

# Ex-post evaluation

## HIV/ AIDS II (blood banks), Kyrgyzstan



|                                    |                                                                                        |                |      |                       |      |
|------------------------------------|----------------------------------------------------------------------------------------|----------------|------|-----------------------|------|
| Title                              | HIV/AIDS II (blood banks)                                                              |                |      |                       |      |
| Sector and CRS code                | Health, 13040                                                                          |                |      |                       |      |
| BMZ number                         | 2007 66 519 / 2007 70 354 (BM)                                                         |                |      |                       |      |
| Commissioned by                    | BMZ                                                                                    |                |      |                       |      |
| Recipient and executing agency     | Ministry of Finance of the Kyrgyz Republic / Ministry of Health of the Kyrgyz Republic |                |      |                       |      |
| FC financing volume and instrument | EUR 3.6 million / EUR 0.4 million (accompanying measure) Budgetary grant               |                |      |                       |      |
| Project duration                   | 2010-2022                                                                              | Reporting year | 2025 | Year of random sample | 2025 |

### Project objectives and implementation

The objective at the outcome level was to utilise a high-quality blood transfusion system in the Kyrgyz health system, which was intended to serve the impact goal of improving the health status of the entire population of Kyrgyzstan by reducing the incidence of HIV transmission through blood transfusions.

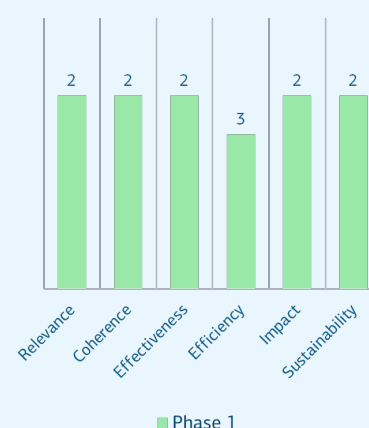
To this end, central blood banks were modernised and international standards for blood donation, processing and transfusion were introduced. Centralising blood processing in the oblast blood banks was intended to increase the safety of blood products, which would benefit all population groups. In addition to the National Blood Bank in Bishkek, the FC project covered all other six Kyrgyz blood banks at the oblast level.

### Key findings

The rating of the project as successful is based on its plausible contribution to improving the health situation by improving the quality of blood transfusion services at the central level:

- Before the project started, blood transfusions in Kyrgyzstan were not of international quality and procedures were not safe (relevance).
- The project was embedded in the coordinated approach of the Ministry of Health and donors to curb the burgeoning HIV/AIDS epidemic (coherence).
- The project measures plausibly made a significant contribution to ensuring a core service of the health system and helped to limit the transmission of infections through transfusions (effectiveness).
- It is further plausible that the project thus helped to slow down the increase in blood transfusion-induced HIV incidence (impact).
- Despite delays, the project made a significant contribution to a functioning blood donation system despite its relatively small project volume (efficiency).
- The blood transfusion system in Kyrgyzstan was able to maintain its performance at an international level even after the end of the project implementation (sustainability).

### Overall rating successful



1: very successful – 6: completely unsuccessful

### Conclusions

- Rationalisation goals in blood transfusion services must take logistical and administrative limitations into account.
- The project achieved required blood transfusion levels. As approx. 50 % of demand for blood transfusions result from traffic accidents, the question arises whether accompanying measures addressing the demand side e.g. on traffic regulation should be added.
- When tendering for sophisticated equipment types, criteria such as life cycle costs, consumables, spare parts, low maintenance costs and easy spare parts procurement should be considered.
- Joint maintenance and repairs in local networks of the blood transfusion system could be incentivised.

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## List of abbreviations

|        |                                                                   |
|--------|-------------------------------------------------------------------|
| PCR    | Final completion report                                           |
| GDP    | Gross domestic product                                            |
| BMZ    | Federal Ministry for Economic Cooperation and Development         |
| CIM    | Integrated Experts ( <i>now a GIZ instrument</i> )                |
| DAC    | Development Assistance Committee                                  |
| EPE    | Ex-post evaluation                                                |
| EUR    | Euro                                                              |
| FC     | Financial cooperation                                             |
| FC E   | FC Evaluation                                                     |
| GFATM  | Global Fund to Fight AIDS, Tuberculosis and Malaria               |
| GIZ    | German Society for International Cooperation                      |
| HDI    | Human Development Index                                           |
| InWEnt | International Training and Development ( <i>now part of GIZ</i> ) |
| LIMC   | low middle income country                                         |
| MP     | Module proposal                                                   |
| OECD   | Organisation for Economic Co-operation and Development            |
| PA     | Project appraisal                                                 |
| PP     | Project proposal                                                  |
| RBC    | Republican Blood Center (Bischkek)                                |
| SWAp   | Sector-wide approach                                              |
| TC     | Technical cooperation                                             |
| USD    | US dollar                                                         |

# Overview

## Brief description

The FC project evaluated here is the second phase of HIV/AIDS prevention in Kyrgyzstan, which, following the provision of laboratory equipment to 34 HIV laboratories in the first phase. The objective at outcome level was to ensure the use of a high-quality blood transfusion system in the Kyrgyz health system. To this end, all central blood banks at national and oblast level were to be modernised and quality raised to international standards for blood donation, blood product processing and transfusion. The rationalisation envisaged in the project was intended to centralise blood processing in the oblast blood banks to achieve greater safety for blood products. The impact objective was to improve the health of the population and contribute to the achievement of Millennium Development Goal No. 6, "Combat HIV/AIDS, malaria and other communicable diseases". The rationale for preparing this project was the rising rate of new HIV/AIDS infections worldwide, including in Kyrgyzstan, in the first decade of this century. Therefore, an important goal of German development cooperation and other donors in the country (e.g. *the Global Fund to Fight AIDS, Tuberculosis and Malaria* (GFATM) and *the President's Emergency Programme for AIDS Relief* (PEPFAR)) was to curb further spread.

In addition to the National Blood Bank in Bishkek, the FC project covered the six oblast blood banks (Batken, Jalal Abad, Naryn, Karakol, Osh and Talas).

The FC module was supplemented by an accompanying measure (BM) with various training courses on international standards for transfusion services including a study trip to Germany.

## Breakdown of total costs

The BMZ's financing and grant volume amounted to EUR 4 million, including EUR 0.4 million for the accompanying measure. According to the initial plan, the Kyrgyz partner was to contribute EUR 1.6 million of its own funds. This consisted mainly of operating costs (e.g. wages, consumables) and own contributions to construction work. Although the partner did not provide a summary overview of the costs incurred over time, it can be assumed that the own contribution has been made.

