



Healthy dividends

How German investments are helping to stop TB and HIV in the Caucasus and central Asia

Context

This report describes the approach of German Development Cooperation (GDC) in supporting national efforts to reduce the impact of TB and TB/HIV co-infection in Georgia and Uzbekistan – whose experience is broadly representative of that of five other countries benefiting from this approach in the southern Caucasus (Armenia and Azerbaijan) and central Asia (Kazakhstan, Kyrgyzstan and Tajikistan).

In 2008, more than 9 million people worldwide became sick with tuberculosis and 1.8 million died, the highest death toll of any curable infectious disease. About half a million of those who died were also co-infected with HIV. Multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB) were also on the rise in many parts of the world.

Few world regions are as threatened by TB and HIV, diseases that thrive in the presence of the other, as eastern Europe and central Asia: TB prevalence is up to 50 times higher than in western Europe, and multidrug-resistant TB prevalence rates are among the highest in the world. Widespread injecting drug use, high rates of incarceration, serious poverty and a decline in health services – immediately after the disintegration of the Soviet Union – have raised fears that countries here could be on the cusp of explosive dual epidemics of TB/HIV.

In Georgia (population 4.4 million) the number of TB patients notified increased from 32 per 100 000 inhabitants in 1995 to 97 per 100 000 in 2002. In Uzbekistan (population 27 million), notifications increased from 43 to 81 per 100 000 over the same period. Notification rates in both countries continued to increase, though at a slower pace, until 2006, before beginning a gradual decline.

TB-drug resistance, however, continues to rise in Georgia and Uzbekistan. In Georgia about 6.8% of all newly diagnosed TB cases and 27.4% of previously treated TB cases were multidrug resistant, according to 2010 figures from the World Health Organization. In Uzbekistan the comparable figures are 14.2% and 49.8% respectively. HIV has also been increasing and in 2007 prevalence among adults (15 – 49) was estimated to be 0.1% in both countries.

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Technicians in new National Reference Laboratory in Tashkent, Uzbekistan.

In the last two decades, fortunately, the global community has demonstrated a growing commitment to addressing the dual threat of TB and HIV. United Nations Millennium Development Goal 6, for example, calls for measures “... to have halted by 2015 and begun to reverse the incidence” of both TB and HIV, and the WHO/Stop TB Partnership is overseeing efforts to meet the tuberculosis part of this target.

German HIV Practice Collection

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Peer-reviewed

The Stop TB Strategy calls for a range of actions in six areas to

- Pursue expansion and enhancement of high-quality DOTS (directly observed treatment, short-course);
- Address TB-HIV, MDR-TB and other challenges;
- Contribute to health system strengthening;
- Engage all care providers;
- Empower people with TB and communities; and
- Enable and promote research.

Approach

German efforts to address TB in the southern Caucasus and central Asia go back more than one decade and focus on investments to catalyze health-system strengthening, rather than direct technical assistance. The support is provided through *KfW Entwicklungsbank* (KfW Development Bank, one of the main instruments of GDC) and in the last decade has provided about 65 million euros for TB programmes here. GDC/KfW programmes help countries to implement the Stop TB Strategy in five areas: building national TB programmes; twinning and technical assistance for laboratories; protecting prisoners; forging regional networks; and working in dynamic partnerships.

Building national TB programmes

Direct GDC involvement in providing steady supplies of quality assured drugs and other essential medical commodities has helped Georgia's National TB Programme (NTP) and Uzbekistan's Republican DOTS Center (which administers the NTP) ensure appropriate treatment of TB patients nationwide. This support has been conditional, tied to governments demonstrating a growing commitment to the Stop TB Strategy and DOTS, a cost-effective way to reduce the burden of TB and TB/HIV with generic procedures and standard equipment.

As well as drugs and commodities, DOTS calls for swift, reliable case-detection and bacteriological analysis. GDC has invested heavily, therefore, in helping the NTPs of Georgia and Uzbekistan build TB laboratory infrastructure and networks. As a result Georgia, for example, now has a well-developed network of laboratories, with a National Reference Laboratory (NRL) in Tbilisi, a regional laboratory at the West Georgia Center for Tuberculosis and Lung Diseases, 30 first-level microscopy laboratories and 37 sputum collection points. It also has state-of-the-art equipment, a reliable system for transporting sputum samples for drug-sensitivity testing, and is now building and equipping a new NRL to allow

for, among other procedures, rapid diagnosis of multi-, and extensively, drug-resistant TB. Uzbekistan has made similar progress.



Georgian patient with multidrug-resistant TB taking his medicine at Tbilisi DOT Spot.

With greatly expanded capacity, the NTPs of Georgia and Uzbekistan are now recognized as the main coordinating and implementing agencies and have influence in shaping government investments in TB and HIV services.

Twinning of reference laboratories

GDC has also focused on building capacity and operational support to assure the quality of work of Georgia and Uzbekistan's national reference laboratories. It has done this by twinning them with two WHO-certified, supranational reference laboratories based in Germany: the National Reference Center for Mycobacteria, in Borstel; and the Supranational Reference Laboratory at the Institute of Microbiology and Laboratory Medicine, in Gauting.



Patients at the Abastumani TB hospital, Georgia.

Experts at Gauting, for example, have given technical support to Uzbekistan's NRL to build a new laboratory in Tashkent, in accordance with international biosafety standards, helped

train staff in culture and drug-resistance testing and introduced standard operating procedures for quality assurance systems. Experts from Gauting have also visited the Tashkent laboratory three times a year (2007 – 2010) and Tashkent technicians have visited Gauting to further develop their skills. As a result, Uzbekistan's NRL now meets international standards and is disseminating its expertise regionally.

