Report and Recommendation of the President to the Board of Directors

INTERNAL

Project Number: 55131-001
August 2022

Proposed Loan and Grant
Kyrgyz Republic: Strengthening Regional Health Security Project

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 1 August 2022)

Currency unit	–	som (Som)
Som1.00	=	$0.012
$1.00	=	Som82.17

ABBREVIATIONS

ABEC	–	Almaty–Bishkek Economic Corridor
ADB	–	Asian Development Bank
BLBH	–	Better Labs for Better Health
CAREC	–	Central Asia Regional Economic Cooperation
CDL	–	clinical diagnostic laboratory
COVID-19	–	coronavirus disease
DALY	–	disability-adjusted life year
GDP	–	gross domestic product
IHR	–	International Health Regulations
ISO	–	International Organization for Standardization
LAT	–	Laboratory Assessment Tool
MHIF	–	Mandatory Health Insurance Fund
MOH	–	Ministry of Health
NCD	–	noncommunicable disease
PAM	–	project administration manual
PIU	–	project implementation unit
PPP	–	public–private partnership
RHS	–	regional health security
SSES	–	State Sanitary and Epidemiological Surveillance
UHC	–	universal health care
USAID	–	United States Agency for International Development
WHO	–	World Health Organization

NOTE

In this report, “$” refers to United States dollars.

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CONTENTS

PROJECT AT A GLANCE

1. Basic Data **Project Number:** 55131-001

Project Name	Strengthening Regional Health Security Project
Country	Kyrgyz Republic
Borrower	Kyrgyz Republic
Country Economic Indicators	https://www.adb.org/Documents/LinkedDocs/?id=55131-001-CEI
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=55131-001-PortAtaGlance
Department/Division	CWRD/CWSS
Executing Agency	Ministry of Health

2. Sector

	Subsector(s)	ADB Financing ($ million)
✓ **Health**	Disease control of communicable disease	15.00
	Health sector development and reform	15.00
	Total	**30.00**

3. Operational Priorities

- ✓ OP1: Addressing remaining poverty and reducing inequalities
- ✓ OP2: Accelerating progress in gender equality
- ✓ OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability
- ✓ OP6: Strengthening governance and institutional capacity
- ✓ OP7: Fostering regional cooperation and integration

Climate Change Information

GHG reductions (tons per annum)	112
Climate Change impact on the Project	Low

ADB Financing

Adaptation ($ million)	0.55
Mitigation ($ million)	0.66

Cofinancing

Adaptation ($ million)	0.00
Mitigation ($ million)	0.00

Sustainable Development Goals

SDG 1.b
SDG 3.8, 3.d
SDG 5.1
SDG 13.a

Gender Equity and Mainstreaming

Effective gender mainstreaming (EGM) ✓

Poverty Targeting

General Intervention on Poverty ✓

4. Risk Categorization: Low

5. Safeguard Categorization **Environment:** B **Involuntary Resettlement:** C **Indigenous Peoples:** C

6. Financing

Modality and Sources	Amount ($ million)
ADB	**30.00**
Sovereign Project grant: Asian Development Fund	20.00
Sovereign Project (Concessional Loan): Ordinary capital resources	10.00
Cofinancing	**0.00**
None	0.00
Counterpart	**5.00**
Government	5.00
Total	**35.00**

Currency of ADB Financing: US Dollar

Source: Asian Development Bank

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan and (ii) a proposed grant, both to the Kyrgyz Republic, for the Strengthening Regional Health Security Project.

2. The proposed project follows the coronavirus disease (COVID-19) emergency assistance and vaccine projects of the Asian Development Bank (ADB) in the Kyrgyz Republic and ADB's ongoing regional support.[1] The project will be part of ADB's long-term support for the health sector, building on good relations and policy dialogue developed over the years. It will contribute to regional health security (RHS) by improving health sector resilience to emerging and reemerging infectious diseases in the country. The project addresses critical bottlenecks in RHS and the country's compliance with the International Health Regulations (IHR), namely diagnostic capacity and regional links of laboratories and hospitals in busy border zones.[2]

3. The project is aligned with ADB's country partnership strategy for the Kyrgyz Republic, 2018–2022, which calls for improving access to public and social services and leveraging regional cooperation, and with the government's strategic pillar of improved connectivity with neighbors and markets.[3] The project is also aligned with the following ADB Strategy 2030 operational priorities: addressing remaining poverty and reducing equalities; accelerating progress in gender equality; tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability; strengthening governance and institutional capacity; and fostering regional cooperation and integration.[4]

II. THE PROJECT

A. Rationale

4. The Kyrgyz Republic is a lower middle-income country in Central Asia bordering Kazakhstan, Tajikistan, Uzbekistan, and the People's Republic of China. The country is highly dependent on trade, tourism, remittances, and gold exports. Remittances constitute about one-third of gross domestic product (GDP).[5] About 37% of its population of 6.6 million reside in urban hubs—the capital, Bishkek, has more than 1 million people and Osh city has about 320,000 people. Per capita gross national income contracted slightly from $1,240 in 2019 to $1,160 in 2020 because of the COVID-19 pandemic.[6] Unemployment has increased, especially among returning female migrants.[7] The population living below the national poverty line declined from

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[1] ADB. Kyrgyz Republic: COVID-19 Active Response and Expenditure Support Program; ADB. Kyrgyz Republic: COVID-19 Pandemic Emergency Project; ADB. Kyrgyz Republic: COVID-19 Vaccine Support Project under the Asia Pacific Vaccine Access Facility; ADB. Regional: Addressing Health Threats in Central Asia Regional Economic Cooperation Countries and the Caucasus; and ADB. Regional: Almaty–Bishkek Economic Corridor Support.

[2] In 2005, the World Health Organization (WHO) and member states endorsed the IHR, requiring countries to strengthen core capacities to detect, assess, notify, and report events, and to respond to acute public health events, especially health emergencies of international concern.

[3] ADB. 2018. *Country Partnership Strategy: Kyrgyz Republic, 2018–2022—Supporting Sustainable Growth, Inclusion, and Regional Cooperation*. Manila.

[4] ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

[5] World Bank. Personal Remittances, Received (% of GDP) (accessed 17 May 2022).

[6] ADB. 2022. *Basic Statistics 2022*. Manila; ADB. 2021. *Basic Statistics 2021*. Manila. and ADB. 2017. *Basic Statistics 2017*. Manila.

[7] International Organization for Migration. 2021. *Kyrgyzstan: Study on the Socioeconomic Effects of COVID-19 on Returnees*. Vienna.

32.1% in 2015 to 20.1% in 2019 but increased to 25.3% in 2020 because of the COVID-19 pandemic (footnote 6).

