

Initial Environmental Examination

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Tajikistan: Integrated Regional Health Security and Primary Health Care Services Project

Prepared by the Ministry of Health and Social Protection of the Population of the Republic of Tajikistan for the Asian Development Bank (ADB).

CURRENCY EQUIVALENTS

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ABBREVIATIONS

ACM	-	Asbestos-Containing Materials
ADB	-	Asian Development Bank
CAREC	-	Central Asia Regional Economic Cooperation Program
CEP	-	Committee for Environment Protection
CESS	-	Centre for Epidemiology and Sanitary Services
CFS	-	Committee on Food Security
CHS	-	Community Health and Safety
CRA	-	Climate Hazard, Risk, and Vulnerability Assessment
DHC	-	District Health Center
DRS	-	Districts of Republican Subordination
DSC	-	Design and Supervision Consultant
EA	-	Executing Agency
EHS	-	Environment, Health and Safety
EHSO	-	Environmental, Health and Safety Officer
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
EMoP	-	Environmental Monitoring Plan
ESO	-	Environmental and Social Officer
GAP	-	Gender Action Plan
GBV	-	Gender-Based Violence
GBAO	-	Gorno-Badakhshan Autonomous Oblast
GDP	-	Gross Domestic Product
GRISH	-	Gender Responsive Integrated Services for Health
GIIP	-	Good International Industry Practices
GRM	-	Grievance Redress Mechanism
IA	-	Implementing Agency
IBAT	-	Integrated Biodiversity Assessment Tool
IEE	-	Initial Environmental Examination
IFC	-	International Finance Corporation
KBA	-	Key Biodiversity Area
M&E	-	Monitoring and Evaluation
MOA	-	Ministry of Agriculture
MOF	-	Ministry of Finance
MOHSPP	-	Ministry of Health and Social Protection of the Population
MOLME	-	Ministry of Labor, Migration and Employment of the Population
OHS	-	Occupational Health and Safety
PAM	-	Project Administration Manual
PHC	-	Primary Health Care
PAG	-	Project Administration Group
PIU	-	Project Implementation Unit
POE	-	Points of Entry
RHH	-	Rural Health Houses
RRP	-	Report and Recommendation of the President

SEE	-	State Ecological Expertise
SEMP	-	Contractor's Site-Specific Environmental Management Plan
SEMR	-	Semiannual Environmental Monitoring Report
SES	-	Sanitary and Epidemiological Service
SOP	-	Standard Operating Procedure
SPS	-	Safeguard Policy Statement
SRHR	-	Sexual and Reproductive Health and Rights
UN	-	United Nations
VOC	-	Volatile Organic Compound
WHO	-	World Health Organization

WEIGHTS AND MEASURES

°C	degree celsius	m ²	square meter
dB	decibel	m ³ /a	cubic meter per annum
g	gram	m ³	cubic meter
ha	hectare	m ³ /d	cubic meter per day
km	kilometer	m ³ /s	cubic meter per second
km ²	square kilometer	mg/l	milligram per liter
kW	kilowatt	mg/m ³	milligram per cubic meter
L	liter	mm	millimeter
L _{Aeq}	Equivalent continuous A-weighted sound pressure level	T	metric ton
MW	megawatt	t/d	metric ton per day
m	meter	t/a	ton per annum

NOTE

In this report, "\$" refers to United States dollars.

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Map 1: Location map of the project components and facilities

Integrated Regional Health Security and Primary Health Care Services

Legend

GBV Shelters

POE

Selected sites for construction

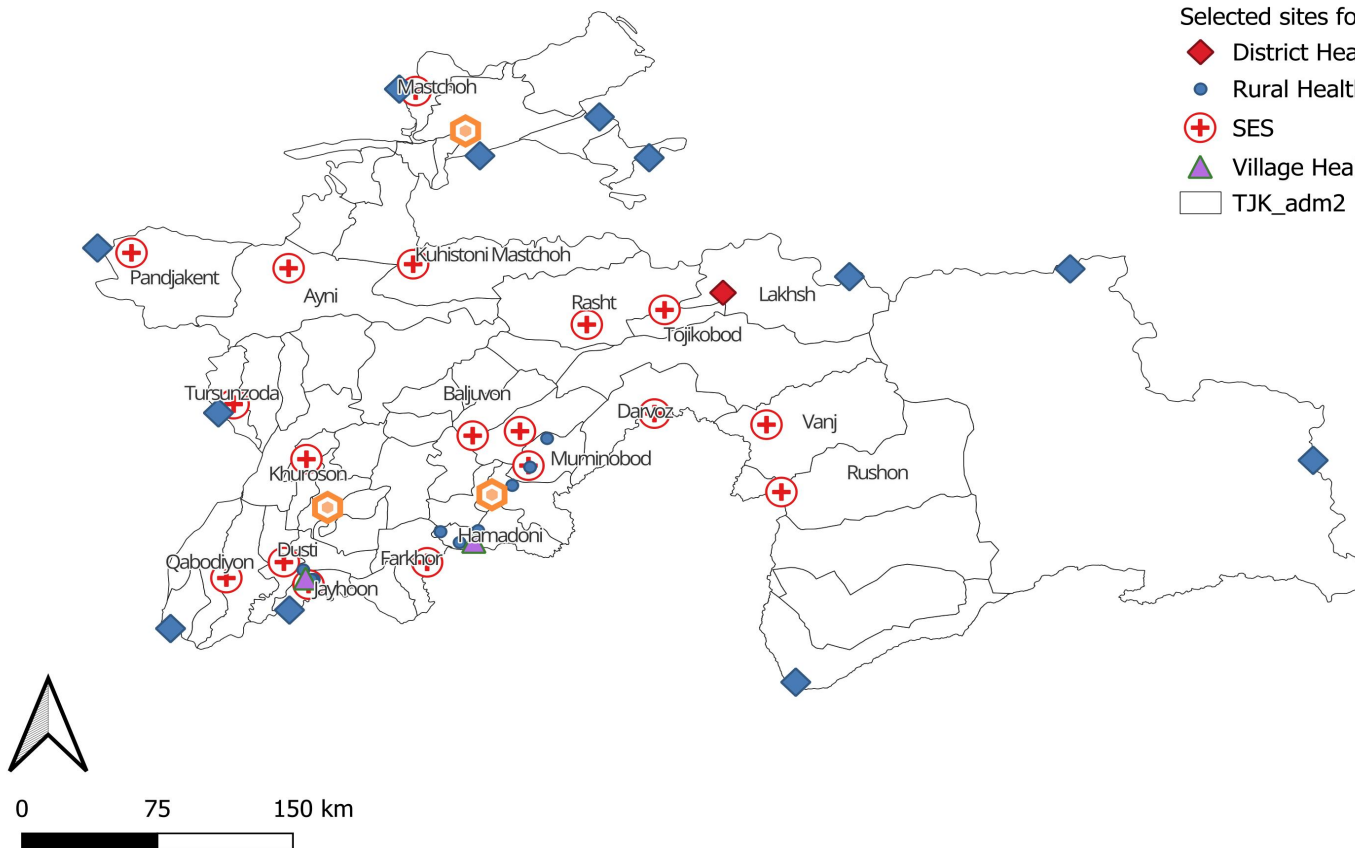
District Health Polyclinic

Rural Health House

SES

Village Health Centers/Clinic

TJK_adm2



I. EXECUTIVE SUMMARY

A. Introduction

1. This is the initial environmental examination (IEE) report prepared for the proposed Integrated Regional Health Security and Primary Health Care Services Project (the project) to be implemented in the Republic of Tajikistan. The IEE has been prepared in accordance with Asian Development Bank (ADB) Safeguard Policy Statement (SPS) 2009 based on available concept design information, site investigations, and stakeholder consultations. The IEE is based on concept design information that is sufficiently detailed to identify key environmental risks and define preliminary mitigation measures. This includes site layouts, functional specifications, and initial system configurations (e.g., healthcare waste management and operational systems). The IEE will be updated once the detailed designs of the project facilities are available.

2. The proposed project aims to enable Tajikistan to better respond to cross-border health threats, improving the efficiency and capacity of public health laboratory system, transforming primary health care (PHC) system to better respond to emerging climate-related health risks, expand women's access to health care services, and improving regional health security in the Central Asia region. It prioritizes digital health transformation and institutional integration of epidemiological and public health laboratory stakeholders to improve the efficiency, effectiveness, and capacity of overall disease surveillance system. It will upgrade health infrastructure and strengthen PHC to deliver patient-centered services more efficiently. It will also empower women in rural and border communities by increasing the awareness of emerging notifiable diseases, climate change-related health risk, risk factors that affects women's and girl's sexual and reproductive health and rights (SRHR), and the gender-based violence (GBV). The improved disease surveillance and laboratory testing capacity of Tajikistan to be supported through the project will enable timely and effective detection and response to emerging infectious diseases, which is considered a regional public good, as it contributes to improved regional health security in Central Asia and beyond.

3. The project is aligned with the following impacts: (i) Equitable access to essential climate-resilient health services improved with rural-urban and gender-related health disparities addressed, and strengthening service resilience and continuity of service delivery under climate and disaster risks (National Health Strategy 2021–2030 of Tajikistan), and (ii) public health threats in Central Asia Regional Economic Cooperation Program (CAREC) region addressed comprehensively, efficiently, and sustainably while safeguarding the needs of the most vulnerable segments of the population in Tajikistan (CAREC Strategy 2030). The project will have the following outcome: Health security and service delivery of Tajikistan improved with enhanced gender responsiveness and climate resilience. The project will have four outputs: Output 1: Disease prevention and public health emergency response capacity improved; Output 2: Capacity and efficiency of laboratories improved; Output 3: Primary health care reform to manage emerging infectious disease, climate-related health risk supported; and Output 4: Gender-responsive integrated services for health centers established and operational.

4. The project will be implemented from November 2026 to December 2031. The Ministry of Health and Social Protection of the Population (MOHSP) is the executing agency, and the MOHSP and the Committee on Food Security (CFS) are the implementing agencies of the project.

5. The project will focus on 18 border and rural districts, including their respective 18 jamoats and 36 villages, where underserved, and hard-to-reach groups face the most severe gaps in public health service access.

B. Objective and Scope of the IEE

6. This IEE report documents the environmental assessment of the physical infrastructure to be developed under the proposed project and identifies the environmental risks and issues to be considered in the project planning and design stages. The IEE addresses, as far as required, the environmental, health and safety management requirements of the ADB's SPS 2009 as well as those of the country safeguard system of Republic of Tajikistan. The scope of work to accomplish the above objective, comprises of the following:

- understanding the existing baseline environmental conditions of the project areas based on secondary data and site inspections. Baseline characterization relies on secondary data, site observations at selected representative facilities, and stakeholder inputs.
- identifying the key environmental risks-particularly related to healthcare waste management, occupational health and safety, and operational systems-and defines preliminary mitigation measures, performance standards, and mandatory design requirements within the Environmental Management Plan (EMP),
- prediction of significant impacts on the major environmental components using appropriate tools wherever necessary,
- recommending appropriate mitigation measures to avoid and minimize the adverse environmental impacts, and
- preparing an EMP for the implementation. The EMP will outline preventive and curative strategies for minimizing adverse impacts during design and pre-construction, construction and operational phases of the project along with cost estimates and schedule for the implementation of EMP. These requirements will be incorporated into detailed engineering design, bidding documents, and contractor obligations.

7. The study area considered for the IEE study included (i) environmental features within 100 m periphery of project sites, and (ii) for ecological aspects within 5km m radius of the project sites.

C. Stages and Methodology Adopted for the IEE Study

8. The IEE study has been carried out in accordance with the requirements of the ADB SPS 2009. The IEE methodology ensures that environmental concerns are given adequate weightage in the selection of locations and design of the proposed project facilities. The methodology employs an iterative approach in which potential environmental issues were examined at successive levels in detail and specificity, at each step of the process.

9. The environmental assessment is based on the information collected from secondary sources and field inspections. As per requirements of the State Committee for Environment Protection (CEP), data of air, water, noise, soil, waste, and flora and fauna have been collected based on secondary sources and various issues have been examined during field surveys to determine the magnitude of environmental impacts. This IEE report has been prepared based on following:

- desktop review of the individual project locations.
- detailed reconnaissance survey of selected high risk project locations.
- preliminary concept design information provided by the technical team.
- data collected from a variety of secondary sources including government documents, census statistics data, and government agencies.
- climate hazard, risk, and vulnerability assessment of the project.
- public consultations organized with the project affected communities, stakeholders, and government officers to gather inputs as to existing environmental conditions in and around

the project areas.

D. Brief Project Description

10. The proposed project is a health sector investment aimed at strengthening public health preparedness, improving access to quality primary healthcare services, and enhancing disease surveillance and response capacity in selected regions of the country. The project supports the Government's health sector reform priorities and focuses on addressing infrastructure gaps, service delivery constraints, and system resilience, particularly in underserved and vulnerable communities.

11. The project comprises a combination of physical investments and institutional strengthening activities. The civil works component includes construction of new and upgraded healthcare and public health facilities, such as rural health houses, village health centers or clinics, district-level health polyclinics, sanitary and epidemiological service (SES) laboratories, and short-term residential facilities for survivors of gender-based violence. These facilities will be designed to provide a continuum of care from community-level primary services to district-level diagnostics and referral functions, while maintaining a limited construction footprint and avoiding environmentally sensitive areas.

12. All construction activities are planned to be carried out on pre-identified land plots allocated for health or social service use or within the premises of existing facilities. One of the prerequisites for selection of sites for construction of SES laboratories is the proximity to district health facilities. Selection of sites for construction of PHC facilities, including rural health houses and centers, is population density and availability of such facilities in target districts.

13. Buildings will follow standardized designs approved by the MOHSPP and will comply with national building codes, public health standards, and applicable biosafety and infection prevention requirements. The scale of the civil works is modest, with low-rise structures and localized construction activities, will result in limited and manageable environmental impacts.

14. The project will adopt a mixed healthcare waste management system based on facility typology. CESS laboratories will include on-site treatment systems (e.g., autoclave or equivalent), while rural health houses (RHHs), points of entry (POEs), and selected PHC facilities will rely on centralized treatment at designated SES facilities, supported by a defined transport system. The waste management system will therefore comprise: (i) segregation at source; (ii) on-site storage; (iii) controlled transport; (iv) treatment at designated facilities; and (v) final disposal in accordance with national regulations and Good International Industry Practices (GIIP).

15. In addition to infrastructure development, the project includes capacity-building, training, and operational support to strengthen service delivery, medical waste management, environmental management, and occupational health and safety practices. The project is expected to deliver improved healthcare access, enhanced diagnostic and surveillance capacity, and strengthened social protection services, contributing to better health outcomes and increased system resilience at the community and district levels.

E. Environmental Assessment and Safeguard Due Diligence

16. The Project is classified as Category B for environment in accordance with the ADB Safeguard Policy Statement (SPS, 2009), as the anticipated impacts are expected to be site-specific, largely temporary, and manageable with appropriate mitigation measures. The anticipated environmental impacts are associated with small to medium-scale civil works, including demolition of obsolete facilities, reconstruction or upgrading of laboratories and quarantine areas at border POEs, and rehabilitation of rural health facilities with improved waste management systems. Potential construction-phase impacts include dust and noise, generation of construction and demolition waste (including asbestos-containing materials (ACM), if identified as part of pre-bid ACM surveys), localized soil and water contamination risks, and occupational and community health and safety risks. Operational-phase impacts relate primarily to healthcare waste management and associated biosafety risks, which will be managed through implementation of a defined and appropriate healthcare waste management system commensurate of the facility typologies covering segregation, storage, transport, treatment, and final disposal. Wastewater and laboratory effluent management arrangements are included in the EMP to ensure compliance with applicable standards. The project design will include on-site waste management system for project facilities (SEs, CESS, RHC, RHHs and POEs) which will comply with stringent standards among national and acceptable international standards and GIIP for collection, storage, transport, treatment and disposal of healthcare waste as defined in the EMP. These requirements will be incorporated into detailed engineering design, bidding documents, and contractor obligations. CESS / SE facilities will not commence operation until environmental management systems, including healthcare waste management arrangements, are operational and verified.

F. Stakeholder Engagement and Grievance Redress Mechanism

17. Stakeholder engagement for the project was initiated at an early stage and carried out as part of the pre-fact finding and safeguards due diligence process to ensure transparency, information disclosure, and incorporation of stakeholder inputs into project design and environmental and social management. Consultations focused on health sector institutions and specialists who are directly involved in service delivery and will be affected by or benefit from the project.

18. Between 24 November to 5 December 2025, the project team visited health facilities in six districts of Khatlon region. During these visits, information on the proposed project activities, scope of civil works, and potential environmental and social risks was shared with key stakeholders in the target districts. Consulted stakeholders included representatives and specialists from rural health houses, village health centers, and sanitary and epidemiological stations. These interactions provided an opportunity to discuss anticipated project benefits, identify operational challenges, and understand site-specific conditions relevant to environmental and social safeguards.

19. On-site assessments of existing facilities were undertaken, with a particular focus on medical waste management practices and methodologies. The findings from these assessments helped identify gaps and risks related to waste segregation, storage, and disposal, which are being addressed through project design, capacity building, and EMP measures.

20. On 28 January 2026, the environmental and social safeguards team conducted a face-to-face consultation meeting with directors of all 18 Sanitary and Epidemiological Service (SES/CESS) facilities that are planned to be upgraded under the project. The primary purpose of this meeting was to disclose information about the upcoming project activities, anticipated environmental and occupational health risks, and safeguard requirements. The meeting also served as a platform to

collect feedback and institutional inputs that will inform the establishment and operation of the project's Grievance Redress Mechanism (GRM), including preferred communication channels and existing complaint-handling practices within the health system.

21. In addition, a consultation meeting was held with the Director of the State Sanitary and Epidemiological Surveillance Service of the Republic of Tajikistan under the Ministry of Health and Social Protection, Mr. Kurbonzoda Shamsiddin. During this meeting details on scope of the project, planned investments, and expected environmental and operational risks were presented and discussed. Mr. Kurbonzoda provided strategic guidance and suggested upgrading the central laboratory to strengthen coordination and oversight of regional laboratories, an input that supports the project's objectives of improving system-wide laboratory capacity and resilience.

22. A project-level GRM has been proposed and same will be established to provide an accessible, transparent, and responsive process for receiving and addressing concerns, complaints, and feedback related to environmental and social issues arising during project implementation. The GRM has been designed in line with national requirements and ADB SPS principles.

23. Information gathered during consultations with health facility managers, CESS directors, and MOHSP representatives will inform the design of the GRM, including entry points, responsible focal persons, and response timelines. The GRM will allow grievances to be submitted verbally or in writing at the facility, district, or central levels, with clear procedures for registration, review, resolution, and feedback to complainants. Particular attention will be given to ensuring that the GRM is accessible to facility staff, contractors' workers, and local communities.

24. The GRM will be operational prior to commencement of construction activities and will remain active throughout the construction and operation phases. Information on the GRM, including contact details and procedures, will be disclosed at project sites and communicated during future stakeholder engagement activities. Records of grievances and resolutions will be maintained and monitored as part of the project's environmental and social monitoring and reporting framework.

G. Climate Change

25. Tajikistan's health system is highly vulnerable to the impacts of climate change and disaster-related risks due to the country's geographic, climatic, and socio-economic conditions. Key climate-induced hazards include glacier retreat, increasing water stress, dust storms, landslides, and the growing frequency and intensity of floods and droughts. These hazards pose direct risks to the structural integrity and operational continuity of health infrastructure and frequently disrupt the delivery of essential health services, particularly in rural, mountainous, and hard-to-reach areas targeted under the project. Climate change also exacerbates public health risks by increasing the incidence of respiratory and cardiovascular diseases, heat-related illnesses, and climate-sensitive infectious diseases.

26. Institutional constraints further heighten climate vulnerability within the health sector. These include limited capacity for climate-informed planning, insufficient integration of climate risk data into disease surveillance and laboratory systems, and resource gaps in resilient infrastructure, emergency preparedness, and energy security. As a result, health facilities often face service interruptions during extreme weather events, undermining early detection, diagnosis, and response to disease outbreaks and emergencies.

27. To address these challenges, the Project will support development and application of climate-responsive and energy-efficient design recommendations for healthcare facilities. Measures will include improved insulation, enhanced glazing, passive design solutions, optimized ventilation, and integration of renewable energy systems to reduce greenhouse gas emissions and improve energy security. These interventions will prioritize operational continuity, self-resilience, and reduced dependence on fossil fuels, which are critical for healthcare facilities operating in climate-vulnerable settings.

28. All proposed design solutions will be evaluated against future climate scenarios to ensure long-term resilience under projected temperature extremes, precipitation variability, and increased frequency of climate-related hazards. The approach aligns with Tajikistan's National Climate Change Adaptation Strategy (2020–2030), National Health Strategy (2021–2030), Nationally Determined Contribution, and national green building and green cities initiatives. Design recommendations will also comply with guidelines issued by the Committee of Architecture and Construction, supporting national commitments to climate resilience, sustainability, and green economic development.

29. Overall, by embedding climate change adaptation and mitigation measures into disease prevention, laboratory systems, and primary healthcare infrastructure, the project will enhance adaptive capacity, reduce climate-related health risks, and contribute to safeguarding vulnerable populations while strengthening Tajikistan's long-term health system resilience.

H. Environmental Management, Monitoring, and Reporting Plan

30. As part of this IEE, an EMP has been developed (presented separately as Appendix 1). The EMP is an overarching document to guide environmental safeguard management to be implemented throughout the project's lifecycle. The EMP describes the project requirements for environmental mitigation measures, monitoring, reporting, roles and responsibilities, budget, and the GRM. It includes design and pre-construction requisites to achieve readiness. The total cost of EMP implementation is estimated at \$1.11 million. Semiannual environmental and social monitoring reports (in the format provided in Appendix 4) will be submitted to ADB to report progress on the implementation of EMP.

I. Conclusions

31. The assessment in this IEE is based on concept design information that is sufficiently detailed to identify key environmental risks and define preliminary mitigation measures. This includes site layouts, functional specifications, and initial system configurations (e.g., healthcare waste management, and operational systems). The EMP includes conditions for site-specific surveys (e.g., ACM, contamination) and readiness (healthcare waste management system and biosafety standard operating procedures-SOPs) prior to works commissioning. The IEE and EMP will be updated following the detailed design of the project components, and the same will be submitted to ADB for review and approved to ensure compliance with SPS 2009 requirements. The IEE will also be updated if there are changes in project scope or location of the project facilities and components.

I. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

32. The ADB has defined its environmental and social safeguard policy requirements viz. ADB's SPS 2009. The Republic of Tajikistan also has a well-defined institutional and legislative framework that covers all components of the environment viz. air, water, soil, terrestrial, aquatic flora and fauna, natural resources, and sensitive habitats. The Republic of Tajikistan is also a signatory to several international treaties, conventions, and protocols. This assessment is about the applicability of national laws and regulations, conventions, protocols, to the proposed ADB financed Integrated Regional Health Security and Primary Health Care Services Project. The project will also be guided by ADB's SPS 2009. This chapter summarizes the following:

- ADB safeguard policies and categorization of the project,
- National (Tajikistan) environmental legislation and administrative framework,
- International treaties, conventions, protocols, and their applicability to the project.

A. ADB Environmental Safeguards Policy and Requirements

1. ADB Safeguard Policy Statement

33. This IEE report has been prepared in accordance with the ADB's SPS 2009, which governs the environmental and social safeguards of ADB's operations. Environmental safeguard requirements of the SPS 2009 outline the requirements that borrowers/clients are required to meet when delivering environmental safeguards for projects supported by the ADB. These requirements include assessing impacts, planning and managing impact mitigations, preparing environmental assessment reports, disclosing information and undertaking consultation, establishing a grievance redressal mechanism, and monitoring and reporting. SPS 2009 requirements also include specific environmental safeguard requirements pertaining to biodiversity conservation and sustainable management of natural resources, pollution prevention and abatement, occupational and community health and safety, and conservation of physical cultural resources.

34. At an early stage in the project cycle (typically the project identification stage) ADB screens and categorizes proposed projects based on the significance of project's potential impacts and risks. A project's environment category is determined by the category of its most environmentally sensitive component, including direct, indirect, induced, and cumulative impacts. Project screening and categorization are undertaken to:

- Reflect the significance of the project's potential environmental impacts.
- Identify the type and level of environmental assessment and institutional resources required for the safeguard measures proportionate to the nature, scale, magnitude and sensitivity of the proposed project's potential impacts; and,
- Determine consultation and disclosure requirements.

35. Rapid environmental assessment checklists are used to support screening and categorization of proposed projects. ADB assigns a proposed project to one of the following categories:

- (i) **Category A.** Proposed project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented; impacts may affect an area larger than the sites or facilities subject to physical work. A full-scale environmental impact assessment

(EIA) including an EMP is required.

- (ii) **Category B.** Proposed project's potential environmental impacts are less adverse and fewer in number than those of category A projects; impacts are site-specific, few if any of them are irreversible, and impacts can be readily addressed through mitigation measures. An IEE, including an EMP, is required.
- (iii) **Category C.** Proposed project is likely to have minimal or no adverse environmental impacts. No EIA or IEE is required, although environmental implications need to be reviewed.
- (iv) **Category FI.** Proposed project involve investment of ADB funds to, or through, a financial intermediary.

36. It is important to note that environmental categorization is an ongoing process and is subject to change as more detailed information becomes available as the project preparation proceeds.

37. During the design, construction, and operation of a project the SPS 2009 requires the borrower to follow environmental standards consistent with good international practice, as reflected in internationally recognized standards such as the International Finance Corporation (IFC)/World Bank Group's Environment, Health and Safety (EHS) Guidelines (hereafter referred to as the EHS Guidelines).¹ Where national standards are less stringent or absent, the project will apply (Good International Industry Practice (GIIP) following relevant acceptable international standard and guidance. With respect to the proposed project in Tajikistan, the most applicable EHS Guidelines are the General Environmental, Health, and Safety Guidelines (2007), IFC Health Care Facilities EHS Guidelines, World Health Organization (WHO) Safe Management of Healthcare Waste, and WHO Laboratory Biosafety Manual.

