assurance of the cofinancing inclusing in the State Budget.

8. Auditing Arrangements. The PIU will be responsible for ensuring that its financial statements, special accounts, and Statement of Expenditures (SOEs) or Financial Monitoring Reports (FMRs) are audited by an independent acceptable to WB auditor, a member of a professional body that is a member of the International Federation of Accountants (IFAC), in accordance with standards on auditing that are acceptable to the Bank. The annual project audit will be carried out in accordance with the *Guidelines for Financial Reporting and Auditing of Projects Financed by the World Bank (March 1982).* The audit report shall be in a format in accordance with the International Standards on Auditing promulgated by the International Federation of Accountants (IFAC). The audited financial statements of the project will be sent to the Bank within six (6) months of the end of the Government's fiscal year. The audit costs will be financed from the loan funds.

Issues and recommendations

TOR for the audit should be agreed with the WB to follow the needs and requirements, which will cover the specific project features.

9. Impact of procurement arrangements. According to the initial procurement evaluation this project is considered as a high risk for the procurement arrangements. It is also considered as a complex project due to the division of financial flows into two that should satisfy needs of MoH and State Department of Prisons. Procurement tenders, nevertheless, will be provided for both components as for one without any break out. All procurement arrangements will be undertaken by the PIU which is to prepare document to be signed by the beneficiaries involved. Procurement plan has anticipated that great number of contracts to be processed during the project implementation that will cause additional risks in financial management and accounting of the project. The key playing role in the coordinating, reporting and monitoring in this case will be placed on the PIU staff.

10. Supervision Plan. The reports of the progress of the project implementation will be monitored in detail during supervision missions. Financial management reports will be reviewed on a regular basis by the field-based FMS and the results or issues identified during the supervision missions will be followed up. Financial audit reports of the project will be reviewed and issues identified and followed up. It is proposed to have first supervision one month after effectiveness or after disbursement begins, with the following quarterly supervisions.

Annex 7: Project Processing Schedule
UKRAINE: Tuberculosis and HIV/AIDS Control Project

Project	Planned	Actual
Time taken to prepare the project (months)	12	18
First Bank mission (Identification)	09/06/1999	09/06/1999
Appraisal mission departure	01/21/2001	01/21/2001
Negotiations	08/05/2002	10/18/2002
Planned Date of Effectiveness	03/01/2003	

Prepared by:
Jean J. de St. Antoine

Preparation assistance:

Bank staff who worked on the project included:

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Yingwei Wu	Procurement Specialist
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Ian Conachy	Projects Assistant
Nicholay Chistyakov	Senior Financial Officer

Annex 8: Documents in the Project File*
UKRAINE: Tuberculosis and HIV/AIDS Control Project

A. Project Implementation Plan

Project Operational Manual and Detailed Project Implementation Plan (September 2002)

B. Bank Staff Assessments

C. Other

Tuberculosis drug management
Plan of a national response to HIV/AIDS in Ukraine for 2001-2003 (draft), December 2000
Report on a Joint Review of Tuberculosis in Ukraine: WHO, 2000
Joint Review of Tuberculosis in Ukraine, WHO, USAID/CDC, December 1999
List of HIV/AIDS Prevention Projects Run by UNAIDS, UN - Agencies and other major sponsoring organizations in Ukraine, 2000 (2)
Treatment, care and support of injecting drug users living with HIV/AIDS: Implications for Ukraine, July 2000
National organizations (a list of 63 NGOs operating in 24 oblasts)
Some non-government organizations focusing on HIV in Ukraine with the capacity to expand their services
*Including electronic files

Annex 9: Statement of Loans and Credits

UKRAINE: Tuberculosis and HIV/AIDS Control Project

15-Nov-2002

			Original Amount in US$ Millions					Difference between expected and actual disbursements*	
Project ID	FY	Purpose	IBRD	IDA	GEF	Cancel.	Undisb.	Orig	Frm Rev'd
P069858	2002	SIF	50.21	0.00	0.00	0.00	49.21	-0.50	0.00
P054966	2002	PRIV SEC DEV (APL #1)	30.00	0.00	0.00	0.00	30.00	0.30	0.00
P048790	2002	AZOV-BLK SEA CORR BIODIV CONSV (GEF)	0.00	0.00	6.90	0.00	7.39	0.26	0.00
P035786	2001	LVIV WATER/WW	24.25	0.00	0.00	0.00	24.25	4.23	0.00
P055738	2001	SEVASTOPOL HEAT SUPPLY IMPROVEMENT	28.20	0.00	0.00	0.00	28.19	5.17	0.00
P055739	2000	KIEV PB ENERGY EFFIC	18.29	0.00	0.00	0.00	16.08	3.95	0.00
P044728	1998	ODS PHASE-OUT (GEF)	0.00	0.00	23.20	0.00	3.56	4.25	-2.92
P049174	1998	TREASURY SYSTEMS Project	16.40	0.00	0.00	0.00	4.22	4.22	0.02
P044832	1998	KIEV DISTRICT HEAT.	200.00	0.00	0.00	0.00	174.65	129.12	6.97
P044851	1997	EXPORT DEVELOPMENT	70.00	0.00	0.00	0.00	0.62	3.20	0.00
		Total:	437.35	0.00	30.10	0.00	338.17	154.20	4.07

UKRAINE
STATEMENT OF IFC's
Held and Disbursed Portfolio
Jun 30 - 2002
In Millions US Dollars