5. **Key health threats**. Located at the center of trade routes in Central Asia, the Kyrgyz Republic is prone to epidemics of emerging and reemerging infectious diseases like COVID-19 and anthrax, and endemic diseases of regional relevance like tuberculosis and HIV/AIDS. Increased economic activity, especially in border markets and industrial zones with high numbers of migrants and mobile populations, has further exposed the country to communicable diseases. The tuberculosis incidence of 110 per 100,000 people is much higher than in neighboring countries. As of 1 August 2022, the country had reported 201,329 COVID-19 cases (3.1% of the population), with 2,991 deaths.[8] As of 25 July 2022, more than 1,326,878 people (20.1% of the total population) had been fully vaccinated against COVID-19.[9] The country is also battling a high level of antimicrobial resistance in infections including HIV, tuberculosis, and hospital-acquired infections. Antimicrobial resistance is accelerated by the irrational use and unregulated sale of often substandard antibiotics. Tobacco use and negative changes in diet and lifestyle have led to an increase in noncommunicable diseases (NCDs), which contributed to 71% of the overall disease burden in 2019, up from 65% 10 years earlier.[10] Early detection and management of NCDs will help reduce premature deaths and disabilities in the population.

6. **Regional health security.** Measures to control COVID-19 around the world have resulted in reduced productivity, increased unemployment, indebtedness, and poverty. Globalization has made the world more vulnerable to the spread of emerging and endemic communicable diseases. Detecting and containing public health threats in a timely manner is essential to reducing health and economic impacts in and beyond the country. Given its location at the crossroads of major east–west and north–south transport corridors, and given high cross-border traffic, the large number of Kyrgyz migrants working abroad, and its vulnerability to local spread of diseases, the Kyrgyz Republic is critical to health security in the region.[11] The country's self-assessment based on the IHR highlights its shortcomings in contributing to RHS compared with most of its neighbors.[12] The country's COVID-19 experience has highlighted the importance of (i) resilient and responsive health systems, including effective laboratory systems and testing capacity, technical and human capacity, and access to services; and (ii) strong global and regional cooperation in health security and health systems through participation in existing platforms such as the health program of Central Asia Regional Economic Cooperation (CAREC), which will help leverage coordination for RHS.[13]

7. **Laboratory issues**. The laboratory system plays a vital role in disease surveillance, diagnoses, and response, and in clinical diagnoses and identification of treatment for common

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[8] Worldometer. COVID Live – Coronavirus Statistics (accessed 1 August 2022).
[9] Our World in Data. Coronavirus (COVID-19) Vaccinations (accessed 1 August 2022).
[10] Institute for Health Metrics and Evaluation. GBD Compare (accessed 17 May 2022).
[11] ADB. 2021. *Enhancing Regional Health Cooperation under CAREC 2030: A Scoping Study*. Manila.
[12] World Health Organization. 2022. IHR State Party Self Assessment Annual Report: Kyrgyzstan. In 2021, the Kyrgyz Republic's self-assessment stated an average IHR score of 42%, compared with 74% (WHO Europe region) and 64% (globally). A joint external evaluation in 2016 based on similar criteria reported IHR compliance of 71%, noting strong risk communication, emergency preparedness, and response capacity, with shortcomings in surveillance and control of antimicrobial resistance. However, the COVID-19 pandemic has revealed the country's challenges in most dimensions, hence the more critical self-assessment in 2021.
[13] The project aligns with the recommendations under the CAREC 2030 strategy, which seeks to expand cooperation among member countries, including health cooperation. ADB. 2017. *CAREC 2030: Connecting the Region for Shared and Sustainable Development*. Manila. The CAREC Health Strategy 2030 on RHS supports four pillars: (i) leadership and human resource capacity, (ii) technical preparedness (surveillance and laboratory infrastructure), (iii) surge demands and access to supplies, and (iv) vulnerable population groups and border health. ADB. 2022. *CAREC Health Strategy 2030*. Manila.

diseases and conditions. A strong laboratory system ultimately benefits neighboring countries through early warning of communicable disease threats, and supports universal health coverage (UHC). In the Kyrgyz Republic, laboratory services include (i) 119 public health laboratories (including 60 State Sanitary and Epidemiological Surveillance [SSES] laboratories responsible for public health, disease surveillance, and diagnostics of infectious diseases; 10 tuberculosis laboratories; and 33 HIV/AIDS laboratories); (ii) 149 clinical diagnostic laboratories (CDLs) in the public sector; and (iii) 9 CDLs in the private sector. In a 2020 World Health Organization (WHO) Laboratory Assessment Tool (LAT) checklist, six major laboratories scored an average of 76% on overall core capacities.[14] Overall, SSES laboratory and public CDL numbers and distribution are adequate; however, they are less effective and less services efficient than private laboratories. Although private services are generally of higher standard, weak SSES and public CDL services lead to high demand for private services, which are paid out-of-pocket and are therefore less equitable.[15]

8. Public laboratories offer limited packages of subsidized tests of substandard quality. Of 268 laboratories, only 31 are accredited based on the International Organization for Standardization (ISO). These deficiencies are linked to staff constraints, outdated facilities and equipment, lack of supplies and maintenance, and weak quality control. The laboratory system is affected by internal fragmentation and limited networking among services. Well-functioning laboratory information systems are limited to major public health programs (i.e., tuberculosis and HIV/AIDS). There is a need to scale up the nascent, fragmented laboratory information system into a centralized one that networks reporting and quality management for CDLs and SSES laboratories, which can be the basis for cross-border information sharing on outbreaks. The country lacks an overall structure for laboratory services, resulting in gaps and duplications in services by providers and causing inefficiencies and high costs. Pre-service undergraduate curricula for medical doctors and laboratory specialists do not include courses in laboratory diagnostics; thus, quality improvement depends on laboratory-specific post-graduate training and on-the-job skilling. Continuing professional education and licensing systems are in the early stages of development.

9. To control COVID-19, development partners provided staff training, quality assurance, and equipment and supplies for COVID-19 testing to the Ministry of Health (MOH). However, a holistic approach is required to further improve overall laboratory services in terms of range and quality of services. Furthermore, laboratory services are in transition from classic multilevel laboratories to a more efficient, centralized system with specimen collection points and improved emergency and point-of-care testing. Such a centralized system requires adjustments to upgrade services and optimize available resources. Additional measures are required to improve quality of services, including laboratory management, quality assurance, and continuous quality improvement. Laboratory staff, more than 90% of whom are women, would benefit from capacity development. In the short-term, priority should be given to post-graduate training, skills laboratories, continuing professional education, licensing, and personnel management. Pre-service laboratory education remains underfunded, and dedicated institutions lack accreditation. The major private CDLs provide a model of technical efficiency, with well-equipped centralized laboratories and a network of specimen collection points. Regulation and accreditation of private services is required, while opportunities for public–private partnership (PPP) and private sector engagement are being

[14] WHO. *COVID-19 Health System Response Monitor. Kyrgyzstan: Preventing Transmission – Testing* (accessed 17 May 2022).
[15] ADB. 2018. Almaty–Bishkek Economic Corridor: Assessment Report for Diagnostic and Reference Laboratories. Manila.

explored. Improved infrastructure, service quality, biosafety, networking, and integration of laboratory services are required to ensure RHS and promote UHC.