2. Project Environmental Categorization

38. The Project is classified as Category 'B' for environment in accordance with the ADB Safeguard Policy Statement (SPS, 2009), as the anticipated impacts are expected to be site-specific, largely temporary, and manageable with appropriate mitigation measures. Accordingly, this IEE, along with an EMP, has been prepared covering all facilities to be constructed, rehabilitated, or upgraded under the Project. This categorization is based on the concept design information and is subject to revision following the updating of IEE and EMP based on detailed design of the project components.

3. Consultations

39. The SPS 2009 requires the proponent to carry out meaningful consultation with affected people and facilitate their informed participation; ensure women's participation in consultation; involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and considered; continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment; and establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.

¹ International Finance Corporation. 2007. *Environmental, Health, and Safety Guidelines*. <http://www.ifc.org/ifcext/sustainability.nsf/Content/EHSGuidelines>

40. Stakeholder engagement for the project began at an early stage as part of the project preparation and continued during safeguards assessment process to ensure transparency, information disclosure, and incorporation of stakeholder inputs into project design and environmental and social management and Project-level GRM. During the pre-fact-finding mission from 24 November to 5 December 2025, the project and safeguards teams visited health facilities in six districts of Khatlon Region and consulted key stakeholders, including specialists from rural health houses, village health centers, and sanitary and epidemiological stations. Information on proposed project activities, civil works, and potential environmental and social risks was shared, while stakeholders provided feedback on operational challenges and site-specific conditions.

41. Additional consultations were held to strengthen institutional coordination and inform project implementation. On 28 January 2026, the environmental and social safeguards team conducted a meeting with directors of all 18 Sanitary and Epidemiological Service (SES/CESS) facilities planned for upgrading to disclose project information and discuss anticipated environmental and occupational health risks. A separate consultation was held with the Director of the State Sanitary and Epidemiological Surveillance Service under the Ministry of Health and Social Protection, Mr. Kurbonzoda Shamsiddin, who provided strategic guidance, including the recommendation to upgrade the central laboratory to strengthen coordination of regional laboratories. Field-level consultations continued in February 2026.

4. Information Disclosure

42. Information disclosure involves delivering information about a proposed project to the public and to affected communities and other stakeholders beginning early in the project cycle and continuing throughout the life of the project. Information disclosure is intended to facilitate constructive engagement with affected communities and stakeholders over the life of the project.

43. To make key documents widely available to the public the SPS 2009 requires that the borrower submits to ADB the following documents for disclosure on ADB's website:

- (i) Final IEE (upon receipt or prior to Board approval, whichever is earlier).
- (ii) New or updated IEE, if required during project design and implementation.
- (iii) Corrective action plans (for major non-compliance, if any) prepared during project implementation, and
- (iv) Environmental monitoring reports.

44. The above disclosure procedure will be followed for the project IEE. After the final IEE is prepared and endorsed by the executing agency, it will be disclosed on the ADB website.

B. National (Tajikistan) Environmental Legislation and Administrative Framework

45. The Republic of Tajikistan has a range of laws, regulations, technical guidelines, and standards that govern the way in which environmental protection and environmental assessment for projects must be implemented, including laws for pollution prevention and control on air, noise, water, ecology and solid waste, and technical guidelines on assessing ambient air, noise, surface water, groundwater, and ecological impacts.

1. Tajikistan Legal and Regulatory Framework

46. The main environmental legislation of Tajikistan is the 760/2011 Law on Environmental Protection (replacing the Tajikistan Framework Environment Law that was adopted in 1993, enacted in 1994, and successively amended in 1996, 1997, 2002, 2004, and 2007). Project

implementation party will refer to the most stringent international standards in the event of national regulations lacking or duplicate specific requirements.

47. A host of environmental laws have been adopted since 2010 focusing on issues that were relatively new to Tajikistan, such as:

- The 2011 Law on Environmental Audit, setting provisions for mandatory and voluntary environmental review to be performed by licensed environmental audit organizations.
- The 2012 Law on Ecological Expertise introduces a streamlined mechanism and requirements for environmental assessment by projects, including procedures for state ecological expertise (SEE) and EIA.
- The 1448/2017 Law on Environmental Impact Assessment, further establishing the legal framework for Environmental Impact Assessment.
- the 2010 Law on Environmental Education of the Population, stating the need for training civil servants on environmental protection-related issues. Training is occasionally delivered at the Institute of Public Administration, while regular training and in-service training schemes for civil servants on environmental issues are not in place.
- The Water Code was enacted in 2000 and amended in 2008, 2009, 2011 and 2012, with the introduction a new chapter on basin water management.

Table II-1. Tajikistan environmental laws applicable to the project

Law	Enacted and amended	Responsible Agency	Brief Description
760/2011 Law on Environmental Protection	2 August 2011, last amended in 2022	Committee on Environment Protection (CEP) and its subdivisions in the districts	The Law defines legal state principles of environment protection and aimed at provision of sustainable social and economic development, guarantees of human rights for healthy and friendly environment, law enforcement strengthening, prevention of negative impact of business and other operations on the environment, management of rational use of nature resource and securing environmental safety. Chapter 6 requires an Environmental Impact Assessment and Chapter 7 specifies requirements for the location, design, construction, reconstruction and commissioning of enterprises, buildings and other facilities
1448/2017 - Law on Environmental Impact Assessment	18 July 2017	CEP and its subdivisions at the districts	The Law establishes the legal and organizational framework for assessing the environmental impact, relationship with state environmental expertise, and the procedure for registering and classifying impact of assessment objects on the environment.
326/1996 - Land Code of the Republic of Tajikistan	Enacted in 1996, last amended in 2022	Committee on Land Management and Geodesy and its subdivisions at the districts,	Land legislation governs the relations of land use and protection, land use property relation which arise from getting (acquisition) of convey land use rights.

Law	Enacted and amended	Responsible Agency	Brief Description
788/2011 - Law on Special Protected Areas	Enacted on 26 December 2011, last amended in 2014	State Institution on Specially Protected Natural Areas of Forestry Agency under the Government and its subdivisions in the districts,	The Law defines legal, organizational and economic principles of specially protected natural areas, establishes the assignments, activity operations and zoning
761/2011 Forestry Code of the Republic of Tajikistan	Enacted on 2 August 2011	Forestry Agency, CEP and its subdivisions at the districts, Ministry of Agriculture (MOA)	Regulates relations for protection, possession, sustainable use & reproduction of the forest in Tajikistan. Defines prohibited activities in protected forest zones & their regimes conditions when undertaking allowed activities in the utilization zone forests & their regimes.
178/2006 - The Law on Conservation and Usage of the Historical and Cultural Heritage	Enacted on 3 March 2006	Ministry of Culture, TAS, CEP, Forestry Agency	The Law regulates legal framework on conservation and use of historical and cultural heritage objects at the territory of the Republic of Tajikistan and being national property of Tajik people.
983/1994 - Law on Subsoil	Enacted on 20 July 1994, last amended in 2013	Geology Head Office, CEP	Regulates relations concerning the use & protection of subsoil in the interests of present and future generations.
555/2009 - Law on Soil Conservation	Enacted on 16 October 2009	CEP, Committee on Land Management and Geodesy, MOA	The law defines main principles of state policy, legal framework of public authorities, individual and legal entities for the efficient and safe use of soils, preservation of quality, fertility and soil protection from negative impacts and regulates the variety of relationships related to soil protection.
1688/2000 - Water Code	Enacted on 2 April 2000	CEP, Ministry of Energy and Water Resources, MOA; Geology Head Office; MOHSPP	The Water Code focuses on: (i) protection of state water fund and state water fund lands for the improvement of the population's social condition and environment; (ii) water pollution control, impurity, depletion, prevention, and control of water adverse effects; (iii) enhancement and protection of water objects; (iv) strengthening legality and rights protection of individuals and legal entities in water management.
915/2012 - Law on Protection of Atmospheric Air	Enacted on 28 December 2012	CEP, MOHSPP, Hydro-meteorology Agency	The Law regulates relations of individual and legal entities irrelevant of ownership form with an aim of conservation, rehabilitation of atmospheric air and securing of environmental safety.
1413/2017 - Public Health Code of the Republic of Tajikistan	Enacted On 30 May 2017, last amended in 2021	MOHSPP	The Code regulates public health relations and aims at implementation of constitutional rights and health protection of citizens. Chapter 17 of the Code secures sanitary and epidemiological safety.
44/2002 - Law on Production and	Enacted on 10 May 2002, last	CEP; MOHSPP; State Unitary Enterprise on	The Law regulates the relations arising in the process waste generation, collection, storage, utilization, transport, deactivation and landfilling of

Law	Enacted and amended	Responsible Agency	Brief Description
Consumption Waste	amended in 2011	Municipal Housing and Utilities	wastes, state management, supervision and control of waste management and is aimed to prevent the negative impact of production and consumption wastes on the environment and human health when handling with them, their involvement into economic and production turnover as an additional stock source.
53/2004 - On Protection of Population and Territories from Natural and Manmade Emergencies	Enacted on 15 July 2004	Committee for Emergency Situations and Civil Defense and its structural subdivisions	The Law defines organizational and legal framework on protection of population of the Republic of Tajikistan and persons without citizenship at the territory of the Republic of Tajikistan, as well as the lands, interiors, water, airspace, animals and plants and other natural resources of Tajikistan, objects of industrial and social purpose and environment from natural and man-made emergencies. Regulates public relations on prevention, occurrence and development of emergencies, reduction of damages and losses, elimination of emergency situations and timely notification of population in dangerous zones on natural and man-made emergencies.
354/2008 - Law on wildlife	Enacted on 5 January 2008	CEP; MOA; Academy of Sciences; Forestry Agency	The Law regulates public relations in protection, restoration and reasonable use of wildlife, establishes legal, economic and social framework of the field and is aimed at protection and restoration of wildlife resources.
Law on Labor Protection	Enacted on 19 May 2009	Ministry of Labor, Migration and Employment of Population (MOLME), MOHSPP	The Law establishes legal framework of labor protection relations between employers and employees and is aimed at creation of conditions that meet the requirements of employees lives and health preserving in the work process.
1329/2016 - Labor Code of the Republic of Tajikistan	Enacted on 23 July 2016, last amended in 2022	MOLME; MOHSPP	The Code regulates labor and other relations directly aimed at them, protection of the rights and freedoms of the parties of labor relations, securing minimal guarantees of labor rights and freedoms.
1688/2000 - Water Code	Enacted on 2 April 2000	CEP, Ministry of Energy and Water Resources, MOA; Geology Head Office; MOHSPP	The Water Code focuses on: (i) protection of state water fund and state water fund lands for the improvement of the population's social condition and environment; (ii) water pollution control, impurity, depletion, prevention, and control of water adverse effects; (iii) enhancement and protection of water objects; (iv) strengthening legality and rights protection of individuals and legal entities in water management.
363/2008 - Law on Fire safety	Enacted on 20 March 2008	Main Department of State Fire Prevention Agency of the Ministry of Internal Affairs	The Law defines general legal, economic, social and organizational principles of fire prevention in the Republic of Tajikistan, regulates the relations between state authorities, local authorities, organizations, other legal entities irrelevant of organizational and legal forms, as well as between public amalgamations, officials and citizens of the Republic of Tajikistan, foreign citizens and

Law	Enacted and amended	Responsible Agency	Brief Description
			persons with-out citizenship.
SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions	May 14, 2021	MOHSPP	SanPiN defines the rules and guidelines for the collection, disinfection, storage, and disposal of all types of medical waste in medical institutions.
Healthcare Code of the Republic of Tajikistan	Match 30, 2017	MOHSPP	The Health Code of the Republic of Tajikistan (May 30, 2017) is a fundamental normative act that regulates public relations in the field of public health protection, defines the rights of patients and the responsibilities of medical workers, as well as the activities of public and private healthcare systems to ensure the sanitary and epidemiological safety of the population.
Law of Republic of Tajikistan № 1010/2013 On ensuring sanitary and epidemiological safety of the population	2013	Republic of Tajikistan (MOHSPP)	The Law of the Republic of Tajikistan "On Ensuring Sanitary and Epidemiological Safety of the Population" regulates legal relations for creating a healthy living environment, preventing infectious and non-infectious diseases, and ensuring radiation safety. It enshrines citizens' rights to a favorable environment, imposes obligations on individuals and organizations to comply with sanitary standards, and establishes a system of state oversight.
Operating procedures of sanitary and quarantine points №416	2021	Republic of Tajikistan (MOHSPP)	The operating procedures for sanitary and quarantine points in Tajikistan govern the activities of health authorities to prevent the importation of infections across the state border. These procedures include mandatory screening of passengers, vehicles, and cargo, actions taken upon detection of cases, and legal regulation of the rights and responsibilities of officials at checkpoints.

Table II-2. National administrative regulations and plans

Agency	Brief description
CEP (Committee on Environmental Protection)	Responsibilities include environmental and natural resources management, including control of waste, atmospheric air, and water.
National Agency for Hydrometeorology	Deals with the implementation of the national policy in the area of hydrometeorology and environmental pollution monitoring, reports and provides data to other government bodies
Ministry of Energy and Water Resources	Formulates and carries out the public policy and fulfills regulatory functions in the area of fuel, energy and water resources.
Ministry of Agriculture	Responsible for elaboration and implementation of the common`

Agency	Brief description
	national agricultural policy.
Ministry of Health and Social Protection of the Population (MOHSPP)	Responsible for development and implementation of policy, regulations, and norms on public health.
Ministry of Education and Science	Responsible for the integration of environment and climate change topics in the school curriculum.
Ministry of Labor, Migration and Employment of Population	Formulation and implementation of policies on employment, labor, and migration
Committee of Women and Family Affairs	Deals with gender and family related policies.
Committee for Architecture and Construction of Tajikistan (CACT)	Central executive body responsible for implementing activities related to the state policy, regulatory framework, provision of government services, and state control in the field of architecture and construction.
Tajik GOST Standards	Sets, among others, air, ambient noise, and drinking water quality standards.
Statistical Agency under President	Responsible for the statistical and economic analysis of the country.

Table II-3. Local regulations and plans

Governmental body	Brief description
<i>Hukumats</i> or municipality	Government body on a district or city level, and are headed by a chairperson appointed as a local representative of the President, with responsibility for national policy implementation and administration of State services and regulations
<i>Jamoats</i> (or district level administrative boundary)	The third level administrative divisions of Tajikistan, covering a smaller area than a <i>hukumat</i> . It is responsible for organizing community-based delivery of some basic public services. It has no budgeting authority and has a very limited independent role.

2. Tajikistan Legal and Regulatory Framework

48. Tajikistan's environmental guidelines focus on sustainable natural resource management, climate change adaptation, and biodiversity conservation, guided by a draft Environmental Code aimed for 2026 adoption. Key regulations emphasize "rational use of natural resources," environmental impact assessments for projects, waste management, and protection of water resources and glaciers. The framework aligns with the Green Economy Strategy and promotes low-carbon development.

Table II-4. Applicable environmental guidelines

Key Environmental Guidelines	Focus Areas
Water Management Strategy	National Water Strategy to 2040 and the Water Sector Reform Programme (2016–2030), aims to transition from administrative to basin-level management, focusing on sustainable development, climate resilience, and equitable water access
National Strategy for Adaptation to Climate Change (NSACC) to 2030	Focuses on strengthening resilience in water management, agriculture, energy, and disaster risk reduction. The strategy aims to enhance adaptive capacity through national, regional, and local action plans, addressing vulnerabilities like glacial melting, droughts, and food insecurity.
Waste Management	Regulations target improved waste management, recycling, and, in particular,

Key Environmental Guidelines	Focus Areas
	reduction of industrial waste.
Environmental Impact Assessment (EIA)	Mandatory assessments are required for planned economic activities to prevent negative impacts on the environment.
Monitoring and Standards	The Committee for Environmental Protection conducts monitoring of air, water, soil, and biodiversity, including the protection of forests and endangered species.

3. Environmental Standards

49. Environmental quality standards in Tajikistan are based on GOST, SNIIP and SanPiN. GOST (Tajiki: ГОСТ) refers to a set of technical standards maintained by the Euro-Asian Council for Standardization, Metrology and Certification, a regional standards organization operating under the auspices of the Commonwealth of Independent States (CIS). SNIIP means Technical Standards (Tajiki: СНИП) - a building code, a set of rules that specify the minimum standards for constructed objects such as buildings and non-building structures. SanPiN (Tajiki: Коидахо ва меъёрҳои санитарии) are sanitary rules and norms (standards).

50. Environmental quality standards in Tajikistan ensure both maximum permissible concentration and maximum permissible emissions. The maximum permissible concentration is approved by the law on hygienic standard. Under maximum permissible concentration refers to a concentration of chemical elements and their compounds in the environment, which in everyday impact for a long time on the human body does not lead to pathological changes or diseases established modern research methods in any time of life of present and future generations. The maximum permissible (or allowable) emissions is standard of maximum permissible emissions of harmful substances (pollutants) into the air, which is set for a stationary source of air pollution in accordance with technical standards for emissions and background air pollution. It provides non-exceeding of the hygiene and environmental air quality standards, limits (critical) load on ecological systems, and other environmental regulations requirements. Table II-5 gives an overview of the National Standards and regulations that are applicable to the Project.

Table II-5. National standards and regulations applicable to the project

#	Title - National Standards - GOSTs
1.	31431—2011. Protection of nature. Air. Set of Maximum Permissible Emissions. 29 November 2011
2.	31434—2011 Protection of nature. Air. Determination of parameters of efficiency of dust collection systems. 29 November 2011
3.	IEC 61241-0—2011 Electrical equipment used at areas containing flammable dust. Part 0. General requirements. 29 November 2011
4.	GOST 17.0.0.01-76 (ST SEv 1364-78) (in edition of 1987) System of standards for environmental protection and improvement of natural resources usage. General provisions
5.	General provisions GOST 17.0.0.04-80 (1998) Protection of nature. Environmental passport(certificate) of industrial facility. General provisions
6.	GOST R ISO14001-98 Environmental management systems. Requirements and guidelines.
7.	GOST 17.0.0.02-79 (1980) Protection of nature. Provision of metrological control of air, surface water and soils pollution.
8.	GOST 17.1.1.01-77 (ST SEv 3544-82) Usage and protection of water. General terms and definitions.
9.	GOST 17.2.1.01- 76 Classification of emissions (content).

#	Title - National Standards - GOSTs
10.	GOST 12.1.014-84 (1996) SSBT. Air at workplace. Methodology of measuring of pollutants concentration using indication tubes.
11.	GOST 12.1.005-88 (1991) SSBT. General sanitary and hygiene requirements to air at workplace.
12.	GOST 17.2.2.05-97 Norms and methods of emissions measuring containing spent diesel gases, tractors and self-propelled agricultural machines.
13.	GOST 21393-75 Diesel motorcars. Exhaust gas opacity. Norms and methods of measurement.
14.	GOST 17.2.2.03-77 Concentration of carbon monoxide at exhaust gases of motorcars with gasoline engines. Norms and measurements methodology.
15.	GOST 17.2.2.03-87 Norms and methods of measurements of carbon monoxide at exhaust gases of motorcars with gasoline engines.
16.	GOST 17.4.2.01-81 Nomenclature of sanitary condition parameters
17.	GOST 17.4.1.02-83 Classification of chemical substances for monitoring of contamination.
18.	GOST 12.1.003-83 (1991) SSBT. Noise. General safety requirements
19.	GOST 12.1.023-80 (1996) SSBT. Noise. Methods of threshold noise levels for stationary machinery.
20.	GOST 12.1.029-80 (1996) SSBT. Means and methods of noise protection. Classification.
21.	GOST 12.1.036-81 (1996) SSBT. Noise. Allowable levels of noise within residential and public buildings.
22.	GOST 12.1.007-76 (1999) SSBT. Harmful substances. Classification and general safety requirements
23.	GOST 12.4.119-82 SSBT. Means of respiratory PPE. Methods of protective features assessment for aerosols.
24.	GOST 12.4.125-83 (1985) SSBT. Means of collective protective equipment from mechanical factors. Classification.
Sanitary norms and regulations (SanPins)	
25.	SanPiN 2.1.4.559-96 Drinking water. Hygienic requirements to the quality of water from centralized systems of drinking water supply. Quality control
26.	CH 2.2.4/2.1.8.562-96 Noise at working places, indoors of residential and public buildings and the territories of residential areas
27.	SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions

51. **Noise Standards (daytime - nighttime).** Tajikistan has also noise quality standards for receptors in different areas as indicated in the table II-6 below:

Table II-6. Tajikistan noise standards

#	Area	Day time Limits *	Night Time limits**
1	Residential area	55 dBA	45 dBA
2	Commercial area	60 dBA	50 dBA
3	Industrial area***	70 dBA	70 dBA
4	Hospitals	35 dBA	25 dBA
5	Schools, Library,	45 dBA	45 dBA
6.	Hotels etc.	60 dBA	50 dBA

* Tajik standards with daytime defined as 07:00 – 22:00 in line with IFC EHS General guidelines. Exception: areas adjoining hotels and dorms where IFC standard is more stringent 55 dB (A).

** Tajik standards apply with night time defined as 22:00 – 07:00 in line with IFC EHS General Guidelines. Exception 1: IFC standard will prevail from 22.00 to 07.00. Exception 2: areas adjoining hotels and dorms where IFC standard is more stringent 45 dB (A)

*** Limit as per IFC standard.

52. **Surface Water Quality Standards.** Water quality standards for surface watercourses with

selected parameters as indicated by the table II-7 below:

Table II-7. Tajikistan surface water quality standards

#	Parameter	Limit/value
1.	Oxygen	Winter – 4.0 mg/Liter; Summer – 6.0 mg/Liter
2.	Salt ammonium	0.5 mg/liter
3.	BOD	3.0
4.	Oil and petrochemicals	0.05
5.	Iron	0.05
6.	Copper	0.001
7.	Zink	0.01
8.	Phenols	0.001
9.	Chlorides	300
10.	Sulphates	100
11.	Calcium	180
12.	Potassium	50
13.	Suspended Matter	1000

53. **Air Quality Standards.** Table II-8 below provides the Air Quality Standards in Tajikistan.

Table II-8. Tajikistan air quality standards

#	Pollutant	Tajikistan Standard, mg/m ³
1.	Particulate Matter	0.150
2.	Nitrogen Oxide (NO)	0.060
3.	Nitrogen Dioxide (NO ₂)	0.040
4.	Sulphur Dioxide (SO ₂)	0.050
5.	Carbon Dioxide	3.000
6.	Ammonium	0.200

4. Domestic EIA Requirements and Approval Status

54. There are two laws in the country that stipulate all aspects of environmental assessment: (a) Law on Environment Protection; and (b) Law on Ecological Expertise. The Chapter v, Articles 35-39 of the Law on Environment Protection (2011), introduces the concept of state ecological review that seeks to examine the compliance of proposed activities and projects with the requirements of environmental legislation and standards and ecological security of the society.

55. The mentioned laws stipulate the mandatory cross-sectoral nature of SEE, which shall be scientifically justified, comprehensive, and objective, and which shall lead to conclusions in accordance with the law. SEE precedes decision-making about activities that may have a negative impact on the environment. Financing programs and projects is allowed only after a positive SEE finding, or conclusion, has been issued.

56. The following activities and projects are subject to state ecological review:

- Draft state programs, pre-planning, pre-project, and design documentation for economic development;
- Regional and sectoral development programs;
- Spatial and urban planning, development, and design;
- Environmental programs and projects;

- Construction and reconstruction of various types of facilities irrespective of their ownership;
- Draft environmental quality standards and other normative, technology, and methodological documentation that regulates economic activities;
- Existing enterprises and economic entities.

57. The laws stipulate that all types of economic and other activities shall be implemented in accordance with existing environmental standards and norms and shall have sufficient environmental protection and mitigation measures to prevent and avoid pollution and enhance environmental quality. The environmental assessment studies analyzing the short- and long-term environmental, genetic, economic, and demographic impacts and consequences shall be evaluated prior to making decisions on the allocation, construction, or reconstruction of facilities, irrespective of their ownership. If these requirements are violated, construction will be terminated until necessary improvements are made, as prescribed by the government and/or other duly authorized control bodies, such as sanitary, geological, and public safety agencies

58. An EIA is a component of the SEE, as set out in the 2011 Environmental Protection Law and in the 2012 Law on State Ecological Expertise, which comprises both the department within the Committee for Environmental and the process as well. Conducting the EIA is the responsibility of the project proponent. The State Ecological Review, which comprises the process component only - for all investment projects is the responsibility of the Committee for Environmental Protection (CEP) of Tajikistan and its regional offices. Furthermore, according to the 2012 Law on State Ecological Expertise, all civil works, including rehabilitation ones, should be assessed for their environmental impacts and the proposed mitigation measures should be reviewed and monitored by the CEP.

59. According to the 2012 Law on Ecological Expertise, ecological expertise is intended to prevent negative impacts on the environment as a result of a proposed activity, forecast impacts from activities that are not considered as necessarily damaging to the environment and create databases on the state of the environment and knowledge about human impact on the environment.

60. The Law on Ecological Expertise and the Law on Environment Protection envisage two types of ecological expertise – State ecological expertise and public ecological expertise, which are not given equal importance. While State ecological expertise is a prerequisite for beginning any activity that may have an adverse environmental impact, public ecological expertise becomes binding only after its results have been approved by a State ecological expertise body.

61. The State Ecological Expertise is authorized to invite leading scientists and qualified outside specialists to participate in the review. Approval should be issued within 30 days, unless the project developer agrees to an extension, and remains valid for two years, if the decision is positive. For very complicated projects, the term of consideration and approval can be extended till 60 days.

62. According to the Law on SEE the public ecological expertise of economic activities or other activities implementation of which can negatively impact the environment of population which live in relevant area can be carried out by any public organization and citizen. They have the right to send the proposals to the responsible government bodies concerning environmental issues of implementation planned activities; to receive information on results of conducted state ecological expertise from relevant responsible bodies. The materials reflecting the public expertise delivered to the experts' commission should be taken into consideration under preparation of conclusion of state ecological expertise and decision making on realization of expertise object. The public

ecological expertise is carried out under the state registration of application of public organization. The registration can be done by local executive authorities (for 7 days) in place where the expertise activities are planned. The public organizations which are organizing this expertise should inform the population of initiation of expertise and then on its results.