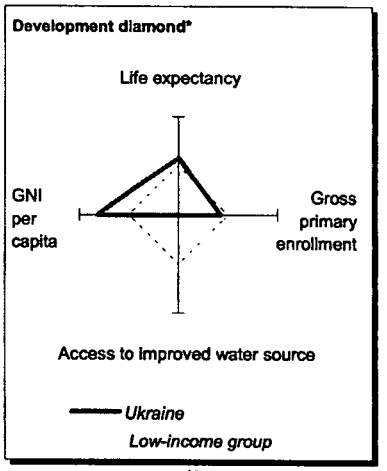
		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1996	FUIB	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00
1998	HVB Bank Ukraine	0.00	2.28	0.00	0.00	0.00	2.28	0.00	0.00
2001	JSC Okean	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	MBU	3.50	1.70	0.00	0.00	0.00	1.70	0.00	0.00
1994/96	Ukraine VC Fund	0.00	1.50	0.00	0.00	0.00	1.15	0.00	0.00
	Total Portfolio:	13.50	10.48	0.00	0.00	0.00	10.13	0.00	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
1996	FUIB	10.00	0.00	0.00	0.00
1998	HVB Bank Ukraine	5.00	0.00	0.00	0.00
	Total Pending Commitment:	15.00	0.00	0.00	0.00

Annex 10: Country at a Glance

UKRAINE: Tuberculosis and HIV/AIDS Control Project

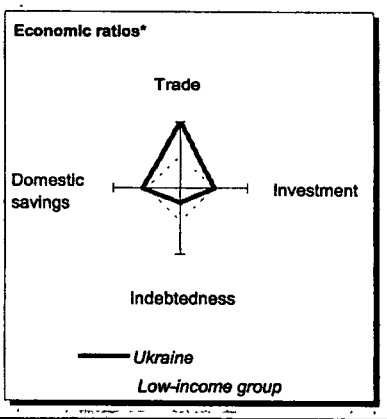
POVERTY and SOCIAL	Ukraine	Europe & Central Asia	Low-income
2001			
Population, mid-year *(millions)*	49.1	475	2,511
GNI per capita *(Atlas method, US$)*	710	1,960	430
GNI *(Atlas method, US$ billions)*	35.0	930	1,069
Average annual growth, 1995-01			
Population *(%)*	-0.8	0.1	1.9
Labor force *(%)*	-0.5	0.6	2.3
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	23	..	..
Urban population *(% of total population)*	68	63	31
Life expectancy at birth *(years)*	68	69	59
Infant mortality *(per 1,000 live births)*	13	20	76
Child malnutrition *(% of children under 5)*	..	..	..
Access to an improved water source *(% of population)*	..	90	76
Illiteracy *(% of population age 15+)*	0	3	37
Gross primary enrollment *(% of school-age population)*	82	102	96
Male	83	103	103
Female	81	101	88



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

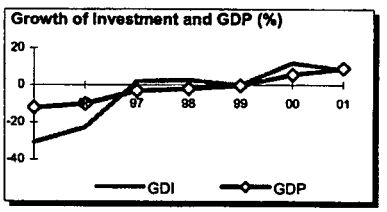
	1981	1991	2000	2001
GDP *(US$ billions)*	..	81.4	31.3	37.0
Gross domestic investment/GDP	..	26.3	19.2	20.4
Exports of goods and services/GDP	..	26.1	62.4	56.1
Gross domestic savings/GDP	..	28.5	24.2	22.0
Gross national savings/GDP	..	..	23.9	24.1
Current account balance/GDP	..	-3.6	4.7	3.8
Interest payments/GDP	..	..	1.8	2.0
Total debt/GDP	..	..	38.9	33.7
Total debt service/exports	..	..	18.1	10.6
Present value of debt/GDP	..	..	35.4	30.7
Present value of debt/exports	..	..	54.6	51.5

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	..	-7.2	5.8	9.1	4.5
GDP per capita	..	-6.6	6.7	10.0	5.3
Exports of goods and services	..	-0.6	18.8	9.7	7.8

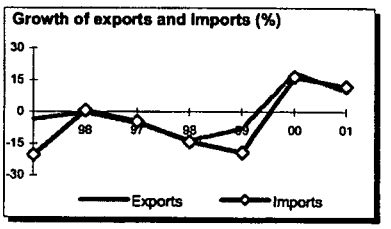


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	..	22.8	16.2	16.6
Industry	..	50.5	37.2	39.0
Manufacturing	..	42.3	34.3	35.0
Services	..	26.7	46.6	44.4
Private consumption	..	54.1	54.3	55.4
General government consumption	..	17.4	21.5	22.5
Imports of goods and services	..	23.9	57.4	54.5



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	..	-4.2	5.9	10.9
Industry	..	-8.3	10.9	8.6
Manufacturing	..	-7.7	12.8	14.2
Services	..	-1.4	4.6	7.0
Private consumption	..	-4.9	5.2	9.1
General government consumption	..	-4.4	-1.9	8.6
Gross domestic investment	..	-14.6	12.1	8.5
Imports of goods and services	..	-0.3	16.6	12.0

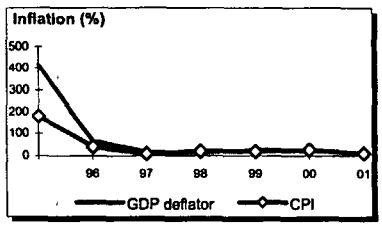


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

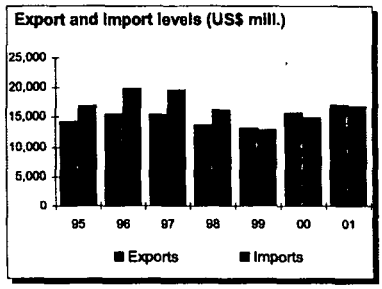
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	..	163.4	25.8	10.9
Implicit GDP deflator	..	95.6	23.2	8 8
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	35.1	35.6
Current budget balance	..	..	-0.1	-0.4
Overall surplus/deficit	..	..	-1.3	-1.6