10. **Border hospitals issues**. The health services in the border areas of Chui and Osh oblasts, with major land points of entry with neighboring countries, are of regional significance. Hospitals in these areas serve patients from across the borders and deal with health challenges associated with urbanizing economic zones, including free movement of people across borders, large numbers of migrant workers and travelers returning from abroad, intensive trade along corridors, and large local markets attended by traders from the region. This results in higher workloads in these hospitals. These hospitals also serve a higher proportion of ineligible and poor patients who lack access to basic health services under the government's Mandatory Health Insurance Fund (MHIF).[16] Hospitals in the border areas require flexible management and additional investments to meet multiple demands.

11. **Lessons**. The COVID-19 experience has demonstrated a need for the Kyrgyz Republic to further invest in RHS and IHR compliance. Laboratory services were unprepared and had inadequate testing capacity (lack of trained staff and only two public laboratories were involved in COVID-19 testing), leading to irregular provision of testing services and delayed reporting of results.[17] Laboratory services and hospital capacity at busy points of entry near Bishkek and Osh proved to be critical bottlenecks in RHS. The WHO-led Better Labs for Better Health (BLBH) initiative identified serious quality and efficiency issues in laboratory services. Implementation of the resulting national laboratory policy and program has been slow in most areas, including in strengthening governance and digital monitoring, networking of facilities, improving skills and quality of services, upgrading facilities, and improving financing to ensure equitable access and affordability to testing. Nonetheless, the country has achieved incremental successes. For example, through the BLBH initiative, the country introduced a mentoring program in 2016 to prepare national laboratories for accreditation in quality management systems, whereby 31 laboratories are now ISO-accredited. Also, the Swiss Agency for Development and Cooperation–financed Health Facilities Autonomy Project in Issyk-Kul oblast demonstrated promising results in centralizing laboratories and introducing sample transportation and laboratory information systems.[18] ADB's ongoing COVID-19 Pandemic Emergency Project highlighted the importance of preparedness and response to public health emergencies and maintaining a flexible approach to project implementation amid great uncertainty.[19]

12. **Government strategy and plans.** The government is strongly committed to RHS based on IHR. The government is committed to (i) provide high-quality, safe, and accessible healthcare for all under its national development strategy;[20] (ii) achieve UHC and other health-related Sustainable Development Goals under its national health program for 2019–2030, "Healthy Person, Prosperous Country;"[21] and (iii) contribute to global and RHS through implementation of

[16] The fund covers a basic package of primary health and emergency care services to all citizens free at the point of use. Inpatient and specialized outpatient care are provided with appropriate referrals and copayments vary across oblasts, by insurance status, and by exemption status.

[17] Country assessment of the Kyrgyz Republic under ADB. Regional: Addressing Health Threats in Central Asia Regional Economic Cooperation Countries and the Caucasus.

[18] Health Facilities Autonomy Project. 2019. *Evaluation Report to SDC. Update of end of phase evaluation of the "Health Facilities Autonomy" project in Kyrgyzstan, Phase I (January 2015–December 2018).* Bishkek.

[19] ADB. Kyrgyz Republic: COVID-19 Pandemic Emergency Project.

[20] Government of the Kyrgyz Republic. 2018. *National Development Strategy of the Kyrgyz Republic for 2018–2040*. Bishkek.

[21] Government of the Kyrgyz Republic. 2019. *The Program of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030 "Healthy Person, Prosperous Country."* Bishkek.

IHR.[22] To improve laboratory services, the MOH developed a comprehensive program and strategy that aims to optimize the network of laboratories through fair and equal access and financial protection of the population, and mechanisms to regulate and ensure quality control of healthcare laboratories.[23] A review of the program's action plan for 2019–2023 noted some progress—functional merger of 19 CDLs in Bishkek into four unified networks and the purchase of equipment.[24] However, less progress was observed in many areas including regulation and standardization, quality management, supplies, education, skills training, and piloting PPP. The MOH also issued orders to address the core crosscutting elements of laboratory services, including the optimization of national laboratory systems and introduction of specimen referral mechanisms.[25] Lessons from the COVID-19 pandemic response have deepened the government's commitment to strengthen laboratory services in terms of governance, financing, female staff development, services for women, and optimizing the network of laboratory services based on government plans for health sector reform and international best practices. The Kyrgyz Republic is committed to regional health cooperation through international agreements such as IHR, bilateral agreements (e.g., on tuberculosis/HIV with Kazakhstan and Tajikistan), and intergovernmental platforms (e.g., Commonwealth of Independent States, Eurasian Economic Union), and is a member of the Almaty–Bishkek Economic Corridor (ABEC).[26]

13. **Development coordination**. ADB has a strong partnership with the MOH and development partners. The country has an active Development Partners' Coordination Council with a thematic working group on health in which ADB actively participates. Several partners have been supporting the healthcare delivery system in the Kyrgyz Republic. National laboratories have received institutional and bilateral support. The United States Agency for International Development (USAID) is strengthening the network of tuberculosis and HIV/AIDS laboratories.[27] The United States Centers for Disease Control and Prevention supports regular participation of national HIV/AIDS labs in external quality assurance and proficiency programs on HIV testing.[28] Of particular importance is the WHO-led BLBH initiative launched in 2012 to strengthen laboratory systems in five countries of the WHO Europe region.[29] From 2014 to 2016, an interagency national laboratory working group facilitated a participatory planning process. This resulted in the national Program and Strategy for the Development of Laboratory Service of the Health Care System (footnote 24), and the establishment of the Coordination Laboratory Council, an expert advisory group on laboratory services development, in 2016.

B. Project Description

14. The project is aligned with the following impact: public health and RHS in the Kyrgyz

[22] Government of the Kyrgyz Republic. 2019. *Joint Order on the Implementation of the Action Plan for the Implementation of the International Health Regulations (2005) in the Kyrgyz Republic for 2020–2022*. Bishkek.
[23] Government of the Kyrgyz Republic. 2016. *Program and Strategy for the Development of Laboratory Service of the Health Care System (2016–2025).* Bishkek.
[24] Government of the Kyrgyz Republic. 2018. Plan of Activities for 2019–2023 as the First 5-Year Stage of Implementation of the Program of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development.
[25] Ministry of Health and Social Development Order No. 347 dated 20 May 2016, "On Approval of the Program and Strategy for Development of the Laboratory Service of the Health Care System of the Kyrgyz Republic"; and Order No. 458 dated 28 June 2018, "On Approval of the Regulation on the Reference Laboratory of the Ministry of Health of the Kyrgyz Republic."
[26] ADB. Regional: Almaty–Bishkek Economic Corridor Support.
[27] USAID. 2021. USAID Eliminating Tuberculosis in Central Asia; and USAID. 2020. USAID Meeting Targets and Maintaining Epidemic Control.
[28] United States Centers for Disease Control and Prevention. 2021. Kyrgyzstan Country Profile.
[29] WHO Regional Office for Europe. 2022. Better Labs for Better Health.