63. The legal and regulatory system for the EIAs also include:

- Procedure of Environmental Impact Assessment (adopted by the Resolution of the Government of the Republic of Tajikistan No. 509 as of 01.08.2014).
- Procedure to implement State Ecological Expertise (approved by the Resolution of the Government of the Republic of Tajikistan No. 697 as of December 3, 2012).
- Guidelines on the composition and order of development of content and structure of the documentation to be submitted for review (SEE), as well as coordination and approval of all projected budget or investment estimations, design drawings or documentation that must be developed in coordination with the SEE²⁸, buildings and structures and EIA chapters, Strategic Environmental Assessment and feasibility documents; and
- List of objects and types of activity for which preparation of documentation on Environment Impact Assessment is mandatory (adopted by the Resolution of the Government of the Republic of Tajikistan No. 253 as of June 3, 2013).

64. The elaborated existing normative legal base is intended for determination of legal basis for implementation of projects and their compliance with state requirements for environmental protection and mitigation of environmental impact.

65. The Environmental Protection Law stipulates that a SEE should be conducted by the CEP, which is designated as a duly authorized state environmental protection body. The CEP has a comprehensive mandate that includes policy formulation and inspection duties. The CEP has divisions at oblast (region), city and rayon (district) level, in the form of Departments of Environmental Protection, within the Hukumat (local administration) at each city or rayon.

66. The MOHSPP as the project proponent will obtain SEE from CEP based on the project IEE, which will also include baseline monitoring data, before commencement of the project work.

C. International Agreements

67. Under Tajikistan's unified (monist) legal system, international agreements and treaties once ratified or acceded to by the Government, have the same force as national legislation

68. Tajikistan is a party of an international environmental conventions and protocols. It has passes state laws that implement the terms of these international conventions, with provision that: "If an international treaty to which Tajikistan is a party is inconsistent with this law, then the provisions of the international treaty shall prevail".

69. Tajikistan is a party to the following international environmental conventions: In recognition of its global responsibilities, Tajikistan has acceded to a number of international environmental conventions, and the key ones are shown in the following table II-9.

Table II-9. Applicable international agreements

Convention	Year of Accession
UN Convention on Biological Diversity (CBD), 1997; Related updates to CBD are: Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 2004. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, signed in 2011 and ratified in 2013.	1997
UN Framework Convention on Climate Change, 1998; A related update is: Kyoto Protocol, accessed on December 29, 2008, and entered into force on March 29, 2009.	1998
UN Convention on Combating Desertification (UNCCD)	1997
Vienna Convention for the Protection of the Ozone Layer, 1996 and updated by: Protocol on Substances that Deplete the Ozone Layer (Montreal), 1998; London Amendments to Montreal Protocol on Ozone Depleting Substances, 1998; Copenhagen Amendments to Montreal Protocol on Ozone Depleting Substances, 2009; Montreal Amendments to Montreal Protocol on Ozone Depleting Substances, 2009; Beijing Amendments to Montreal Protocol on Ozone Depleting Substances, 2009.	1996
Convention on International Trade in Endangered Species of Fauna and Flora (CITES)	2016
Stockholm Convention on Persistent Organic Pollutants (ratified 2007); Related up-dates: 2009 amendments listing 9 new POPs, August 26, 2010; 2011 amendment listing endosulfan, October 27, 2012; and 2013 amendment listing HBCD, November 26, 2014.	2007
UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage	1992
Aarhus Convention (joined 2001); A related update is: Kiev Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information on May 21, 2003.	2003
Bonn Convention on the Conservation of Migratory Species of Wild Animals (joined 2001); A related update is: Bukhara Deer Memorandum, 2002.	2001

Source: TrTA Consultants' compilation, 2026

II. PROJECT DESCRIPTION AND ALTERNATIVES

A. Rationale

70. Tajikistan is a country in transition, experiencing strong economic growth with gross domestic product (GDP) growing at an average of over 7% in the last decade. However, despite this progress, it remains the poorest country in the Central Asia region, with a national poverty rate of 20.4% in 2023². The coronavirus disease (COVID-19) pandemic had a significant adverse impact on Tajikistan, with GDP growth declining to 4.5% by the end of 2020. The crisis exposed the country's already weak health system, straining medical resources, and infrastructure.

² The World Bank. 2025. [Tajikistan Economic Update 2025](#). Washinton DC.

Additionally, COVID-19 led to a rise in poverty, exacerbating social vulnerabilities, and inequality across the population. Investing in pandemic preparedness and health emergency response, and climate responsive healthcare system is therefore essential to safeguarding public health, strengthening national security, and ensuring economic resilience.

71. The current key health sector challenges in the country included (i) emerging health security concerns; (ii) fragmented disease surveillance systems; (iii) inefficiency of public health laboratory systems; (iv) antimicrobial Resistance; (v) prolonged endemicity of Tuberculosis; (vi) inadequate risk communication and community engagement; (vii) climate vulnerability of health system; (viii) gender inequality in health service delivery; (ix) gender-based violence; (x) Structural Gaps at Primary Health Care; and (xi) lack of human resource for health constraints.

72. The proposed project aims to enable Tajikistan to better respond to cross-border health threats, improving the efficiency and capacity of public health laboratory system, transforming primary health care (PHC) system to better respond to emerging climate-related health risks, expand women's access to health care services, and improving regional health security in the Central Asia region. It prioritizes digital health transformation and institutional integration of epidemiological and public health laboratory stakeholders to improve the efficiency, effectiveness, and capacity of overall disease surveillance system. It will upgrade health infrastructure and strengthen PHC to deliver patient-centered services more efficiently. It will also empower women in rural and border communities by increasing the awareness of emerging notifiable diseases, climate change-related health risk, risk factors that affects women's and girl's sexual and reproductive health and rights (SRHR), and the gender-based violence (GBV). The improved disease surveillance and laboratory testing capacity of Tajikistan to be supported through the project will enable timely and effective detection and response to emerging infectious diseases, which is considered a regional public good, as it contributes to improved regional health security in Central Asia and beyond.

73. The project will focus on 18 border and rural districts, including their respective 18 jamoats and 36 villages, where underserved, and hard-to-reach groups face the most severe gaps in public health service access.

B. Project Impact, Outcome and Outputs

74. The project is aligned with the following impacts: (i) Equitable access to essential climate-resilient health services improved with rural-urban and gender-related health disparities addressed, and strengthening service resilience and continuity of service delivery under climate and disaster risks (National Health Strategy 2021–2030 of Tajikistan), and (ii) public health threats in Central Asia Regional Economic Cooperation Program (CAREC) region addressed comprehensively, efficiently, and sustainably while safeguarding the needs of the most vulnerable segments of the population in Tajikistan (CAREC Strategy 2030).³ The project will have the following outcome: Health security and service delivery of Tajikistan improved with enhanced gender responsiveness and climate resilience. The project has the following four outputs.

- **Output 1: Disease prevention and public health emergency response capacity improved.** The output will improve Tajikistan's human and animal health sectors disease surveillance system through the One Health approach. In specific, the output will deploy and install container-based climate resilient CESS stations in 10 prioritized land POEs with

3 ADB. 2017. [CAREC 2030: Connecting the Region for Shared and Sustainable Development](#).

equipment to serve as basic health and laboratory units for border disease surveillance. It will also support the rollout of a digital One Health surveillance portal integrating human, animal health, and environment related data as well as adopting digital tools for improving surveillance information management. A cross-sectoral advocacy package to systematically enhance the collection, analysis, and use of sex- and age-disaggregated data in health emergencies with attention to vulnerabilities and inequities will be designed. On-the-job trainings to strengthen skills of epidemiologists and laboratory technicians on diagnosis and surveillance practices and risk communication will be provided according to national competency framework.⁴ The output will also improve antibiotic relevant regulations and capacity building, incorporate climate-related drivers of infectious disease risk and surge demand, and establish a cross-sectoral AMR surveillance network. Lastly, the project will pilot a new approach to improve animal health disease surveillance and investigate the causality behind chronic local shortages in veterinary supplies and strengthen logistics for supplying veterinary laboratory products. The output will also conduct simulation exercises to validate the improvement of Tajikistan's capacity to detect, investigate, and response to zoonotic disease outbreak.

- **Output 2: Capacity and efficiency of laboratories improved.** The output will support the government's reform on integrating diagnostic laboratory and epidemiology services under centers for epidemiology and sanitary services and vertical disease control programs in selected districts along the border and districts in rural and hard-to-reach areas for efficiency, cost-effectiveness, and quality improvement. In specific, the output will establish a standardized competency framework for laboratory personnel for managing disease outbreaks and laboratory operations. It will conduct a situational and needs assessment of biosafe and bio-secured transportation of laboratory samples. A five-year framework for ensuring minimum capabilities and quality assurance for diagnosis of priority and climate-related pathogens will also be developed under the output. Accordingly, 18 integrated district CESS laboratories will be designed and constructed, which will harmonize laboratory and epidemiology units of existing CESS and vertical disease control programs incorporating climate-resilient and environment-friendly design and standards with equipment, consumables, and training on biosecurity and biosafety provided and protocols to address zoonotic spillover risks aggravated by climate variability strengthened..
- **Output 3: Primary health care reform to manage emerging infectious disease, and climate-related health risk supported.** The output will support the government's PHC reform by reducing the prevalence of prolonged high-burden notifiable diseases, improving gender responsiveness of health services, raising the awareness of diseases and health risk factors, integrating GBV interventions into PHC services, and strengthen climate resilience and efficiency of health infrastructure. In specific, the output will develop PHC reform guidelines and update service delivery standards, job descriptions, and performance indicators with special focus on the gender sensitivity and responsiveness of service delivery, GBV, climate change. Accordingly, the output will support the construction of primary health care facilities across four rural and hard-to-reach districts to bridge service coverage gap, equipped with solar power and water and designed with standards to withstand climate-induced hazards. The output will also improve health promotion service accessibility in 8 rural and hard-to-reach districts through modernizing health education tools and methods and mobility support. The Red Cross Society of Tajikistan will be

⁴ Including field epidemiology, zoonotic disease detection, One Health epidemic intelligence, management of public health emergencies, risk assessment, laboratory sampling, data management, and cross-sectoral coordination.

engaged to design and implement targeted and coordinated school and community-based RCCE campaigns on AMR, health security, zoonotic diseases, climate-related health risks with support of CSOs. The JFPR grant under the output will support improving the early detection of TB, HIV, and other respiratory diseases among vulnerable populations at community level using AI-enabled portable screening technologies and with additional mobility support.

- **Output 4: Gender-responsive integrated services for health centers established and operational.** The output will support expanding the coverage of government services to GBV and human trafficking victims, ensuring access to essential services in underserved areas vulnerable female population. In specific, the output will construct three (3) regional gender responsive integrated services for health (GRISH) centers with needed equipment provided across the country. The output will also provide on-job training and awareness raising to frontline health care works on the guidelines and protocols for service delivery, referral, and vocational training to victims. Women-led volunteer groups for local health advocacy on infectious disease, GBV, environment health and climate-related awareness will also be mobilized with support of the project. An impact evaluation study will be conducted to assess effectiveness and impact of activities undertaken within the project scope and measure the change of knowledge, attitude, and practice of GBV response.

75. The proposed project is expected to be implemented from November 2026 to December 2031. The executing agency of the project is MOHSPP, and the implementing agencies are MOHSPP and CFS.

C. Project Location and Key Features

76. The proposed project will be implemented across multiple regions of the Republic of Tajikistan, covering selected districts in Khatlon Region, Sughd Region, the Districts of Republican Subordination (DRS), and the Gorno-Badakhshan Autonomous Oblast (GBAO). Project sites are geographically dispersed and include both lowland and mountainous areas, reflecting the national scope of the health sector intervention. The locations have been identified by MOHSPP based on service coverage gaps, population needs, and existing health system capacity.

77. Site selection for health infrastructure under project follows functional purpose of each facility type, reflecting a deliberate effort to maximize service effectiveness and ensure integration within the health system. For the construction of integrated CESS laboratories, a key prerequisite is proximity to district health facilities. The CESS laboratories are designed to support timely detection, monitoring, and reporting of infectious and climate-sensitive diseases at the district level. For PHC facilities -including rural health houses and village health centers - the site selection criteria shift to reflect their community-facing role. Population density and the availability of existing health services in the target districts are the defining factors.

78. The project involve construction and/or upgrading of primary and secondary healthcare facilities, including sanitary and epidemiological stations, rural health houses, village health centers/clinics, and district-level health polyclinics.

79. Allocated land plots for construction have already been identified in the selected districts, and their geographic coordinates have been documented.

80. In Khatlon Region, the project will cover several districts characterized by mixed rural and semi-urban settlements, agricultural land use, and relatively high population density compared to other parts of the country. Sughd Region project sites include districts with both valley and mountainous terrain, while sites in the DRS and GBAO are located in more remote and topographically challenging areas. Climatic conditions, accessibility, and existing infrastructure

vary significantly across the project locations, which will be considered during design, construction planning, and environmental management measures.

81. Key features of the project include small- to medium-scale civil works, limited footprints of construction activities, and use of standard health facility designs aligned with relevant applicable national regulations and GIIP. No large-scale industrial activities are envisaged. Construction activities are expected to be confined to clearly defined sites and implemented in phases to reduce disruption to surrounding communities. Operation of the facilities will strengthen access to essential health services, disease surveillance, and primary healthcare delivery, particularly in underserved and remote areas.

82. Overall, the dispersed nature of the project locations, the modest scale of civil works, and the use of pre-allocated land plots suggest that potential environmental impacts are likely to be localized, temporary, and manageable through the application of standard mitigation measures and GIIP.

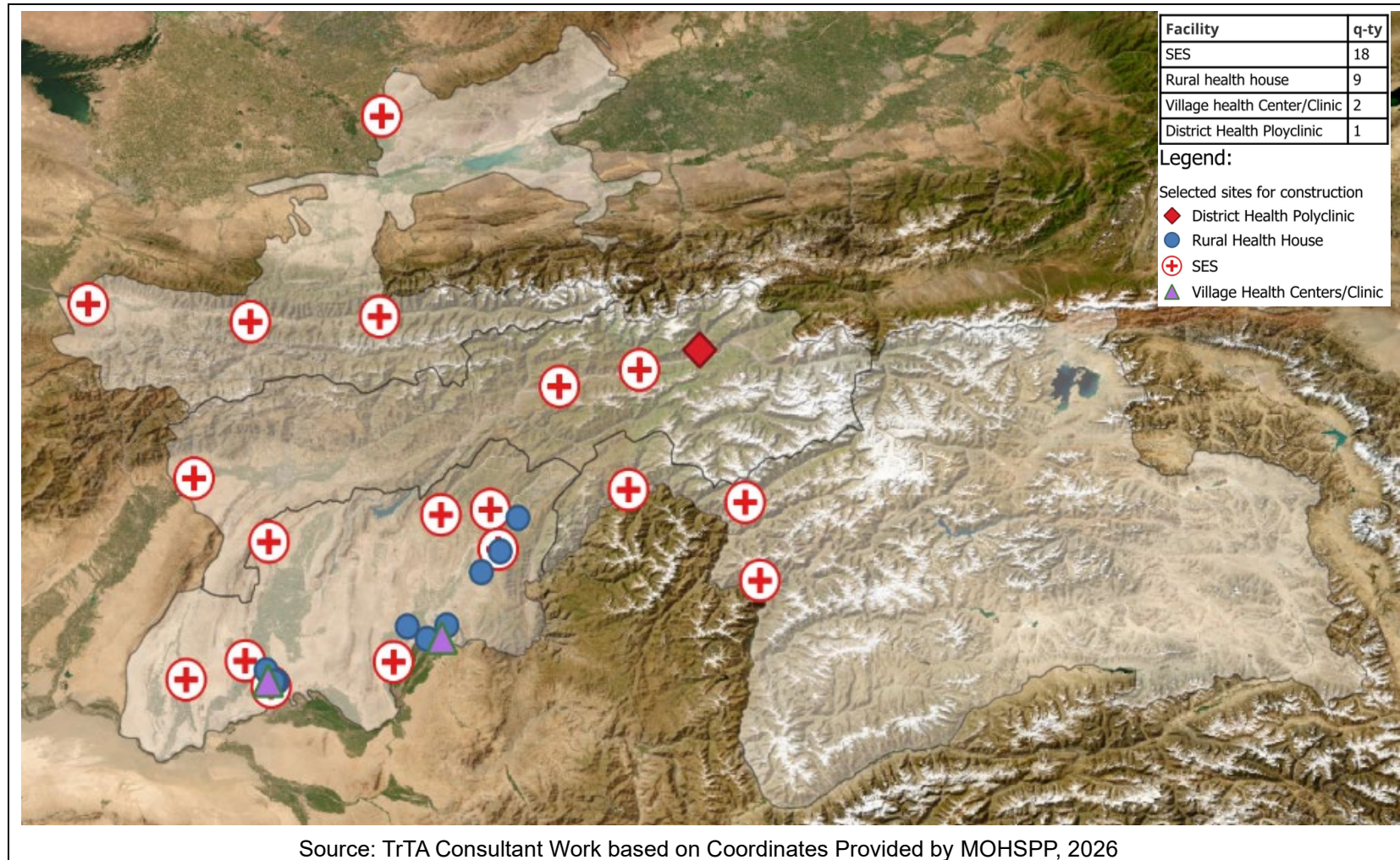
83. Table III-1 presents the details of the project components including location, GPS coordinates and proposed interventions under the project. Figure III-1 shows the geographical locations of the project component on the country map.

Table III-1. Details of project components, location and proposed interventions

#	Facility Type and Construction typology	District	Proposed Intervention	GPS coordinates
1	Sanitary and Epidemiological Station (Activity - PCR, serology)	Baljuvon	New construction	38.308570, 69.682951
2		Dusti	New construction	37.4930437, 68.53296
3		Farkhor	New construction	37.4919729, 69.40537
4		Jayhoon	New construction	37.3486474, 68.68313
5		Khovaling	New construction	38.3374390, 69.97080
6		Khuroson	New construction	38.1568881, 68.67029
7		Muminobod	New construction	38.1155880, 70.02237
8		Qubodiyon	New construction	37.3904966, 68.18262
9		Ayni	New construction	39.388089, 68.56176
10		Kuhistoni Mastchoh	New construction	39.4143432, 69.32020
11		Mastchoh	New construction	40.5304264, 69.33540
12		Panjakent	New construction	39.4875051, 67.60486
13		Tursunzoda	New construction	38.5119645, 68.22687
14		Rasht	New construction	39.0250071, 70.37785
15		Tojikobod	New construction	39.1197284, 70.85153
16		Vanj	New construction	38.379646, 71.472230
17		Darvoz	New construction	38.451071, 70.789725
18		Rushon	New construction	37.945110, 71.562991
1	Rural Health House (Activity – Basic Medical Care, basic Diagnostics)	Hamadoni	New construction	37.6194943, 69.603073
2			New construction	37.6892640, 69.486853
3			New construction	37.6962491, 69.716507
4		Jayhoon	New construction	37.4429648, 68.651258
5			New construction	37.3813302, 68.715166
6			New construction	37.3809298, 68.701518
7		Muminobod	New construction	38.2904559, 70.136018
8			New construction	38.1056327, 70.032364
9			New construction	37.9690132, 69.988685
1	Village Health Center (Activity – Basic Medical Care, Basic Diagnostics)	Hamdoni	New construction	37.6243782, 69.689680
2		Jayhoon	New construction	37.3878376, 68.665224
1	District Health Polyclinic (Activity – Basic Medical Care, Basic Diagnostics)	Lakhsh	New construction	39.2300904, 71.207319
1	CESS facility at the POE	Tursunzoda	Renovation and expansion	38.5050787, 68.109489
1	GBV short-term residential facilities (400 sqm)	Kulob city	New construction	TBD
2		Khujand city	New construction	TBD
3		Bokhtar city	New construction	TBD

Source: TrTA Consultant Work based on Coordinates Provided by MOHSPP, 2026

Figure III-1. Location map of the project facilities



D. Project Concept Design and Summary of Physical Works

84. The proposed project is designed to strengthen health security and primary healthcare service delivery in health infrastructure, disease surveillance capacity, and climate-resilient service delivery systems. The project adopts a decentralized and phased design approach, focusing on upgrading and expanding existing public health and primary healthcare facilities in selected districts, rather than constructing large-scale new facilities. This approach is intended to maximize service coverage, improve operational efficiency, and minimize environmental and social impacts.

85. Physical works under the project will primarily consist of small- to medium-scale civil works, including (i) construction of new health facilities on pre-identified land plots, (ii) installation of essential utilities and auxiliary infrastructure. The types of facilities to be supported include sanitary and epidemiological stations and laboratories, rural health houses, village health centers/clinics, district-level primary healthcare polyclinics, and selected facilities at points of entry (POE).

86. The scope and scale of work at each site depend on local service needs, existing infrastructure conditions, and functional requirements defined by MOHSPP.

87. New construction activities will generally involve single- or two-story buildings with limited footprints, on sites generally located within or adjacent to existing health facility compounds or on publicly owned land designated for social infrastructure, to be designed in accordance with national building codes and health facility standards. Where required, facilities will be equipped with climate-resilient features such as improved thermal insulation, energy-efficient lighting, and backup or renewable power supply systems to ensure continuity of services during extreme weather events and power outages.

88. The project will also support the installation of medical and laboratory equipment, information and communication technology systems, and waste management facilities appropriate to the level of care provided. These activities will largely be confined to building interiors, perimeter of facility and service areas. Healthcare waste management systems will be installed at project facilities in line with national regulations (MOHSPP SanPiN 190.010.090) and good international guidelines and practices (IFC EHS Guidelines for Health Care Facilities, IFC EHS Guidelines for Health Care Facilities (2007); WHO Safe Management of Waste from Health-care Activities (a practical guide); and WHO Laboratory Biosafety Manual) for segregation, temporary storage, transportation, treatment and safe disposal arrangements. This healthcare waste management system will be compliant in terms of emission limits, treatment efficiency, segregation requirements, temporality storage limits. Construction activities are expected to be carried out by licensed contractors under the supervision of the project implementing agency and relevant technical authorities. Project Administration Group (PAG) will closely work with CEP to obtain the required conclusion of the State Ecological Expertise. Before initiation of construction activities contractors must ensure the following permits are granted:

- A positive conclusion of State Ecological Expertise (SEE) issued by the Committee for Environmental Protection.
- Land Use Permits. Rights to use land for construction
- Construction Permit. Issued by construction oversight authorities
- Water Use Permits (if applicable). For projects requiring water extraction or discharge
- Tree Cutting Permits (if applicable). Required if vegetation removal is necessary.
- Cultural Heritage Permits (if applicable). For work near protected cultural/archaeological sites
- Agreement with local municipal authorities on disposal of construction waste material at designed disposal sites.

89. No blasting, quarrying, or large-scale earthworks are anticipated. Temporary impacts related to noise, dust generation, waste generation, and worker safety are expected during the construction phase; however, these impacts are site specific and short term and considered low to moderate in magnitude and can be effectively managed through standard environmental mitigation measures included in site-specific EMP.

90. Table III-2 below presents the output wise summary of project content i.e. project components and key activities under each component.

Table III-2. Summary of project contents

Output	Component	Main activities
Output 1: Disease prevention and public health emergency response capacity improved.		
1	Detection and early response to infectious diseases	<ol style="list-style-type: none"> 1. Deploy and install 10 modified 40-ft ISO Health Containers, equipped with essential medical, laboratory, and office facilities, to serve as basic health and laboratory units at selected priority land POEs. 2. Renovate and expand the existing CESS facility at the POE of Tursunzoda district.
Output 2: Capacity and efficiency of laboratories improved.		
	Strengthen infrastructure of integrated disease surveillance and response capacity	<ol style="list-style-type: none"> 1. Design and construct 18 new integrated district SES/CESS laboratories
	Strengthen diagnostic capabilities of 8 district CES laboratories	<ol style="list-style-type: none"> 1. Provide supplementary laboratory, office, and IT equipment, reagents, and test kits to the 18 new district SES/CESS laboratories 2. Improve biosecurity and biosafety management of zoonotic pathogens at 18 new integrated SES/CESS laboratories
Output 3: Primary health care reform to manage emerging infectious disease, and climate-related health risk supported.		
	Strengthen infrastructure of PHC to improve UHC Strengthening GBV short term residential facility	<ol style="list-style-type: none"> 1. Construct 1 district PHC polyclinic, 2 village health clinics (each 220 sqm) and 9 rural health posts (each 70 sqm) across four boarder and hard-to-reach rural districts 2. Procure 8 service vehicles for Healthy Lifestyle Centers of 8 districts with rural and hard-to-reach areas
Output 4: Gender-responsive integrated services for health centers established and operational.		
	Strengthening GBV short term residential facility	<ol style="list-style-type: none"> 1. Construct three 400 sqm Gender Responsive Integrated Service for Health facilities in Kulob city, Khujand city, and Khorugh city

E. Construction Content

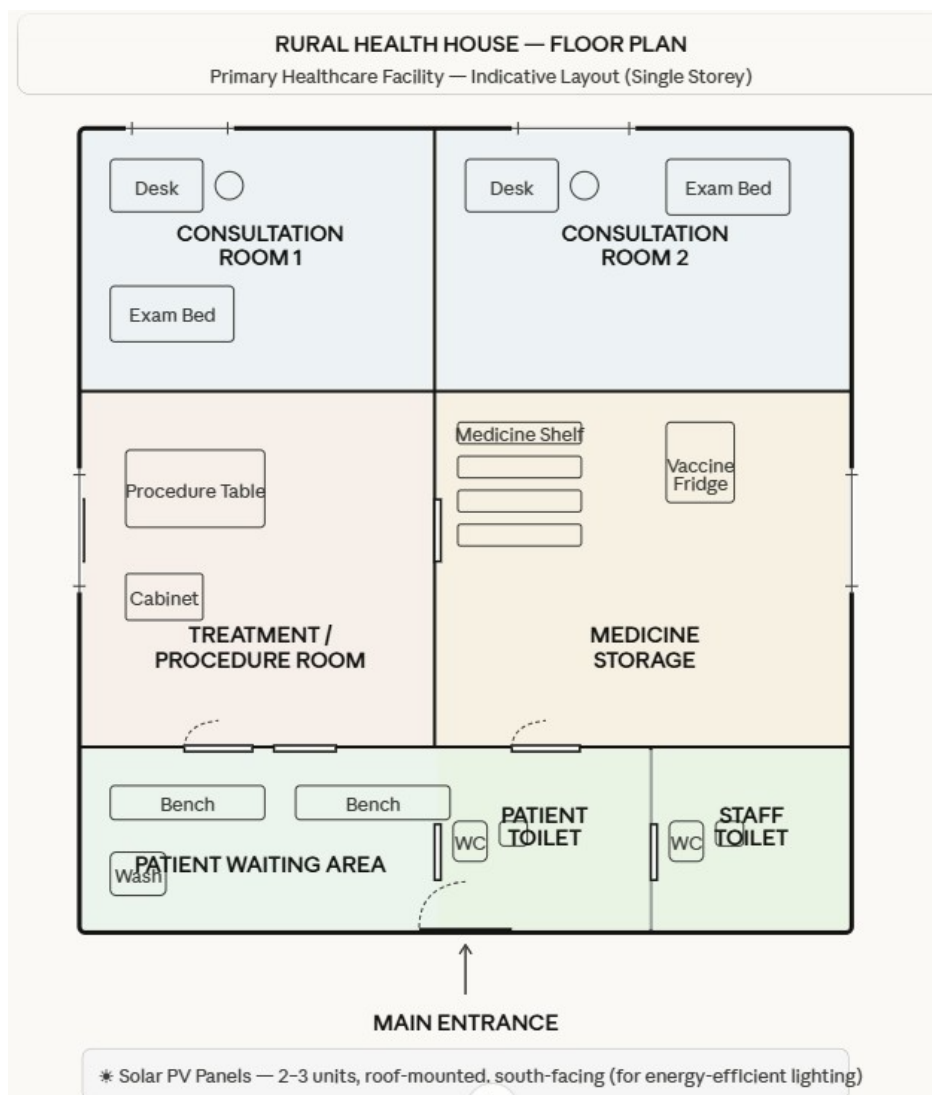
91. The construction content of the project comprises targeted small- to medium-scale civil works intended to strengthen public health infrastructure, improve primary healthcare access, and enhance disease surveillance and diagnostic capacity in selected districts. Construction activities will be implemented on pre-identified land plots allocated for health sector use or within existing health facility premises (normally district – level clinic). One of the prerequisites for selection of sites for construction of CESS laboratories is proximity to district health facilities. Selection of sites

for construction of PHC facilities, including rural health houses and centers, is the density of the population and availability of such facilities in target districts. The scope of work is limited to essential health infrastructure and associated utilities. The physical works will include construction of new buildings and, where applicable, upgrading of existing structures to meet functional, safety, and climate-resilience requirements. Facility designs will follow standardized layouts approved by the MOHSPP and comply with national building codes, public health standards, and applicable biosafety and infection prevention requirements as per national and international standards. All facilities will be designed with modest building heights (generally one or two stories), limited footprints, and capacities aligned with district- and community-level service demand. Additional works will include internal roads or walkways, boundary fencing, drainage, and connection to utilities such as water supply, sanitation, electricity, and communications. Construction materials will consist of conventional building materials, including reinforced concrete, masonry, steel elements, and prefabricated components. The facility wise construction contents are provided in the following paragraphs.