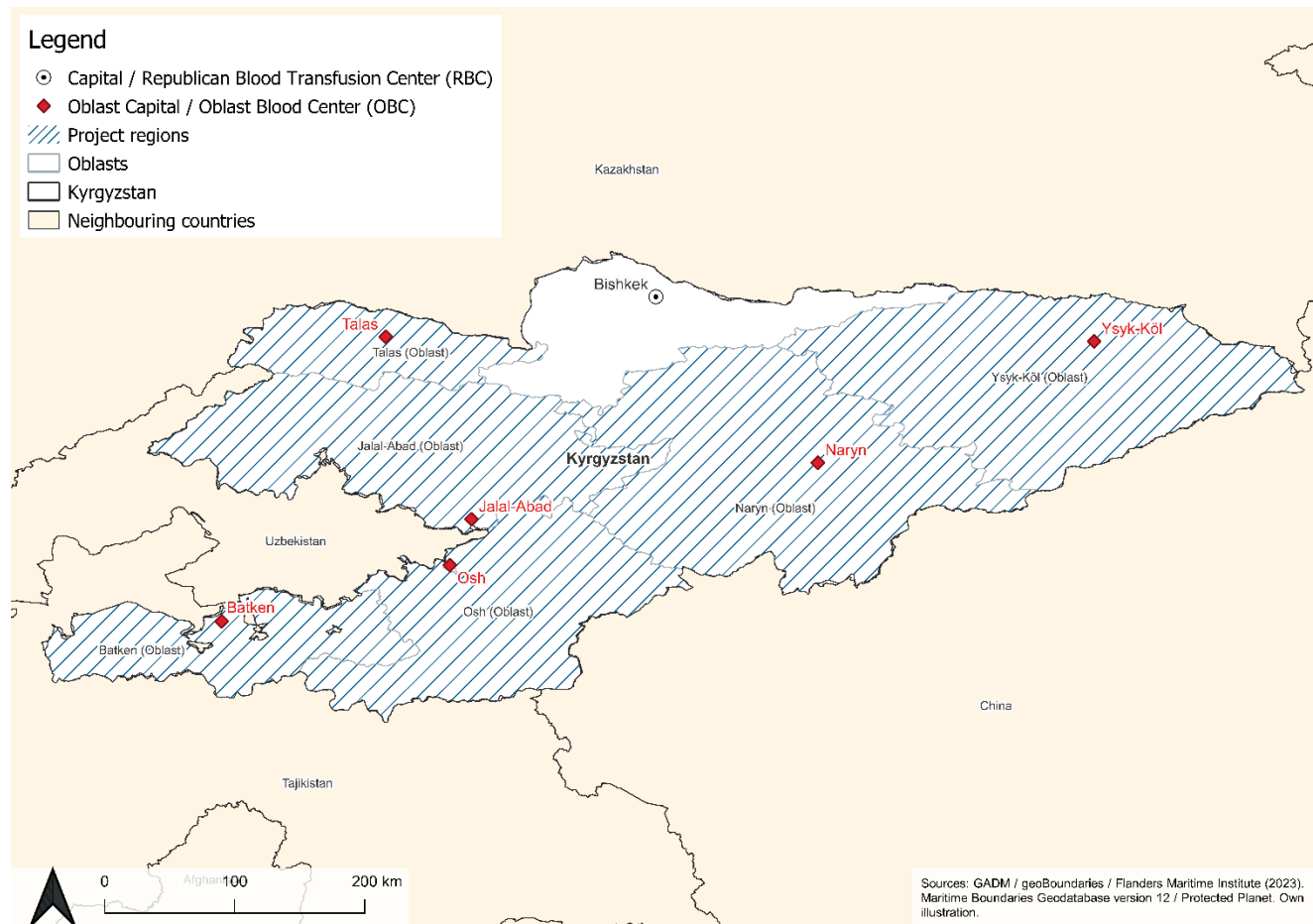
|                                                       | 2007 66 519<br>(plan) | 2007 66 519<br>(actual) | 2007 70 354 (BM)<br>(plan) | 2007 70 354 (BM)<br>(actual) |
|-------------------------------------------------------|-----------------------|-------------------------|----------------------------|------------------------------|
| <b>Investment costs<br/>(total)</b><br>in EUR million | 5,2                   | 5,2                     | 0,4                        | 0,4 <sup>1</sup>             |
| <b>Own contribution</b><br>in EUR million             | 1,6                   | 1,6                     |                            |                              |
| <b>External funding</b><br>in EUR million             | 3,6                   | 3,6                     | 0,4                        | 0,4                          |
| <b>of which BMZ funds</b><br>in EUR million           | 3,6                   | 3,6                     | 0,4                        | 0,4                          |

**Table 1:** Breakdown of costs.

**Source:** Project documentation.

<sup>1</sup> Remaining funds of EUR 2,821.08 were credited to the state's debt.

## Map of the project region



**Figure 1:** Oblast centres for blood processing in Kyrgyzstan.  
**Source:** KfW (2025).

## Project-specific strengths and weaknesses

### The strengths include in particular:

- The project has enabled a strengthened and further rationalised blood transfusion system in Kyrgyzstan that complies with international standards and is supported by the Kyrgyz government under its medical and budgetary responsibility.
- A high degree of responsibility and ownership for blood transfusions within the health system has been established and continues to exist, which is reflected in a corresponding level of competence at all staff levels and complies with the international standards introduced by the WHO.
- Despite its comparatively small financial resources, the project has achieved a structural impact on the blood transfusion system throughout the country with its focus on the central level of the system, trainings and equipment.

### The weaknesses include in particular:

- Delays in implementation are a weakness of the project, however they have not led to increased costs and have not impaired the functioning of the blood transfusion system.
- The current financing of the blood transfusion system is secured, based on current demand which does not include any reserves. Similarly, maintenance and repairs are only carried out when equipment is not functioning as it should, there is no reserve held in the system (e.g. no replacement according to life cycle). There is no indication of national funding for further modernisation (e.g. for the introduction of DNA testing). In addition, a more centralised management could optimise equipment management nationwide and enable further rationalisation to increase efficiency in the blood transfusion system.
- The initial rationalisation plan has not been completed but is being slowed down by structural, political, administrative and geographical limitations. However, given the very limited project funds, it couldn't be expected that it was going to be solved by the project.
- Overall, these limitations have not prevented the blood donation system from functioning and thus the project from being successful.

## General conclusions/lessons learned

- The formulation of rationalisation goals in the blood transfusion system must take into account logistical and administrative limitations.
- In contexts where approximately 50% of blood product demand is caused by traffic accidents, in addition to meeting blood demand, accompanying measures to reduce demand (in this case: traffic policy and regulation) should also be considered.
- When tendering for sophisticated equipment types, criteria such as life cycle costs, consumables, spare parts, low maintenance costs and easy spare parts procurement should be considered. Similarly, in weaker LMICs, greater consideration should be given to selecting the tendered equipment on the basis of low maintenance costs and easy procurement of spare parts.
- Joint maintenance and repairs through local networks in the blood transfusion system could be incentivised.

# Assessment according to OECD DAC criteria

## Relevance

### 1. Alignment with policies and priorities

Following Kyrgyzstan's independence and a deterioration in healthcare provision in the country due to the resulting lack of funding from the Soviet system, several healthcare reforms were implemented with the help of the World Bank and the donor community in the form of a *Sector-Wide Approach* (SWAp): These were *Manas* (1996–2006), the follow-up reforms *Manas Taalimi* (2006–2011) and *Den Sooluk* (2012–2016, implemented 2014–2018). These reforms were intended to create a health system with financial sustainability and a needs-based approach and to increase equitable access to and quality of health care. In addition, compulsory health insurance was introduced (*Mandatory Health Insurance Fund*, MHIF). The reform is being continued in the current *Healthy Person – Prosperous Country* programme (2019–2030). Basket funding led by the World Bank and with the participation of the FC and the *Swiss Agency for Development Cooperation* (SDC) continues to support the health sector.

The FC project evaluated here is a specific sectoral approach that supports the achievement of a sub-goal of the national health strategy in parallel with the SWAp. It involved the concrete implementation of part of the *Manas Taalimi* reform programme.

In the 1990s and especially in the first decade of this century, combating the spread of the HIV/AIDS pandemic was an important objective of the German development cooperation (DC) worldwide, including in Kyrgyzstan. At that time, considerable funds were mobilised worldwide. The most important donors were the GFATM and the American PEPFAR (see also brief description). In Kyrgyzstan, the GFATM was the most important donor in the field of HIV and, as in other countries, there was a division of tasks between international donors. In several countries, the German DC therefore focused on curbing the spread of HIV/AIDS through blood transfusions as part of the joint efforts to combat the pandemic (see also under coherence).

### 2. Alignment with the needs and capacities of stakeholders and beneficiaries

In Kyrgyzstan, the HIV prevalence (the total number of people infected with HIV) in 2006 was low, estimated at 6,500 people or 0.13 % of the population. According to the UNAIDS definition, the epidemic was therefore at the low level of a localised epidemic, occurring mainly within the main risk groups. The most important route of transmission was sharing injection needles by drug users, while the other classic routes of transmission via sexual contact or blood transfusions were less common.