Protecting prisoners with the Stop TB Strategy

GDC has supported the International Committee of the Red Cross (ICRC), the NTPs and prison health authorities to extend the Stop TB Strategy to prisons, so that prisoners receive state-of-art services for prevention, treatment and care for TB, multidrug-resistant TB and TB/HIV coinfection. ICRC has also helped establish systems that ensure that prisoners continue to receive care on release. This means that Uzbek prisoners with multidrug-resistant TB who are not yet cured at time of release now go directly to a specific ward of the Republican TB hospital in Tashkent, until cured.



Nursing providing drugs for patients with MDR-TB in Tashkent Hospital, where also ex-prisoners on MDR-TB treatment directly go after completing their sentence.

Forging regional networks of health professionals

With WHO Regional Office for Europe, GDC has organized regular conferences and workshops for health professionals (decision-makers and programme managers, as well as doctors, nurses and technicians) throughout the two sub-regions to increase political commitment and strengthen human resources for TB and HIV services. These sessions have likely boosted transparency and expedited the expansion of high-quality DOTS regionally. In the southern Caucasus, the meetings have also fostered exchanges among professionals from countries recently at war with one another, contributing to peace-building.



Decision-makers at central Asian TB Conference on MDR-TB, Tashkent, 2008.

Working in dynamic partnerships

The GDC approach has helped NTPs develop and coordinate productive partnerships with bilateral and global agencies such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, KNCV Tuberculosis Foundation, Médecins sans Frontières, ICRC, United Nations Development Programme and USAID. Georgia's NTP used partnerships such as these to become the first former Soviet Republic, outside the Baltic region, to offer universal access to treatment for multidrug-resistant TB.

Results

GDC is only one of many partners – local, national and international – engaged in boosting the response to TB and HIV in the southern Caucasus and central Asia, so it is difficult to attribute epidemiological trends and systemic impacts to specific interventions. Some data and anecdotal evidence, however, indicate that GDC's approach is helping Georgia and Uzbekistan protect their citizens against these potentially devastating diseases.

While incidence rates for all forms of TB rose markedly in the two countries from 1990 – 2000, they levelled off in the first decade of the new millennium. As well, TB case notifications have been declining in recent years. As a result, both countries may already have surpassed the TB target in Millennium Development Goal 6.

Both Georgia and Uzbekistan now have strong national TB programmes, with steady supplies of essential medicines and robust TB laboratory networks. Uzbekistan's Deputy Minister, Marat Khudaykulovich Khodjibekov, for example, has said that GDC contributed greatly to the strengthening of the

Republican DOTS Centre with its sustained and thorough planning procedures and long-term commitment to the cause. According to WHO's TB advisor for central Asian republics, Gombogaram Tsogt, the Tashkent National Reference Laboratory is now the best in central Asia and GDC's strengthening of capacity of TB laboratories has been one of the most important contributions towards scaling up MDR-TB and TB/HIV programmes.

There is also widespread agreement that Germany's regional approach to addressing TB and HIV, by forging international networks of dedicated health professionals, and extending TB services to prisons has been worthwhile. The Director of Georgia's NTP, Iagor Kalandadze, for instance, says that Germany's long-term support for the introduction of first-line TB drugs and other contributions have helped to halt the spread of the TB in his country.

Lessons learnt

GDC's approach highlights, among other, lessons:

- Regional networks of health professionals, such as those supported by GDC, boost cooperation and capacity and, in regions characterized by conflict, may contribute to peace;
- Partnerships require national coordination (e.g. by NTPs) as well as care in choosing the right partners for specific tasks; and
- Political commitment can be increased by tying financial support to concrete actions by governments.

Peer review

According to the expert reviewers of the full version of this report, Richard Zaleskis of WHO Regional Office for Europe and Masoud Dara of KNCV Tuberculosis Foundation, the GDC approach summarized above is a "promising practice" in that it is transferable, innovative, participatory and empowering (of national authorities, and health professionals) and cost-effective (though formal studies of this have not yet been done). Regarding other standard German HIV Practice Collection criteria, they note:

- **Effectiveness:** GDC has contributed to TB and HIV control across the southern Caucasus and central Asia with quality-assured microscopy and culture/DST laboratories, improved TB-case detection, effective monitoring and evaluation and information exchanges among countries.

- **Quality of monitoring and evaluation:** KfW Entwicklungsbank conducts regular monitoring missions, on occasion with WHO. As well, the annual conferences organized for all republics in central Asia and the southern Caucasus, "contribute substantially to the monitoring and evaluation of TB control in the countries".
- **Sustainability:** Most interventions backed by GDC have been adopted by national governments and/or financed by the Global Fund to fight AIDS, Tuberculosis and Malaria and, therefore, are likely to be sustained over time. As well, the partnerships supported by KfW, technical as well as financial, enhance the sustainability of TB and HIV programmes described here.

Acknowledgements

This report was made possible by contributions from many, including the reviewers, see above, and those listed under Contacts and Credits. Special thanks to Iagor Kalandadze, National Center for Tuberculosis and Lung Diseases, Tbilisi; Maia Kavtaradze, Global Fund to Fight AIDS, Tuberculosis and Malaria (TB component), Tbilisi; Gulnoz Uzakova, Global Fund to Fight AIDS, Tuberculosis and Malaria, Tashkent; Kazim Mukhamedov, KfW TB Programme, Tashkent; and Pierpaolo de Colombani, WHO Regional Office for Europe, Copenhagen.

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Published by:

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www.golzundfritz.com

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Abastumani)

All individuals whose images appear
in this document consented to be
photographed.

Eschborn, July 2010 (this edition
January 2011)