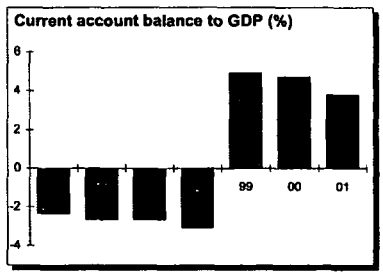
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	23,988	15,722	17,091
Ferrous and non-precious metals	..	..	6,468	6,720
Mineral products	..	..	1,377	1,824
Manufactures	..	..	2,584	3,180
Total imports (cif)	..	21,994	14,943	16,839
Food	..	..	908	1,126
Fuel and energy	..	..	6,419	6,590
Capital goods	..	..	2,625	3,379
Export price index *(1995=100)*	..	..	97	94
Import price index *(1995=100)*	..	..	115	112
Terms of trade *(1995=100)*	..	..	84	84



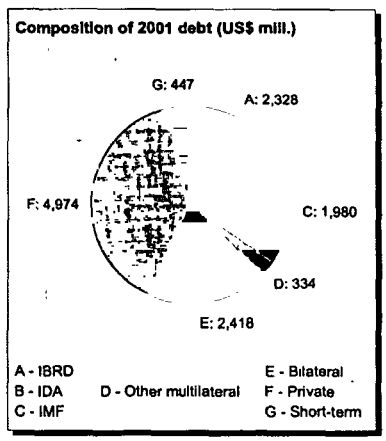
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	..	24,671	19,522	21,086
Imports of goods and services	..	22,162	17,947	20,473
Resource balance	..	2,509	1,575	613
Net income	..	..	-942	-667
Net current transfers	..	..	848	1,456
Current account balance	..	-2,928	1,481	1,402
Financing items (net)	..	..	-1,083	204
Changes in net reserves	..	..	-398	-1,606
Memo:				
Reserves including gold *(US$ millions)*	..	..	1,476	3,090
Conversion rate *(DEC, local/US$)*	..	3.68E-5	5.4	5.5



EXTERNAL DEBT and RESOURCE FLOWS

	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	..	..	12,166	12,481
IBRD	..	..	1,991	2,328
IDA	..	..	0	0
Total debt service	..	..	3,662	2,343
IBRD	..	..	142	212
IDA	..	..	0	0
Composition of net resource flows				
Official grants	..	..	-8	3
Official creditors	..	..	-1,060	716
Private creditors	..	..	332	-809
Foreign direct investment	..	..	594	769
Portfolio equity	..	..	-201	-866
World Bank program				
Commitments	..	..	18	353
Disbursements	..	..	113	407
Principal repayments	..	..	24	69
Net flows	..	..	88	338
Interest payments	..	..	118	143
Net transfers	..	..	-29	196



Additional
Annex 11

Ukraine: Tuberculosis and HIV/AIDS Control Project
Technical Terms

Acid-fast bacilli (AFB)	Bacteria that retain a carbol-fuschin stain after the application of acid-alcohol decolorizing mixtures; the most important of these bacilli is *Mycobacterium tuberculosis*, the agent that causes tuberculosis.
AIDS	Acquired Immunodeficiency Syndrome. Disease characterized by a loss of proper immune system function, leading to infection by infection with the human immunodeficiency virus (HIV).
Acquired MDR TB	Infection with a strain of *M. tuberculosis* resistant to at least isoniazid and rifampicin in a patient who has previously received at least one month of antituberculosis therapy; also called secondary MDR-TB.
Active case finding (ACF)	Case-detection strategy characterized by the systematic search for individuals with tuberculosis in a population; this contrasts with passive case finding, a case-detection strategy in which symptomatic individuals identify themselves to health services.
Antiretroviral therapy	Treatment with medications that inhibit the replication of retroviruses. This term is most commonly used to refer to medications that inhibit HIV replication, e.g. AZT (zidovudine), ddI (didanosine), ddC (zalcitabine), protease inhibitors, and nucleoside analogs.
Bacilli Calmette-Guérin	BCG. Bacilli used to vaccinate against TB. The vaccine is believed to have moderate efficacy; it does not prevent TB infection but it is understood to reduce the risk of developing all forms of active TB. Use varies widely between countries. For developing countries with high rates of TB, WHO supports universal BCG immunization.
Case-detection rate	Number of correctly identified cases of a disease of interest within a given time period, given the total estimated incidence.
Completed treatment	Specific outcome category used in TB cohort analysis; defined as patients who have completed treatment but without bacteriological proof of cure.
Cured	Specific outcome category used in TB cohort analysis; this category includes patients initially smear-positive who are sputum smear negative at, or one month prior to, the completion of treatment and on at least one previous occasion. This category also includes the patients, who were initially culture positive and became culture negative at the end of treatment
Default	Term referred to TB patients in treatment who have failed to take their antituberculous drugs for two or more months at any time since registration as a TB patient. The term "interrupted treatment" is also used.

DOTS	Refers to a specific type of tuberculosis-control program under the aegis of a country's National Tuberculosis Program, requiring the following elements: (i) government commitment to sustained TB control activities; (ii) case detection by sputum smear microscopy among symptomatic patients self-reporting to health services; (iii) standardized treatment regimens of six to eight months for at least all confirmed sputum-positive cases with directly-observed treatment (DOT) for at least the initial phase of the treatment; (iv) regular uninterrupted supply of all essential antituberculosis drugs; and (v) a standardized recording and reporting system that allows assessment of treatment results for each patient and of the TB control program overall.
Drug resistance	Characteristic of microorganisms that are not killed or inhibited by a specific antibiotic due to the selection of naturally-occurring resistant mutants through inadequate therapy. May result from the administration of too few medications or irregular intake of drugs.
Drug-susceptibility testing	Laboratory tool for assessing susceptibility of TB bacillus to antibiotics; a key component in designing treatment regimens for patients with drug resistance.
Epidemic	Occurrence of a disease in a community or region above the expected. In common usage refers to a disease that is relatively new to or previously suppressed in a given population.
Failure	Specific outcome category used in TB cohort analysis. Refers to those TB patients who remain or become again sputum smear-positive five months or later after the start of treatment.
First-line drugs	Term used to describe the most efficacious antituberculous drugs, including isoniazid (INH or H), rifampicin (RIF or R), pyrazinamide (PZA or Z), ethambutol (EMB or E), and streptomycin (SM or S).
Fluoroscopy	Radiological screening method used to diagnose pulmonary TB; used widely in the former Soviet Union.
Good Manufacturing Practices or GMP.	Guidelines for pharmaceutical manufacturers that provide minimum quality standards for the production of drugs.
Harm reduction	Refers to programs providing education, condoms, bleach, needle exchange, and referral for drug treatment to injecting drug users (IDUs) to reduce transmission of the HIV epidemic to the IDUs themselves and to the rest of the population.
Human immunodeficiency Virus (HIV)	Human retrovirus that infects CD4 lymphocytes leading to immunosuppression and the development of opportunistic infections. In patients infected with HIV, TB is the world's most common lethal opportunistic infection.
Incidence	Number of new cases of a disease in a population over a period of time. Usually expressed as a rate, i.e. number of new cases of a disease over a period of time divided by population at risk of the disease in the time period.