92. **Construction of Rural Health Houses.** Rural health houses will be constructed across four rural districts to bridge basic primary healthcare service coverage gap which will be equipped with solar power and water and will be designed with climate-resilient standards to withstand floods, heatwaves, and other climate-induced hazards. These facilities will typically be single-story buildings with a small footprint and an indicative floor area sufficient to support essential outpatient services. A standard rural health house will include one or two consultation and examination rooms, a small treatment or procedure room, storage space for medicines and supplies, and basic sanitation facilities for staff and patients. The capacity of rural health houses will be designed to serve a limited local catchment population, focusing on preventive care, maternal and child health services, health education, and early identification and referral of communicable diseases. Buildings will incorporate climate-resilient design features such as thermal insulation, natural ventilation, and energy-efficient lighting to ensure functionality under varying climatic conditions. Each rural health house facility will have a secured medical waste storage facility to be designed following national (MOHSPP) and international (IFC, WHO) standards and GIIP on healthcare waste management. Figure III-2 shows the view and layout of a typical rural health house in Tajikistan.

Figure III-2. View and Layout of a typical rural health house in Tajikistan

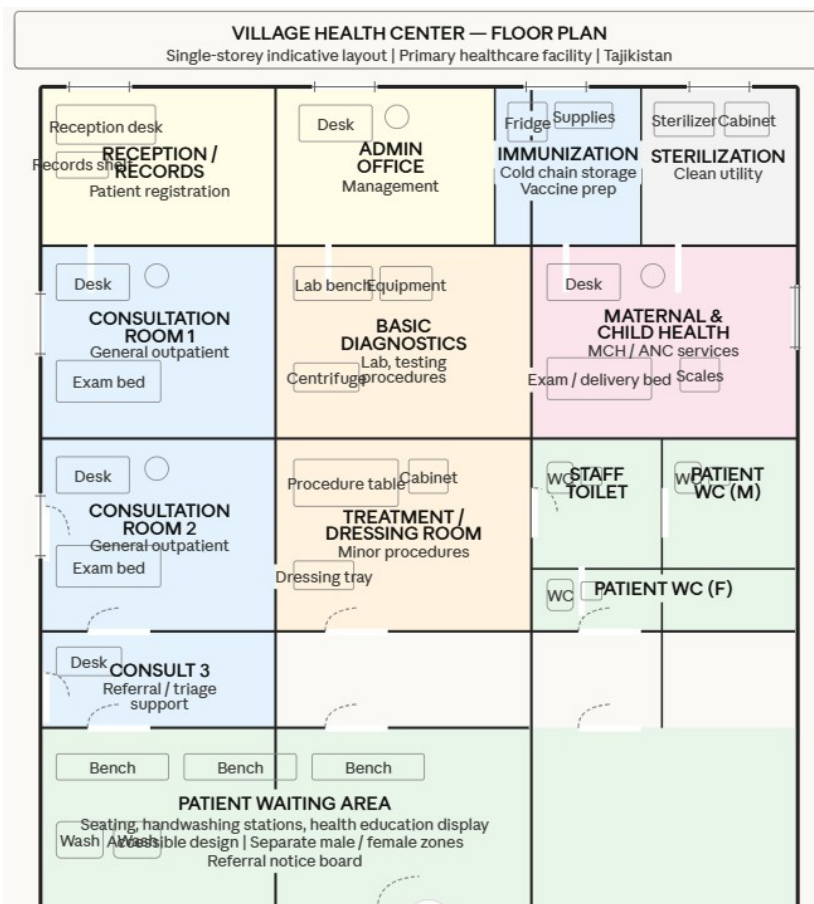




93. **Construction of Village Health Centers/Clinics.** Village health centers or clinics will be constructed to provide a higher level of primary healthcare services than rural health houses and to serve larger catchment populations. These facilities will have a larger indicative floor area and greater functional capacity, typically including multiple consultation rooms, basic diagnostic spaces, administrative offices, patient waiting areas, medical waste storage facility, and improved sanitation facilities. Village health centers are intended to deliver outpatient medical services, routine diagnostics, immunization, and referral support to district-level facilities. The buildings are expected to be permanent structures of one story, depending on site conditions and service requirements. Designs will emphasize functional zoning, infection prevention and control, accessibility for patients, and efficient patient flow. External work will be limited to minor site leveling, walkways, and boundary demarcation within the allocated land plots.

94. Each village health centers/clinics will have on-site waste management system including collection, storage, disinfection, treatment and disposal facility to be designed following national requirements in line international (IFC, WHO) standards and GIIP on healthcare waste management. Figure III-3 shows the view and layout of a typical village health centers/clinics in Tajikistan.

Figure III-3. View and layout of a typical village health centers/clinics in Tajikistan

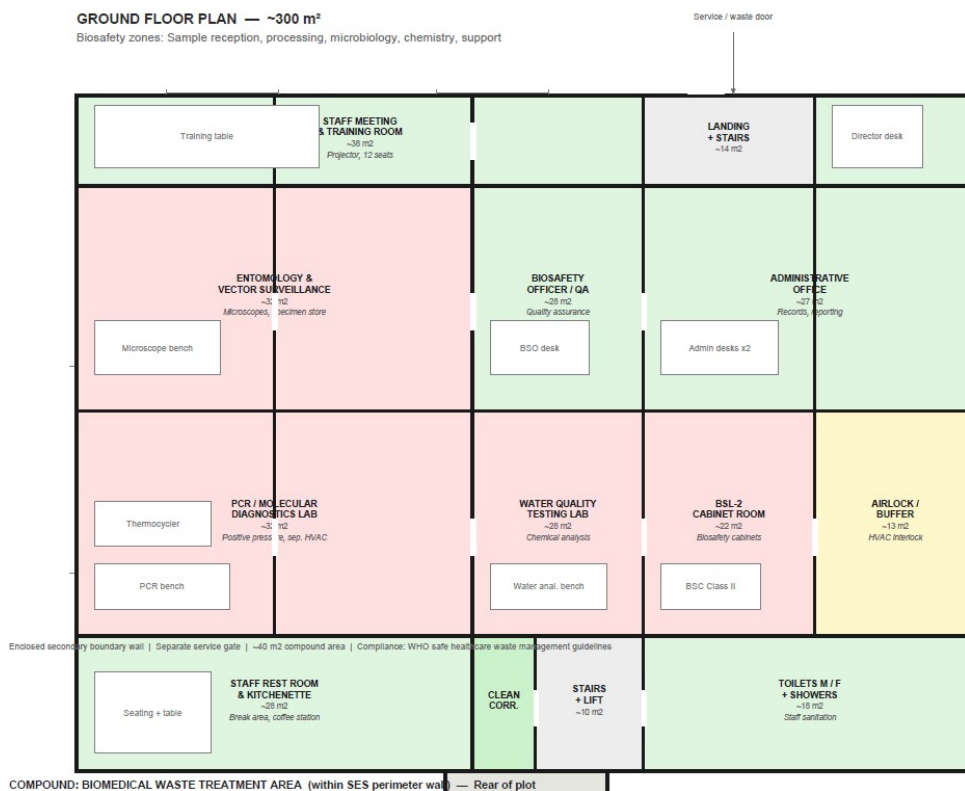


95. **Construction of Integrated SES Laboratories.** The project will support the construction of integrated laboratories under the Sanitary and Epidemiological Service (CESS) to strengthen district-level disease surveillance and diagnostic capacity. These laboratories will be designed as permanent facilities with clearly defined functional zones, including sample reception areas, laboratory testing rooms, cold storage, biomedical waste management handling and temporary storage rooms, and administrative and staff support spaces. The capacity of the CESS laboratories will be appropriate for district-level public health operations and will not include high-containment laboratory functions. Designs will comply with applicable biosafety and biosecurity standards, including controlled access, appropriate ventilation systems, segregation of clean and contaminated areas, and safe handling, treatment and disposal of laboratory waste. The primary purpose of the laboratories is to support timely detection, monitoring, and reporting of infectious and climate-sensitive diseases, thereby strengthening public health preparedness and response. Figure III-4 shows the view and layout of an integrated SES laboratory in Tajikistan.

Figure III-4. View and layout of an integrated SES laboratory in Tajikistan



96. Each SES facility will have on-site waste management system including collection, storage, disinfection, treatment and disposal facility to be designed following national and applicable international e.g., IFC, WHO standards in line with acceptable GIIP on healthcare waste management.



97. **Construction of district health polyclinic in Lakhsh district.** The project will support the construction of a district health polyclinic to strengthen secondary-level primary healthcare service delivery and referral capacity within the project area. The polyclinic will be designed as a permanent multi-functional healthcare facility serving a large district-level catchment population and providing a broader range of outpatient and diagnostic services than village-level facilities. The building is expected to be a one- or two-story structure with a relatively large floor area to accommodate multiple specialized consultation rooms, diagnostic and examination spaces, administrative offices, patient waiting areas, and staff support facilities. The polyclinic will function as a referral center for rural health houses and village health centers, supporting early diagnosis, treatment, and follow-up of communicable and non-communicable diseases. Technical design features will include functional zoning to separate patient flow, staff areas, and service spaces, infection prevention and control measures including waste segregation, storage, treatment and disposal system, accessibility provisions, and reliable utility connections for water supply, sanitation, electricity, and communications. The facility will be constructed in accordance with national healthcare infrastructure standards and will incorporate climate-resilient and energy-efficient design elements to ensure safe and continuous operation under varying environmental conditions. The district health polyclinic will have on-site waste management system including collection, storage, disinfection, treatment and disposal facility to be designed following national (MOHSPP) and international (IFC, WHO) standards and GIIP on healthcare waste management. The building design and layout of district health polyclinic is similar to a SES laboratory (as shown in Figure III-4 above).

98. **Construction of GBV Short-Term Residential Facilities.** The project will support the construction of two three (3) Gender Responsive Integrated Service for Health (GRISH) facilities in Kulob city, Khujand city, and Khorugh city, each with an approximate gross floor area of 400 square meters. These facilities are intended to provide safe, temporary accommodation and

integrated support services for survivors of GBV, including women and children, within a protected, secured and confidential environment. The buildings will be designed as low-rise permanent structures, typically one story, with functional spaces that include short-term residential rooms, private consultation and counseling rooms, basic medical examination space, administrative offices, staff areas, and communal living facilities. The design will prioritize the privacy, safety, and dignity of residents, incorporating controlled access points, secure perimeters, and discreet site layouts to minimize visibility and risk. Technical features will include reliable water supply and sanitation systems, heating and ventilation, energy-efficient lighting, and accessibility provisions. Construction will comply with national building standards and social protection facility guidelines, with environmental impacts limited to localized and temporary construction activities that can be effectively managed through standard mitigation measures. Figure III-5 shows the view of typical GRISH short-term residential facility in Tajikistan.

Figure III-5. View of a typical GRISH short-term residential facility in Tajikistan



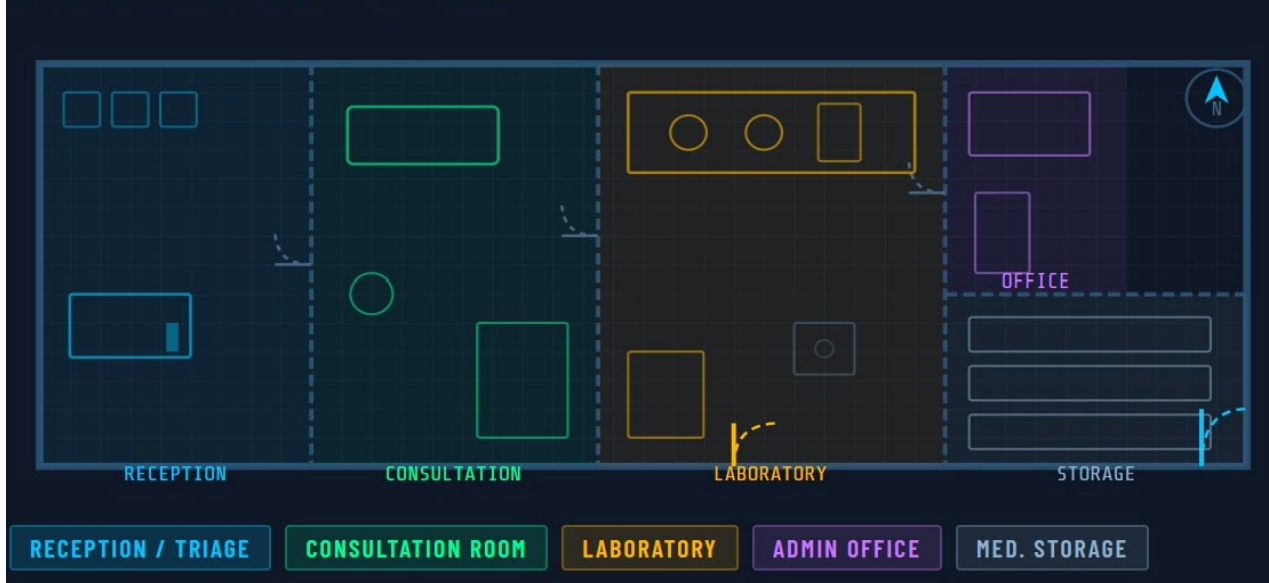
99. **Installation of Health Containers.** The project will deploy and install container units at 10 Points of Entry with improved surveillance, testing, and quarantine capacity, infectious prevention and control arrangements, and stable and modernized power and water supply and communication connection. It will be a modified inbuilt container pre-manufactures. Each container will have an approximate site of 40-ft ISO. It will be transported to the site. Each container will generally have a reception area, consultation room, laboratory, admin office and storage area including provision for secure storage of healthcare waste.

100. Each POE facility will have a secured medical waste storage facility to be designed following national (MOHSPP) and international (IFC, WHO) standards and GIIP on healthcare waste management. Figure III-6 shows the view and layout of typical health container for POEs in Tajikistan.

Figure III-6. View and layout of a typical health container for POEs in Tajikistan



INTERIOR FLOOR PLAN - TOP VIEW



101. Table III-3 provides a summary of the construction content under each project component.

Table III-3. Summary of construction content under each component

Output	Component	Construction Content	Quantities
Output 1: Disease prevention and public health emergency response capacity improved.			
1	Detection and early response to infectious diseases	Deploy and install modified 40-ft ISO Health Containers at POEs	10
		Renovate and expand the existing CESS facility at the POE of Tursunzoda	1
Output 2: Capacity and efficiency of laboratories improved.			
2	Government's reform on integrating diagnostic laboratory and epidemiology services	Design and construct new integrated district CESS laboratories	18
		Provide supplementary laboratory, office, and IT equipment, reagents, and test kits to new district CESS laboratories	
		Improve biosecurity and biosafety management of zoonotic pathogens at integrated CESS laboratories	
Output 3: Primary health care reform to manage emerging infectious disease, and climate-related health risk supported.			
3	Support Government's PHC reform	Conduct construction district PHC polyclinic in Lakhsh district	1
		Village health clinics (each 220 sqm)	2
		Rural health house (each 70 sqm)	9
Output 4: Gender-responsive integrated services for health centers established and operational.			
4	Gender	Construct 400 sqm Gender Responsive Integrated Service for Health facilities in Kulob city, Khujand city, and Khorugh city	3

F. Project Cost and Implementation Schedule

102. The project is estimated to cost \$35.71 million, including duties and taxes, physical and price contingencies. The government has requested a grant of \$17 million from ADB to help finance the project.

103. The project will be implemented over a period of 62 months (indicative schedule: from November 2026 to December 2031). The procurement will be done under different packages for civil works, goods, and services. Each civil work package will take about 1 to 2 years for implementation. The overall project implementation schedule is shown in Figure III-7 below.

Activities	26	2027				2028				2029				2030				2031			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
B. Management Activities																					
Conduct first project steering committee meeting (By Q4 2026)																					
Complete the recruitment of all project administration group staff (By Q1 2027)																					
Procure office furniture, equipment, and two vehicles for the project administration group (By Q4 2026)																					
Complete the recruitment of gender expert, IT expert, and other consultants for supporting the implementation, monitoring, and reporting of the project (By Q1 2027)																					
Prepare and submit annual progress reports (Every Q4 of the year from 2026 onward)																					
Prepare and submit quarterly progress reports (From Q4 2026 onward)																					
Submit annual audited project financial statements (Every Q2 and Q4 from 2026 onward)																					
Prepare project completion report (From Q3 2031 onward)																					

Source: TrTa Team, 2026

G. Associated and Existing Facilities

104. The project due diligence considered in this IEE includes project associated facilities and existing facilities. Associated facilities are those which are not funded by the project, but whose viability and existence depend exclusively on the project and whose operation and services are essential for successful operation of the project (ADB SPS 2009). Existing facilities are defined as: existing facilities – those which are already established and will be necessary for the project operations, but whose operation does not depend on the project and therefore do not meet the SPS 2009 definition of associated facility. These facilities are not part of the project scope and will not be subject to any ADB-funded construction, operation, upgrade, rehabilitation, or other activities.

105. The proposed facilities under the project (SESSs, rural health houses, village health centers/clinics, district health polyclinics, health containers) will be constructed and operated independently. Based on the available information from the initial concept stage planning, there are no new facilities being constructed planned or constructed, which are not funded by the project whose viability and existence depend exclusively on the project and whose operation and services are essential for successful operation of the project facilities. The proposed plan is that the project SESSs, CESS and polyclinic will have their own waste management system whereas medical waste from rural health houses/centers and POEs will be transferred to the nearest new CESS/SES facilities to be constructed under the project. Therefore, considering the scope and operational requirements of the proposed project facilities, the proposed project does not have any associated facility.

106. The project involves several existing facilities such as utilities supplies such as electricity, heating etc. Details of the identified existing facilities are provided in Table III-4.

107. **Associated/Existing Facility Consideration:** The project includes healthcare waste management infrastructure as part of its design, including integrated treatment systems at selected SES/CESS facilities. These facilities are project components and not associated facilities. Where other project facilities, such as RHHs or POEs, rely on these project-financed SES/CESS facilities for centralized treatment, such reliance forms part of the project's internal waste management system and shall be assessed accordingly in the IEE and EMP. Any external facilities or services required beyond the project-financed treatment systems, including final disposal sites, external transporters, or other downstream waste management arrangements, shall be identified separately and assessed as associated facilities where applicable under ADB SPS (2009). Table III-4 provides an assessment of the identified existing facilities and its linkage with the project.

Table III-4. Due diligence for identified existing facilities

District and Facility	Type of facility	Likely existing facilities	Compliance to domestic regulation? (Y/N)	Link with the Project
Rasht district, Jamoati Shahraki Gharm	SES	Centralized water supply system, Centralized sewage system, electricity from local grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing facility. The structure of the existing health facility will be demolished once new SES is constructed. The new SES facility will integrate with established utility networks for electricity, water, and sewage. The new SES under the project will have an integrated and independent on-site medical waste management system.
Tojikobod district. Shahraki Tojikobod, Jamoat Qalai Labi Ob.	SES	Centralized water supply system and local electricity grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing SES facility. No demolished work will be involved in this facility. The new project facility will integrate with established utility networks for electricity and water. The new SES under the project will have an integrated and independent on-site medical waste management system.
Tursunzoda district, city of Tursunzoda	SES	Centralized water supply system, Centralized sewage system, electricity from local grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing facility. The structure of the existing health facility will be demolished once new SES is constructed. The new facility will integrate with established utility networks for electricity, water, and sewage. The new SES under the project will have an integrated and independent on-site medical waste management system.
Baljuvon District, Khatlon	SES	Electricity from local grid.	The existing electricity grid has been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing SES facility. No demolished work will be involved in this facility. The facility does not have access to existing utilities except electricity grid. The new SES under the project will be connected with the local utility network (power, water, sewerage) and it will have its own independent on-site medical waste management system.
Khovaling District, Khatlon	SES	Electricity from local grid, medical waste treatment facility at district hospital close to SES facility.	The existing electricity grid has been in operation since a long time as per local regulations. The medical waste treatment facility at SES is insufficient and faces issues with its operation.	The project involves the construction of a new SES adjacent to the existing facility. The structure of the existing health facility will be demolished once new SES is constructed. The facility does not have access to existing utilities except electricity grid. The new SES under the project will be connected with the local utility network (power, water, sewerage) and it will have its own independent on-site medical waste management system.

District and Facility	Type of facility	Likely existing facilities	Compliance to domestic regulation? (Y/N)	Link with the Project
Muminobod District, Khatlon region	SES	Centralized water supply system, Centralized sewage system, electricity from local grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing SES facility. No demolished work will be involved in this facility. The new facility will integrate with established utility networks for electricity and water. The new SES under the project will have its own independent on-site medical waste management system.
Muminobod District, Khatlon region	RHH	No		The proposed RHH will be constructed on a new plot. The new facility will integrate with established utility networks for electricity and water. The project design will include on-site storage of medical waste and transport waste to the newly constructed nearest SES under the project for treatment and disposal.
Hamadoni District, Khatlon	RHC	Centralized water supply system and local electricity grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new rural health center adjacent to the existing rural health center. No demolished work will be involved for this facility. The new facility will integrate with established utility networks for electricity and water. The new rural health under the project will have its own independent on-site medical waste management system.
Hamadoni District, Khatlon region, Boghiston	RHH	No		The proposed RHH will be constructed on a new plot. The new facility will integrate with established utility networks for electricity and water. The project design will include on-site storage of medical waste and transport waste to the newly constructed nearest SES under the project for treatment and disposal.
Hamadoni District, Khatlon region, Pakhtakor village	RHH	No		The proposed RHH will be constructed on a new plot. The new facility will integrate with established utility networks for electricity and water. The project design will include on-site storage of medical waste and transport waste to the newly constructed nearest SES under the project for treatment and disposal.

District and Facility	Type of facility	Likely existing facilities	Compliance to domestic regulation? (Y/N)	Link with the Project
Jayhun District, Khatlon region	SES	No		The proposed RHH will be constructed on a new plot. The new facility will integrate with established utility networks for electricity and water. The new SES under the project will have its own independent on-site medical waste management system.
Farkhor District, Khatlon region	SES	Electricity from the local grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing facility. The structure of the existing health facility will be demolished once new SES is constructed. The facility will integrate with established utility networks for electricity, water, and sewage. The project design will include on-site storage of medical waste and transport waste to the newly constructed nearest SES under the project for treatment and disposal.
Khuroson district	SES	Centralized water supply system and electricity grid.	The existing utilities have been in operation since a long time as per local regulations.	The project involves the construction of a new SES adjacent to the existing facility. The structure of the existing health facility will be demolished once new SES is constructed. The facility will integrate with established utility networks for electricity, water, and sewage. The project design will include on-site storage of medical waste and transport waste to the newly constructed nearest SES under the project for treatment and disposal.

Legend: SES: Sanitary and Epidemiology Station, RHH - Rural Health House, RHC - Rural health center

Source: TrTA Consultant field assessment, 2026

H. Analysis of Alternatives

108. An analysis of alternatives was conducted to justify the overall project and project components based on location (siting), construction, operation (waste treatment mechanism), and a with and without-project alternative analysis.

109. For the siting of the project facilities such as CESS facilities, project design requirement was to allocate integrated CESS facilities close to district hospitals which might require for some CESS facilities constructed in a new land parcel – closer to district hospital. Several existing CESS facilities are already close to the district hospital and will not require newly allocated land parcels. Considering this, most of the project facilities will be constructed within the existing premises or close to existing hospitals/health facilities; no alternative sites were considered.

110. The project considered options to minimize demolition of the existing health facility buildings wherever possible, such as at the POE of Tursunzoda. However, where not possible (as the existing buildings are too old for renovation and expansion), the project considered demolition of existing health facility buildings and proposed new construction.