Republic improved.[30] The project will have the following outcome: coverage of effective laboratory and border hospital services in Chui and Osh oblasts enhanced.[31]

15. **Output 1: Capacity, quality, and networking of reference laboratories in Bishkek and Osh cities strengthened.** The output will support upgrading and strengthening the capacity of the four reference laboratories (two under SSES and two CDLs) in Bishkek and Osh cities, transforming them into the country's leading national or subnational reference laboratories. In addition to infrastructure and equipment upgrading, the project will finance mentoring support to the four reference laboratories to prepare them for ISO accreditation and to carry out key reference functions in their laboratory network, such as development of technical guidelines and provision of training and external quality assessment for non-reference laboratories. The reference laboratories will have links to global and regional laboratories' external quality assurance programs, and to resource institutions such as the WHO-led BLBH initiative, CAREC, and ABEC.

16. **Output 2: Laboratory services based on continuous quality improvement in Chui and Osh oblasts (including Bishkek and Osh cities) developed.** Under this output, the project will develop a laboratory network consisting of six public health laboratories under SSES and 11 CDLs, which includes the four reference laboratories (2 under SSES and 2 CDLs), in Chui and Osh oblasts (including Bishkek and Osh cities).[32] The MOH has drafted a national laboratory optimization master plan in consultation with the Coordination Laboratory Council with the support of ADB technical assistance during project preparation. The plan will guide the restructuring, upgrading, and continuous quality improvement of the laboratory network in Chui and Osh oblasts. This will include strengthening governance capacity for the national laboratory system, including improved regulations and standards and innovative solutions for planning, financing, managing, and monitoring. For instance, the MOH will update, decree, and implement the national quality and safety standards for laboratories with the support of national mentors, and the project will support the Kyrgyz Center of Accreditation to become a full International Laboratory Accreditation Cooperation member capable of providing ISO certification to qualified project laboratories.

17. The project will also support (i) upgrading or adapting and equipping laboratories based on modern quality and biosafety standards; (ii) networking SESS laboratories and CDLs in Chui and Osh oblasts internally and with patient care and cross-border services using specimen transport and the existing laboratory information management system developed by the MOH's e-Health Center; (iii) developing and implementing innovative solutions such as optimizing available resources and outsourcing services to the private sector; (iv) developing a laboratory system and financing plan for the Chui and Osh laboratories, including for supplies, maintenance, and other support components (costing exercise, review and updating of the benefits package,

[30] Government of the Kyrgyz Republic. 2019. *Joint Order on the Implementation of the Action Plan for the Implementation of the International Health Regulations (2005) in the Kyrgyz Republic for 2020–2022*. Bishkek; Government of the Kyrgyz Republic. 2019. T*he Program of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030 "Healthy Person–Prosperous Country"*. Bishkek; and ADB. 2022. *CAREC Health Strategy 2030*. Manila.

[31] The design and monitoring framework is in Appendix 1.

[32] The project will support upgrading and modernizing 17 laboratories (six public health laboratories and 11 CDLs) and six hospitals in a proposed laboratory network that includes about 100 laboratories and sample collection points covering about 3.7 million beneficiaries across Chui and Osh oblasts (including Bishkek and Osh cities). The facilities were selected based on cost-effectiveness. The core concept of the selection process is optimization of laboratory services. The choice of facilities is determined not only by the state of the facilities, but also by their role in the laboratory optimization master plan, including distance from capital, catchment population, and town population (in terms of staff services), and whether a facility needs upgrading.

and support laboratories to prepare budgets, update payment systems, and monitor budget expenditures to promote sustainable financing); and (v) developing a continuous quality improvement program for all laboratories in Chui and Osh oblasts (including training module development and skills training, which will involve review and updating of training curricula, support for reference laboratories in providing training to lower-level laboratories, and support for overseas training and twinning programs with regional and international institutions).

18. **Output 3: Patient care and biosafety capacity in hospitals in border areas and high travel zones in Chui and Osh oblasts improved.** The output will support upgrading and strengthening the capacities of six hospitals' emergency services and improving their links to reference laboratories. This will improve preparedness, prevention and control, screening, and case management of infectious diseases in border areas and high travel zones in Chui and Osh oblasts. Work under this output will include upgrading and equipping facilities, training staff, and improving cross-border and cross-sector information exchange and coordination of outbreak prevention and control efforts. The project will apply energy-efficient and gender-sensitive approaches in upgrading hospital and laboratory infrastructure.

C. Value Added by ADB

19. **ADB's value addition.** The project expands on ADB's comprehensive support to the COVID-19 pandemic response, and its ongoing regional support (footnote 1). ADB has substantial experience implementing communicable disease control and RHS projects.[33] The COVID-19 pandemic created an opportunity to strengthen laboratory services in the Kyrgyz Republic, but much of the work in this regard has been focused on increasing COVID-19 testing capacity, rather than on structural reforms in subsector governance, financing, staff development, and optimization of the laboratory services network based on international best practices and government plans. Because of additional grants from the Asian Development Fund 13 thematic pool to support RHS, the project will be implemented in close coordination with development partners. The project will also support activities on the Kyrgyz side for the ABEC project (footnote 26), under which regional networking of laboratories has been studied, and will feature exchange of information and coordinated capacity development with regional institutions. The project will also make an important contribution to the implementation of the RHS-focused CAREC Health Strategy 2030 (footnote 13). Emerging regional cooperation in health under CAREC will enable the Kyrgyz Republic to leverage regional health initiatives and enhance information exchange and dialogue with other CAREC countries; this will benefit this project and the larger goal of RHS. Meanwhile, ADB's experience in social sector PPPs will help the Kyrgyz Republic engage the private sector in improving the efficiency and quality of laboratory services.

D. Summary Cost Estimates and Financing Plan

20. The project is estimated to cost $35 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the project administration manual (PAM).[34]

[33] ADB. Regional: Addressing Health Threats in Central Asia Regional Economic Cooperation Countries and the Caucasus; ADB. 2018. ABEC: Assessment Report for Diagnostic and Reference Laboratories; M. Counahan et al. 2018. Investing in Regional Health Security for Sustainable Development in Asia and the Pacific: Managing Health Threats Through Regional and Intersectoral Cooperation. *ADB Sustainable Development Working Paper Series*. No. 56. Manila: ADB; ADB. Regional: Greater Mekong Subregion Health Security Project; and ADB. Greater Mekong Subregion Regional Communicable Diseases Control Project.

[34] Project Administration Manual (accessible from the list of linked documents in Appendix 2).