During the 2007 appraisal, it was very worrying that the estimated incidence of the disease (the number of new infections per year) had risen from 41 % between 2005 and 2006 to 66 % between 2006 and 2007 (which was considered to be partly due to more actual infections and partly to the improved availability of tests). There was great concern that if the localised epidemic continued to grow, it could spread into a generalised epidemic and thus spread beyond the risk groups, which is to be expected once the infection rate reaches 1 %. In 2004/2005, children have been infected with HIV and those cases were assumed to have been caused directly or indirectly through blood transfusions. At project appraisal, therefore, it was decided not to further differentiate the target group, which is plausible given the potential transmission risks for all population groups through blood transfusions.

Blood transfusions are a life-saving measure. They should only be used in accordance with international guidelines, i.e. primarily in cases of severe bleeding, such as in traffic accidents, which are very common in Kyrgyzstan, or in cases of bleeding of women during or immediately after childbirth, as well as in cases of major surgery or severe anaemia (red blood cell deficiency). Blood is a very complex fluid with different components, cells (red and white blood cells and platelets) and serum, which consists of many different molecules. Blood transfusion recipients can react critically to many of these components. Therefore, a variety of precautions and tests must be carried out to minimise the risk of potentially fatal side effects. Determining blood type is an essential part of these tests. Incompatible blood types can cause severe reactions in the recipient. Infectious diseases can also be transmitted through blood. It is therefore extremely important to rule out these diseases in donors. In Kyrgyzstan, these include HIV/AIDS, hepatitis B and C, brucellosis<sup>2</sup>, syphilis and malaria. According to the appraisal report, only 20 % of all blood reserves were tested for all six target diseases at the time of the appraisal. This posed a high risk of serious, often fatal infectious diseases being transmitted through blood transfusions. In 2006, infectious agents were detected in 13.2 % of the blood reserves tested, meaning that the reserves had to be destroyed. As many as 0.4 % of blood donations were HIV-positive. This created an emergency in 2007, as the risk of infections due to non-existent or inadequate testing of blood donations (core problem) causes great human suffering and mistrust among the population regarding the quality of the health system.

<sup>2</sup> Brucellosis is a bacterial infectious disease that is transmitted as a zoonosis, mostly from animals to humans, but also through contact or blood transfusions.

Recent developments in blood transfusion now allow for the high-grade separation of blood components, enabling much more targeted treatment (e.g. the preparation of plasma with essential coagulation factors for haemophiliacs). As a result, demand for equipment that can separate blood components even more precisely and detect infections at an earlier stage has increased in recent years.

Another contextual factor for blood safety is to have a large proportion of regular voluntary blood donors. These are preferable, as evidence proves, that they do not belong to the high-risk groups for infectious diseases transmitted through transfusions. Paying blood donors can attract marginalised or risk groups and should therefore be avoided, if possible, unless there is no alternative. However, at the time of the project appraisal and today, the blood donors most commonly used in Kyrgyzstan are family members or random blood donors who happen to be present, because the number of regular voluntary blood donors is insufficient. Infection risks in blood transfusions are increased in the group of family members and incidental donors. The importance of voluntary blood donation was one of the topics addressed in the accompanying measure of the FC project.

At the time of the appraisal, postpartum haemorrhage (blood loss in mothers after childbirth) was the most important indication for blood transfusions in developing countries. It was therefore plausible to conclude that women would benefit from the FC project by receiving better-tested blood transfusions. Blood transfusions are free of charge in Kyrgyzstan or included in medical treatment and are therefore widely accessible. In the specific area of blood transfusion, the authors believe that there are no measures within the scope of the objective that would have had a greater potential gender impact. In the other components of HIV prevention, there were potentially more specific approaches geared towards gender impacts, but these were covered by other donors, in particular the GFATM, in accordance with sectoral coordination (see also under coherence).

In order to make transfused blood of high quality accessible even in remote regions, a concept was developed for more centralised and thus improved testing and processing of donated blood and distribution to peripheral areas.

### 3. Appropriateness of design

The proposed design and the underlying theory of change (TOC), according to which the FC measures financed by the Federal Ministry for Economic Cooperation and Development (BMZ) should lead to an improvement in the quality and safety of blood transfusions and thus contribute to better prevention of HIV transmission and ultimately to a better state of health among the Kyrgyz population, is plausible.

The investments were intended to fundamentally modernise poorly equipped transfusion centres at both national and regional level, thereby bringing them up to international standards. The planned procurements are assessed as technically appropriate for the project's objectives. The approach focusing on the central level of the national blood transfusion system is assessed as organisationally appropriate. Overall, the FC project had a comparatively small financial volume, but it addressed an important cross-cutting function in the health sector and complemented the efforts of other donors (see also under coherence) and is therefore assessed as financially appropriate. The training activities planned as part of an accompanying measure were intended to support the technical implementation of modern international standards in blood transfusions. Based on the training manual, it was planned to produce specific manuals for transfusion specialists in Kyrgyzstan to be used in their daily work. With a standardised implementation of the guidelines and by ensuring that all blood donations were to be tested for relevant diseases, it was plausible to assume that HIV infections through blood transfusions could be significantly reduced. According to the concept, the spread of the epidemic to broader population groups should be prevented by system-wide measures in the country's blood donation and transfusion system. The project was therefore suitable for contributing to the German DC program objective at impact level: improving the health of the Kyrgyz population.

The first indicator (blood donations are collected, processed and stored in accordance with internationally recognised standard procedures) comprises a number of indicators and is assessed as appropriate for reflecting the outcome effects of the FC project. Although the second indicator (blood donations are tested for HIV/AIDS) is strictly speaking already included in the first indicator, it illustrates the key changes that the project aimed to achieve and is therefore used for the evaluation. The third indicator (number of blood centres at rayon level is reduced) was easy to measure. However, peripheral health facilities cannot be closed without taking geographical and logistical requirements into account. The indicator is not assessed suitable for measuring rationalisation while ensuring medical safety. The simple scaling of blood donation centres to be rationalised was too ambitious in this context. The third indicator therefore shall not be used for assessing the effectiveness within the framework of this EPE.

Through the accompanying measure, the mobilisation of voluntary donors was to be introduced through modern mobilisation activities e.g. interpersonal communication and nationwide sensitisation campaigns. But these were not at the focus of the FC measure. In the Soviet Union, blood donations had often been organised in the form of commands, e.g. all employees of a company or state institutions such as the police and army were more than encouraged to donate blood. For a broader cultural change, a much more comprehensive approach requiring more financial resources would have been required.

#### 4. Adaptability – response to change

Due to delays in project implementation and the resulting costs, equipment for the rayon level was not financed as originally planned. However, this did not have a negative impact on the restructuring and functioning of the nationwide blood processing procedures and the transfusion system as a whole, as the seven leading blood donation centres were not affected, and their leading role and logistical position was probably even strengthened. It can be assumed that the lack of funding for equipment at the rayon level may have supported the partial rationalisation (closure of local blood donation centres) to a certain extent. From today's perspective, this flexible adjustment is justified.

#### Rating summary of relevance: **successful (2)**

A key aspect for the high relevance of the FC project is the emergency that existed at the time of the project appraisal due to the assumed HIV infections through blood transfusions because of blood donations not adequately being tested. The theory of change of the FC project is plausible and is assessed suitable for addressing the core problem. The project was and is compatible with national strategies and priorities as well as with BMZ priorities.

## Coherence

#### 5. Internal coherence

Internal coherence of development cooperation in the German DC program for health concerns FC modules (e.g. on maternal and child health and the establishment of a national emergency health system) and TC modules (GIZ, InWEnt and CIM). Particular synergy potential of improvements in the quality of blood transfusions existed with the above-mentioned FC projects which targeted health service provision potentially applying blood transfusions. The GIZ regional project on HIV/AIDS and drug prevention among young people focused on youth social work and reducing the stigmatisation and discrimination of those affected. The former InWEnt, together with the Kyrgyz Institute for Medical Training, offered online courses on HIV/AIDS prevention for medical and non-medical professionals.