111. The project planning also considered possibilities of treating waste from new health care facilities, and it was revealed that in most cases off-site treatment of medical waste is not possible due to lack of functional existing treatment facilities. Therefore, project proposed onsite treatment of medical waste including collection, disinfection, treatment and disposal. The detailed design of the individual facilities will include appropriate medical waste treatment system for each facility considering national regulations (MOHSPP SanPiN 190.010.090) and international standards and GIIP (IFC EHS Guidelines for Health Care Facilities, IFC EHS Guidelines for Health Care Facilities (2007); WHO Safe Management of Waste from Health-care Activities (a practical guide); and WHO Laboratory Biosafety Manual) for segregation, temporary storage, transportation, treatment and safe disposal arrangements.

112. The availability and need for utilities were considered as part of project planning. Considering utilities reliability specifically electricity, which is also at risk, the project considered alternative options such as incorporating solar PV and climate energy efficient requirements into project planning, as an alternative power source and other climate resilient measures.

113. Considering the need and rationale for the project, the “no-project” alternative is not an option as the patients’ and health workers’ safety is currently compromised by lack of adequate health care facilities in project provinces/districts. The no-project option would impede further social and economic development of the citizens of the state. The “with- project” alternative will improve patients’ and health workers’ safety in hospitals in the project provinces/districts.

III. EXISTING ENVIRONMENTAL, HEALTH AND SOCIAL CONDITIONS

A. Introduction

114. This section presents the existing environmental, health, and social baseline conditions in the project areas which will provide the necessary context for impact assessment and mitigation planning later on. The baseline assessment has been developed based on review of available secondary data from various sources, site visits conducted during from November 2025 to February 2026, consultations with health facility staff and local authorities in different districts, and various documentation that was provided by MOHSPP. Most of the detailed field observations and stakeholder consultations were carried out at project sites in Khatlon Region, particularly in districts like Baljuvon, Khovaling, Muminobod, Hamadoni, and also Jayhun, Farkhor and Khuroson as well as in Districts of Republican Subordination where the team was able to visit and assess the existing conditions.

115. The baseline characterization presented in this section covers physical environmental conditions, socio-economic setting, cultural resources, ecological resources and also includes specific baseline conditions such as sensitive receptors, ecological resources that might be impacted by construction and operation of health facilities to be constructed under the project. It should be noted that the information presented here reflects the conditions observed during on-site assessment and desk review of information and evidence for each site provided by MOHSPP. In some cases where site-specific data were not available or were limited, regional or national level information has been used, and this has been supplemented wherever possible with field observations and inputs from stakeholders during consultations.

B. Environmental, Health and Social Setting

1. Physical setting

116. The project areas are spread across different topographic zones in Tajikistan. Most of the sites in Khatlon Region are located in lowland and foothill areas where elevations range from around 300 meters to about 800 meters above sea level. The terrain in these areas is generally characterized by alluvial plains, terraced agricultural land and gently sloping valley floors which are surrounded by seasonal streams and irrigation channels in many places. It was observed during site visits that several sites, particularly in Hamadoni and Muminobod districts, are located in areas where soil erosion, gully formation, and seasonal mudflow activity, which were quite evident in the field. A particular concern was noted at Darai Havosh village in Muminobod District where the initially proposed site for construction of a rural health house was found to be located adjacent to an active mudflow stream. During the site visit there was clear evidence of recent erosion and gully development in the area which raised serious concerns among the team members about the stability of the site and whether it would be safe for a permanent health facility in the long term.

117. **Climate and Hydrology.** The project areas have a continental type of climate with hot and dry summers and cold winters, which is typical for this region. The annual precipitation varies quite a bit depending on the elevation and where you are geographically - in the valley areas it can be around 150-400 mm while in the mountainous zones you get higher amounts. Most of the precipitation happens during winter and spring months, and then you have these prolonged dry periods from around June through September. During summer the temperatures can get really hot - frequently exceeding 40°C in the lowland districts, while in winter it can drop well below freezing. In terms of water resources in the project areas, these are mainly coming from seasonal rivers, irrigation canals, and shallow groundwater.

118. It was observed during site visits that many of the health facilities have problems with reliable access to piped water supply. In fact, several sites are relying on on-site wells, or they get intermittent supply from municipal connections which is not reliable. A specific case was noted at Farkhor SES where the water supply is completely dependent on an on-site well and this provides water which is then being used for all facility operations including laboratory activities and sanitation - which is not ideal from a health and safety perspective. The issue of

seasonal water stress keeps coming up particularly during the summer months when the irrigation demand is very high and groundwater levels go down. The climate vulnerability is becoming more evident with the increasing frequency and intensity of extreme weather events such as heatwaves, droughts and flash flooding which put a lot of strain on the existing infrastructure and disrupt essential services.

2. Socio-economic conditions

119. **Population and Settlement Patterns.** The project districts have predominantly rural settlement patterns with scattered villages, and small administrative centers spread across the areas. The population density is quite variable across the region - have higher densities in the valley agricultural areas while in the more remote and mountainous zones the density is much lower. Khatlon Region, where most of the sites that were assessed are located, has been experiencing gradual population growth over the years, although many of the rural areas are facing challenges related to seasonal labor migration. This is particularly noticeable with male out-migration to Russia and other countries for employment opportunities which has become quite common. This migration pattern is actually affecting the household composition significantly because there are many households that are headed by women during the periods when men are away for work. The villages are typically organized around agricultural livelihoods, and the economies are mostly based on production of cotton, wheat, vegetables, and also livestock production. When it comes to access to basic services including healthcare, education, water supply, and sanitation, the situation in rural areas is significantly worse compared to district centers and urban settlements.

120. **Access to Health Services and Infrastructure.** The existing healthcare infrastructure in the project districts is quite limited and most of it is in very poor condition based on what was observed during the field visits. A lot of the rural health houses and village health clinics are operating in buildings that are really old - they were constructed during the Soviet era and now they have deteriorating structural conditions, the utilities are inadequate and there's not enough space for proper service delivery. During the consultations in Boghiston Village, the health facility staff actually reported that the current services are being provided from a small, rented premises because there is simply no permanent health facility available.

121. Similar situations were observed in Pakhtakor and Darai Havosh villages where the existing health infrastructure is either not functional anymore or is just inadequate to meet the community needs. The Sanitary and Epidemiological Stations that were assessed in Baljuvon, Khovaling, Muminobod, Jayhun, Farkhor and Khuroson districts are all housed in buildings that were constructed between the 1950s and 1990s and they have severe infrastructure deficiencies. This includes factors like structural deterioration, presence of asbestos-containing materials in the roofing which is a major health hazard, electricity and water supply that is very unreliable, absence of centralized wastewater connections and inadequate waste management facilities.

122. All of these conditions create both operational constraints and also pose environmental and occupational health hazards, which are quite serious. Community access to health services is further limited because of long travel distances that people have to cover, poor road conditions especially in rural areas, lack of transportation options, and also affordability barriers.

3. Physical cultural resources

123. **Cultural Heritage and Sensitive Sites.** Based on what was observed during the field assessments and from the stakeholder consultations that were conducted, there were no physical cultural heritage sites, archaeological monuments or any protected cultural properties identified in the immediate vicinity of the project sites. The project areas are basically located in established settlement zones which have long histories of agricultural and residential use going back many years. The broader region of Tajikistan does contain quite significant historical and cultural sites - ancient settlements, Islamic architectural monuments and traditional cultural landscapes in various parts of the country - but none of the project sites are located within or adjacent to any designated cultural heritage zones. The local authorities and community

representatives who were consulted during the site visits did not raise any concerns or identify any issues related to physical cultural resources at the proposed construction locations.

124. **Chance Finds Protocol.** Even though no known cultural resources were identified during the assessment, it cannot completely be ruled out the possibility of encountering subsurface archaeological materials or historical artifacts when excavation and earthworks are being done. Construction activities that involve ground disturbance, particularly in areas that have historical settlement patterns, always carry some inherent risks of uncovering materials that were previously unknown. To address this kind of risk, the project will implement a chance finds procedure which is in line with both the national legislation and also ADB Safeguard Policy Statement 2009 requirements. The procedure will basically require that contractors immediately stop work and notify the relevant authorities if any artifacts, structures or materials that might have archaeological, historical or cultural significance are found during construction. This procedure will be incorporated into the contractor's obligations and will also be part of the environmental management plan requirements. It will include provisions for temporary protection of the site, assessment by qualified specialists who know about these things, and coordination with the Ministry of Culture and other agencies that are responsible for cultural heritage. Before any excavation activities start, workers will receive training and orientation on these chance finds protocols and the reporting procedures they should follow.

4. Ecological resources

125. **Protected Areas and Key Biodiversity Areas.** The proximity of the sites of the proposed project facilities (rural health houses, village health centers/clinics, district-level health polyclinics, sanitary and epidemiological stations) to key biodiversity areas (KBA) and nationally protected areas, Ramsar sites etc. has been analyzed using the Integrated Biodiversity Assessment Tool (IBAT). The IBAT multisite report (attached in Appendix 2) shows that 3 project sites are located within 1 km buffer radius of a legally protected areas that is internationally recognized for biodiversity. However, the project facilities are located away from these protected areas. Based on the IBAT multisite assessment, it can be concluded that the proposed project components are not located within any legally protected area or area that is internationally recognized for biodiversity.

126. **Flora and Fauna.** The project sites are all located in what can be described as heavily modified landscapes which are characterized mainly by agricultural land use, residential areas, and established institutional compounds. There is not much natural vegetation in these areas - mostly limited to ruderal species, some roadside trees and shrubs, and whatever remnant vegetation that can be find in drainage channels and non-cultivated margins here and there. The cultivated vegetation in the surrounding areas includes the typical crops like wheat, cotton, vegetables, fruit trees, and fodder crops which are common in this region. During the site visits, no rare, endemic or protected plant species were observed at any of the project locations. The wildlife in these project areas is also quite limited and consists mainly of common species that have adapted to living in human-modified environments - this would be small mammals, reptiles and common bird species that you typically find around settlements. There were no critical habitats, protected areas or ecologically sensitive ecosystems identified at or anywhere near the project sites. The nearest protected areas are actually located at quite significant distances from where the project locations are and it's not anticipated that they would be affected by any of the project activities.

127.

128. **Sensitive Ecological Features.** Although the project sites are not located within or right next to any formally protected areas, it should be noted that some of the sites are situated near seasonal watercourses, irrigation canals and agricultural drainage systems. These features do provide some localized ecological functions and habitat for aquatic and semi-aquatic species even though they are man-made systems. When construction activities happen in close proximity to these features, attention will be paid to things like erosion control, sediment management and making sure there's no contamination from construction materials or wastes getting into these water systems.

129. At Darai Havosh village of Muminobod district the presence of that active mudflow stream and the associated erosional features that were observed indicates that there are some dynamic hydrological and geomorphological conditions happening there which may be sensitive to disturbance. The initial site selection at this particular location actually raised environmental concerns because of the erosion risk and questions about long-term site stability, which is why recommendations were made for selecting an alternative site in a safer and more stable location. Overall, the ecological sensitivity of the project sites can be considered as low to moderate, with some localized features that will require standard environmental management practices to make sure project activities prevent degradation of environmental quality or pollution in the project areas.

130. Table IV-1 presents the summary of the site conditions along with basic physical, socio-economic and ecological baseline at the project sites.

Table IV-1. Summary of site conditions and ecological baseline for project components

District	Type of facility for construction	Allocated land plot size	Sensitive receptors and Land use	Existing facilities	Water supply	Centralized sewage system	Medical Waste Treatment Facilities	Presence of ACM
Rasht district, Jamoati Shahraki Gharm	Sanitary and Epidemiology station	0.17 Ha	Hospital, residential area, businesses, public access roads, river ~ 150 meters away from site	Existing SES facilities from 1950s	Centralized water supply system	Available	Self-made furnace	Present in old SES building to be demolished
Tojikobod district. Shahraki Tojikobod, Jamoat Qalai Labi Ob.	Sanitary and Epidemiology station	Currently allocated land area size is 0.10 hectares.	Districts hospital, residential area, health center	Two mobile wooden sheds, one of which is used by administration, another as laboratory	Centralized water supply system	Not available	Done through burning medical waste in a self-made furnace	No
Tursunzoda district, city of Tursunzoda	Sanitary and Epidemiology station	Existing facility is located with 0.42 hectare	Residential areas. adjacent houses of population	Existing SES building is from 1960s which is one floor carcass building in a very poor condition	Centralized water supply system	Available	Waste management is done through burning medical waste in a soviet era incinerator which is in very bad shape.	Present in old SES building to be demolished
Baljuvon District, Khatlon	Sanitary and Epidemiology station	0.14 hectare	Residential area, governmental offices. Kizilsu river ~ 125 meters away from site	Existing SES building is from 1990s which is one floor in a very poor condition	Onsite water well	Not available	Done through burning medical waste in a self-made furnace	No
Khovaling District, Khatlon	Sanitary and Epidemiology station	0.20 hectare	Residential areas. adjacent houses of population, ~ 500 meters	Existing SES facility in a poor condition requiring constant maintenance. The territory of SES	Onsite water well	Not available	Medical waste is transferred to district hospital close to SES facility	Yes, existing SES facility to be demolished and auxiliary facilities – warehouse and garage

District	Type of facility for construction	Allocated land plot size	Sensitive receptors and Land use	Existing facilities	Water supply	Centralized sewage system	Medical Waste Treatment Facilities	Presence of ACM
			away from site	has underground well which supplies water to nearby population and SES facility itself				
Muminobod District, Khatlon region	Sanitary and Epidemiology Station	0.15 hectare	Districts hospital, residential area, health center, access roads	Allocated land plot for construction of SES facility is adjacent to district hospital.	Available	Available	Done through burning medical waste in a self-made furnace	No
Muminobod District, Khatlon region	Rural health House	0.10 Hectares	Residential area	No	No	No	No	No
Hamadoni District, Khatlon	Rural health center	0.40 hectares	Residential area, medical facility	Functioning rural health center beside which a new health center is proposed to be constructed	Available	Available	Done through burning medical waste in a self-made furnace	No
Hamadoni District, Khatlon region, Boghiston	Rural Health House	0.15 hectares	Residential area, secondary school	Allocated land in empty land plot	No	No	n/a	no
Hamadoni District, Khatlon region, Pakhtakor village	Rural Health House	0.15 hectares	Residential area, secondary school	Allocated land in empty land plot	No	No	n/a	no
Jayhun District, Khatlon region	Sanitary and Epidemiology Station	0.12 hectares	Residential area	Allocated land in empty land plot	No	No	n/a	no
Farkhor	Sanitary and	0.25	Functioning	Laboratory of	On-site water well.	Not available	Done through	Yes

District	Type of facility for construction	Allocated land plot size	Sensitive receptors and Land use	Existing facilities	Water supply	Centralized sewage system	Medical Waste Treatment Facilities	Presence of ACM
District, Khatlon region	Epidemiology Station	hectares	district hospital, laboratories, residential are	tropical disease, current building of SES facility	(quality of well water must be further tested, local employee informed on poor water quality.		burning medical waste in a self-made furnace	
Khuroson district	Sanitary and Epidemiology Station	0.20 hectares	Residential are, governmental offices, narrow access roads	Existing building of SES facility with axillary premises to be demolished	Available	Not available	Done through burning medical waste in a self-made furnace	Yes

Source: TrTA Consultant field surveys, January - February 2026

C. Environmental Baseline Quality

1. Surface water quality

131. **Water sources and quality.** Surface water resources in project areas consist of seasonal rivers, irrigation canals, and agricultural drainage channels. Water quality data for specific project sites are limited; however, regional water quality assessments indicate that surface waters in agricultural areas are subject to contamination from agricultural runoff, domestic wastewater discharge, and inadequate solid waste management. Common pollutants include suspended sediments, nutrients (nitrogen and phosphorus from fertilizers), organic matter, and bacterial contamination from inadequate sanitation systems. During site visits, several health facilities reported discharging untreated or poorly treated wastewater directly into shallow on-site pits or nearby drainage channels due to absence of centralized sewerage connections. At Jayhun SES, wastewater is directed to an underground storage tank approximately 3-3.5 meters deep, with potential risks of soil and groundwater infiltration. Similar arrangements were observed at other SES facilities in Farkhor and Khuroson districts. These practices pose risks of localized soil and groundwater contamination, particularly in areas with shallow water tables or permeable soils.

132. **Groundwater conditions.** Groundwater is an important water source in project districts, particularly where municipal supply is unreliable or unavailable. Shallow wells and boreholes are commonly used by households, institutions, and agricultural operations. Groundwater quality is variable and influenced by local geology, land use practices, and proximity to pollution sources. In densely populated areas with inadequate sanitation, groundwater contamination from septic systems, pit latrines, and uncontrolled wastewater discharge is a recognized concern. At Farkhor SES, reliance on an on-site well for all facility operations, including laboratory functions, raises concerns about both water availability and quality, particularly given the absence of water treatment systems. Protection of groundwater resources from contamination by construction activities, healthcare waste, and operational effluents will be an important consideration in project design and environmental management planning.

2. Noise

133. **Ambient noise levels.** Ambient noise levels in project areas vary depending on site location and surrounding land use. In district centers and densely populated settlements where most SES facilities are located, ambient noise is influenced by local traffic, commercial activities, residential activities, and periodic construction or agricultural machinery operations. In more rural and agricultural areas where village health centers and rural health houses are proposed, ambient noise levels are generally lower, typically below 50 dBA, with noise sources limited to occasional vehicular traffic, and domestic activities. No baseline noise measurements were conducted during site assessments; however, field observations and stakeholder consultations did not identify existing noise-related concerns or sensitive receptors requiring special consideration.

134. **Sensitive noise receptors.** All project sites are located within or adjacent to residential areas, which are considered sensitive noise receptors. Several sites are also located near schools, government offices, and other institutional facilities. During consultations in Hayoti Nav and Boghiston villages, proximity to secondary schools was noted, and in Baljuvon and other district centers, project sites are surrounded by densely populated residential neighborhoods. Construction activities, particularly during early site preparation and structural works, will generate temporary noise increases that could affect nearby residents. Mitigation measures, including restrictions on construction hours, use of well-maintained equipment, and provision of advance notice to affected communities, will be required to minimize disturbance. Operational noise from completed health facilities is expected to be minimal and consistent with typical institutional activities.

3. Air quality

135. **Ambient air quality.** Regional air quality in Tajikistan is influenced by both natural and

anthropogenic sources. Natural sources include dust from arid and semi-arid landscapes, particularly during dry and windy periods, while anthropogenic sources include vehicular emissions, residential heating with solid fuels, agricultural burning, and industrial activities. In project districts, air quality is generally moderate, with periodic elevated particulate matter (PM10 and PM2.5) concentrations during summer dust events and winter heating seasons. Localized air quality concerns are associated with unpaved roads, construction activities, and open burning of agricultural residues or domestic waste. During site visits, several communities reported seasonal dust problems, particularly in areas with unpaved access routes and limited vegetation cover. Residential heating in winter months relies heavily on coal, wood, and agricultural residues, contributing to elevated particulate and gaseous emissions. No ambient air quality monitoring data are available for specific project sites; however, regional air quality is considered to be within acceptable ranges for most of the year, with seasonal exceedances of particulate matter standards during dust events or intensive heating periods.

136. **Sensitive air quality receptors.** As with noise, all project sites are located in proximity to residential areas, which are sensitive to air quality degradation. Construction activities will generate temporary dust and emissions from construction equipment, material transport, and site preparation activities. Dust generation is expected to be most significant during dry and windy conditions and during earthworks, excavation, and material handling operations. Given the close proximity of construction sites to residences and other sensitive receptors, dust suppression measures, including water spraying, covering of material stockpiles, and limiting of trucks speeds on unpaved surfaces, will be required.

137. Operational air quality impacts from completed facilities are expected to be minimal and limited to emissions from backup generators or heating systems where applicable. Improved waste management practices, including elimination of open burning of medical waste, will result in positive air quality benefits compared to baseline conditions observed at existing facilities.

D. Existing Health Facility Conditions and Baseline Deficiencies

138. This section further presents elaborated descriptions of the baseline environmental and social conditions for each project site visited during project preparation environmental due diligence. Site visits and stakeholder consultation meetings were conducted across districts of Khatlon Region and Districts of Republican Subordination between November 2025 and February 2026. The baseline assessment focused on five key parameters: (i) sensitive receptors in proximity to the proposed construction site; (ii) presence of asbestos-containing materials (ACM) in existing buildings; (iii) identification of associated and existing facilities and current conditions of the existing health care facility structures; (iv) waste management practices, with particular attention to medical waste; and (v) access to utility infrastructure including water supply and sewerage. The findings presented here are drawn from field observations, facility staff interviews, photographic documentation, and consultation meeting records.

139. The selection of sites for field visits was not undertaken on a universal basis across all project locations. Given the large number of sites, their wide geographical distribution, and the prevailing winter conditions at the time of the assessment mission, a targeted and risk-informed approach to site selection was adopted. Field visits were prioritized based on three main criteria. First, a desk review of baseline information submitted by local stakeholders and MOHSP was conducted for all proposed project sites. This review included site descriptions, photographic documentation, land ownership and land-use certificates, and other available secondary data. Sites where the desk review identified potentially significant environmental or social risks — such as proximity to sensitive receptors, presence of hazardous materials including ACM, complex existing facility conditions, or inadequate waste management infrastructure — were flagged for mandatory field verification. Second, the feasibility of travel to each site considering winter road and extreme weather conditions prevailing during due diligence period. A number of project districts, particularly those in mountainous or remote areas, are subject to difficult or

impassable road access during winter months, which constrained the physical reach of the assessment team. Site visits were therefore scheduled only for locations that were safely accessible during due diligence period. Third, the anticipated magnitude of environmental and social risks associated with each site during project implementation was considered as a prioritization criterion. Sites where higher-risk activities were foreseen — including demolition of existing Soviet-era structures, disturbance of potential hazardous materials, or construction within close proximity to hospitals, schools, and densely populated residential areas — were given priority for in-person field verification to complement and validate the findings of the desk review. For sites assessed as presenting lower environmental risk based on the desk review, the documentary evidence provided by MOHSPP and local stakeholders was considered sufficient for the purposes of the due diligence-

140. In total, 13 project sites were physically visited as part of due diligence assessment, comprising 9 Sanitary and Epidemiology Stations (SES), 1 Village Health Center (VHC), and 3 Rural Health Houses (RHH). These sites are geographically distributed across several districts of Khatlon Region and DRS and reflect a range of environmental and geographical conditions, from semi-urban district centers to rural and remote village settings. Individual site baseline conditions are documented in the sections that follow.

141. **Inadequate Infrastructure condition and utility services.** Site visits to existing SESs in target districts revealed severe infrastructure deficiencies and utility service limitations that directly affect operational capacity and environmental performance of the existing SES. It must be noted that the operational gap in visited facilities was alike among all the visited sites. All assessed SES facilities reported frequent electricity interruptions, particularly during winter months when demand is highest. These interruptions disrupt essential laboratory operations, refrigeration of samples and reagents, lighting, and heating systems.

142. **Water supply reliability and wastewater treatment are equally problematic.** Most facilities are not connected to reliable municipal water networks and instead rely on intermittent connections, on-site wells, or outside water deliveries. At Farkhor SES, the facility depends entirely on an on-site well (Photo 1) that provides non-potable water, creating operational and health risks. Most of the assessed SES facilities are not connected to municipal sewerage systems. Instead, wastewater from laboratory, administrative, and sanitation functions are directed to shallow on-site pits ranging from 3 to 3.5 meters in depth. These rudimentary systems lack proper lining, capacity for waste treatment, or measures to prevent soil and groundwater contamination. At Jayhun SES, an underground water storage tank (Photo 2) was observed, but its condition, capacity, and seepage potential could not be verified during the site visit.



Photo 1. On-site well in Farkhor SES

Photo 2. Jayhun SES, an underground water storage tank

143. **Medical waste treatment conditions.** Existing waste management practices at assessed SES facilities are severely inadequate and pose substantial environmental and occupational health hazards. Seven of the nine SES sites rely on self-made furnaces or severely degraded Soviet-era incinerators for on-site burning of medical waste. These arrangements lack emission controls, safety mechanisms, and operator protection. Those self-made incineration devices operate at low temperatures, resulting in incomplete combustion, release of toxic air pollutants including dioxins and furans, particulate emissions, and generation of hazardous ash residues. The furnaces are typically located in close proximity to residential areas, raising serious environmental and public health concerns.

144. At Farkhor SES, waste storage and segregation practices were observed to be particularly poor, with open storage of mixed waste within the facility compound and inadequate separation of infectious, chemical, and general waste streams.

145. None of the assessed facilities engage licensed waste transporters or employ approved off-site disposal contractors, and none comply with national waste management regulations or international best practices for healthcare waste management. The absence of proper waste segregation systems, color-coded containers, staff training, and documented waste handling procedures was noted across all sites. These deficiencies create occupational health risks for facility staff and waste handlers, environmental contamination risks from ash disposal and emissions, and potential community exposure to pathogens and hazardous materials.

146. The following photographs show the existing system and practices for medical waste management in some of the visited SES facilities.



Farkhor SES



Khursoson SES



N. Khisrav SES



Qubodiyon SES



Muminobod SES



Tursunzoda SES

147. **Asbestos-containing materials (ACM).** A critical finding from site assessments was the widespread presence of asbestos-containing materials in roofing at existing SES facilities constructed during the Soviet era. ACM was visually confirmed at facilities in Jayhun, Farkhor, and Khuroson districts, and is suspected at other aging SES buildings based on construction period and roofing material types. The presence of ACM introduces significant health risks associated with building rehabilitation, demolition, or disturbances during construction activities. Asbestos fibers, when released into the air through mechanical disturbance, pose severe respiratory health hazards including asbestosis, lung cancer, and mesothelioma.

148. Safe removal and disposal of ACM require specialized procedures, trained personnel, use of personal protective equipment, containment measures, and disposal at approved facilities in accordance with national regulations and international best practices. During project implementation, all existing buildings proposed for demolition must undergo ACM surveys prior to commencement of works. Where ACM is confirmed, the work should be stopped and licensed asbestos abatement contractors must be engaged to conduct removal operations in strict accordance with approved ACM management plan, which will be a part of the environmental management plan. Workers, nearby residents, and facility staff must be protected from asbestos exposure through appropriate controls and monitoring. The ACM should be removed and disposed as a whole, without breaking the material, to minimize fiber release, dismantled asbestos containing roofing materials must be double wrapped during transportation and storage. Where possible waste material should be wetted during collection to minimize potential fiber release. Refer to more safety measures for ACM management in EMP. Following photographs shows ACM used in roofing of existing SES buildings in Jayhun and Khursoson.