Table 1: Summary Cost Estimates
($ million)

Item			Amount[a]
A.		**Base Cost**[b]	
	1.	Output 1: Capacity, quality, and networking of reference laboratories in Bishkek and Osh cities strengthened	15.27
	2.	Output 2: Laboratory services based on continuous quality improvement in Chui and Osh oblasts (including Bishkek and Osh cities) developed	11.07
	3.	Output 3: Patient care and biosafety capacity in hospitals in border areas and high travel zones in Chui and Osh oblasts improved	5.05
		Subtotal (A)	**31.39**
B.		**Contingencies**[c]	**3.31**
C.		**Financial Charges During Implementation**	**0.30**
		Total (A+B+C)	**35.00**

[a] Includes taxes and duties of $4.71 million. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of $3.56 million, which will be covered by the government through exemptions. The government will also provide in-kind project administration support.
[b] In June 2022 prices.
[c] Physical contingencies computed at 5% for all cost categories. Price contingencies, which are calculated based on escalation rates for domestic and international costs estimated for the Kyrgyz Republic, include provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate. The annual escalation rate for international costs is estimated at 1.7% for each year from 2022 to 2023 and 1.8% per year from 2023 onward. The annual escalation rate for domestic costs is estimated at 15% for 2022, 12% for 2023, 7% for 2024, and 5% from 2025 to 2027.

Sources: Asian Development Bank and Government of the Kyrgyz Republic.

21. The government has requested (i) a concessional loan of $10 million from ADB's ordinary capital resources and (ii) a grant not exceeding $20 million from ADB's Special Funds resources (Asian Development Fund 13 thematic pool to support RHS) to help finance the project. The loan will have a 32-year term including a grace period of 8 years; an interest rate of 1.0% per year during the grace period and 1.5% per year thereafter; and such other terms and conditions set forth in the draft loan agreement.

22. The summary financing plan is in Table 2. The ADB loan will finance the expenditures toward goods and civil works, and a portion of taxes and duties of about $1.15 million. The ADB grant will finance goods, consulting services, and nonconsulting services as presented in the detailed cost tables in the PAM (footnote 34). The government has assured ADB that it will meet any financing shortfall to ensure that project outputs are fully implemented.

Table 2: Summary Financing Plan

Source	Amount ($ million)	Share of Total (%)
Asian Development Bank		
Special Funds resources (ADF 13 thematic pool)	20.0	57.1
Ordinary capital resources (concessional loan)	10.0	28.6
Government of the Kyrgyz Republic	5.0	14.3
Total	**35.0**	**100.0**

ADF = Asian Development Fund.
Sources: Asian Development Bank and Government of the Kyrgyz Republic.

23. Climate change mitigation is estimated to cost $0.66 million and climate change adaptation is estimated to cost $0.55 million. ADB will finance 100% of mitigation and adaptation costs. Measures include climate-proofing in building renovations such as improved thermal insulation, indoor air quality, and climate-friendly ventilation; rooftop photovoltaics; and prioritizing equipment and appliances with environment-friendly labels and credentials. Details are described

in the climate change assessment[35] and the PAM (footnote 34).

E. Implementation Arrangements

24. The project will be implemented over 5 years. The MOH will be the executing agency and will be responsible for overall strategic planning, guidance, management of the project, and ensuring compliance with the loan and grant covenants. A project implementation unit (PIU) has been established within the MOH to support the MOH with planning, implementation, monitoring and supervision, and coordination of all activities under the project. Consulting firms and individual consultants will be engaged by the MOH to support project implementation, including monitoring and evaluation, procurement, construction supervision, and other activities. The MOH will also be responsible for financial management, disbursements, contract management, financial reporting, project records management, and audits management. A high-level ministerial project steering committee, chaired by the MOH deputy minister and concurrently project director, will provide strategic guidance, review project performance, and take timely strategic measures to achieve the project outputs through the PIU. The implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 34).

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	1 October 2022–30 September 2027		
Estimated completion date	30 September 2027		
Estimated loan and grant closing date	31 March 2028		
Management			
(i) Project coordination and project oversight body	Project steering committee led by the Ministry of Health with participation from the Ministry of Finance and other key bodies		
(ii) Executing agency	Ministry of Health		
(iii) Key implementing agency	Project implementation unit established in the Ministry of Health		
Procurement	OCB (internationally advertised)	7 contracts	$18,846,000
	OCB (nationally advertised)	4 contracts	$3,660,000
Consulting services	Consulting firm, QCBS	Continuous quality improvement and costing lab services	$820,000
	Consulting firm, QCBS	LIMS development and implementation	$750,000
	Consulting firm, QCBS	Preparation of service contracts: Outsourcing and optimization of services	$250,000
	CQS and LCS	4 contracts	$420,000
	Individual consultant selection (national)	745 person-months	$700,000
Nonconsulting services	Direct contracting	Twinning and scholarship	$250,000
	OCB (national advertisement)	3 contracts	$1,200,000
Retroactive financing and/or advance contracting	Advance contracting as well as retroactive financing up to 20% of the loan and grant amounts may be used to reimburse eligible expenditures incurred before loan and grant signing date. Eligible items include recruitment of project implementation unit staff and procurement of equipment.		
Disbursement	Disbursement of the loan and grant proceeds will follow ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, CQS = consultants' qualifications selection, LCS = least-cost selection, LIMS = laboratory information management system, OCB = open competitive bidding, QCBS = quality- and cost-based selection.
Source: Asian Development Bank.

[35] Climate Change Assessment (accessible from the list of linked documents in Appendix 2).

III. DUE DILIGENCE

A. Economic and Financial Viability

25. **Economic viability.** ADB conducted an economic analysis at the country level, assessing the overall impact of the project on the population's welfare as well as estimating a cost-effectiveness indicator.[36] The cost-effectiveness analysis shows that the cost per disability-adjusted life year (DALY) is less than the GDP per capita using 9% and 6% discount rates, making the intervention very cost effective.[37] A sensitivity analysis was conducted assuming higher costs (increased by 10%) and lower health benefits (decreased by 10%), with the project remaining cost effective under all sensitivity scenarios.

26. **Financial viability.** Clinical laboratory diagnostics play a crucial role in raising the quality of patient care, improving health outcomes, and minimizing required downstream resources. The project will support a laboratory cost calculation exercise, based on WHO costing tools, which will include human resources, infrastructure, equipment, consumables, and quality assurance practices. The costing methodology and calculated cost will be proposed to the MHIF to serve as the basis for adjusting tariffs, updating the laboratory services benefit package, and establishing more realistic compensation of laboratory tests costs. The budget analysis notes that allocations to the health sector show that the government is committed to supporting the sector and helping the MOH cover health expenditures. Although the project will not have a dedicated revenue-generating component, laboratories will be able to generate revenues, which, when paired with more efficient budgeting by healthcare organizations, will contribute to the project's sustainability. There is reasonable basis that sufficient funding will be available to cover recurrent costs.[38]

B. Sustainability

27. During implementation, laboratory equipment and other medical equipment will be under supplier-provided 12-month warranty plus an additional 24-month warranty with comprehensive maintenance services. After project completion, the MOH will fund operation and maintenance costs of project assets from its recurrent budget through respective healthcare organizations. The optimization of laboratory services under the project will ensure rational use of resources, and will contribute to improved efficiency and quality laboratory services. The project will promote sustainable financing through a costing exercise as basis for adjusting tariffs, reimbursement levels for laboratory tests, and the laboratory services benefit package (para. 26). After such adjustments, the project will support laboratories to prepare budgets, update the payment system, and monitor expenditure and utilization to ensure sustainability and cost efficiency.