Other German DC measures are complementary. TC measures raised awareness of HIV/AIDS among those affected and medical staff. This is likely to have had a positive impact on blood donation behaviour and the quality of blood processing, thereby also contributing to reducing the risk of infections. The TC measures thus supported the reduction of HIV infections, which also reduced the likelihood of infectious blood being passed on in centres/during blood donations.

With regard to the overarching impact objective of improving the health of the Kyrgyz population, all German DC projects made complementary contributions, internal coherence is therefore assessed as good/successful.

#### 6. External coherence

The FC project was embedded in the reform process of the Kyrgyz health sector. The reform was supported by numerous donors. Several World Bank health sector reform programmes (approx. USD 110 million) and a SWAp with pooled financing (approx. EUR 44 million) was co-financed through FC to support the *Manas Talimi* health reform programme (2006-2010).

The GFATM was the most important donor in the HIV sector (over USD 45 million) and, as in other countries, there was a division of tasks. In several countries, German DC specialised on curbing the spread of HIV/AIDS through blood transfusions as part of its efforts to combat the pandemic (see also under relevance). The FC project was closely coordinated with the GFATM and the national HIV programme.

All reform measures and bilateral projects were coordinated under the overall responsibility of the MoH. All projects/programmes were also coordinated within joint reviews.

The project addressed an important cross-cutting function of the health sector and was consistent with and complementary to the measures taken by the government and other donors in the Kyrgyz health sector.

At the time of the evaluation, international WHO standards continue to be implemented in national guidelines. In addition, during the evaluation mission, it was possible to verify in the facilities visited that blood products were processed in accordance with those WHO standards. The project has thus contributed to coherence with international and WHO standards (see also under effectiveness). External coherence is therefore appraised as good.

### Rating summary of coherence: **successful (2)**

The contribution of the measures to the overall Kyrgyz HIV/AIDS strategy and compliance with international standards contributed to a good coherence. The project is also rated as successful in terms of coherence due to its complementary implementation within German DC and with other donor's initiatives.

## Effectiveness

### 7. Achievement of outcome objectives

The objective at the outcome level was to ensure the use of a high-quality blood transfusion system in the Kyrgyz health system. The two indicators focused precisely on this: processing blood donations in Kyrgyzstan in accordance with internationally recognised standards (1) and testing blood donations for HIV/AIDS (2).

The following indicators were used to measure the outcome objective:

| Indicator                                                                                                                  | Status at time of review | Target value at EPE (review) | Actual value at PCR | Actual value at EPE   |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------|---------------------|-----------------------|
| (1) Blood donations are collected, processed and stored in accordance with internationally recognised standard procedures. | 0%                       | 100%                         | 100%                | Target value achieved |
| (2) Blood donations are tested for HIV/AIDS                                                                                | 92,5%                    | 100%                         | 100%                | Target value achieved |

**Table 2:** Outcome target achievement.

**Source:** Republican blood center (RBC), Bishkek (September 2025).

Indicator 1 was met as confirmed by the Republican Blood Center (RBC) and based on the results of regular quality controls carried out by the RBC. As part of the evaluation, the process descriptions and work instructions were also compared with international standards and random assessments were carried out on the application/compliance with these specifications during visits to the project sites. Regarding the achievement of the outcome objectives, the table shows that both indicators have fully achieved the set target values.

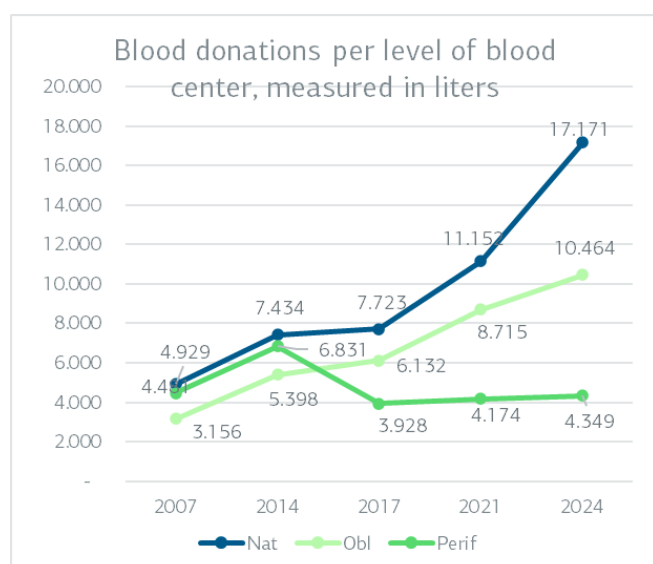
### 8. Contribution to the achievement of objectives

The FC project has contributed significantly to the achievement of the objective despite the limited financial amount. Thanks to modern technologies in higher-level transfusion centres, safe blood transfusions can be made available to the population of Kyrgyzstan. These technologies include semi-automatic and fully automatic laboratory equipment for the diagnosis of infectious diseases, as well as modern centrifuges that can separate blood components more precisely. For the first time, adequate refrigerators and freezers were purchased for storage, allowing the temperature to be continuously monitored. Most of the equipment continues to be used intensively. It was also helpful that the maintenance system allowed for short notice repairs whenever needed. Where equipment has failed over the years, the state has procured its own replacements. An accompanying measure was implemented to support the organisation in developing and implementing national standards with mandatory work requirements for all employees in the blood transfusion system. Staff further received training on aspects of international standard quality blood transfusion, and key employees took part in a study trip to Germany, visiting the Robert Koch Institute and the Paul Ehrlich Institute and met with high-ranking German representatives in the field of transfusion.

This made it possible to better ensure a stable supply of high-quality blood for the population. Blood transfusions remain free of charge for all citizens and are paid for by health insurance as part of the standard medical care provided. There was no specific support for women in this project. However, it is noticeable that female employees made up the majority of the centres' workforce and were also represented as transfusion doctors and in management positions. Furthermore, blood transfusions are particularly lifesaving for pregnant women who had severe bleeding before, during and after childbirth. This group accounted for a large proportion of transfusion use, but in recent years it has been observed in Kyrgyzstan that pregnant women have had less postpartum bleeding than at the time of the appraisal as other preventive measures reduced these often fatal complications. At

the time of the evaluation, victims of traffic accidents constitute another large group of beneficiaries (approx. 50 % of the need for blood products). Initiatives to reduce the latter, such as better regulated road traffic, are beyond the scope of the FC project. The assessment is based on personal observations, as the transfusion statistics do not provide gender-disaggregated data.

The activities aiming at centralising blood banks at a higher level was less successful but caused no negative effects on the overall impact of the project. The considerable distances and mountainous geography made it difficult to supply remote district centres and smaller health stations with blood reserves. Although the transport vehicles procured allowed the reserves to be kept cool for some time, the vehicles did not and do not have their own self-sufficient cooling equipment, meaning that the blood reserves are at risk of being damaged by warmer temperatures over longer distances. Due to geographical and logistical challenges, the initiative towards increased centralisation has not been as successful as was hoped for at project appraisal. However, from an evaluation perspective, even vehicles with more powerful cooling technology would not have been able to achieve a faster and more comprehensive rationalisation due to risks of accidents and breakdowns.



**Figure 2:** Donations per level of blood center 2007 – 2024.

**Source:** RBC Bishkek (September 2025).

As Figure 2 illustrates, the proportion of blood donations at lower service levels has fallen significantly since 2014, immediately before the delivery of equipment under the FC project and during the implementation phase. While 36 % of blood donations were still made at the lower level in 2007, the proportion was only 14 % in 2024.

In recent years, the national transfusion service management began to initiate a further centralisation. By the time of the evaluation, seven peripheral centres at the lower level had been closed. These centres had collected blood donations themselves, forwarded samples to various local laboratories for testing and then delivered the blood to patients once it had been proven to be safe. This method was less efficient and due to the involvement of other laboratories also less reliable (e.g. due to the risk of mix-ups). In addition, the testing procedures at other laboratories are not automated, which results in delays that put patients waiting for life-saving blood transfusions at risk.