Jayhun SES



Khursoson SES

149. **Chemical and hazardous materials management.** Chemical management systems at existing SES facilities are basic and insufficient. Although laboratories use only small volumes of reagents and chemicals, storage conditions observed during site visits lacked consistent labeling, material safety data sheets, secondary containment for liquid chemicals, spill response equipment, and ventilation. Chemical inventories were not systematically maintained, and emergency procedures for spills or exposures were not documented or posted. At facilities where chlorine is used for water disinfection or laboratory applications, dedicated secure storage areas with appropriate ventilation and safety signage were not consistently provided. These deficiencies create risks of accidental spills, worker exposures, fire hazards, and environmental releases. Improved chemical management protocols, including proper storage cabinets, secondary containment, spill response kits, staff training, and documented safety procedures, will be required at new and upgraded facilities. Following photographs show existing lab and waste storage area in Jayhun SES.



Lab in Jayhun SES



Waste Storage in Jayhun SES

150. **Occupational health and safety.** Occupational health and safety conditions at assessed SES facilities are weak and reflect aging infrastructure, insufficient emergency systems, and absence of trained environmental health and safety personnel. Fire safety equipment is outdated, limited, or entirely absent. At facilities in Jayhun and Khuroson, which were constructed in the 1950s, no modern fire protection features such as fire alarms, emergency exits, fire extinguishers, or suppression systems were observed. Emergency signage, evacuation plans, and first-aid kits were inconsistently available, and no facilities maintain systematic incident reporting systems or standard operating procedures for safe laboratory or waste handling operations. Personal protective equipment for laboratory staff and waste handlers is limited and often inadequate, with shortages of gloves, masks, eye protection, and protective clothing reported during consultations. The absence of occupational health surveillance, training on biological and chemical hazards, and protocols for post-exposure management further increases worker vulnerability. Stakeholder consultations with SES directors and staff highlighted these deficiencies and emphasized the urgent need for capacity building, equipment provision, and institutional support to establish functional health and safety programs. Project design and operational planning must prioritize occupational health and safety improvements, including provision of appropriate protective equipment, development of safety protocols and training programs, installation of emergency systems, and establishment of safety oversight and monitoring mechanisms.

E. Baseline Condition of existing SES facilities

151. The SES sites represent the most complex group of project locations from an environmental safeguards perspective. All SES facilities are being entirely replaced with new two-story buildings of approximately 600 square meters. In most cases, this requires demolition of aging Soviet-era structures. A consistent pattern of inadequate infrastructure, poor waste management, and presence of hazardous materials was observed across the SES group, though site-specific conditions vary considerably. The following sections presents baseline conditions at SES facilities, assessed through site visits and interviews as part of due diligence. The summary is provided in Table IV-1.

E.1 Rasht District — Sanitary and Epidemiology Station (Jamoati Shahraki Gharm)

152. The proposed construction site is located within Jamoati Shahraki Gharm and is currently occupied by obsolete existing SES buildings constructed in the 1950s. Demolition of all existing structures on the allocated plot will be required prior to construction of the new facility. The allocated land area of 0.17 hectares has been confirmed as sufficient for the footprint of the planned two-story SES building. The site lies within a densely developed area of the district center, with direct adjacency to residential properties and public circulation routes.

153. **Sensitive Receptors.** The site is located adjacent to a hospital, residential properties, businesses, and public access roads. Adjacent community residents attended the consultation meeting and were directly informed of the upcoming construction activities, associated risks, and the mitigation strategy planned for the project. The proximity of residences to the site boundary means that construction dust, noise, and vibration will require active management. The access roads to the site are shared with local residents, customers of nearby shops, and road users, and are partially occupied as informal parking areas - this is identified as a key access constraint for construction vehicles and heavy equipment.

154. **Associated Facilities and Existing Conditions.** The existing SES facility comprises several obsolete buildings from the 1950s which are currently used for operations. A centralized sewage pipe is located approximately 20 meters from the land plot boundary, offering a feasible connection point for the new facility. High-rise residential construction is ongoing in close proximity to the selected land plot, which may create cumulative construction disturbance. The existing SES building will remain operational during the early phase of construction, following which it will be demolished once the new facility is commissioned.

155. **Water Supply and Sewerage.** The site is connected to the centralized water supply system. A centralized sewage network is available with a connection point approximately 20 meters from the site boundary. Both utility connections are expected to serve the new SES facility upon completion.

156. **Medical Waste Management.** Medical waste is currently managed through a self-made furnace for on-site incineration. This arrangement lacks emission controls, safety features, and operator protection. The furnace is located within the facility compound in close proximity to residential areas, raising risks of toxic emissions and uncontrolled burning.

157. **Presence of ACM.** Asbestos-containing materials are confirmed to be present in the existing SES building, which is scheduled for demolition. Prior to the commencement of any demolition or civil works, an asbestos survey must be conducted and an Asbestos Management and Removal Plan (AMRP) prepared and approved. All removal and disposal must be carried out by a licensed contractor in accordance with national safety requirements.

158. Figure IV-1 below shows the location map and images of the existing SES facility at Rasht district.

Figure IV-1: Location map and images of Rasht SES facility





E.2 Tojikobod District - Sanitary and Epidemiology Station (Shahraki Tojikobod, Jamoat Qalai Labi Ob)

159. The proposed SES site in Tojikobod District is an allocated vacant plot located adjacent to the district hospital. The SES has been operating from two mobile wooden sheds for an extended period, as no functional building is available. One shed is used for administration and the other as a laboratory. These temporary structures are described by staff as unusable and obsolete. The head of the SES laboratory expressed strong support for the construction of a new dedicated building and emphasized the urgency of replacing the current arrangements.

160. **Sensitive Receptors.** The allocated land plot is situated in close proximity to the district hospital, residential areas, a health center, and a polyclinic. Given the healthcare cluster setting, construction activities will be carefully managed to avoid disruption to hospital operations and community health services. Dust and noise controls will be particularly important given the adjacent clinical facilities.

161. **Associated Facilities and Existing Conditions.** There is no permanent SES structure on the allocated land. The two mobile wooden sheds currently in use represent the entirety of the existing operational infrastructure. No demolition of permanent structures is anticipated, though the temporary sheds will be cleared from the site. Continuity of SES operations during construction was raised as a key concern by stakeholders, who requested that arrangements be made to maintain service delivery through the construction period. The cross-contamination prevention between laboratory spaces was also highlighted as a design requirement by SES staff.

162. **Water Supply and Sewerage.** The site benefits from centralized water supply. However, no centralized sewage system is available in the immediate vicinity, representing a key infrastructure gap that will be addressed through the facility design — either through connection to available networks or provision of appropriate on-site sanitation solutions.

163. **Medical Waste Management.** Medical waste is currently incinerated in a self-made furnace, which lacks safety controls, emission mitigation, and operator protection. This is the only waste treatment arrangement available to the facility at present.

164. **Presence of ACM.** No asbestos-containing materials were identified at this site. The temporary wooden sheds do not contain ACM, and no demolition of permanent structures is

planned. No asbestos management measures are required for this site.

165. Figure IV-2 below shows the location map and images of the existing SES facility at Tojikobod district.

Figure IV-2: Location map and images of Tojikobod SES facility



E.3 Tursunzoda District — Sanitary and Epidemiology Station (City of Tursunzoda)

166. The Tursunzoda SES occupies its existing compound in the city of Tursunzoda. The existing SES building dates from the 1960s and is a single-floor carcass structure in very poor condition, requiring constant renovation and maintenance. The building does not meet current sanitary or functional standards. The existing structure and associated premises will be demolished and replaced with a new two-story SES facility. The relatively large land area of 0.42 hectares provides sufficient space for construction of the new facility while maintaining operational continuity through a phased approach.

167. **Sensitive Receptors.** The site is directly adjacent to residential areas and houses of the local population. Given the urban location and the scale of demolition and construction

works required, construction-related impacts including dust, noise, and vibration present a significant concern for neighboring residents. The proximity of residential properties to the demolition zone will be carefully managed throughout the works.

168. **Associated Facilities and Existing Conditions.** The existing 1960s carcass building is the principal existing structure on site and is in very poor condition. The head of SES proposed retaining the existing building in operation during the construction phase and demolishing it only after the new facility is commissioned — a phased approach that would maintain service continuity. The allocated land area is sufficient to accommodate both the operational old building and the new construction simultaneously. A centralized sewage system is available near the site, offering a connection point for the new facility.

169. **Water Supply and Sewerage.** The site is served by a centralized water supply system. A centralized sewage network is available near the site. Both connections are expected to serve the new SES facility. This represents one of the better-served sites in the project in terms of utility infrastructure.

170. **Medical Waste Management.** Medical waste is currently managed through a Soviet-era incinerator in very poor condition. The incinerator is operational but severely degraded and lacks modern emission controls, safety features, or compliance with environmental protection standards. Burning of medical waste in this unit poses risks of uncontrolled toxic emissions and potential fire hazards, particularly given the urban residential setting. Replacement of this waste treatment arrangement is a clear environmental priority under the project.

171. **Presence of ACM.** Asbestos-containing materials are confirmed present in the existing SES building, which is scheduled for demolition. An asbestos survey and AMP must be prepared prior to any demolition activities. All ACM removal and disposal must be carried out under the supervision of qualified personnel and in compliance with national regulations for hazardous material handling.

172. Figure IV-3 below shows the location map and images of the existing SES facility at Tursunzoda district.

Figure IV-3: Location map and images of Tursunzoda SES facility





E.4 Baljuvon District — Sanitary and Epidemiology Station

173. The Baljuvon SES site covers 0.14 hectares and currently hosts an existing SES building constructed in the 1990s. The building is a single-story structure in very poor condition and does not comply with current sanitary standards. Full replacement with a new SES facility is planned. Consultation stakeholders confirmed strong community and institutional support for the project, and raised practical concerns regarding construction logistics, service continuity, and facility design requirements.

174. **Sensitive Receptors.** The site is located within a mixed residential and administrative area. Sensitive receptors in the immediate vicinity include residential properties and government offices. The presence of administrative facilities adjacent to the construction zone will require coordinated traffic and access management during construction to minimize disruption to government operations and residents.

175. **Associated Facilities and Existing Conditions.** The existing 1990s-era SES building is the principal structure on site. It is in poor condition and non-compliant with current standards. Stakeholders proposed that the facility design should incorporate auxiliary premises including dedicated storage for chlorine and other hazardous substances, as well as a garage — features currently absent. The employment of local labor during construction was recommended by community representatives. Ensuring adequate access for construction vehicles was identified as a logistical challenge.

176. **Water Supply and Sewerage.** The site relies on an on-site water well for its water supply. No centralized sewage system is available. These infrastructure deficiencies represent the most significant utility constraints at this site and will be addressed in the facility design, with appropriate on-site sanitation solutions and consideration of water quality from the existing well.

177. **Medical Waste Management.** Medical waste is currently managed through burning in a self-made furnace. No emission controls, safety features, or licensed waste contractors are engaged. The furnace is the only available treatment infrastructure, and its inadequacy poses

ongoing environmental and health risks.

178. **Presence of ACM.** No asbestos-containing materials were identified at the Baljuvon site. The existing 1990s building does not contain confirmed ACM.

179. Figure IV-4 below shows the location map and images of the existing SES facility at Baljuvon district.

Figure IV-4: Location map and images of Baljuvon SES facility



E.5 Khovaling District — Sanitary and Epidemiology Station (Khatlon Region)

180. The Khovaling SES site presents one of the more complex baseline conditions in the project. The existing SES facility, which is in poor condition and requires constant maintenance, is located on a plot of 0.20 hectares together with auxiliary structures including a warehouse and a garage. All existing structures are scheduled for demolition. A notable environmental concern at this site is the presence of an underground well within the territory of the SES compound that supplies water not only to the facility itself but also to nearby residents.

181. **Sensitive Receptors.** The site is immediately adjacent to residential properties and houses of the local population. The on-site underground well, which supplies water to neighboring residents, constitutes both a sensitive receptor and a potential exposure pathway. Any contamination of the well during construction activities — from fuel spills, chemical runoff, or disturbed soils — could directly impact the health of the surrounding community. This dual-use water dependency is a site-specific risk requiring dedicated protective measures during construction. Sensitive receptors also include the residences and community members dependent on the shared well.

182. **Associated Facilities and Existing Conditions.** In addition to the main SES building in poor condition, the compound includes a warehouse and garage, all of which are to be

demolished. The overall existing facility condition is characterized by deterioration requiring ongoing maintenance investment. SES staff and stakeholders emphasized the need for a functionally designed new facility with appropriate laboratory layout, adequate ventilation systems, and measures to prevent cross-contamination between different functional areas. No alternative demolition-related or ACM concerns were identified during consultation for the main building, though the scale of demolition across all structures on site is noteworthy.

183. **Water Supply and Sewerage.** The site relies entirely on the on-site underground well. This well is the sole water source for both the SES facility and for adjacent community households. No centralized water supply or sewage network is available. The lack of any connection to municipal infrastructure means that wastewater from the facility currently drains to on-site pits, with associated risks of soil and groundwater contamination. The well water quality has not been assessed under this project, and testing is recommended.

184. **Medical Waste Management.** Medical waste from the Khovaling SES is transferred to the district hospital located near the SES facility for treatment and disposal. This represents a comparatively better arrangement than on-site open burning, though the adequacy of treatment at the district hospital and the safety of transport procedures has not been independently verified under this IEE.

185. **Presence of ACM.** Asbestos-containing materials are confirmed to be present in the existing SES facility building, the warehouse, and the garage — all of which are scheduled for demolition. The scale of ACM risk at this site is therefore greater than at other sites, encompassing multiple structures. A comprehensive asbestos survey covering all structures must be completed before any demolition commences. The AMRP must address the removal of ACM from all three structures and include provisions for safe disposal and community protection, given the proximity of residential properties and the shared well.

186. Figure IV-5 below shows the location map and images of the existing SES facility at Khovaling district.

Figure IV-5: Location map and images of Khovaling SES facility





E.6 Muminobod District — Sanitary and Epidemiology Station

187. The Muminobod SES site is an allocated land plot located adjacent to the district hospital, on which no existing permanent SES building is present. The current SES has been operating from an existing building constructed in the 1980s at a nearby location, which is not the allocated construction site. The proposed construction site itself is a relatively clean vacant plot, simplifying the environmental baseline compared to sites requiring demolition of existing structures.

188. **Sensitive Receptors.** The surrounding area comprises residential neighborhoods and governmental facilities. The adjacency to the district hospital is both a contextual advantage — enabling close operational collaboration between the new SES and hospital — and a sensitive receptor requiring careful construction management to avoid disruption to ongoing hospital services. Dust suppression, noise controls, and traffic management will be particularly important given the healthcare cluster setting.

189. **Associated Facilities and Existing Conditions.** As the allocated plot is an empty land area with no existing permanent structures, no demolition is required at the primary construction site. Stakeholders raised the possibility of an alternative construction site with a larger land area, though this alternative site is currently occupied by an operational SES facility, making it immediately infeasible. The current SES building from the 1980s — located elsewhere — was noted to be in poor condition, and concerns about inadequate medical waste management at that location were raised as a key issue requiring attention under the project.

190. **Water Supply and Sewerage.** Both centralized water supply and a centralized sewage system are available at the site. This represents one of the better infrastructure baselines among the SES group, offering straightforward utility connections for the new facility.

191. **Medical Waste Management.** Medical waste is currently managed through burning in a self-made furnace. Stakeholders specifically highlighted the absence of a proper incineration facility as a significant concern and emphasized the need to improve waste handling practices as part of the project. This feedback has been noted and is reflected in project design and EMP requirements.

192. **Presence of ACM.** No asbestos-containing materials were identified at the proposed Muminobod SES construction site. No demolition activities are planned at the vacant allocated plot. ACM management measures are not required for this site.

193. Figure IV-6 below shows the location map and images of the existing site of the proposed SES facility at Muminobod district.

Figure IV-6: Location map and images of the proposed site for Muminobod SES



E.7 Jayhun District — Sanitary and Epidemiology Station

194. The Jayhun District SES site is an allocated empty land plot with no existing permanent structures. The existing SES facilities in Jayhun District include buildings constructed in the 1950s with known ACM roofing materials, as documented during the November 2025 SES site visit mission. Photographic documentation confirmed the presence of ACM roofing sheets on the existing Jayhun SES buildings, along with an underground water storage tank. The OHS conditions at the existing facility were assessed as weak, with aging infrastructure, limited fire safety equipment

195. **Sensitive Receptors.** The proposed construction site is surrounded by residential areas. The vacant plot setting reduces the complexity of sensitive receptor management compared to sites adjacent to active clinical facilities or within established compounds. Nonetheless, standard dust, noise, and access management will be required during construction.

196. **Associated Facilities and Existing Conditions.** The allocated land is an empty plot with no structures requiring demolition at the new construction site.

197. **Water Supply and Sewerage.** No water supply or sewage infrastructure is available at the allocated land plot. These are significant utility constraints that will be addressed through the new facility design, including appropriate water supply connections and sanitation solutions.

198. **Medical Waste Management.** At the existing Jayhun SES facility, medical waste is managed through on-site burning. No licensed waste handling or disposal arrangements are in place. Open waste storage was observed during site visits and represents a significant environmental and health risk.

199. **Presence of ACM.** No ACM is present at the allocated construction site (vacant plot).

200. Figure IV-7 below shows the location map and images of the existing site of the proposed SES facility at Jayhun district.

Figure IV-7: Location map and images of the proposed site for Jayhu SES



E.8 Farkhor District — Sanitary and Epidemiology Station

201. The Farkhor District SES site is one of the highest-risk sites in the project, presenting a combination of ACM, poor water quality, inadequate waste management, and proximity to sensitive healthcare and residential receptors. The existing SES building is located on the 0.25-hectare site along with a specialist laboratory of tropical diseases, which constitutes a particularly sensitive associated facility requiring careful management during construction.

202. **Sensitive Receptors.** The site is adjacent to a functioning district hospital, specialist tropical disease laboratory facilities, and residential areas. The district hospital and tropical disease laboratory are highly sensitive receptors, as ongoing clinical and diagnostic services must not be disrupted during construction. Any chemical, biological, or particulate contamination pathway from the construction site towards these facilities represents a significant risk. Access road management will also be important given the hospital setting.

203. **Associated Facilities and Existing Conditions.** The existing SES building on site is the principal structure to be replaced. A laboratory dedicated to tropical disease diagnosis is located within the compound and constitutes a sensitive existing facility. The site also has an on-site water well that has been confirmed to supply non-potable water — local staff have been informed of the poor water quality findings. The water quality of this well must be further tested and the results documented. The existing waste management infrastructure is severely inadequate, with open waste storage observed within the compound during site visits.

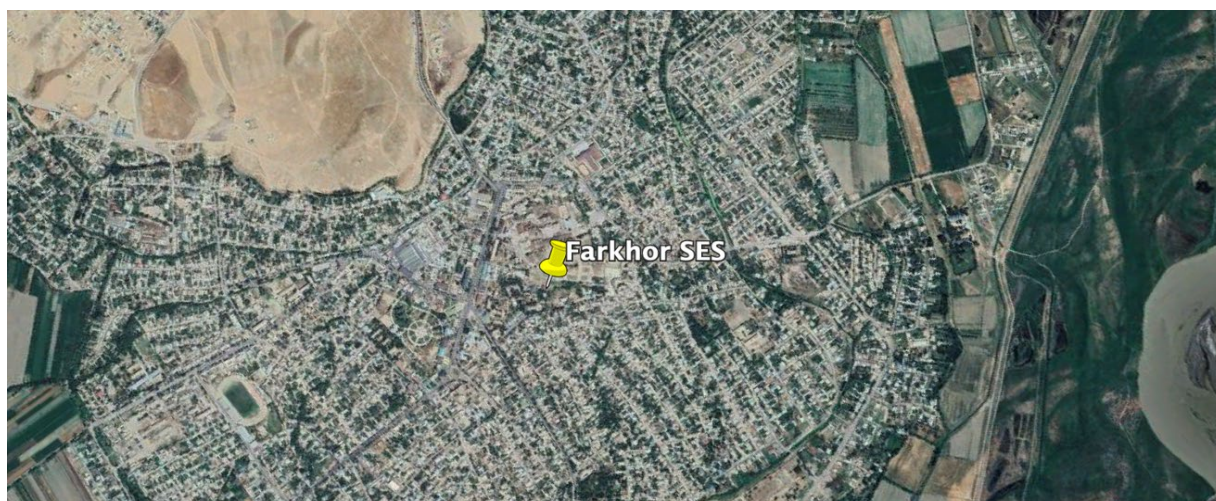
204. **Water Supply and Sewerage.** The site relies on an on-site water well, the water from which has been assessed as non-potable. Further water quality testing is required, and staff have been warned of the risks. No centralized water supply is available at the site. No centralized sewage system is available; wastewater is directed to on-site pits, creating risks of soil and groundwater contamination given the proximity to the well.

205. **Medical Waste Management.** Medical waste is currently managed through burning in a self-made furnace within the compound. Open storage of waste was also observed during site visits, indicating that waste segregation and containment practices are inadequate. Given the presence of a tropical disease laboratory on site, the waste management risks are heightened — improper disposal of laboratory materials could carry disease transmission risks. No licensed waste transporters or disposal contractors are engaged.

206. **Presence of ACM.** Asbestos-containing materials are confirmed to be present in the existing Farkhor SES building. Given the co-location with the tropical disease laboratory, demolition activities at this site must be planned with particular care to avoid cross-contamination and dual exposure risks (ACM fibers and biological materials). An asbestos survey and comprehensive AMRP must be completed before any demolition work commences.

207. Figure IV-8 below shows the location map and images of the existing SES facility in Farkhor district.

Figure IV-8: Location map and images of Farkhor SES facility





E.9 Khuroson District — Sanitary and Epidemiology Station

208. The Khuroson District SES is located on a 0.20-hectare plot and currently hosts the existing SES building together with auxiliary premises, all of which are scheduled for demolition and replacement. The existing buildings, photographically documented during the November 2025 site visit mission, include structures with confirmed ACM roofing materials. The occupational health and safety (OHS) conditions at the existing Khuroson SES were assessed as weak, with outdated fire safety equipment, limited emergency signage, and the absence of incident reporting systems or standard operating procedures.

209. **Sensitive Receptors.** The site is surrounded by residential areas and governmental offices, and is accessed via narrow roads. The narrow access roads present a practical construction challenge — truck access for heavy equipment and materials delivery will be constrained, and construction traffic management plans will identify alternative or temporary solutions. The presence of governmental offices near the site requires that noise and dust impacts are managed to avoid disruption to administrative functions.

210. **Associated Facilities and Existing Conditions.** The existing SES building and its auxiliary premises are all to be demolished. The buildings constructed in the 1950s lack modern fire protection features including alarms, fire exits, and adequate extinguishers. The facilities are in poor condition. The narrow access roads to the site are a constraint for both construction logistics and the ongoing emergency response capability of the facility during operations.

211. **Water Supply and Sewerage.** A centralized water supply system is available at the site. However, no centralized sewage network is available. Wastewater management will be addressed through the new facility design, and appropriate connection or on-site solutions must be incorporated.

212. **Medical Waste Management.** Medical waste is managed through burning in a self-made furnace. No emission controls or operator protection measures are in place. The proximity of residential areas and governmental offices to the furnace location raises concerns about community exposure to emissions from uncontrolled burning.

213. **Presence of ACM.** Asbestos-containing materials are confirmed to be present in the existing SES building and auxiliary premises, as evidenced by photographic documentation of ACM roofing materials taken during the November 2025 site visit. All affected structures are scheduled for demolition. A full asbestos survey and AMRP must be prepared before any demolition activities commence. The narrow access roads at this site add complexity to the logistics of safe ACM removal and transportation for disposal.

214. Figure IV-9 below shows the location map and images of the existing SES facility at Khuroson district.

Figure IV-9: Location map and images of Khuroson SES facility



F. Baseline conditions of Rural Health Houses and Health Center

F.1 Hamadoni District — Village Health Center (Hayoti Nav Village, Khatlon Region)

215. The Hamadoni Village Health Center site in Hayoti Nav Village has a distinctive baseline condition: the allocated 0.40-hectare plot already hosts a functioning rural health center in good working condition. The project proposes construction of a new health center adjacent to the existing facility, with sufficient land available on the plot to accommodate the new building without requiring demolition of the currently operational facility.

216. **Sensitive Receptors.** The site is surrounded by residential areas, and the existing medical facility represents a co-located sensitive receptor. Construction activities must avoid disruption to the functioning health center, particularly in terms of access for patients, dust ingress into clinical spaces, and noise disturbance during patient care hours. Construction activity zoning and working hour restrictions may be required to protect ongoing health service delivery.

217. **Associated Facilities and Existing Conditions.** The existing rural health center is operational and in good condition, and will continue to provide services during construction of the new facility. The site has sufficient land area to accommodate both the existing and new buildings simultaneously. The allocated plot has existing obsolete building which might be demolished for construction of a new Rural health House.

218. **Water Supply and Sewerage.** Both centralized water supply and a centralized sewage system are available at the site. These represent adequate baseline utility conditions for the new facility and will facilitate straightforward connections.

219. **Medical Waste Management.** Medical waste at the existing health center is currently managed through burning in a self-made furnace. This practice will be replaced with a compliant waste management system under the new facility.

220. **Presence of ACM.** No asbestos-containing materials were identified at this site. No demolition of existing permanent structures is planned for the construction phase.

221. Figure IV-10 below shows the location map and images of the existing Village Health Center facility at Hamadoni district.

Figure IV-10: Location map and images of Hamadoni Village Health Center facility



F.2 Muminobod District — Rural Health House (Darai Havosh Village, Khatlon Region)

222. The proposed Rural Health House site in Darai Havosh Village is a 0.10-hectare land plot. During the site visit and consultation, the safeguards team identified significant concerns about the suitability of the selected location. The site is situated near a mudflow stream, and active soil erosion and gully formation were observed in the area. These natural hazard conditions raise questions about the long-term structural safety and sustainability of the facility if constructed at the current location. Additionally, the site was assessed as difficult to access for the local population, limiting its utility as a community health facility.