C. Governance

28. **Financial management**. The financial management assessment concluded that the project financial management risk is *substantial.* Although the executing agency has experience implementing ADB-financed projects, the PIU staff have not yet been recruited, and potential adverse impacts of weak accounting need to be considered. The key risk-mitigating strategies are set out in the financial management assessment.[39] With timely implementation of the

[36] Economic Analysis (accessible from the list of linked documents in Appendix 2).
[37] WHO. 2016. *Cost Effectiveness Thresholds: Pros and Cons*. Geneva. The intervention is deemed very cost-effective if the cost per DALY is less than GDP per capita, cost-effective if the cost per DALY is less than three times GDP per capita, and not cost-effective if the cost per DALY exceeds three times GDP per capita.
[38] Financial Analysis (accessible from the list of linked documents in Appendix 2).
[39] Financial Management Assessment (accessible from the list of linked documents in Appendix 2).

mitigation measures outlined in the financial management action plan, the project financial management arrangements are deemed satisfactory. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government.

29. **Procurement.** Procurement of goods, works, nonconsulting services, and consulting services will be undertaken in accordance with the ADB Procurement Policy (2017, as amended from time to time) and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time). Packages using open competitive bidding will follow the applicable public procurement laws, with modifications agreed between the government and ADB, as set out in the procurement plan, and will be updated at least annually. Value for money in procurement will be achieved by (i) promoting the use of open competitive bidding in all procurement contracts to promote highly competitive and innovative bids; and (ii) ensuring strong terms of reference for consulting services and acceptable technical specifications for goods, works, and nonconsulting services that give potential suppliers clarity on what they should offer the executing agency.

D. Poverty, Social, and Gender

30. **Poverty and social.** Employment levels have dropped sharply as a result of COVID-19-related lockdowns. The national poverty rate increased from 20.1% in 2019 to 25.3% in 2020 (footnote 6). The project will benefit all Kyrgyz citizens by supporting the prevention and containment of infectious diseases and enabling early detection of NCDs. The project will especially benefit people in the catchment areas of targeted laboratories, many of whom live in busy border areas, by improving their access to quality laboratory services and hospitals, with additional indirect benefits on household income and economic recovery.

31. **Gender.** The project's categorization is *effective gender mainstreaming*. Laboratories in the Kyrgyz Republic provide a state-guaranteed package of microscopy tests, including for female-specific health needs. The project will improve the quality and range of tests, including several new tests for female-specific health needs (pregnancy, anemia, thyroid disorders, and cervical and ovarian cancer). The project will educate and train laboratory staff in using new and technologically advanced equipment, examination methods, quality- and biosafety-management systems, and sample-transportation methods. Women will be the main beneficiaries of capacity-building and training activities, as more than 90% of laboratory staff and managers are women.

E. Safeguards

32. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.[40]

33. **Environment (category B).** Potential environmental impacts related to civil works and laboratory operations are insignificant, temporary, and/or short term. The MOH has prepared initial environmental examination reports with environmental management plans in accordance with ADB's Safeguard Policy Statement and government laws and regulations. The MOH will submit safeguard monitoring reports to ADB on a semiannual basis.

34. **Involuntary resettlement and indigenous peoples (category C).** The project undertook comprehensive social safeguards due diligence covering all sites where civil works are expected. The planned civil works entail minor refurbishment and repair of existing medical facilities and will not require any new land acquisition.

[40] ADB. Safeguard Categories.

F. Summary of Risk Assessment and Risk Management Plan

35. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.[41]

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigation Measures
Technical. Delay in approving the national quality and safety standards for laboratories.	MOH will carefully monitor finalization and approval of the standards.
Staffing. Although the MOH has implemented ADB- and development partner–funded projects, MOH staff have limited experience in directly managing the financial aspects of ADB-funded projects.	Key PIU staff (PIU manager, accountant, finance officer, procurement specialist, and disbursement officer) will be engaged in advance to ensure project readiness and continuity of implementation. ADB will provide PIU staff with training on ADB financial management and procurement procedures to strengthen the fiduciary capacity of the project.
Accounting. MOH lacks a financial management manual that details financial management processes and procedures.	The PIU will prepare a financial management manual, to be approved by ADB, that will detail financial management processes and procedures based on MOH regulations and the project administration manual.

ADB = Asian Development Bank, MOH = Ministry of Health, PIU = project implementation unit.
Source: Asian Development Bank.

IV. ASSURANCES

36. The government has assured ADB that implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, financial management, and disbursement as described in detail in the PAM (footnote 34) and loan and grant documents.

37. The government has agreed with ADB on certain covenants for the project, which are set forth in the draft loan and grant agreements.

V. RECOMMENDATION

38. I am satisfied that the proposed loan and grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

(i) the loan of $10,000,000 to the Kyrgyz Republic for the Strengthening Regional Health Security Project, from ADB's ordinary capital resources, in concessional terms, with an interest charge at the rate of 1.0% per year during the grace period and 1.5% per year thereafter; for a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board; and

(ii) the grant not exceeding $20,000,000 to the Kyrgyz Republic, from ADB's Special Funds resources (Asian Development Fund), for the Strengthening Regional Health Security Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant agreement presented to the Board.