Individualized Treatment Regimens (ITR)	TB treatment based on the drug-susceptibility test of an individual's patient infecting strain. The regimen includes those drugs to which a patient's infecting strain has documented *in vitro* susceptibility.
Infection	When used in reference to tuberculosis, the presence of *M. tuberculosis* in the body accompanied or not by signs of clinically active disease such as cough, fever, or night sweats. As regards TB, also named latency.
Monoresistance	Resistance to only one antituberculous medication.
Multidrug-resistant tuberculosis (MDR TB)	Strains of *M. tuberculosis* resistant to at least isoniazid and rifampicin, considered the two most efficacious antituberculous drugs.
Oblast	Primary administrative region within Ukraine, containing several rayons.
Polyresistance	Resistance to more than one antituberculous medication, but not to both INH (isoniazid) and RIF (rifampicin). By convention, resistance to both INH and RIF defines the isolate as MDRTB. Polyresistant strains of tuberculosis may be as difficult to treat as MDRTB.
PPD-screening	Method by which PPD (see below) skin testing is used to detect infection with *M. tuberculosis*.
Prevalence	Number of people in a population who have a certain disease at a certain point or interval in time divided by the population of interest (e.g. 300 cases of smear-positive TB per 100,000 population).
Primary drug resistance	Drug resistance diagnosed in patients without a history of prior antituberculous therapy. Results from direct transmission of a drug-resistant strain of *M. Tuberculosis*.
Purified Protein Derivative	PPD. Substance native to the tubercle bacillus that is injected under the skin to screen for prior exposure to *M. Tuberculosis*. Induration at the time of the injection site suggests prior infection with *M. Tuberculosis*. See PPD-screening above.
Reference laboratory	Mycobacteriology laboratory to which samples are sent for drug-susceptibility testing. Also performs quality control for other laboratories providing TB diagnostic services.
Second-line TB drugs	Antituberculous medications used to treat drug-resistant TB. Second-line drugs include: amikacin, capreomycin, cycloserine, ethionamide, fluoroquinolones, kanamycin, para-aminosalicylic acid (PAS), rifabutin, and thiacetazone.

Sexually-transmitted disease (STD) or sexually-transmitted infection (STI)	Infections acquired during sexual contact, including chlamydia, HSV, HIV, and gonorrhea; strains of human papillomavirus associated with cervical cancer are also likely STIs.
Short-course chemotherapy	Treatment of active TB using INH and RIF-containing regimens lasting nine months or less.
Smear conversion	Difference in a patient's sequential smear microscopy test results (a positive result on one exam followed by a negative result on another, or vice versa). Failure to smear-convert from positive to negative after several months of directly-observed short-course chemotherapy may suggest that the patient is sick with MDRTB.
Smear negative	Term referring to the absence of *M. tuberculosis* bacili on smear microscopy examination. Because of the low sensitivity of smear microscopy, a negative smear does not necessarily indicate the absence of TB disease. Patients who are smear-negative but who have a culture-positive result are considered to be less infectious than smear-positive patients, reflecting lower bacilary load.
Smear positive	Term used to describe the presence of acid-fast bacili (AFB) on smear microscopy.
Sputum smear examination	Microscopic examination of patients' sputum that can reveal the presence of *M. tuberculosis*.
Standardized treatment regime	TB treatment in which all patients enrolled are administered a single treatment regimen without prior testing of the susceptibility pattern of each patient's infecting strain.
Surveillance data	Data collected to monitor the occurrence and spread of a disease, treatment outcome and drug susceptibility patterns.
Transferred out	As treatment outcome. Those patients who have been transferred to another reporting unit and for whom the treatment outcome is not known.

Additional
Annex 12

UKRAINE - TB and HIV/AIDS Control Project

The Implementation of Outreach Services for HIV/AIDS

Prevention activities. To help prevent the spread of the epidemic, the project will finance preventive outreach activities targeted to high-risk groups. This will consist of harm reduction programs among IDUs, CSWs, and MSM including training, advocacy, IEC, peer education programs, provision of condoms, syringes, and dissemination of protocols for needle and syringe disposal.

Overall scheme. The main executor of this component would be the Ukraine AIDS Center working with the regional AIDS Centers (RACs), of which 28 had been established in 20 regions by February 2002. They would contract NGOs to work with high-risk groups and implement outreach programs. Goods (including condoms, syringes, needles) would be procured centrally and provided to NGOs. The latter would be contracted on a competitive basis to implement harm reduction programs. NGOs would submit proposals that would be evaluated using criteria included in the Operational Manual. The criteria to be used are in line with those used by the International Renaissance Foundation (Open Society Institute), one of the largest financiers of NGOs in the field of HIV/AIDS in Ukraine, so that many NGOs in Ukraine would already be familiar with the criteria and basic operating principles. The project cycle would consist of the following five steps.