In order to continue to reach all peripheral regions and thus all population groups, the government does not plan to close all rayon centres, but to keep some strategically located ones open and even better equip them. In future, these will then be able to operate at almost the same high level of quality as the oblast centres. The new strategy will further reduce the number of regional centres (to twelve, which is even less than the 24 defined in the FC project appraisal). At the same time, the centres at the higher level are to be strengthened with new technologies. Molecular diagnostic methods using PCR (polymerase chain reaction) are to be used (one device is already in place at the central blood centre in Bishkek). PCR diagnoses DNA and RNA antigens. This method is therefore more precise and at the same time reduces the so-called “window phase”, the period between the infection of a blood donor and the first time the pathogen can be measured. With these modernisations, Kyrgyzstan is on its way to follow international recommendations.

The proportion of voluntary blood donations did not increase. This proportion rose only sporadically and not sustainably. However, sociological and political circumstances at the time (command-like obligations to donate blood) obviously limited the possibilities for more comprehensive measures in this area as part of the FC project and was further limited by the very scarce project funds.

Overall, it can be concluded that this project concerned a medical contributing to life-saving measures. Blood transfusions are associated with the risk of infection and serious side effects for the recipient, which could successfully be reduced through the combined approach of rehabilitation, equipment and staff training measures. At the same time, blood transfusions as a medical service strengthen the target groups' trust in the overall health system.

## 9. Quality of implementation

The project partners have shown a high degree of ownership and interest in the implementation of the FC project.

Complex decision-making processes at national level and complex international tendering procedures lead to the fact that some tenders had to be repeated (partly due to a lack of bidders and partly due to procedural requirements to cancel/repeat), which led to delays in the implementation (see also under efficiency).

## 10. Unintended effects (positive or negative)

No unintended effects were observed.

### Rating summary of effectiveness: **successful (2)**

It is plausible that the project has made a significant contribution to the use of an improved blood transfusion system through investments in infrastructure and equipment at the oblast and national levels. The qualitative improvement helped to meet international standards. However, the centralisation of transfusion centres, which the project had also aimed at, could not be fully implemented. The target value for the rationalisation was considered too ambitious, therefore this aspect has not been applied for the assessment of effectiveness. Effectiveness is assessed as successful.

# Efficiency

## 11. Production efficiency

Due to delays and cost increases compared to the original budget plan, activities at the oblast level could not be implemented (see also under Relevance, Adaptability). The increased construction costs lead to reduced procurement of equipment for facilities at the oblast level. Despite considerable delays, the measures at the central and oblast levels were implemented successfully. However, the tendering procedures for planned medical equipment were delayed, in some cases very significantly. The delivery of the last spare parts and repairs caused further delays in the formal completion of the project. The delays originated in delayed tendering and awarding processes, to multiple changes of partners, volatile political developments and complex national decision-making procedures (see also Effectiveness, Quality of implementation).

Although the implementation of the project was significantly delayed for the various reasons mentioned above, this is an inherent project risk in the context of the necessary strict award and decision-making procedures and very heterogeneous local conditions. The original plan was to implement the project within 36 months between 2009 and 2012. In reality, the final inspection did not take place until 2023.

As a result, the consultant commissioned for both the investment and accompanying measures following an international tendering procedure was only able to start working in the second quarter of 2011. Due to the delays described below, a total of five addenda to the contract had to be agreed. The contract period was extended from 30 months to 130 months. The consulting contract, originally awarded for EUR 374,966, had to be increased by around 70 % to EUR 639,243.27 due to delays in implementation. Nevertheless, at only 11 % of the total costs, it remains at a relatively low level, especially when considering the long distances between locations of the oblast centres involved.

The construction tender for Kyrgyz construction companies had to be repeated twice due to unqualified bids and ultimately led to a direct award. A further delay of nine months in the execution arose after a dispute between the implementing partner and the contracted construction company over a contract extension due to unforeseen additional work. However, the quality-cost and cost-performance ratios were relatively favourable. Nevertheless, additional FC funds had to be reallocated to co-finance the extended construction measures.

Some procurement measures also had to be retendered several times. Delays were due to lengthy prequalifications and technical specifications. Ultimately, all the equipment ordered was delivered and installed by the end of 2016. A few devices no longer complied with national standards at the time of delivery. They were nevertheless used in peripheral facilities. In addition, the poor

quality of the water was not taken into account in the tender for pressure steam sterilisers, so that water distillation devices had to be reordered, which were not delivered and installed until 2020.

### Costs

The total cost of this project was initially planned at EUR 5.6 million. Of this, EUR 3.6 million was financed by the project and EUR 0.4 million by the accompanying measure. The partner country was to make a contribution of EUR 1.6 million. As already described, there were considerable delays and individual cost items increased. These reallocations are clearly illustrated by the fact that, without the partner's own contributions

- rehabilitation costs were estimated at EUR 0.5 million, but accounted for EUR 0.833 million of the financing
- The costs for medical equipment and consumables remained unchanged at EUR 2.5 million.
- Consulting costs were planned at EUR 0.37 million but rose to EUR 0.64 million.

It should be noted, however, that consulting costs of approximately EUR 0.32 million were covered by the accompanying measure. In addition, planned costs for equipping facilities at the district level were cancelled (see also under Relevance, Adaptability).

Overall, significant cost increases and reallocations are evident. In terms of quality, however, the oblast centres were provided with the planned equipment as planned after the adjustment of the concept, so that despite the cost increases and delays, there the effectiveness of the FC project was not negatively affected. The reallocations can therefore be considered reasonable and appropriate. We therefore assess the cost management as adequate in view of the scarce resources and the impact on the improved quality and functionality of the blood transfusion system achieved.

### Value for money

During the final inspection, the independent architect confirmed that the construction work, which consisted primarily of renovation work, provided good "value for money".

In an international comparison, the budget for the procurement of equipment and vehicles appears surprisingly favourable overall, even considering that the costs for delivery, installation and training, as well as maintenance and warranty contracts on site in this country with exceptionally long distances between the capital and the oblast centres with long mountain ranges were included in the price.

In summary, there is no alternative approach that would have led to similar effectiveness with these relatively limited resources. Production efficiency is assessed as limited due to delays and the reduction in the scope of services.

## 12. Allocation efficiency

The FC project addressed the national blood transfusion system. A targeted distribution of investment goods and measures therefore had to cover the entire country in order to achieve comprehensive transformation to international standards. To this end, the project took advantage of the structural and historical context of a highly centralised system. The distribution of funds covering the whole country was thus implemented through the centralised system, focussing on central levels (Oblast and national level), which was very efficient overall.

The rationalisation originally envisaged was not achieved. Fewer transfusion centres at the rayon level than planned at the time of the project appraisal were closed. However, this was due to geographical, logistical and ultimately medical reasons (see also under Relevance).

In recent years, the demand for blood has increased in oblast centres and especially in the national centre, partly because increasingly complex operations are being performed at these levels of the healthcare system, which require more frequent blood transfusions. Many patients who can afford the journey now increasingly prefer better-equipped healthcare facilities at higher levels (oblast health centres or national health centres or hospitals). In this respect, the appraisal of the decision to concentrate funding on these higher levels of the blood transfusion system was efficient (see also under Effectiveness).

In addition to risks due to underfunding, overfunding could be imagined. This could be relevant for remote and hard-to-reach oblasts with small populations (Batken, Naryn and Talas). Their blood transfusion centres were supplied with the same basic equipment as the densely populated centres of Osh and Jalalabad. The utilisation of the equipment there is significantly lower than in the large oblasts. Only the national centre was supplied with twice the amount of the same equipment, which seems appropriate given the centre's role. In 2024, the national centre collected more blood donations than all other levels combined. Despite the unequal utilisation, the same equipment for the six oblast centres appears appropriate given the importance of each one of them for the overall system.