Masatsugu Asakawa
President

22 August 2022

[41] Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Public health and regional health security in the Kyrgyz Republic improved[a]			
Results Chain	**Performance Indicators**	**Data Sources and Reporting Mechanisms**	**Risks and Critical Assumptions**
Outcome			
Coverage of effective laboratory and border hospital services in Chui and Osh oblasts enhanced	By March 2028: a. Public health laboratory services' capacity increased to 70% (2022 baseline: 60% national average based on e-SPAR 2021) (OP 1.1, OP 7.3) b. Number of essential clinical diagnostic tests,[b] including tests for female-specific health conditions, performed by project CDLs increased by at least 30% (2022 baseline: 30 tests) (OP 1.1, OP 2.2) c. Border hospitals and points of entry capacities increased to 65% (2022 baseline: 47% national average based on e-SPAR 2021) (OP 1.1, OP 7.3)	a. and c. e-SPAR self-assessment reports; WHO laboratories' annual reports b. Laboratories' baseline and end-line surveys using a standard checklist; reports generated from LIMS	R: Increasing capacities take time to effect beyond the project implementation period
Outputs			
Output 1: Capacity, quality, and networking of reference laboratories in Bishkek and Osh cities strengthened	1a. By October 2025, four project reference laboratories have applied for ISO 15189 accreditation[c] (2022 baseline: 0) (OP 6.1.1) 1b. By October 2025, four project reference laboratories are linked to peripheral laboratories through LIMS and sample-transportation services (2022 baseline: 0) (OP 6.2.1) 1c. By September 2027, average LAT score of four project reference laboratories (national and subnational) improved to at least 85% (2022 baseline: 64%) (OP 6.2.1, OP 7.3) 1d. By September 2027, each project reference laboratory participates in external quality assessment for at least 50% of tests it offers, including at least 50% of tests for female-specific health conditions[d] (2022 baseline: About 15% of tests covered; 0% of tests for female-specific health conditions covered) (OP 2.2.2, OP 6.2.1) 1e. By September 2027, at least 75% of project reference laboratories (national and subnational) accredited to an international ISO laboratory standard[c] (2022 baseline: 0) (OP 6.2.1, OP 7.3)	1a.–1e. Reference laboratories' baseline and end-line surveys 1a., 1c.–e. Reference laboratories' annual reports; project progress reports	A: Regulatory and other stakeholders support reforms R: Staff and budget constraints reduce the Ministry of Health's stewardship role in laboratory optimization reform
Output 2: Laboratory services based on continuous quality improvement in Chui and Osh oblasts (including Bishkek and Osh cities) developed	By September 2027: 2a. LAT score of 13 non-reference project laboratories improved to at least 70% (2022 baseline: 45%) (OP 6.2.1, OP 7.3) 2b. At least 70% of 13 non-reference project laboratories meet national quality and safety standards (2022 baseline: 0) (OP 6.2.1) 2c. At least 20 new essential laboratory tests are introduced and performed in project CDLs, of which 15 are related to female-specific health conditions, reflecting	2a.–d. Chui and Osh laboratories' baseline and end-line surveys 2b.–d. Chui and Osh laboratories' annual reports; project progress reports	

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	enhanced accessibility to the essential package of clinical diagnostic tests (2022 baseline: N/A) (OP 2.2.2, OP 6.2.1) 2d. Turnaround time for bacteriology culture and antimicrobial sensitivity tests decreased to 3 days (2022 baseline: 10 days) (OP 6.2.1)	2b.–d. Annual monitoring using standard checklist 2c.–d. Reports generated from LIMS	
Output 3: Patient care and biosafety capacity in hospitals in border areas and high travel zones in Chui and Osh oblasts improved	3a. By October 2024, six border hospitals upgraded with low carbon and climate-resilient infrastructure and equipment for improved patient and provider care and surge capacity (2022 baseline: 0) (OP 3.1.3, OP 3.2.5, OP 6.2.1, OP 7.3) 3b. By September 2027, at least 90% of female staff in six border hospitals improved knowledge and skills in infection prevention and control (2022 baseline: N/A) (OP 2.1.1, OP 6.2.1, OP 7.3)	3a.–b. Project quarterly progress reports using the checklist 3b. Pre- and post-training assessments	

Key Activities with Milestones

1. Capacity, quality, and networking of reference laboratories in Bishkek and Osh cities strengthened.

1.1 Promote formal recognition of selected laboratories as reference laboratories, identify reference functions, develop plans, and provide support to carry out these functions (Q1 2023–Q3 2027).
1.2 Prepare the reference laboratories' budgets for their reference functions (Q4 2023–Q1 2024).
1.3 Establish a mentoring program[e] for reference laboratories to apply for ISO accreditation within 36 months from loan and grant effectiveness (Q4 2023–Q3 2027).
1.4 Select a universal tool to monitor the performance of the four reference laboratories, and collect and analyze data annually (Q3 2024–Q3 2027).
1.5 Support reference laboratories during the early stages of their work to provide training and external quality assessment for non-reference laboratories (Q3 2023–Q3 2027).
1.6 Upgrade laboratory infrastructure, laboratory equipment, and teaching facilities (Q1 2023–Q2 2024).
1.7 Carry-out regional collaboration activities with Almaty–Bishkek Economic Corridor and Central Asia Regional Economic Cooperation (Q1 2023–Q3 2027).

2. Laboratory services based on continuous quality improvement in Chui and Osh oblasts (including Bishkek and Osh cities) developed.

2.1 Strengthen governance capacity for the national laboratory system, including regulations, standards, planning, financing, management, monitoring, and studies for innovative solutions.
2.1.1 Conduct research of existing quality and (bio)safety standards and develop updated draft national quality and safety standards meeting modern requirements, respective legislation, and plan to implement the quality and safety standards (Q2–Q4 2023).
2.1.2 Circulate drafts for feedback and develop a final proposal of standards and legislation (Q1 2024).
2.1.3 Provide advocacy and support to agencies and stakeholders in adopting the quality and safety standards and legislation within 24 months from loan and grant effectiveness (Q2-Q3 2024).
2.1.4 Identify the support the KCA needs to obtain full ILAC membership for ISO 15189; develop the plan; and perform support activities for the KCA to become a full ILAC member (Q4 2024–Q3 2025).
2.1.5 Select national mentors for all other laboratories in preparation for accreditation to national standards (Q4 2023–Q3 2027).
2.1.6 Review baseline LAT assessment and compile a list of informative and actionable performance indicators (Q4 2023).
2.1.7 Choose pilot performance indicators for each type and level of laboratory in the project laboratories (Q1–Q2 2024).
2.1.8 Carry-out preparatory work and implement innovative pilot solutions (Q3 2024–Q3 2027).
2.2 Develop a cohesive laboratory system and financing plan for Chui and Osh laboratories with stakeholders, including support components such as supplies and maintenance.
2.2.1 Approve and adopt the National Laboratory Optimization Master Plan 2023–2030 within 12 months from loan and grant effectiveness (Q4 2023).
2.2.2 Establish a 4- to 5-member laboratory costing working group, represented by CDL and State Sanitary and Epidemiological Surveillance Coordination Laboratory Council members (Q1 2023).
2.2.3 Based on the optimization master plan, agree on a list of tests to be included in the costing exercise (Q2 2023).

Key Activities with Milestones

2.2.4 With MHIF, determine costing methodology based on WHO costing tools adapted to the needs of the country (Q2 2023).
2.2.5 Present and get the approval of MHIF and the Ministry of Health on costing methodology and outcome (Q2–Q3 2023).
2.2.6 Propose an updated reimbursement mechanism to MHIF that reflects the calculated cost of laboratory tests (Q3–Q4 2023).
2.2.7 Propose an updated benefits package (selected tests) (Q3–Q4 2023).
2.2.8 Support laboratories to prepare budgets, update payment systems, and monitor expenditures and utilization (sustainability measures) (Q3 2023–Q2 2024).