1. Promotion. Regional AIDS Centers (RACs) would promote the financing of outreach activities through advertising or other means and receive proposals from NGOs or other groups to carry out outreach. Proposals would consist of the following: (i) description of problems and objectives; (ii) approaches to be taken to solve the problem, including budget and timetable; (iii) methodology to evaluate success; and (iv) background and experience of participants.

2. Selection. RACs would evaluate the proposals using criteria included in the Operational Manual, rank them accordingly, and send their evaluation report to the Ukraine AIDS Center (UAC). A small selecting committee would consist of national experts from UAC, MOH and at least one independent person from an international NGO. The committee would review the evaluation reports and ratify selection proposals from RACs. It would have a power of veto if it found procedures not to have been followed properly.

3. Contracting. Contracts would be drafted by the PIU. They would consist of tripartite agreements between the MOH (National or Regional AIDS Center), the PIU and the NGO (or private).

4. Disbursements. Disbursements would be made by the PIU against progress in implementation.

5. Supervision. RACs would undertake the supervision of outreach work using guidelines provided in the Operational Manual.

Selection criteria would be as follows. Preference would be given to those applications which:

(i) have clear objectives and goals aiming at HIV prevention among IDUs, CSWs and MSM (one or a combination of these groups);
(ii) include needle exchange, dissemination of protocols for needle and syringe disposal, condom distribution, training, advocacy, IEC, counseling as required to reach the objective;
(iii) answer the main harm reduction principles;
(iv) refer vulnerable groups to the existing health care structures;
(v) have support from the local administration and interior affairs;
(vi) have an effective evaluation mechanism;

(vii) provide successful reports on their activity; and
(ix) demonstrate that they are sustainable.

NGO Capacity. Ukraine has sufficient NGOs in number, type, implementation and technical capacity to carry out the outreach and other services contemplated by the project. Currently, there are about 100 NGOs working actively on HIV issues in Ukraine. Of these, about 20 are working directly on prevention among those at highest risk for infection (especially IDUs and CSWs), and another 30 NGOs appear to have the capacity to work with these groups, making a total of 50. Capacity building activities are being conducted by other donors (see below) and are expected to continue for at least 3-5 years. A list of 63 NGOs operating in 24 regions is provided in the project files. Another document in the files provides a brief analysis of NGOs that have a capacity to expand their services. This document lists 49 NGOs operating in 24 cities. NGOs have been informed of the loan development process and know a great deal about the proposed loan activities. More promotion will be undertaken at the project launch and beyond.

Some of the main financiers of NGOs are the International Renaissance Foundation (Open Society Institute), the British Council, Alliance, and the AIDS Foundation East West. All these organizations are doing capacity building. Harm reduction training by the AIDS Foundation East West has been going on for two years and was recently refunded for two more years. Alliance is currently funded by USAID to implement a program of information centers and NGO capacity building. The US has already initiated discussions about a further grant, concentrating on NGO capacity building over the next 3-5 years. As USAID cannot fund condoms, needles and syringes (because of its guidelines), it concentrates on capacity building. These efforts would be complemented by the Bank loan that will finance these items.

UNDP, using its own funds as well as those of SIDA, intends to start a set of integrated projects concentrating on young people, IDUs and CSWs in one city, attempting to set appropriate conditions for scale-up to 60 percent coverage of IDUs and CSWs with prevention services. Most likely, this will be in a new region, possibly Cherson, where there are few or no NGOs working on HIV at present.

One process that may prove useful for linkages in the longer term is a UNICEF program which is funding government services (Social Services for Youth, which exist in most cities) to carry out needle exchange in several cities. The most successful of these programs is the Kiev needle exchange program that has reached a high coverage.

Most of the NGOs mentioned here operate in close collaboration with government services, usually the regional AIDS Centers. As many of the RACs have been created recently, they will need strengthening. This will be undertaken by the project which will provide equipment, prevention and information materials, and training to the RACs. Added to this will be increased funding of NGOs for their outreach activities. As a result, it is expected that the combined response of the government and NGOs will be strengthened by both the loan activities and the international NGO programs.

Additional
Annex 13

Ukraine: Tuberculosis and HIV/AIDS Control Project

HIV/AIDS in the Europe and Central Asia Region

Salient Features of the HIV/AIDS Epidemic in the ECA Region. Until 1995, Europe and Central Asia (ECA) countries escaped the worst ravages of HIV/AIDS. The total number of infections for the entire region at mid-decade was estimated at less than 30,000 in a total population of approximately 300 million. In comparison, 474,000 persons were living with HIV in Western Europe, 1.2 million in Latin America, 4.2 million in Asia, and 12.9 million in Africa. However, as experience has shown, HIV does not respect international boundaries, nor does it discriminate by nationality, race, ethnic group, or religion. By the end of the 1990s, the situation had changed dramatically in the region. The number of infected persons had increased ten-fold, reaching 360,000.

From 1995 onwards, HIV started spreading among drug injectors in cities of several newly independent states (NIS) countries, including Ukraine, Belarus, the Russian Federation, Moldova, and Kazakhstan. The first outbreaks were reported in the southern Ukrainian cities of Odessa and Nikolayev in 1995. These were followed by further spread in the same country, as well as by outbreaks in Svetlogorsk in Belarus, in Chisinau and Baltsi in Moldova, in a prison in Temirtau in Kazakhstan, and in an increasing number of cities in the Russian Federation (including Kaliningrad, Krasnodar, Nizhniy Novgorod, Tumen, Rostov, Tver, and Tula). One-quarter of the infections are believed to have occurred during 1999. Particularly high rates of infection within the ECA population, as high as 65 percent have been found in sub-groups that engage in high-risk behaviors, especially injecting drug use.

While national rates of HIV prevalence, all less than one-half of one percent within the general population, are considered low by international comparison, the particularly worrisome aspect is the high rate of increase in the number of cases in the past few years. The world's steepest HIV curve in 1999 was recorded in the Russian Federation, where the proportion of the population living with HIV doubled between end-1997 and end-1999.