In this respect, it can be concluded that the allocation of resources and project measures was generally good and it is plausible that focussing on the central level (oblast and national level) had an impact on the entire national blood transfusion system.

### Rating summary of efficiency: **moderately successful (3)**

On the one hand, delayed tenders and deliveries had a negative impact on the production efficiency; on the other hand, construction cost increases meant that activities originally planned at the rayon level could not be implemented. However, this did not impair the overall functionality of the national system. The good allocation efficiency results from the concentrated use of FC funds at higher levels, which had an impact on the entire blood donation and transfusion system. Therefore the overall efficiency can be assessed as moderately success.

## Impact

### 13. Overarching developmental changes

The impact-level objective was to improve the health status of the entire population of Kyrgyzstan (contribution to SDG Goal 3.3 Combating communicable diseases).

The following indicators were used to measure the impact objective.

| Indicator                        | Status at time of review | Target value at EPE (re-view) | Actual value at PCR | Actual value at EPE                                                   |
|----------------------------------|--------------------------|-------------------------------|---------------------|-----------------------------------------------------------------------|
| (1) HIV incidence                | 0,1 ‰                    | Not specified                 | 0,11                | Value not defined, but appears to be met<br><br>Target value achieved |
| (2) Growth rate of HIV incidence | 66 % <sup>3</sup>        | Not specified                 | 0,0 ‰ <sup>4</sup>  | Target value achieved                                                 |

**Table 3:** Impact target achievement<sup>5</sup>.

**Source:** UNAIDS: <https://data.worldbank.org/indicator/SH.HIV.INCD.TL.P3?end=2022&locations=KG&start=2005&view=chart>.

In principle, both the prevalence and, above all, the incidence of HIV/AIDS are difficult to determine. On the one hand, there is a high degree of stigmatisation associated with the disease, which prevents those affected from getting tested. At the same time, the initial symptoms of the disease (the onset of certain infectious diseases) are initially attributed to other pathogens, and HIV is therefore often only considered at a late stage. Thirdly, there may be phases lasting several months during which the infection cannot yet be detected using the antibody tests that are currently in use (*window phase*). Of the three main transmission routes – the use of unsterile needles, sexual contact and blood transfusions (listed in order of importance in Kyrgyzstan) – it is difficult or often impossible to identify the actual transmission route. Therefore, all HIV data must be interpreted with caution. Trends are more important than precise figures.

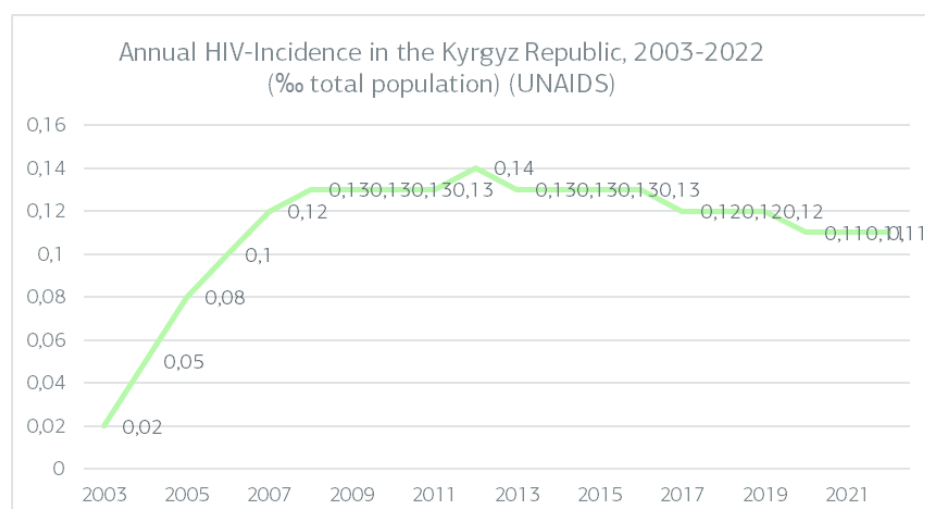
In the FC project, the impact was defined as slowing down the increase in new HIV infections. In fact, there was a 41 % increase in new diagnoses between 2005 and 2006, rising to 66 % between 2006 and 2007. There is no reliable information on the routes of transmission. As there were fears that at some point the epidemic could spill over from a niche among specific risk groups to the general population, posing a risk to the health of the entire population, the aim was to pre-empt this danger by contributing to HIV prevention measures. Poor quality in the blood transfusion system poses a significant risk of HIV infections spreading to population groups outside the risk groups.

As can be seen from Figure 3, the incidence rate (illustrated here in per mille) slowed down after 2008 and especially at the beginning and middle of the 2010s, before slowly declining to the present day. Of course, many factors play a role here and the transfusion-related reduction cannot be reliably measured.

<sup>3</sup> Increase in HIV incidence between 2006 and 2007

<sup>4</sup> Increase in HIV incidence between 2021 and 2022

<sup>5</sup> As described in the text, all HIV incidence figures are estimates and may be subject to significant bias. Reliability intervals for incidence rates were reported by UNAIDS as 0.01 ‰.



**Figure 3:** Annual HIV incidence in Kyrgyzstan 2003-2022.

**Source:** UNAIDS: <https://data.worldbank.org/indicator/SH.HIV.INCD.TL.P3?end=2022&locations=KG&start=2005&view=chart>.

#### 14. Contribution to intended overarching developmental changes

The modernisation of the Kyrgyz transfusion system has ensured that collected blood can be tested for infectious diseases in accordance with international standards. The FC project focused on renovating buildings and procuring modern equipment at the oblast level. The accompanying measure provided the necessary training to complement the infrastructure investments and complete the centres with well-trained staff.

A study on *trends in HIV/AIDS cases in Kyrgyzstan between 2012 and 2022* describes, that the transmission of HIV through medical measures has decreased measurably, while HIV transmission through sexual contact has increased significantly and dominates the incidence figures.

It cannot therefore be proven that the stabilisation and even reduction in HIV incidence was significantly influenced by the project. However, it is plausible that the project has contributed to reducing the transmission of HIV and other infections. All blood samples are now tested for all indicated diseases. And there is sufficient evidence that transmission rates have fallen sharply following improvements of the blood transfusion system. According to the scientific article cited, a significant decline in "nosocomial HIV transmission" has been measured.

The additional approach of centralising the transfusion system by reducing the number of centres at the lower level was not entirely successful. Reasons for this include attempts to maintain their own importance, power politics and a lack of confidence in the new system. On the other hand, the modest project budget was not sufficient to further develop a number of peripheral centres at rayon level so that they could also collect, test and store blood donations for other hospitals in the vicinity. In addition, very remote regions are logistically difficult to reach, and the vehicles financed by the project were not suitable for transporting blood components safely over long distances of several hours. Overall, the logistical challenges are considerable, and the economic viability would have to be examined for individual centres (see also under Efficiency). In retrospect, the project's aspirations were too ambitious in this regard.

The impact of the project is difficult to quantify but it is plausible, that it had an impact on important, life-saving transfusions with better quality blood and, as a result, fewer negative effects such as infections on recipients. The FC project thus also contributed to an improved confidence in the quality of the healthcare system as a whole.

Overall, the measures implemented by the FC programme within the blood transfusion system had broad-based impacts.

As part of the international division of labour, the German FC was responsible to support the modernisation of blood transfusion systems in several countries in Asia and through this developed a certain expertise in this area. In addition, renowned organisations such as the German Red Cross were involved in the project design. During the period in question, Kyrgyzstan therefore had experienced partners for this infrastructure project. In this respect, the FC projects additionality is plausible.

In terms of environmental impact, the project involved only minor and unproblematic disposal requirements. According to reports, expired and infected samples were first sterilised in accordance with international standards and then safely disposed of with household waste. The same applies to used disposable needles and the packaging of all transfusion materials. The amounts of waste in the laboratories were also manageable and were disposed of in the same way.

No negative social impacts were reported. The fact that blood transfusions are offered free of charge throughout the country makes exclusion highly unlikely, partly due to the social ethics of the Soviet era. In rural areas, every facility visited during the EPE had sufficient blood in stock. The decentralised system ensured this availability.