223. **Sensitive Receptors.** The site is located within a residential area. The proximity to a mudflow stream and areas of active erosion represents a natural hazard risk to both the construction workforce and the future facility and its users. There are no hospitals, schools, or government offices in the immediate vicinity.

224. **Associated Facilities and Existing Conditions.** No existing structures are present on the allocated plot. No demolition is required. The safeguards team formally recommended the selection of an alternative site that is safer and more accessible to the local population. This recommendation has been communicated to the project stakeholders for consideration in the final site selection decision.

225. **Water Supply and Sewerage.** No water supply or sewage infrastructure is available at the site. These will be addressed through facility design, which is further complicated by the natural hazard constraints at the current location.

226. Figure IV-11 below shows the location map and images of the site of the proposed Rural Health House facility at Muminobod district.

Figure IV-11: Location map and images of site of the proposed Muminobod Rural Health House facility





F.3 Hamadoni District — Rural Health House (Boghiston Village)

227. The proposed Rural Health House site in Boghiston Village covers 0.15 hectares of allocated empty land. Community members and local stakeholders expressed strong support for the project during consultation, highlighting the current absence of a permanent rural health facility in the village — health services are presently being provided from a small, rented premises, which is considered inadequate. The site was assessed as having sufficient land area, appropriate documentation, and good accessibility for the local population.

228. **Sensitive Receptors.** The site is located within a residential area and is in proximity to a secondary school. The secondary school is a sensitive receptor, particularly during the school year, and construction scheduling should consider avoiding the noisiest activities during school hours. Access to the school must not be obstructed during construction.

229. **Associated Facilities and Existing Conditions.** The allocated land is an empty plot with no existing structures. No demolition is required. Current health services in the village are delivered from a rented premises that are insufficient for community needs.

230. **Water Supply and Sewerage.** No water supply or sewage infrastructure is available at the site. Appropriate on-site or connection-based solutions will be incorporated into the facility design.

231. Figure IV-12 below shows the location map and images of the site of the proposed Rural Health House facility at Boghiston Village in Hamadoni district.

Figure IV-12: Location map and images of the site of proposed Boghiston Village Rural Health House facility



F.4 Hamadoni District — Rural Health House (Pakhtakor Village)

232. The proposed Rural Health House site in Pakhtakor Village covers 0.15 hectares of allocated empty land. Stakeholders confirmed during consultations that the site meets all technical, environmental, and social requirements, with sufficient land area, proper documentation, and good accessibility for the local population. No concerns or objections were raised during the consultation meeting. The site presents a straightforward baseline with minimal environmental constraints.

233. **Sensitive Receptors.** The site is located within a residential area and is in proximity to a secondary school. The secondary school is a sensitive receptor, particularly during the school year, and construction scheduling should consider avoiding the noisiest activities during school hours.

234. **Associated Facilities and Existing Conditions.** The allocated land is an empty plot with no existing structures. No demolition is required.

235. **Water Supply and Sewerage.** No water supply or sewage infrastructure is available at the site. On-site or connection-based utility solutions will be incorporated into the facility design.

236. Figure IV-13 below shows the location map and images of the proposed Rural Health House facility at Pakhtakor Village in Hamadoni district.

Figure IV-13: Location map and images of site of the proposed Pakhtakor Village Rural Health House facility



IV. IMPACTS, RISKS, AND CUMULATIVE ASSESSMENT

237. This chapter identifies potential environmental and social impacts that may arise during the design and pre-construction, construction and operational phases of the project facilities. Where adverse impacts are anticipated, the assessment evaluates their significance and determines the level of mitigation required to reduce those impacts to negligible or minor levels, in line with good international practice and safeguard requirements.

238. In this chapter, when referring to the significance of effects, the impact assessment is making a judgement about the magnitude of the impact and the sensitivity of the receptors, both during the construction and operational periods of the project. It is the interaction of the magnitude of the impact with the sensitivity of the receptor that determines the significance of the effect.

239. The magnitude of an effect is related to its intensity, duration, frequency, extent, and reversibility. The sensitivity of a receptor is related to factors such as its rarity, legal status, vulnerability (i.e. capacity to cope with an impact), and replaceability. Table V-1 provides a commonly used matrix to identify the significance of effects based on this impact magnitude x sensitivity of receptor approach.

240. The terms negligible, minor, moderate and major significance vary in their application depending on the topic under consideration, however in general they reflect the extent to which the effect represents a change in the original baseline state.

241. Table V-2 identifies the impacts considered in the assessment of each of the main receptor groups. The impact assessment is based on the preliminary concept design information that is sufficiently detailed to identify key environmental risks from each project facilities.

Table V-1. Matrix for determining the impact and risks significance

		Sensitivity/vulnerability of Resources and Receptors		
		Low	Medium	High
Magnitude of Impacts	Negligible	Negligible	Negligible	Negligible
	Small	Negligible	Minor	Moderate
	Medium	Minor	Moderate	Major
	Large	Moderate	Major	Major

Table V-2. Summary of project impacts and risk assessed

Activities	Ecological (flora and fauna)	Soil erosion/ pollution	Water	Solid waste & medical waste	Noise	Air quality and odor	Protected areas & physical cultural resources	Community and Worker Health & Safety
Construction								
Establishing ten modified 40-ft ISO Health Container as a basic health facility and laboratory unit				✓	✓			✓
Renovation and expansion the existing CESS facility at the POE of Tursunzoda	✓	✓	✓	✓	✓	✓		✓
Procurement and installation of essential medical equipment and infrastructure in health facilities and laboratories				✓	✓	✓		✓
Construction of eighteen integrated SES buildings (each 600 sqm)	✓	✓	✓	✓	✓	✓		✓
Construction of two rural health clinics (each 220 sqm), one district PHC polyclinic, and nine rural health houses/centers/posts	✓	✓	✓	✓	✓	✓		✓
Construction of three 400 sqm GRISH short term residential facilities	✓	✓	✓	✓	✓	✓		✓
Procurement of vehicles for health facilities				✓				✓
Operation								
Medical waste generation, treatment and disposal				✓				✓
Wastewater generation and treatment			✓					✓
Domestic solid waste generation and disposal				✓				✓
Emissions from health facilities and vehicles						✓		✓

A. Project Area of Influence and Sensitive Receptors

242. The project area of influence is defined as the total area which might be subject to adverse impacts of the project facilities. This is based on the locations of sensitive receptors within the project area of influence, defined as settlements and/or environmental values that might be affected by the project construction and/or operation. The receptors (Tables IV-1) comprise (i) villages, communities and/or public buildings (e.g., schools, offices) potentially subject to construction- or operational- noise, air pollution, altered water quality or supply, and/or environment-related social impacts; (ii) public service facilities vulnerable to disturbance or pollution, e.g., water source protection areas and reservoirs; and (iii) vegetation and fauna habitats within 100 m of the proposed sites of the project facilities.

243. The following distances were applied to identify the sensitive receptors:

- for construction and/or operational noise in urban/semi-urban area– receptors (people) within 200 m from the noise generating source;
- for construction-related air quality impact (e.g., particulates from soil excavation) – receptors within 200 m from the source;
- for construction/operation-related ecological impact, receptors within the construction sites and 200 m from the source;
- for construction/operation-related surface water quality impact - surface water within 500 m upstream and 1500 m downstream from the construction sites.

B. Design and Pre-construction Readiness Activities

244. The following project readiness activities will be undertaken during the engineering design and pre-construction phases to establish the necessary environmental management frameworks and ensure compliance with referenced standards.

- (i) **Institutional strengthening.** (a) MOHSPP PAG will assign one full-time, qualified environmental and social officer to the PAG team. This officer will lead the coordination of EMP; (b) each implementing agency will assign one environmental focal point as part of the project management team at project level; and (c) under the design and supervision consulting services (DSC), implementation environmental and social (E&S) consultants will be included for supervision and monitoring on field.
- (ii) **Pre-construction baseline monitoring and ACM surveys:** Baseline monitoring for the environmental quality (air, water, noise, vibration, soil) will be conducted by contractors prior to start of the civil works construction at any project facility / location.

Also considering that most of the existing district and rural healthcare facilities where project interventions are proposed, has presence of asbestos/ACM/residual medical/hazardous waste, it is important to carry out an inventory of presence of such material. Prior to bidding, the PAG and contractors will carry out pre-construction surveys for the presence of asbestos and ACM, and other hazardous materials and medical waste from installed incinerators at the existing facilities.

- (iii) **Updating IEE and EMP.** This IEE including the EMP is prepared based on the preliminary concept design provided by the design team. The IEE and EMP will be updated following detailed design of the project facilities. In case of any changes in the project scope or locations of the project facilities following detailed design, the IEE and EMP will be updated as needed, including mitigation measures and monitoring and same will be attached to bidding documents after ADB approval. This will be the responsibility of the PAG, IAs and DSC.

- (iv) **Training in environmental management.** The DSC environmental and social consultants will provide training on the implementation and supervision of environmental mitigation measures to PAG, IAs, contractors and DSC.
- (v) **Grievance redress mechanism (GRM) and stakeholder consultation.** The PAG and implementing agencies will implement the project GRM at least two months before the start of construction to ensure that the project communities and public services (e.g., health services) are well informed and provided the opportunity to discuss any concerns. This is part of the continued public consultations and engagements, i.e., apart from the consultations completed during project preparation (Section VII). Details of GRM establishment and implementation refer to the EMP in Appendix 1.
- (vi) **Bidding and contract documents.** The project environmental management plan (EMP; Appendix 1) will be included in the bidding documents and contracts for the procurement of civil works, goods, and services. All contractors and subcontractors will be required to comply with the EMP, and conditions / requirements per the domestic environmental approval.
- (vii) **Contractor obligations.** Contractors, in their bids, will respond to the environmental clauses in the bidding documents for EMP requirements. Prior to construction, each contractor will develop a site-specific EMP, based on the attached project EMP, and assign at least one person responsible for environment, health, and safety (EHS) management. The site-specific EMP will include the following: (a) surface water and ecosystem protection; (b) spill control and management; (c) site drainage and soil erosion protection; (d) waste management; (e) hazardous material management; (f) health and safety; (g) temporary traffic management, and (g) all site-specific mitigation measures listed in the project EMP. The site-specific EMPs will be submitted to the environmental and social officer of PAG for approval.
- (viii) **Demolition Plan.** Contractors will prepare a detailed demolition plan for the facilities where demolition work is envisaged as part of the project. This plan will have comprehensive procedures for demolition work including demolition waste management. The demolition plan should be approved by the PAG and relevant authorities.
- (ix) **ACM Management Plan.** An asbestos management plan will be prepared by the contractors, which will include identification, surveys, handling and management of ACM. The contractor will include procedures for managing asbestos risk and a template for an asbestos survey in the site-specific EMP for asbestos and demolition management plan.

C. Construction Phase Impacts

245. Construction works associated with the proposed project activities will generate noise and dust and may also disrupt access to properties and the flow of traffic. Limited clearing of vegetation may also be necessary.

246. The construction phase of the project includes civil works across multiple locations in urban and rural setup across different project provinces. Construction works associated with proposed new construction, extension, rehabilitation of existing health care facilities will generate noise and dust, solid waste generation, and may also disrupt access to existing health care facilities and nearby properties and the flow of traffic. The construction-related impacts will be temporary and localized and will mainly be a concern for construction workers

and health center staff, patients and people living, working, or visiting the health care facilities where the work is taking place.

C.1 Dust Emission and Air Quality

247. Minor to moderate temporary and localized air quality impacts are anticipated during the construction period of the project facilities (mainly from the works related to the rehabilitation and upgrades to the health care facilities). The majority of the project facilities (CESS, SES) are located adjacent to residential areas. As such, there are relatively little industrial activities that may produce air quality impacts. The main sources of air pollution in the regions relate to the burning of fossil fuels for heating, cooking and power within the urban areas, vehicular movement.

248. During the construction phase of the project facilities, the main sources of lower air quality include fugitive dust from excavation for the building foundation and erection, movement of transporting vehicles carrying the construction materials along the access road. Engine exhaust emissions from construction machinery and equipment, haulage trucks will lead to minor localized temporary increases in levels of nitrogen oxides (NO_x), sulfur oxides (SO_x) and particulate matter. All these activities would give rise to emission of dust particles thereby affecting air quality marginally at the site, which will be transitory in nature. Though the emissions are temporary and not expected to contribute significantly to the ambient air quality and will be within prescribed limits for industrial regions by national ambient air quality standards, necessary measures are to be taken.

249. These impacts are mainly a concern for the (i) construction workers, (ii) patients, staff and general public/visitors at health facility, (iii) adjoining households and buildings, (iv) community areas around the facilities and communities along the civil works traffic routes.

250. Overall impact assessment rating for air quality without mitigation is low to moderate.

C.2 Noise

251. Construction work at the various sites, demolition of existing structures and movement of trucks transporting the construction material and equipment to and from the project sites will generate noise. Most of the access roads along the location are wide enough and can be used to bring construction material without obstructing the neighborhood roads. Construction workers; patients, staff and general public/visitors at health facility; and residents living nearby will be exposed to noise generated during the construction phase. The impacts will be temporary (daytime only) and localized.

252. Construction works may cause objectionable noise nuisance to workers, patients or staff. Hospital/health center authorities and patients must be notified in writing on the date of commencement of construction work at least one month in advance. The impacts will be short term, localized and intermittent throughout the civil works process and can only be mitigated to an extent i.e. civil works are inherently noisy. The receptors (patients) are highly sensitive, but the magnitude of the noise impact will be low.

253. Overall impact assessment rating for noise pollution without mitigation is low.

C.3 Surface and Ground Water Quality

254. The construction of the project facilities (health care centers including selected primary/rural health facilities (RHH/VHC) will not have any major impact on the surface and ground water quality in the area. Contamination of water bodies, if any in the projects areas, may result due to spilling of construction materials and surface runoff from the construction site adjoining the water body. There may be increase in the turbidity levels temporarily where

the surface runoff during construction meets the drainage of the area. This can be avoided by careful selection of raw material and waste material storage at the construction site.

255. The proposed construction activities will create temporary impacts on the existing drainage system in the area, including in earthen and line drains. Thus, it will create temporary inundation closer to the above locations during rainy season. Stagnation of water will create a direct impact on public health.

256. Ground water pollution can take place, if chemical substances and oily waste get leached by precipitation of water and percolate to the ground water table. For health care center construction activity, no chemical substance or oil is used, hence there is no impact on ground water quality. The silt discharge from the earthwork around drains, water bodies, oil, grease and fuel release from the construction vehicles / equipment and spoil from construction and other construction related activities such as raw sewerage from worker accommodation sites will mix with runoff water. This situation will increase during the rainy season and have a critical impact on surface and ground water.

257. Overall impact assessment rating for water quality without mitigation is low to moderate.

C.4 Soil Erosion and Geology

258. Some of the project activities such as earthwork and excavation, cut and fill operations, removal of trees and vegetation cover, etc. will enhance the soil erosion during the rainy season. Also, increased acceleration of surface runoff will damage the topsoil. Inadequate selection and management of spoil disposal sites and borrow pits can cause unnecessary disturbance of habitats, risk of excessive erosion and sediment-laden runoff to surface water bodies, disposal of other types of waste causing air, soil or water pollution, and generation of noise and dust during handling of the materials.

259. Overall impact assessment rating for soil and geology without mitigation is low.

C.5 Waste Management

260. Impacts may arise from waste generated during construction such as biodegradable wastes, e.g., cleared vegetation, inert demolition waste, liquid wastes such as wash water, and hazardous wastes, e.g., oily waste, asbestos, batteries, and solar panels. Poor waste management can lead to impacts such as wind-blown litter, contamination of water bodies, and impacts on human health and environment.

261. *Construction waste.* Wastes will be generated throughout civil works and will impact on resource use associated with waste production. This includes generation of inert wastes e.g., spoil, biodegradable wastes such as cleared vegetation from the sites; hazardous wastes such as oily wastes, asbestos containing waste or mercury containing waste from fluorescent lights; and liquid wastes such as wash water. Considering a life cycle perspective, any waste has inherent impacts in terms of resource use and wider emissions from product manufacturing. The impacts of waste generation are further exacerbated in areas with limited waste treatment or waste disposal infrastructure and are therefore unable to manage waste to internationally accepted levels, leading to leakage into the environment.

262. *Solid waste.* The solid waste generation will be at the location of the construction sites which will include metal scraps, wooden packing material, etc.

263. *Sanitary waste disposal at construction sites.* The labor camps at the site of construction will be temporary in nature, and the human excreta will not be significant to cause

contamination of ground water. Those places where most labor will be staying will be near apartments which may use some community or hospital/health center facilities for solid waste, water, and sanitation. Adequate drinking water facilities, sanitary facilities and drainage in the temporary sheds of the construction workers should be provided to avoid surface water pollution.

264. There should be proper solid waste disposal procedures to enhance the sanitation of workers who stay in camps. Thus, possibilities of infecting water borne diseases or vector borne diseases (Parasitic infections) will be eliminated by adopting proper solid waste disposal procedures. Unacceptable solid waste disposal practices such as open dumping of solid waste and poor sanitation facilities will lead to pollution of surrounding environment, contamination of water bodies and increase adverse impact to the general public inhabited in the area. Surrounding of labor camps, garbage disposal sites and material storage yards provide favorable habitats for diseases. Improper dumping of spoil materials and solid wastes may cause environmental impacts resulting in unpleasant odours, diseases, etc.

265. *Liquid waste.* There will be no oil or chemical waste generated during the construction of healthcare facilities.

266. *Hazardous waste.* During the construction of project facilities (hospitals and health centers) generation of any hazardous waste is not expected. Any asbestos, batteries, and solar panels (if used) would constitute hazardous waste material to be disposed of as per Tajikistan law (as per Chapter II) on solid waste and regulations and guidelines related to hazardous wastes.

267. Some of the existing hospitals/health centers have existing contaminated sites that contain human waste – placenta pits, ash from incinerator waste, and sewage pits that also contain chemicals. The assessment was carried out visually in the presence of a responsible representative of the hospital. It should be noted that chemicals (bleach) are used only for disinfection of waste in the placental pit. Hazardous medical waste after incineration, in the form of ash, together with household waste, is taken to the landfill. Sewage waste is taken to sewage treatment plants. Land (soil) decontamination issues are only relevant for some sites, as the existing hospital/health centers are to be completely demolished and new facilities are planned on the old site. In order to assess potential contamination, the necessary funds will be covered in the cost estimate of civil works. The environmental legislation of Tajikistan also requires measures to avoid pollution risks. At some sites, construction is proposed in areas where there is no contamination, and no cleanup measures will be required.

268. Overall impact assessment rating for waste without mitigation is moderate.

C.6 Flora and Fauna

269. As explained in Section B2, the proximity of the project sites to KBAs and national protected areas, Ramsar sites, etc., has been analyzed using the IBAT. The IBAT multi-site report (attached in Appendix 2) shows that out of 30 project sites, 6 sites are within 5 km buffer of the nationally designated protected areas, and 4 sites are within 5 km buffer of KBAs. However, all the project sites are located within the city/town area mostly within the premises and adjacent to the existing health facilities. Based on the IBAT multi-site assessment, it can be concluded that the project sites (healthcare facilities) are not located within any legally protected area or area that is internationally recognized for biodiversity.

270. As all the project facilities (healthcare facilities) will be constructed in government lands, there will be no displacement of people or animals. It is also not causing any disturbance to the life of people and local animals and birds' movement. There is no dynamic equipment

and moving machinery causing noise pollution, water, and air pollution.

271. During the construction phase there may temporarily minor impacts on local flora and fauna due to noise, vibration and emission from construction vehicles and equipment.

272. The removal of herbaceous vegetation from the soil and loosening of the topsoil generally causes soil erosion. However, such impacts would be primarily confined to the project sites during initial periods of the construction phase. There may be a requirement to remove/trim some of the trees for construction of new facilities. The exact number of trees affected will be known during the final location survey and construction. This will have an irreversible impact.

273. The proposed project sites may also have fruit/non-fruit trees that will be affected due to land development. But with completion of the project facilities (healthcare facilities) and replanting of new vegetation and trees around the buildings, the sites should recover the visual aesthetics. Improper disposal of the construction debris will have an impact on the surrounding ecology, public health and scenic beauty.

274. As there are no major rivers or tributaries in the location of project facilities, no significant impacts on the aquatic ecology of the river are envisaged and will not have any impact due to project activities.

275. Overall impact assessment rating to ecological environment without mitigation is low.

C.7 Health and Safety

The main health and safety risks associated with the project activities are from vehicular movement, accidental risks, conflicts with workers, and local communities etc.

276. **Vehicular movement and project traffic.** During the construction phase of the project facilities, increase in vehicular traffic in the project areas is likely to be experienced because of movement of construction vehicles and machineries, trucks ferrying in and off construction material and carrying waste material from sites. The impacts likely to occur due to increased traffic included (i) increased congestion near the main entrance to the hospitals/health facilities; (ii) increased number of vehicles on local roads will result in increased wear and tear of local roads; (iii) increased risk to pedestrians and cyclists using local roads due to increased vehicular; (iv) increase of exhaust emission from vehicles, which will pollute local atmospheric air (increased level of dust and noise).

277. **Worker and Community Health and Safety – Construction.** Health and safety impacts will be in terms of risk of accidents and exposure to electric shock at the construction site. In addition, when construction work takes place in a public environment, safety measures are often lacking to protect the public. Project activities may create accidental damage to the general public and the construction workers.

278. Health and safety issues due to construction activities will be an issue for workers, patients, staff and others. Accident can happen occur during earth cutting, casting, construction works and installation of heavy machinery if care is not taken in their operation.

279. **Community Health.** Risks to community health and safety (CHS) and occupational health and safety (OHS) are highest during the construction stage as project activities can affect various environmental, social, and behavioral determinants of health. Risks to CHS and OHS can be inter-related, as interactions between construction workers and local community members are unavoidable.

280. The increase in construction traffic, especially of heavy goods vehicles, along the road local networks will affect road safety and the risk of road traffic accidents and injuries. This risk is higher for pedestrians and cyclists and near vulnerable receptors such as hospitals and other social services.

281. Construction traffic and construction work on various sites will generate noise. Construction-related day-time noise, as well as annoyance and other health effects in the general population around the various construction sites. Night-time noise associated with night-time construction traffic and offloading can cause sleep disturbance and therefore will be limited and as per agreement with local community.

282. **Sanitation Hazard & Drinking Water.** The health of the project personnel, construction workers, and laborers at the site could be impacted if arrangement of sanitation and drinking water is not ensured adequately and properly. The project activities shall make higher demand on the local utilities and service facilities, particularly construction and drinking water, health and sanitary facilities.

283. Overall impact assessment rating for health and safety without mitigation is moderate.

C.8 Socioeconomic Matters and Physical Cultural Resources

284. The project construction activities may temporarily affect socioeconomic activities of the local communities. Given the size of the project the internal nature of the works, and the project work will be mostly carried out within or close to the existing health facilities, there will be very limited number of neighboring houses and businesses which may potentially be affected by civil works noise, dust and construction vehicles entering the sites. There is no evidence to suggest that women will be adversely impacted by the project activities. Vulnerable groups including people with physical disabilities and patients could be adversely affected by the close proximity to a construction site, considering issues of noise, dust, and site access.

285. There will not be any land acquisition for the project facilities as all land used for the project are government land and free from encroachments. There are no resettlement or rehabilitation involved in the project.

286. Construction of healthcare facilities will generate local employment, as number of unskilled laborers (both men and women) will be required at the time of construction activities. Local employment during this period will increase socio-economic standards.

287. There are no known archaeological, historical or cultural important sites along the locations of the proposed project facilities; hence, the impacts on these sites are not envisaged. However, the earthwork and excavation for building foundation there are chances of finding the artifacts of cultural, archaeological, or historical importance. If not managed properly, the work may damage these artifacts. However, considering the footprint of proposed excavation work under the project, these impacts are minor.

288. The overall impact assessment rating for socioeconomic and physical cultural resources aspects of the project without mitigation is low.

289. **Overall construction impact summary.** As described in the above sections, the overall construction impacts of the project facilities are low to moderate on physical, ecological and socio-economic environment. These impacts are mostly localized and can be managed with standard mitigation measures.

D. Operational Phase Impacts

290. Operational risks are primarily associated with the healthcare waste management chain, including risks during segregation, storage, transport, treatment, and disposal. Specific risks include: (i) improper segregation leading to hazardous exposure; (ii) leakage or spillage during storage and transport; (iii) failure of treatment systems due to inadequate utilities or maintenance; and (iv) inadequate capacity or non-compliance of disposal facilities. These risks are system-dependent and require integrated management across all stages.

D.1 Risks from improper medical and health care waste management system

291. During the operation phase of the project, solid waste will be generated from offices and support facilities. The project will generate health care and laboratory waste across facility types, including POE mobile laboratories, integrated district CESS laboratories, rural health houses, village health centers, and district polyclinics. Waste streams will include sharps and minor infectious waste from POE Health Container (which include screening and sample collection) and rural health houses/village health centers (which include basic health care); infectious and chemical waste from CESS/SES (which include PCR and serology); mixed medical waste from District Polyclinic/village clinics (which include diagnostics services); and general domestic wastes. Based on available information from similar facilities in Tajikistan, waste generation from project is expected to be low to moderate per facility which requires an on-site centralized waste management system.

292. The quantities of the total waste generated and medical/hazardous waste generation across various project facilities (health containers, CESS, SES, RHC, RHS, DHC) is estimated based on the established daily waste generated from similar facilities in Tajikistan. Table V-4 below shows the facility wise waste generation.

Table V-3: Projected medical waste generation by type of health care facility

Type of facility	Estimated daily total waste generation	Estimated daily medical waste generation
40-ft ISO Health Container as a basic health facility and laboratory unit	2 kg/week	1 kg/week
CESS facility at the POE of Tursunzoda	7-10 kg/day	3-4 kg/day
Integrated SES	7-10 kg/day	3-4 kg/day
Rural health clinics	8-10 kg/day	3-5 kg/day
District PHC polyclinic	8-10 kg/day	3-5 kg/day
Rural health house/center/post	12-18 kg/week	6-8 kg/week

Source: TrTA consultant estimate based on data/information extracted from various published sources on Tajikistan health care facilities and inputs from TrTA technical team.