The Core of the Epidemic in the ECA Region. Both case reporting and prevalence data suggest that the HIV/AIDS epidemic in the ECA region is being fueled by high-risk behaviors, particularly injecting drug use (IDU). The available evidence suggests that the epidemic is still highly concentrated in populations who inject drugs, in an increasing number of cities in the NIS. Most cases continue to be found in Ukraine, Belarus, the Russian Federation, Moldova, and Kazakhstan. HIV remains rare in other places in the NIS, in IDU populations in central and southeast European countries (except Poland and Yugoslavia), and in virtually all other population groups in central and Eastern Europe and central Asia. Prevalence among sex workers, arguably the most vulnerable group after IDUs, remains low throughout the region, with only one major exception, opiate-injecting sex workers in Kaliningrad, Russia.

Adult (15-49 years) HIV/AIDS Rates in Europe and Central Asia (1999)

Rank Within ECA	Country	Adult HIV/AIDS Rate (%)
	Global Average	**1.07**
	ECA Region Average	**0.21**
1	Ukraine	0.96
2	Belarus	0.28
3	Republic of Moldova	0.20
4	Russian Federation	0.18
5	Latvia	0.11
6	Poland	0.07

Data Source: UNAIDS, end-1999 estimates.
Notes: (1) adult rates (%) are derived from the number of adults living with HIV/AIDS at the end of 1999, divided by the 1999 adult population.

Since drug injecting is illegal, it is difficult to estimate the size of the drug injecting population, let alone the extent to which they are linked to sexual networks with non-injectors. There is, however, no doubt that the drug-using populations in the NIS are both very large and are rapidly growing. In Russia and Ukraine, the estimated prevalence of injecting drug use is 1-2 percent, with rates as high as 5 percent in some cities. Drug injecting is becoming extremely common among unemployed young people in many of the industrial cities of the Russian Federation and Ukraine, and has become well established, even among schoolchildren. Very high rates of HIV prevalence have been recorded among persons who inject drugs --- up to 60-70 percent in studies in Ukraine, Belarus, and Russia. Rates of 40-50 percent have been reported in Poland and Yugoslavia. HIV prevalence amongst those who inject drugs in the NIS is patchy, not uniformly high, illustrating that the epidemic gradually moves from city to city, from district to district. In 1999, the epidemic hit Moscow City and region. St. Petersburg may become the next hot spot of the epidemic. The virus has been spreading. It was recently introduced into networks of drug injectors in Russian cities where HIV was previously unknown. The virus has even reached the Siberian city of Irkutsk, where nearly 1300 infections have been reported, most of them in 1999.

Potential Rapid Spread of HIV. While the epidemic is currently concentrated amongst persons who inject drugs, there are worrisome pre-conditions present that suggest that an exceptionally rapid and vast spread of HIV is possible:

(i) sharing drug-injecting equipment without sterilization between users is an extraordinarily efficient way of spreading HIV and has led to the spread of HIV through drug-injecting populations with unparalleled speed in other regions. The risk of infection to those who share injection equipment is higher and more immediate than for any other group engaging in high-risk behavior. The very large populations who use injecting drugs and who are not infected yet, are therefore at immediate and high-risk for HIV infection.

(ii) there is a concurrent, and as yet unrelated, epidemic of classic sexually transmitted diseases (STDs), especially syphilis, in Russia, in the western NIS, and in the Russian-speaking populations in central Asia. Given the large number of people affected and the severity of their sequels (infertility, ectopic pregnancy, congenital syphilis, neonatal blindness), the STD epidemics require an effective response in their own right. Increases in STI rates also suggest that people are having unprotected sex with non-monogamous partners. Moreover, STD infection greatly increases the vulnerability to HIV infection. If HIV were to spread from drug-injecting populations into this larger population, it would find fertile ground for a much wider expansion of the HIV/AIDS epidemic. Given that the overlap between the two epidemics is still small, in order to have an impact on the HIV epidemic now, STD prevention and care strategies need to focus on the most vulnerable groups of the population: injecting drug users and sex workers.

(iii) commercial sex work, which is on the rise, brings in more infections as sex workers get infected with HIV from clients who do not use condoms. If the sex workers themselves do not use condoms, they will infect their clients. The larger the number of clients, the quicker the spread of the disease. Also, if they keep getting new clients (as opposed to repeat ones) the rate of transmission will be even higher;

(iv) changes in sexual norms; and

(v) economic crisis, economic transition (including unemployment); There is some evidence that both HIV and IDU are particularly prevalent where the economic crisis has hit hardest. Young towns like Svetlogorsk and port cities such as Kaliningrad and Odessa, with high unemployment and easy drug re-supply, appear to be the most vulnerable.

Rationale for increased attention to HIV/AIDS in the ECA Region. There are four main reasons for increased attention by governments to the epidemic. First, the HIV/AIDS epidemic is rapidly worsening in ECA. The world's steepest HIV curve was recorded in the region. Second, the opportunity still exists, but only for a short time longer, to prevent the costly spread of infection from those who engage in high-risk behaviors to the general population, but only if adequate prevention measures are taken now. Third, worsening of health outcomes is likely: major increases in mortality, coupled with reductions in life expectancy at birth in one of the

only regions already experiencing increasing adult mortality. Finally, the economic costs of an HIV/AIDS epidemic are considerable, as manifested in direct costs for the care of infected persons and through indirect costs to communities and households, as AIDS primarily affects the most productive age groups in society. Increased demands on public facilities and social disruption are likely.

Note: adapted from Laura Shrestha, Information Brief, April 2000, HIV/AIDS in the ECA Region; updated HIV/AIDS estimates from UNAIDS.

Additional
Annex 14

Ukraine - Tuberculosis and HIV/AIDS Control Project

Implementation Strategy for Tuberculosis Control

Ukraine is in the midst of an epidemic of tuberculosis and of multidrug-resistant tuberculosis. Cases are rising each year, and the system that was in place to diagnose and treat these patients is no longer functioning effectively. Every day, the human and economic costs of the tuberculosis epidemic in Ukraine are increasing. Faced with this public health emergency, urgent action is required.