2.3 Upgrade and equip laboratories based on modern quality and biosafety standards.
2.3.1 Civil works and/or minor renovation: (i) prepare a description of civil works and finalize tender documentation, (ii) conduct tendering and contract awarding, (iii) monitor progress and compliance with environmental and social safeguards, and (iv) verify payments against work completed (Q1 2022–Q3 2023).
2.3.2 Laboratory equipment upgrading: (i) define and prepare bidding documents (Q1–Q2 2022); (ii) approve and advertise bidding documents (by ADB Board consideration date), evaluate bids, and award contracts (Q4 2022); (iii) monitor delivery, installation, technical training, and handing-over (Q1–Q4 2023); and (iv) monitor execution of warranty and post-warranty maintenance services (Q1 2024–Q3 2027).

2.4 Network SESS laboratories and CDLs in Chui and Osh oblasts internally and with patient care and cross-border services using digital and physical communication systems.
2.4.1 Prepare LIMS consulting firm terms of reference (Q1–Q3 2022); and approve and advertise terms of reference, evaluate firms, and award contract (Q4 2022–Q1 2023).
2.4.2 Define LIMS development and/or customization requirements (Q2 2023); prepare tender document for information technology hardware (Q2 2023); approve and advertise bidding document, evaluate bids, and award contract (Q2 2023–Q3 2023).
2.4.3 Prepare LIMS implementation plan and operational guidelines (Q2–Q3 2023).
2.4.4 Develop and/or customize software, and interface with laboratory equipment (Q3 2023–Q1 2024).
2.4.5 Conduct user training, including basic computer skills (Q1–Q2 2024).
2.4.6 Prepare and conduct user acceptance testing and go live (Q2–Q3 2024).
2.4.7 Monitor post-live performance (Q4 2024–Q3 2027).

2.5 Develop a continuous quality improvement program for the Chui and Osh laboratory services, including strengthening human resources for health.
2.5.1 Review post-graduate training curricula of KSMI, including waste management for laboratories (Q2 2023).
2.5.2 Develop needed curricula taking into account needs and capacities (Q3 2023).
2.5.3 Identify teaching personnel and conduct training workshops for the core teaching staff of KSMI (Q3–Q4 2023).
2.5.4 Assemble working groups for respective disciplines and manage the development of courses (Q4 2023–Q3 2024).
2.5.5 Provide support during the first runs of new courses in the renovated facilities (Q2 2024–Q1 2025).
2.5.6 Select candidates and organize relevant studies abroad supported by project scholarships (Q4 2023–Q3 2027).
2.5.7 Select and organize twinning programs for two reference laboratories (Q4 2024–Q3 2027).

3. Patient care and biosafety capacity in hospitals in border areas and high travel zones in Chui and Osh oblasts improved.

3.1 Civil works and minor renovation: (i) prepare a description of civil works and finalize tender documentation, (ii) conduct tendering and contract awarding, (iii) monitor progress and compliance with environmental and social safeguards, and (iv) verify payments against work completed (Q1 2022–Q3 2023).
3.2 Laboratory equipment upgrading: (i) define tender packages and finalize tender documents; (ii) manage tendering process, tender evaluation, and contract awarding; (iii) monitor delivery, installation, technical training, and handing-over; and (iv) monitor execution of warranty and post-warranty maintenance services (Q1 2022–Q3 2027).
3.3 Provide training related to infection prevention and control (Q1–Q2 2025).

Project Management Activities

Establish project implementation unit (Q3 2022).
Recruit key project implementation unit staff (Q3–Q4 2022).
Initiate advertisement of consultants, equipment, and civil works packages (Q3 2022–Q1 2023).
Award consultant, equipment, and civil works contracts (Q4 2022–Q4 2023).
Continue monitoring and reporting on (i) referral laboratory diagnostics, quality assurance, training, licensing support, digital communication, specimen transport, and information technology; (ii) laboratory system regulation, continuous

quality improvement, planning and financing, and civil and biomedical engineering; and (iii) project coordination, procurement, financial management, gender, environment, resettlement, social safeguards, monitoring and evaluation, research, and audit (quarterly)	
Inputs	
ADB:	$20,000,000 (grant) $10,000,000 (concessional loan)
Government of the Kyrgyz Republic:	$5,000,000

A = assumption, ADB = Asian Development Bank, CDL = clinical diagnostic laboratory, e-SPAR = electronic State Parties Self-Assessment Annual Reporting Tool, ILAC = International Laboratory Accreditation Cooperation, ISO = International Organization for Standardization, KCA = Kyrgyz Center for Accreditation, KSMI = Kyrgyz State Medical Institute for Retraining and Advanced Training, LAT = Laboratory Assessment Tool, LIMS = laboratory information management system, MHIF = Mandatory Health Insurance Fund, N/A = not applicable, OP = operational priority, Q = quarter, R = risk, SSES = State Sanitary and Epidemiological Surveillance, WHO = World Health Organization.

[a] Government of the Kyrgyz Republic. 2019. *Joint Order on the Implementation of the Action Plan for the Implementation of the International Health Regulations (2005) in the Kyrgyz Republic for 2020–2022.* Bishkek*;* Government of the Kyrgyz Republic. 2019. *The Program of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030 "Healthy Person—Prosperous Country."* Bishkek*;* and ADB. 2022. *CAREC Health Strategy 2030*. Manila.

[b] The essential package of tests refers to a number of critical, integral, or basic clinical diagnostic tests vital for the diagnosis of a health condition or disease. The package consists of 61 tests, of which 31 will be new (there are currently 30 tests being performed). Out of 61 tests, 21 are related to female-specific health conditions, of which 18 will be new.

[c] Laboratories processing patient samples should aim for ISO 15189 *Medical laboratories: Requirements for quality and competence* accreditation, while laboratories processing samples from environment, food, and consumer products should aim for ISO/International Electrotechnical Commission 17025 *General requirements for the competence of testing and calibration laboratories* accreditation.

[d] Pregnancy, anemia, thyroid disorders, cervical and ovarian cancer.

[e] The mentoring program includes all four antimicrobial resistance laboratories previously mentored by WHO's Better Laboratories for Better Health initiative (three of which are project facilities while the one non-project facility is the Bacteriology Laboratory of Jalalabad Oblast Regional Hospital).

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the linked documents in Appendix 2).

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS
http://www.adb.org/Documents/RRPs/?id=55131-001-3

1. Loan Agreement
2. Grant Agreement
3. Sector Assessment (Summary): Health
4. Project Administration Manual
5. Financial Analysis
6. Economic Analysis
7. Summary Poverty Reduction and Social Strategy
8. Risk Assessment and Risk Management Plan
9. Contribution to Strategy 2030 Operational Priorities
10. Climate Change Assessment
11. Gender Action Plan
12. Draft Initial Environmental Examination (Chui Oblast Subproject)
13. Draft Initial Environmental Examination (Osh Oblast Subproject)

Supplementary Documents

14. Financial Management Assessment
15. Strategic Procurement Planning