## 15. Contribution to unintended overarching developmental changes

An important side effect of the FC project beyond HIV was that the modernisation of the laboratories not only enabled HIV testing to be standardised and carried out safely. In addition, other infectious diseases were also included in testing accordance with international standards. Severe hepatitis B and C<sup>6</sup> with the related high morbidity and mortality rates are notorious for frequent transmission through donated blood. Seroprevalence rates<sup>7</sup> were alarmingly high in the first decade of this century, ranging between 3 % and 20 % of the adult population, depending on the estimate. Since the introduction of hepatitis B vaccination for children, the proportion of hepatitis B cases has been slowly declining to a lower level of around 2 %. The seropositivity rate for hepatitis C currently remains at around 3 %, and the WHO continues to regard this disease as highly epidemic. Thanks to newly introduced testing devices, HIV and hepatitis can be tested simultaneously and test results are more reliably, which reduces transmission through blood transfusions. Brucellosis and syphilis, which occur regularly in Kyrgyzstan, are also tested in parallel. Malaria is considered eradicated in Kyrgyzstan but can be imported from neighbouring countries. There are also chronic forms of malaria in which infected individuals can carry the pathogen for several years, meaning that Kyrgyz citizens may still be carriers who could transmit the infection through untested blood. The project thus supported the entire health system beyond the defined core problem.

No negative unintended overarching developmental impacts were identified during the EPE. The same applies to such impacts on vulnerable groups.

### Rating summary of impact: **successful (2)**

The project has had predominantly positive overarching developmental impacts and even unintended impacts, which continue to this day. No negative impacts were identified.

## Sustainability

### 16. Capacities of beneficiaries and stakeholders

The project fitted in well with national priorities in the health sector and the great need to modernise the blood transfusion system. The procurement of necessary equipment (mainly modern centrifuges, semi-automated and automated laboratory equipment, and refrigerators and freezers) enabled a qualitative leap towards a transfusion system meeting current international standards. During the evaluation, visits were made to the national blood centre, three oblast centres and four peripheral health facilities providing blood transfusion services. All the facilities visited were fully functional in terms of their blood transfusion services and, despite vacant positions, had sufficient and well-qualified staff. As described above, the blood centres have varying degrees of need for building rehabilitation.

As in many countries, the current budget for health care facilities is tight. In Kyrgyzstan, the funds are apparently sufficient for the operation of the blood banks. After ten years of intensive operation, most of the infrastructure procured and installed during the project is still functional and in continuous use. With a typical depreciation period of three to seven years, depending on the device, the robustness and quality of most of the procured equipment can be confirmed after ten years of often very intensive use. A rough estimate based on a random sample in four blood transfusion centres showed that over 75 % of the equipment is still in use. All temperature-insulated vehicles procured were still in use in the centres visited. According to information from the final inspection, this also applied to the three remaining centres in 2023.

The maintenance system, and particularly its management also play an important role in this context, both in terms of available budgets and the staff employed. In smaller centres, local maintenance technicians are employed, who achieve astonishingly good results in maintenance through their personal commitment. Long-term maintenance contracts for the healthcare system would be hardly affordable here. In the oblast centres, in-house technicians or external local maintenance companies are commissioned. Here, with a more sophisticated equipment pool, it could be worthwhile to bundle or *outsource* maintenance. For cost reasons, these options are only used in a few cases after the end of the project or the warranty periods.

<sup>6</sup> Infectious liver inflammation Hepatitis B and hepatitis C. Both diseases are primarily transmitted via bodily fluids and often cause chronic liver inflammation and/or liver cancer.

<sup>7</sup> The seroprevalence rate is the frequency of serological detection of specific antibodies that indicate an existing or past infectious disease.

Some of the laboratory equipment and centrifuges supplied by the project had broken down and were replaced with new equipment financed by the government through the Ministry of Health's own procurement budget. This also applies to laboratory equipment for which consumables were very expensive and which was replaced by equipment with less costly consumables, at least at the locations visited. It is recommended that tenders for sophisticated equipment take into account not only the purchase price but also the so-called *lifetime costs*<sup>8</sup>.

The management of the equipment appears to be rational and efficient, with no significant performance failures after ten years of operation. Overall, it can be noted that the budget for blood banks has increased significantly in recent years. Between 2022 and 2024, it rose from just under KGS 60 million to over KGS 150 million, with annual inflation rates of between 5 % and 10 %. Discussions are currently underway between the blood centres, the Ministry of Health and the government regarding a fundamental renovation and expansion of the centres with newer and more precise technologies in order to better prevent unwanted side effects and infections in blood recipients. In recent years, internationally, new technologies have been developed that have significantly improved the quality of infectious disease diagnostics. One of these methods is the polymerase chain reaction (PCR), which can be used to detect the genetic material (DNA or RNA) of pathogens accurately and quickly. This allows pathogens to be detected earlier and to further reduce the *window phase*<sup>9</sup>.

The Ministry of Health is well aware about the importance of further innovations and the chances that they could strengthen public confidence in the health system. At the time of the evaluation mission, a recent case of HIV transmission supposedly through a blood transfusion had stirred discussions about transfusion safety in Kyrgyzstan.

At the same time, the increasing number of blood donations indicates greater confidence in the system. The number of blood donors has more than doubled from approximately 25,000 in 2007 to over 53,000 in 2024.

The accompanying measure, which both improved technical expertise in the centres and initiated management reforms, was also successful.

Eighteen years after project appraisal, with rising demands and new technologies being introduced, there is once again a considerable need for renovation and expansion, including additional space for new technologies. The national blood bank confirmed plans for a complete renovation and further improvement of the transfusion centres.

## 17. Contribution to supporting sustainable capacities

The project has successfully contributed to transforming the transfusion system to an internationally standard and to ensuring the sustainability of this standard even after the end of the implementation. Ownership on the user side is high. The staff appear to be professionally competent and motivated, as does the management of the blood transfusion centres, which proactively makes suggestions to the Ministry of Health to further improve of the system.

At the same time, an LMIC<sup>10</sup> with a nominal per capita income of USD 2,019 in 2023 is fiscally vulnerable to crises, therefore a risk remains that in the event of significant disruption in the country, the health system could suffer funding shortfalls that could compromise the sustainability of the strengthened capacities.

## 18. Durability of impacts over time

As a country located between China, Uzbekistan, Tajikistan and Kazakhstan, Kyrgyzstan faces particular challenges due to several border conflicts.

However, the greatest risks to the sustainability of the project's impact through improved blood transfusion services lie in government budget restrictions, which tend to hit the health sector hard. Within the scope of the evaluation, however, it is plausible that the country's blood transfusion system continues to function more than ten years after the start of the project with just adequate funding for this purpose.

In addition, there is a strong incentive to maintain the system at its current level and even improve it further, as Kyrgyzstan must ensure high standards in view of the increasing relevance of the tourism sector. The Kyrgyz government has therefore recognised that a sustainable, safe blood transfusion system contributes to mitigating economic risks.

<sup>8</sup> Lifetime costs include, for example, maintenance costs or the costs of consumables and reagents for the testing equipment.

<sup>9</sup> Period between the infection of a blood donor and the first time the pathogen can be detected.

<sup>10</sup> LMIC Lower Middle Income Country

### Rating summary of sustainability: **successful (2)**

It is plausible that the FC project has contributed to the establishment of a high quality, sustainably functioning blood transfusion system. The evaluation results suggest that budgetary risks will not jeopardise the improved capacities in the future due to the high priority that the Kyrgyz government is giving the blood transfusion system, and that the effectiveness of the FC measure will therefore continue. Sustainability is therefore rated as successful.

## Overall assessment: **successful (2)**

Overall, the project is assessed as **relevant** due to an inadequate baseline situation of the blood transfusion system at the time of the project appraisal, that did not meet international standards. This is further underlined by an emergency of uncontrolled HIV transmission at the time of the FC project appraisal and the particular importance of the quality of blood transfusion services for the health system as a whole.