However, tuberculosis control requires a systematic and well-implemented approach or else efforts to improve a situation may actually make it worse. For example, the widespread application of the last remaining anti-tuberculosis drugs to patients with MDR TB in Ukraine (under the present program conditions) would lead to the development of resistance to these drugs, and to the development and spread of untreatable MDR TB.

To face the epidemic, Ukraine has adopted a new TB control strategy called "the National TB Strategy Adapted to the World Standard". The main components of this strategy are as follows: (i) training and education of specialists; (ii) introduction of smear microscopy as an important diagnosis tool; (iii) introduction of standardized treatment regimen (except for drug-resistant cases) and direct observation of TB drugs intake; (iv) implementation of a standardized TB register and monitoring system; and (v) the implementation of a public awareness campaign.

To implement this strategy, guidelines and training materials would be produced. Diagnosis of TB would be improved, treatment would be directly observed and a reporting system according to international standards would be established. As Ukraine is a large country with 27 regions, the project would start implementation in the civilian population in 4-5 selected regions. When outcomes start to improve, another 4-5 regions would be added and so on. To decide that more regions can be added, the previous set of regions should have achieved the following: (i) smear positive cases should represent at least 50 percent of newly detected cases; and (ii) smear conversion rate after an intensive phase of treatment would be at least 90 percent. Other objective outcome measures may also be used. Under this scheme, it is expected that, over four years, 90 percent of Ukraine's population would be covered by the new strategy. The implementation in the prison system would start simultaneously, which would allow to improve the referral of patients from prisons to the MOH.

To increase the chances of success for the project, implementation would start in those regions which are currently best equipped, have good communications, and more qualified specialists. In each region, implementation would start from the center and would continue in smaller cities, rayon centers, and eventually would reach remote rural areas. More advanced cities and rayons would be chosen first. Experience shows that if this is not followed, poor interim results may delay or block further expansion of the program.

Training and education. *Training materials.* A certain number of materials are already available. WHO has prepared training modules that fully correspond to the Ukrainian National TB Strategy. CDC has produced similar materials for nurses. There are training modules available from several NGOs for the training of GPs and laboratory technicians. Two months would be required to adapt these materials for Ukraine and make them specific to the local circumstances and translate them in the local language. These would be reviewed and endorsed by the MOH. The training materials would then be published and distributed to the training centers.

Training centers. The IPP would organize and coordinate all training in Kiev and 12 centers in the largest region hospitals or dispensaries. Training centers would be organized as follows.

Training Center	Beneficiary
Institute of phthisiology and Pulmonology	The National TB Training Center would organize and coordinate training for all the country and would train the first group of trainers
Kiev City TB Dispensary	Kiev City
Institute for Improving Doctors' Skills in Kiev	Cherkasy, Zhytomir, Chernigiv and Kiev regions
Ternopol TB Dispensary	Ternopol, Lutsk, and Rivno regions
Lviv TB Dispensary	Lviv and Zakarpaty regions
Ivano-Frankivsk TB Dispensary	Ivano-Frankivsk and Chernovsty regions
Kherson TB Dispensary	Kherson and Nikolaiv regions
Odessa TB Dispensary	Odessa and Kirovograd regions
Simferopol TB Dispensary	Crimea Republic and Sevastopol City
Dnipropetrivsk TB Dispensary	Dnipropetrivsk and Zaporizh regions
Donetsk TB Dispensary	Donetsk and Luhansk regions
Vinitsa TB Dispensary	Vinitsa and Khmelnitsk regions
Kharkiv TB Dispensary	Kharkiv, Poltava, and Sumy regions

These centers would be provided with the space for training, furniture and equipment (projectors, screen, and computer), training materials, manuals and literature about the National TB Strategy. The training centers would elaborate their own educational materials and adapt hem to local circumstances. Specialists from both civilian and prison system would be trained at the regional training centers. In case the regional centers do not yet have trainers ready, prison staff would be trained by the National Training Center.

Trainers. In each regional training center, trainers would be medical university professors, Chief TB Specialists, and experienced TB doctors. Such a group of trainers has already been trained in the Donetsk region from September to December 2001.

For the first training at the IPP in Kiev (National TB Training Center), facilitators would be invited from abroad. During the first two weeks, a group of trainers would be trained out of which a group of 10-12 would be tested and selected.

At each local training center, facilitators from outside would conduct the first training as well. There would be newly prepared facilitators from the IPP in Kiev or from Donetsk where a number of trainers have already been trained. Training of trainers would be undertaken during the first two weeks, and a group of 10-12 specialists would be tested and selected out of a larger group. The trainers would have an excellent knowledge in TB and would be capable to train their colleagues. The selection process would ensure that some of them have the experience of medical services in the prison system. Further training courses would be conducted by the newly appointed local faculty. The project would finance per diem and travel for the trainers.

Training courses. The following scheme is contemplated for training courses. During the first week, three groups of health personnel would be trained: TB specialists, laboratory technicians, and GPs. In each group there would be 12-15 trainees, and in total about 40-45 people would have been trained during the first week. The following week, the same would be repeated, resulting in a total of about 80 specialists trained. Providing 2-3 courses within each region would allow the majority of key specialists among TB doctors and laboratory technicians to be trained. Training for GPs and other medical workers would be continued for 3-6 months depending on the number that need to be trained in each region.

Epidemiologists, statisticians, and nurses would be added to the 2-3 courses given to the main specialists. As

the nurse training program is shorter than the one for doctors, it is possible to train twice as many nurses during the same time. Refresher courses would be given after one year.

Practical implementation of the new strategy would start once the majority of specialists are trained.

Detection of TB and strengthening of laboratory services. At the present time, laboratories are old and outmoded. There is a lack of microscopes, sputum collection containers, slides and other supplies. Quality control is weak.