The project activities fitted in well with national priorities and strategies. Measures were clearly coordinated with national approaches and initiatives from other donors, implemented in a complementary manner and aimed at contributing to compliance with international standards. **Coherence** is therefore appraised as successful overall.

It is plausible that the project has made a significant contribution to the use of an improved blood transfusion system through investments in infrastructure and equipment at the oblast and national levels. The qualitative improvement helped to meet international standards. However, the further rationalisation of transfusion centres, which was also one of the project's objectives, could not be fully implemented, at the same time the respective target values were seen as too ambitious. The **effectiveness** is still appraised as successful.

On the one hand, delayed tenders and deliveries had a negative impact on production efficiency; on the other hand, construction cost increases meant that activities originally planned at rayon level could not be implemented. The allocation efficiency is assessed as good a.o. due to the concentrated use of FC funds at higher service levels, which had an impact on the entire blood transfusion system. The overall **efficiency** can be assessed as moderately successful.

The impact target of improving the health situation: reducing the increase in the HIV infection rate, was achieved. However, for methodological reasons, the project's contribution to the achievement of this goal cannot be quantified. It is plausible, however, that although the reduced number of transmissions through blood transfusions is lower than through other transmission routes, an insufficiently functional blood transfusion system would have facilitated the spread of HIV prevalence to population groups outside the risk groups. It should also be noted that, in addition to combating HIV, other communicable diseases were also successfully combated (positive unintended effects). The **impact** is therefore appraised as successful.

The fact that the transfusion system in Kyrgyzstan has continued to operate at an internationally recognised level since the implementation of key FC measures more than ten years ago is proving its sustainability. In addition, Kyrgyz partners are also moving towards further system modernisation due to economic risks (e.g. tourism). The Ministry of Health is currently planning the necessary innovations and an upgrade to a higher standard. There are signs of wear and tear at the visited infrastructure and equipment. However, critical replacements are always ensured. Overall, the project can therefore still be considered successful in terms of **sustainability**.

## Contribution to Agenda 2030

The project undoubtedly made a positive contribution to the sustainable development of health and well-being (SDG 3). The project has played a key role in preventing the uncontrolled spread of infectious diseases and in performing the core function of a blood transfusion service. This role has been successfully fulfilled, as the supply of blood products benefits the general population and the entire health sector.

# Methodology

## Evaluation methodology

The ex-post evaluation follows the methodology of a rapid appraisal, i.e. a data-based, qualitative contribution analysis, and represents an expert opinion. The project is attributed effects based on plausibility considerations, which are based on a careful analysis of documents, data, facts and impressions. Where possible, this also includes the use of digital data sources and modern techniques (e.g. satellite data, online surveys, geocoding). The causes of any contradictory information are investigated, attempts are made to resolve them, and the assessment is based on statements that are confirmed by several sources of information (triangulation), where possible.

The analysis of the effects is based on assumed causal relationships, documented in the impact matrix developed during the project appraisal and updated during the ex-post evaluation, if necessary. The evaluation report sets out arguments as to why certain influencing factors were identified for the effects observed and why the project under review probably made a certain contribution (contribution analysis). The context of the development measure is taken into account in terms of its influence on the results. The conclusions are put into relation to the availability and quality of the data basis. An evaluation concept serves as the reference framework for the evaluation.

The method offers a balanced cost-benefit ratio for project evaluations, on average, with a balance between knowledge gain and evaluation effort, and allows for a systematic assessment of the effectiveness of DFG projects across all project evaluations. Individual ex-post evaluations cannot therefore meet the requirements of a scientific assessment in the sense of a clear causal analysis.

The main objective of the evaluations (knowledge interest) is to measure impacts, provide accountability, promote transparency and enable institutional learning.

### Type of evaluation:

Internal and external documentation was used for the evaluation. However, surveys and observations as well as interviews with staff and local offices were also decisive for determining project results.

### Key questions of the evaluation according to the evaluation concept:

- Are the planned project objectives still relevant?
  - Are the indicators still suitable for measuring the achievement of the project objectives?
  - Are there national standards for blood processing?
  - Is the "application of international standards" for blood processing implemented in this context?  
Are the national standards sufficient?
  - How have the numbers and utilisation rates of blood donation facilities changed? E.g. lower number (target) with the same/higher utilisation rate?
  - Development of the number and capacity of blood transfusion facilities and their organisational structure (e.g. policy-making authority, related processes)
  - What effects can still be observed or are sustainable in terms of sustainability?
- ➔ Data: Development of the number and capacity of blood donation facilities and their organisational structure (e.g. policy-making authority, related processes)

### Non-public (internal) documents

Internal project documents: *Module proposal, Final control report, Selected progress control reports, Consultant's final report*

### Directory of public sources

**Kirillova, I., Nimetcan M. O.** (2025): "Trends in HIV/AIDS cases in Kyrgyzstan between 2012 and 2022: An ecological study". In: HIV Medicine: Volume 26, Issue 9, Pages 1323-1471; obtained from the author Nimetcan Mehmet Orhun via LinkedIn email

**Satybaldieva A.B.** (2014): National Strategic Plan for Voluntary Non-Remunerated Donation for the Kyrgyz Republic. In: The New Armenian Medical Journal

**Tomislav, T.** (2023): QUALITY INDICATORS FOR BLOOD ESTABLISHMENTS AND HOSPITAL BLOOD BANKS – REVISION 2023; In: International Society of Blood Transfusion.

**World Health Organisation** (2021): Global Status Report on Blood Safety and Availability

**Kurmanaliev, N. et al.** (2020): Development of Blood Donation Activities in Kyrgyzstan and General Implications for Blood Donation; In: Open Journal of Blood Diseases.

**Moldoisaeva S. et al.** (2022): Kyrgyzstan Health system summary; From WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Copenhagen.

**Rechel, B. et al.** (2024), Health Systems in Action (HSiA) Insights Kyrgyzstan; From: European Observatory on Health Systems and Policies, Copenhagen.

**Akmatov, M. K. et al.** (2023): Changing Epidemiology of Viral Hepatitis in a Post-Soviet Country - the Case of Kyrgyzstan.

### **Data sources and analysis tools**

Monitoring data and cost statements from the partner.

### **Project sites visited**

Bishkek Republican Blood Centre (RBC) and Oblast Blood Centre (OBC) in Talas, Jalal-Abad, Osh.

### **Interview partners and modality (in person)**

Ministry of Health (MoH), E-Health Centre Bishkek

Management and staff at the Republican Blood Centre (RBC) in Bishkek

Management and staff at the Oblast Blood Centre (OBC) in Talas, Jalal-Abad, Osh, and at district hospitals/general practice hospitals in Aitmatov, Kara-Kul, Massy, Cholpon-Ata

### **The following aspects limited the evaluation**

There are no known limiting data sets or other restrictions for the evaluation.

## Assessment methodology

A six-point scale is used to assess the project according to OECD DAC criteria, with the exception of the sustainability criterion. The scale values are as follows:

- Level 1** Very successful: results significantly above expectations
- Level 2** Successful: results fully in line with expectations, without significant shortcomings
- Level 3** Moderately successful: results below expectations, but positive results predominate
- Level 4** Moderately unsuccessful: significantly below expectations and negative results dominate despite recognisable positive results
- Level 5** Unsuccessful: despite some positive partial results, the negative results clearly dominate
- Level 6** Highly unsuccessful: the project is useless or the situation has deteriorated

The overall rating on the six-point scale is based on a project-specific weighting of the six individual criteria. Levels 1–3 of the overall rating indicate a ‘successful’ project, while levels 4–6 indicate an ‘unsuccessful’ project. It should be noted that a project can generally only be classified as "successful" in terms of development policy if both the achievement of objectives at the outcome level (effectiveness) and impact level, as well as sustainability, are rated at least as "moderately successful " (level 3).

### Imprint

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