Sputum collection. Sputum for patients with TB symptoms (coughing) would be collected in all polyclinics and analyzed by microscopy for *mycobacterium tuberculosis.* The medical facility would register the patient and send the sputum to the nearest level I laboratory (see below). Depending on the results of the microscopy and other methods (clinical, X-ray etc.) the GP would decide to treat the patient or to refer him or her to TB services. All medical facilities would be provided with containers for sputum collection and boxes for its transportation.

Organization of laboratories. Laboratories would be organized at four levels.

Level I. These would consist of laboratories located in TB or general medical facilities. They would undertake smear microscopy. There would be one laboratory per 50,000 – 100,000 population. They would be equipped with modern microscopes and supplies. Sputum collected in medical facilities that do not have laboratories would be transported to level I laboratories.

Level II. These level-II laboratories would be located in sub-regional TB dispensaries within the region and smaller regional TB dispensaries that produce smear microscopy and culture (without drug susceptibility). Sputum and smears collected and investigated in other medical facilities would be transported to level II laboratories for culture. In addition to microscopes and supplies, this type of laboratory would be equipped with more advanced equipment for culture investigation. Level II laboratories would be located in smaller regional centers (Tsherkasy, Zhitomir, Tscernigiv, Kiev region, Sevastopol, Kirovograd, Sumy, Luhansk, Poltava, Zaporizhe, Uzhgorod, Tshernovtsky, Lutsk, Rivno, Khmelnitsky, Nikolaiev).

Regional reference laboratories. These laboratories would perform the same functions as level II laboratories plus drug susceptibility testing. They would be established in the 12 large regions that would also have training centers. The smaller regions would send samples for drug susceptibility testing to the neighboring level III laboratory or to the central reference laboratory.

Central reference laboratory. This level IV laboratory is the only laboratory that would produce the whole range of investigation on *mycobacterium tuberculosis* in the country. It supervises the quality control of all investigations.

Quality control. The central reference laboratory is responsible for quality control in the whole country. It investigates microscopy, culture and drug susceptibility testing.

Treatment of tuberculosis. Standardized treatment schemes, organized in categories, would be applied. These treatment schemes would be taught to all specialists during training courses. After an initial hospitalization period, patients would continue treatment on an outpatient basis. Medical staff would observe drug intake by patients. The most appropriate course of action would be selected by local specialists according to local circumstances.

There would be 4-5 specialized centers to treat drug-resistant TB, including 1-2 in the prison system. The staff of these centers would be trained in clinical care before undertaking treatment of MDR TB patients. This kind of treatment would be introduced only after part of the country has been implementing the National TB Strategy, and laboratory services have been strengthened. Culture and drug susceptibility test results of all prospective patients with MDR TB would be provided to these centers.

Implementing the standardized register of TB and monitoring system. Standardized TB registers according to the international standard would be put together by the IPP and introduced. The IPP would be responsible to regularly monitor and evaluate the implementation of the National TB Strategy using a monitoring manual. It would form its own evaluation team that would conduct regular monitoring visits to the regions. In turn, each region would have its own monitoring team that would visit the rayons, at least once a month. Each rayon would be visited at least once a year.

Evaluation criteria would be used as follows: accuracy of diagnosis (100%), smear positive TB cases to be at least 50% of all newly detected pulmonary TB, smear conversion rate after intensive phase of treatment (90%), cure rate (85%), defaulters, transfers and deaths (not more than 5% each), percentage of directly observed cases in the outpatient departments (90%), and accuracy, timeliness, and regularity of quarterly reports.

Drug resistance surveillance. Laboratories and communication system (computers, modems, phone lines etc.) would be strengthened so as to improve TB and drug resistance surveillance in the country. That would allow the establishment of a strategy to control MDR TB in Ukraine.

Public awareness campaign. A public awareness campaign would be conducted to encourage people to refer to a medical facility if they have been coughing for more than three weeks or have other symptoms of TB. The campaign would explain that TB can be cured and the treatment is free of charge. The following groups would be targeted: (i) the population at large, that is at risk of being infected; (ii) TB patients; (iii) the families of TB patients; (iv) general medical staff; (v) prison inmates and non-medical prison staff. In addition to TV and radio spots, the following media would be used: booklets, information sheets, posters to be placed inside trains, tramways and buses, and billboards.

TB control in prisons. Taking into account that there are more than 200,000 prisoners in Ukraine, the TB notification rate is almost 100 times higher in prisons than in the civilian system. More than half of all chronic TB cases in the country are former prisoners.

The prison system would implement the same technical and operational system used in the civilian system. Direct observation of drug intake is easier in the prison system as patients are always under survey. The prison TB system would be implemented as part of the National TB Strategy, but it also has many specific characteristics. The implementation of the strategy should start throughout the whole prison system. Training of prison medical staff would be provided at the regional level by regional trainers. Prisons located in regions that have not yet started implementing the National TB Strategy would send their staff to be trained at the IPP in Kiev. When training starts in the regions, it would start first in those regions that contain large numbers of prisoners (such as Kherson, Dniepropetrovsk, etc.) so as to train TB specialists in the prison system. Regions that have few or no prisoners with TB (mainly the western part of the country) would be included later in the expansion plan.

Laboratory services would follow the same scheme as in the civilian sector. Level I laboratories would be established for 3-4 colonies or prisons, SIZOs, larger hospitals, and TB hospitals. Level II laboratories would be established for 1-3 neighboring regions according to the number of prisoners. Where numbers of prison TB patients are not very high, the civilian level II laboratory would be used. Level III laboratories would serve both the civilian and prison populations. The National Reference Laboratory would serve the whole country.

TB registers would be the same, but the prison system would establish its own evaluation and monitoring team. This team would be made up of the same specialists in the prison system that are responsible for data collection, registers and monitoring and would work in close collaboration with its counterparts in the civilian sector. Patient files of released prisoners would be transferred to the MOH so that those released prisoners with TB could continue their treatment.

IMAGING

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