293. Typical centralized SES facility in a Tajik district typically generates between 7 kg and 10 kg of total waste per day. The majority of this volume comes from large-scale laboratory diagnostics, regional surveillance activities, and the consolidation of waste from subordinate "Rural Health Houses". Roughly 40% to 50% (approx. 3 kg – 4 kg) is classified as high-risk infectious waste or sharps. Considering these assumptions, it is estimated that the proposed CESS facility at the POE of Tursunzoda will generate on an average 8 kg of health care waste of which about 4 kg will be medical waste. The existing waste management practice at Tursunzoda city SES is done through burning medical waste in a soviet era incinerator which

is in a very bad shape. Considering this, the project will install a robust on-site medical waste management system to manage medical waste generated from the proposed project facility in accordance with national regulations and GIIP.

294. In Tajikistan, an Integrated SES (Sanitary Epidemiological Service) facility is a critical public health institution responsible for disease surveillance, laboratory testing, and environmental monitoring at the district level. While exact daily figures for every facility are not publicly centralized, regional data for comparable health and laboratory settings in Tajikistan indicates that an integrated SES facility typically will also generate between 7 kg and 10 kg of waste per day, depending on its laboratory capacity and the population it serves. Approximately 40% to 50% (3 kg- 4 kg) of the total daily generation is typically classified as hazardous (infectious or sharps). Considering this generation rate, it is estimated that the project SES will generate on an average a total of 144 kg (8kgx18 SES) of waste per day of which 72 kg of waste is medical/hazardous waste. The current waste management practice at existing SES is through burning medical waste in a self-made furnace or burning medical waste in soviet era incinerators, which are outdated. Considering this, the project will a robust on-site medical waste management system to manage medical waste generated from the project facilities in accordance with national regulations and GIIP.

295. In rural Tajikistan, a Rural Health Center (RHC), often also called a Rural Health Center or Health House, typically generates between 1 kg and 2 kg (average 1 kg) of total medical waste per week. Because these facilities primarily serve outpatients and have limited inpatient capacity, their daily waste volume is lower than the global average for district-level centers. Considering these generation rates, it is estimated that the project RHC/RHH will generate on an average a total of 10 kg (1kg x10 RHC/RHH) of medical/hazardous waste per week. The current waste management practice at existing RHC/RHH is off-site transfer to the nearest SES facility. Considering this, the project will install on-site medical waste management system to manage medical waste generated from the proposed RHC/RHH facilities under the project in accordance with national regulations and GIIP.

296. The typical district/rural clinics generally generate 8-10 kg/day of total waste comprised of 3-5 kg/day of medical waste. Considering this estimate, it is estimated that the project district health polyclinic will generate on an average a total of 10 kg (10kg x1 district health clinic) of total waste of which 5 kg is medical/hazardous waste per day. The current waste management practice at the existing district health polyclinic is through burning medical waste in a self-made furnace which is outdated. This project will have a robust on-site medical waste management system to manage medical waste generated from the project facilities in accordance with national regulations and GIIP.

297. A 40 ft health container equipped with a basic laboratory and health facility is estimated to generate between 1 kg -2 kg of total waste per week. These containers typically function as a high-volume outpatient health center or a specialized district laboratory. A standard medical laboratory generates a mean of 1 kg of biomedical waste per week. This included small quantities of infectious and sharps waste. With this rate it is estimated that the 10 containers to be installed at POE under the project will generate a total of 20 kg (2kg x 10 containers) waste of which about 10 kg is medical/hazardous waste per week. The current waste management practice at POEs in Tajikistan is transfer to nearest SES facility. Considering this, the project will install on-site medical waste management system to manage medical waste generated from the proposed POE containers under the project in accordance with national regulations and GIIP.

298. It is estimated that the total waste generated and medical/hazardous waste generation from the project facilities is 166 kg per day and 83 kg /day respectively as shown in Table V-5 below.

Table V-4: Projected total medical waste generation by type of health care facility

Type of facility	Estimated daily total waste generation (kg/day)	Estimated daily medical waste generation (kg/day)
40-ft ISO Health Container as a basic health facility and laboratory unit (10 Nos)	2	1
CESS facility at the POE of Tursunzoda (1 Nos.)	8	4
Integrated SES (18 Nos)	144	72
District PHC polyclinic (1 Nos.)	10	5
Rural health house/center/post (10 Nos.)	2	1
Total	166	83

Source: TrTA consultant estimate, March 2026.

299. The following table specifies that centralized treatment approach for medical waste generated from each type of facility proposed under the project. The treatment approach will be further confirmed as part of the detailed design.

Table V-5: Projected total medical waste generation by type of health care facility

Facility	Type	Activities	Waste type	Treatment approach (based on concept planning)
POE Health Container	Modular-small	Screening, sampling	Sharps, minor infectious	On-site storage + transfer to nearest district SES for treatment and disposal.
CESS/SES	New build-Medium	PCR, serology	Infectious, chemical	On-site segregation, storage, treatment and disposal.
District Polyclinic	New build-Medium	Diagnostics	Mixed medical	On-site segregation, storage, treatment and disposal.
RHH/VHC	New build - Small	Basic care	Sharps, minor infectious	On-site storage + transfer to nearest district SES for treatment and disposal

Source: TrTA consultant estimate, March 2026.

300. The feasibility of healthcare waste treatment systems is dependent on the availability and reliability of utilities, particularly electricity and water. Given identified constraints in some project areas, the design will include provisions for backup power supply and water storage where required to ensure safe and continuous operation of laboratory and waste treatment systems. Further, the project will ensure that CESS/SES facility staff are adequately trained in the operation and maintenance of treatment units, and that standard operating procedures (SOPs) for waste handling, biosafety, and treatment are implemented and supervised. This includes allocation of trained personnel, periodic refresher training, and monitoring of compliance with established protocols.

301. Non-medical Wastewater. The project facilities (CESS, health centers, laboratories) will create non-medical wastewater discharge that will be mainly water used for domestic and toilet uses.

302. Overall impact assessment for health care waste rating without mitigation is high.

D.2 Increased demand of utilities

303. The new buildings will require services (notably electricity, sewage, water, heating, and electricity), which could cause additional demand during periods of low water availability and load-shedding. Given identified constraints in some project areas, the design will include provisions for backup power supply and water storage where required to ensure safe and continuous operation of laboratory and waste treatment systems. Considering this, the impacts will be insignificant.

304. Overall impact assessment rating for utilities without mitigation is low.

D.3 Increased GHG emission

305. Some of the project facilities (particularly in rural and district health centers where the district heating is not available) would install heat only boilers. This will lead to emission of GHG from the fuel used to operate boilers. Given that the hours of operation would be for 24 hours for 210 days (1 October to 1 May) at the emission rate of 2500 g for 1 boiler would lead to 3.6 tons/annum approximately. Given the size of the facilities operation these risks are anticipated to be low.

306. Overall impact assessment rating for utilities without mitigation is low.

D.3 Accidental risks and emergencies

307. No significant risks are anticipated during operation. Some accidental risks are expected during operation of project facilities on healthcare facilities, staff/personnel, patients and nearby residents. The accidents such as spillage, leakages, electric shocks may lead to death or injury to the hospital staffs, patients and public in the area if facilities are not constructed properly. No significant risks are anticipated during operation.

308. Overall impact assessment rating for accidental risks without mitigation is low.

D.5 Occupational Health and Safety

309. For occupational health and safety, the main hazards include:

- Exposure to hazardous material/chemicals/health care waste due to accidental spillage, leakages etc.,
- Ergonomic hazards from lifting heavy objects, uncomfortable postures;
- Trips, slips and falls with risk of injuries;
- Exposure to microbial pathogens;
- Injury due to skin/eye contact or ingestion of chemicals.

310. **Overall operation impact summary.** During operation, the most significant impacts expected to arise from the project are beneficial impacts on public health and the quality of life in the cities and districts through the improvement of health care services.

311. Potential negative impacts that may result due to operation of the health facilities as outlined above are considered not significant and can be addressed through design following national and international standards and operation of the facilities following GIIP and the implementation of mitigation measures.

E. Indirect, Induced, and Cumulative Impacts

312. The Cumulative Impacts⁴⁰ are defined as the combination of multiple impacts from existing projects, the proposed project, and anticipated future projects that may result in

significant adverse and/or beneficial impacts that cannot be expected in the case of a stand-alone project. The Induced Impacts are the adverse and/or beneficial impacts on areas and communities from unintended but predictable developments caused by a project, which may occur later or at a different location.

313. There are currently no other construction/development projects happening in the vicinity of the proposed project facilities. Besides, these the project facilities are in different geographical locations and therefore there are no cumulative or induced impacts arising from proposed project facilities.

F. Climate Change and Greenhouse Gas Emissions

314. This Climate Hazard, Risk, and Vulnerability Assessment (CRA) confirms that Tajikistan's health sector is highly exposed to a complex set of climate and disaster risks. Floods, droughts, landslides, heatwaves, cryosphere changes, and seismic activity represent systemic threats, while localized hazards such as dust storms, mudflows, avalanches, winter isolation, and climate-linked epidemic risks compound vulnerabilities in specific districts. The assessment demonstrates that these hazards intersect with fragile health infrastructure, limited adaptive capacity, and socioeconomic disparities, creating critical risks that demand immediate adaptation measures.

315. The CRA's structured methodology, combining hazard identification, exposure analysis, sensitivity and vulnerability assessment, adaptive capacity evaluation, and risk prioritization, provides a transparent and evidence-based framework for guiding project design. By overlaying hazard maps with district boundaries and site locations, the assessment ensures that risk categorization is tailored to operational realities of each facility rather than generic assumptions. This approach strengthens confidence in the findings and ensures alignment with ADB safeguards, national adaptation priorities, and the Paris Agreement. Key conclusions include:

- Floods and heatwaves consistently emerge as critical risks, threatening cold chain systems, surveillance centers, and border health posts.
- Landslides and seismic risks dominate mountain districts such as GBAO, Rasht Valley, and Lakhsh, where avalanches and winter isolation exacerbate isolation and infrastructure fragility.
- Droughts are critical in Dusti and significant in Hamadoni, underscoring acute water scarcity in lowland districts.
- Cryosphere changes are critical in Lakhsh and significant in GBAO and Rasht Valley, reflecting long-term systemic risks linked to glacier retreat and water supply disruption.
- District specific hazards such as dust storms, mudflows, and epidemic risks intensify vulnerabilities in southern PoEs and flood prone valleys.
- GBV facilities in Sughd and Khatlon were assessed using region level hazard data, ensuring gender responsive infrastructure is integrated into resilience planning despite current geographic data limitations.

316. Adaptive capacity analysis highlights that while institutional frameworks exist, anchored in MOHSPP, CoES, Hydromet, and civil society organizations, gaps remain in surveillance systems, laboratory biosafety, cold chain resilience, and community preparedness. Rural households, women, and marginalized groups are disproportionately affected, requiring targeted adaptation measures. The CRA emphasizes that antimicrobial resistance surveillance is particularly sensitive to climate shocks, given the potential for flooding, water contamination, and rising temperatures to accelerate resistant pathogen transmission.

317. Beyond infrastructure fragility and institutional gaps, climate change is reshaping Tajikistan's health risk landscape through both direct and indirect pathways. Integrating these impacts into adaptation priorities ensures that project investments safeguard not only infrastructure but also the health security of vulnerable populations.

318. The assessment concludes that climate-proofing health infrastructure is both urgent and feasible. Priority adaptation measures include flood-resilient construction, slope stabilization, seismic-resistant design, portable cold chain systems, decentralized solar energy, and digital epidemic intelligence tools. Cross-cutting measures such as gender-responsive health services, community-based awareness programs, and strengthened institutional coordination are essential to ensure that resilience is socially equitable and technically robust.

319. Limitations remain, including uneven Hydromet coverage in high-altitude regions, incomplete disaster records, and evolving institutional coordination. These uncertainties highlight the importance of adaptive management and iterative updating of risk assessments. Stakeholder validation workshops and targeted data collection are recommended to refine district classifications and strengthen evidence-based adaptation planning.

320. In conclusion, the CRA provides a comprehensive, transparent, and donor-ready foundation for integrating climate resilience into Tajikistan's health security and primary health care investments. By embedding resilience into laboratories, primary health care facilities, surveillance systems, and GBV protection infrastructure, the project safeguards continuity of care for millions of vulnerable households. It strengthens Tajikistan's pathway toward a climate-resilient health system, aligned with national strategies, ADB safeguards, and international climate commitments, ensuring that investments remain robust under current and future climate conditions.

G. Anticipated Project Benefits and Positive Impacts

321. The project is expected to have overall beneficial impacts by improving the health system in the country. The project will enable Tajikistan to better respond to cross-border health threats, improve regional health security in Central Asia, improving the efficiency and capacity of public health laboratory system, and transforming PHC system to better respond to emerging climate-related health risks and expand women's access to services. It prioritizes digital health transformation and institutional integration of epidemiological and public health laboratory stakeholders to improve the efficiency, effectiveness, and capacity of overall disease surveillance system. It will upgrade health infrastructure and strengthen the capability of the health workforce to deliver more efficient and patient-centered services. The project will also empower women in rural and border communities to design and deliver initiatives on increasing the awareness of emerging notifiable diseases, climate change-related health risk, and risk factors that affects women's and girl's SRHR. The project will benefit communities from 18 border and rural districts, including their respective 18 jamoats and 36 villages, where underserved, and hard-to-reach groups face the most severe gaps in public health service access. The project is an integral part of development partners' efforts to strengthen the resilience of Tajikistan's health system. The improved disease surveillance and public health laboratory testing capacity of Tajikistan to be supported through the ensuing project enables timely and effective detection and response to emerging infectious diseases, which is considered a regional public good, as it contributes to improved health security in Central Asia and beyond. The outcome of the project is improved health security and service delivery of Tajikistan improved with enhanced gender responsiveness and climate resilience.

V. MITIGATION AND MANAGEMENT MEASURES

322. This section defines the preliminary mitigation measures for the adverse impacts identified in previous (impacts, risks and cumulative assessment) section based on available concept design information, site investigations, and stakeholder consultations. The mitigation measures are presented in the same order in which impacts and risks are identified.

A. Design and Pre-construction Stage Mitigation Measures

323. The following project readiness activities will be undertaken during the engineering design and pre-construction phases to establish the necessary environmental management frameworks and ensure compliance with referenced standards.

- (i) **Design of new buildings and healthcare facilities.** All new buildings (CESS, SES, health centers, laboratories including selected primary/rural health facilities (RHH/VHC) shall be designed in compliance with relevant Government of Tajikistan's design standards and codes for energy-efficient, safe buildings, including but not limited to: Tajikistan national standards on protection of environment. World Bank's EHS guidelines 2007 standards may apply in-case where the Tajikistan standards are less stringent.

Type and scale of insulation to be installed in the building will be designed by the Contractor as per norms followed in Tajikistan. The design must lead to introduction of other energy efficiency elements (heat meters; heat insulation that meets the requirements on Tajikistan Energy Efficiency Regulations; LED lighting; triple glazed windows) etc. The PAG and the Contractor must ensure proper design for the healthcare facilities so that the infrastructure become coherent and complies to national (Tajikistan) and international (IFC/WHO) health and safety norms.

Green Building and Energy Efficiency: The building design must include green building and energy efficiency features as listed in Section 4. Use of more energy efficient smokeless heat only boilers (HOBs) may have to be mandated in bidding documents. Alternatively, the design must include alternatives to HOBs such as electric heating that can be controlled using heating control regulators.

Design of waste management system: The project will adopt a mixed healthcare waste management system based on facility typology. CESS laboratories will include on-site treatment systems (e.g., autoclave or equivalent), while rural health houses (RHHs), POEs, and selected PHC facilities will rely on centralized treatment at designated SES facilities, supported by a defined transport system. The waste management system will therefore comprise: (i) segregation at source; (ii) on-site storage; (iii) controlled transport; (iv) treatment at designated facilities; and (v) final disposal in accordance with national regulations and GIIP.

Each project facility (POE, SES, RHH/RHC/Polyclinics) design to include appropriate on-site medical waste management system following national (Tajikistan) and international standards and GIIP i.e.

- MOHSPP SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions;
 - IFC EHS Guidelines for Health Care Facilities (2007);
 - WHO Safe Management of Waste from Health-care Activities (a practical guide); and
 - WHO Laboratory Biosafety Manual.
- (ii) **Domestic environmental approvals and permits.** The proposed construction sites are in the midst of residential/urban areas. Construction activities in residential areas

are not prohibited within the city zones, but it will have EIA and EMP approved by the Committee on Environmental Protection (CEP) of the Republic of Tajikistan. Also, construction works are not prohibited in urban areas (but project of health facilities rehabilitation has to undergo state environment expertise of CEP). The PAG should obtain all required permits and approvals prior to start of construction work, as required under the national regulations.

Linked facilities: The PAG must confirm from concerned authorities of various linked facilities such as power, heating, water, wastewater facilities to each of the healthcare facilities on their ability to deliver required services and without interruptions. Any underground utilities such as heating pipes, sewage drainage, water pipeline etc. if disconnected to the premises will be restored.

- (iii) **Institutional strengthening.** (a) MOHSPP PAG will assign one full-time, qualified environmental and social officer to the PAG team. This officer will lead the EMP implementation oversight; (b) each implementing agency will assign one environmental focal point as part of the project management team at project level; and (c) under the design and supervision consulting services (DSC), implementation environmental and social consultants will be included for supervision and monitoring on field.
- (iv) **Pre-construction baseline monitoring and ACM surveys:** Baseline monitoring for the environmental quality (air, water, noise, vibration, soil) will be conducted by contractors prior to start of the civil works construction at any project facility.

Also considering that most of the existing district and rural healthcare facilities where project interventions are proposed, has presence of asbestos/ACM/residual medical/hazardous waste, it is important to carry out an inventory of presence of such material. Prior to bidding, the PAG and contractors are required to carry out pre-construction surveys for presence of asbestos and ACM, and also hazardous materials and medical waste from installed incinerators at the existing facilities.
- (v) **Updating the IEE and EMP.** This IEE including the EMP is prepared based on the preliminary concept design provided by the design team. The IEE and EMP (including mitigation measures and monitoring) will be updated following the detailed design of the project components, and if there are any changes in project scope or location of the project facilities and components. The updated EMP will be attached to the bidding documents after ADB approval. This will be the responsibility of the PAG, implementing agencies, and DSC.
- (vi) **Training in environmental management.** The DSC environmental and social consultants will provide training on the implementation and supervision of environmental mitigation measures to PAG, IAs, contractors and the construction supervision companies.
- (vii) **Grievance redress mechanism (GRM) and stakeholder consultation.** The PAG and implementing agencies will implement the project GRM at least two months before the start of construction to ensure that the project communities and public services (e.g., health services) are well informed and provided the opportunity to discuss any concerns. This is part of the continued public consultations and engagements i.e., apart from the consultations completed during project preparation (Section VII). For details of GRM refer to the EMP in Appendix 1.
- (viii) **Bidding and contract documents.** The project environmental management plan (EMP; Appendix 1) will be included in the bidding documents and contracts for the procurement of civil works, goods, and services. All contractors and subcontractors will be required to comply with the EMP, and conditions / requirements per the domestic environmental approval.

- (ix) **Contractor obligations.** Contractors, in their bids, will respond to the environmental clauses in the bidding documents for EMP requirements. Prior to construction, each contractor will develop a site-specific EMP, based on the attached project EMP, and assign at least one person responsible for environment, health, and safety (EHS) management. The site-specific EMP will include the following: (a) surface water and ecosystem protection; (b) spill control and management; (c) site drainage and soil erosion protection; (d) waste management; (e) hazardous material management; (f) health and safety; (g) temporary traffic management, and (g) all site-specific mitigation measures listed in the project EMP. The site-specific EMPs will be submitted to the environmental social officer of PAG for approval.
- (x) **Demolition Plan.** Contractors will prepare a detailed demolition plan for facilities/site where demolition of existing buildings is proposed. This demolition plan will have comprehensive procedures for demolition work including demolition waste management. The demolition plan should be approved by the PAG and relevant authorities.
- (xi) **ACM Management Plan.** Contractors should develop a feasible occupational health asbestos action plan which will also have ACM management plan (refer Annex 3 to EMP) and seek approval from PAG/MOHSP prior to start of construction. No asbestos or asbestos containing material will be used in the project facilities. Tajikistan has banned the use of asbestos building products, but the management of asbestos containing materials remains fairly poor. The Experts under the guidance of the Agency for Control and Building and Architecture will conduct physical engineering survey to determine existence of asbestos in the affected buildings covered by the project. The ACM management plan should consider the internationally recognized *Standards Practices for Maintenance, Renovation and Repair of Installed Asbestos Cement Products*.^{5 6 7}.

B. Construction Phase Mitigation Measures

B.1 Dust Emission and Air Quality

324. Regular sprinkling of water on open surface and dust emitting grounds should be done regularly until paving is done during dry season and keeping all soil, sand, and aggregate piles covered (whether on the site, or on trucks) to minimize the air pollution during the construction stage. If there is any complaint of dust emissions from patients, staff and neighbors, should be given proper attention.

325. Residual impacts after mitigation measures: Low

B.2 Noise

326. Contractor shall equip their heavy construction equipment and plants with exhaust silencers to limit the engine noise not to exceed 75 dB(A) (compacters/rollers, loaders and cranes) and regularly maintain all construction vehicles and machinery that should meet the stringent standards between Tajikistan national and IFC standards for noise emission.

327. Contractor shall preferably limit working time for activities that create noise within normal waking hours of the public except for construction sites near public sensitive receptors.

5 ADB. 2022. Good Practice Guidance for the Management and Control of Asbestos: Protecting Workplaces and Communities.

6 ASTM International. ASTM E2394-11, Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products. West Conshohocken, PA, 2011. <http://www.astm.org/Standards/E2394.htm>.

7 International Finance Corporation. Environmental, Health, and Safety Guidelines, 2007.

Construction related activities closer to sensitive receptors have to be scheduled in coordination with the residents and relevant authorities.

328. Contractor and its suppliers of construction materials should strictly implement noise control regulations stipulated for Noise pollution for all construction vehicles and equipment. All machines will be fitted with noise reduction devices. Depending on noise attenuation and proximity to the construction works, careful monitoring will be required. World Bank Group (IFC) EHS Guidelines 2007 and Tajikistan noise standards are same in their limits.

329. For managing noise nuisance, construction works should be limited to daytime hours, and all employees likely to be exposed to ear noise must use ear protectors. However, the noise impacts will be local limited to the premises and very short term. Loud noise may disturb the local resident apartment dwellers during normal hours of waking as well. Due consideration must be given by the Contractor in consultation with local residents. Noise barriers may be installed by the Contractor to ensure residents are not inconvenienced.

330. During the operation phase of the project, the ambient noise level meets the World Bank Group (IFC) EHS Guidelines for residential areas [55 dB(A) during daytime and 45 dB(A) during night time]. During normal work hours, noise from construction may also disturb some residents, but they have been consulted prior to the start of construction.

331. Residual impacts after mitigation measures: Low

B.3 Surface and Ground Water Quality

332. Incorporation of following measures will minimize anticipated impact due to obstruction of natural flow paths and existing drainage:

- Provisions of temporary drainage facilities to the particular locations if existing drains are obstructed due to construction activities.
- Maintenance of all drainage paths by avoiding blockages at all times.
- Contractor should minimize excavation of drainage systems in project affected areas
- If any healthcare facility is situated in the immediate vicinity of the water body/river, adequate reinforcement of embankment will be done to ensure no surface runoff gets discharged into the water body/river.

333. Care shall be taken to locate the temporary construction worker sheds away from the drainage/water bodies. Adequate drinking water facilities, sanitary facilities, and drainage in the temporary sheds of the construction workers should be provided to avoid surface water pollution. The provision of adequate washing and toilet facilities should be made obligatory. This should from an integral component in the planning stage before commencement of construction activity

334. Following measures will be implemented in order to prevent deterioration of ground water quality from the construction and construction related activities:

- All construction vehicles and equipment should be maintained in proper conditions without any leakages,
- Contractors shall use silt traps to avoid entering of cement particles, rock, rubbles and wastewater to the surrounding drains and ultimately into water bodies in the district,
- Construction activities requiring digging should be preferably done in the dry season,

- Waste oil should be collected properly and disposed to the approved location.

335. Residual impacts after mitigation measures: Low.

B.4 Soil Erosion and Geology

336. The impacts associated with excessive erosion and other civil works will be avoided or minimized by following mitigation measures:

- Minimize removal of trees and green cover vegetation.
- Minimize obstruction or destruction of natural drainage patterns of the surrounding area.
- Proper treatment of clearing and filling areas against flow acceleration.
- Contractors shall restrict cut and fill operation around sharp/deep slope areas.
- Topsoils which are removed during construction must be stored separately for future utilization.

337. Residual impacts after mitigation measures: Low.

B.5 Waste Management

338. Construction waste will be managed through comprehensive waste management plans prepared for each facility and applicable to all sites, focusing on collection, segregation, storage, licensed disposal, and prohibition of open burning.

339. For all project sites, contractors will develop site-specific waste management plans prior to start of the construction work that address all waste streams including inert materials, metals, timber, plastics, hazardous wastes (oils, paints, solvents), and general refuse. Color-coded segregation zones will be established on-site with clearly labeled containers for each waste type.

340. Licensed waste haulers approved by local municipality/authorities will be contracted for regular collection and transport of segregated waste to designated legal disposal or recycling facilities. All hazardous waste will be manifested with chain-of-custody documentation, and monthly reports will be submitted to the PAG. Open burning of any waste is strictly prohibited at all sites.

341. These construction waste management protocols align with the waste minimization and segregation principles outlined in the World Bank Group's EHS Guidelines for Health Care Facilities, adapted for the construction context.

342. In Addition following measures will be implemented to protect and enhance the quality of environment during the construction stage of project facilities.

- Follow adequate waste disposal approaches, including prevention of waste from being generated through recycling to minimize impacts on environmental receptors.
- Wooden waste and metal scrap will be collected and disposed of in compliance with applicable Tajikistan regulations and rules.
- Contractor should provide adequate facilities to manage its wastes in accordance with the guidance given by the Tajikistan law on solid waste and law on construction, and related regulations.
- Provision of solid waste disposal, sanitation, and sewage facilities at all sites of the construction sites to avoid or minimize health hazards and environmental pollution.
- Contractors should handle and manage waste generated from the construction

sites without contamination to the natural environment, and it will reduce risk to the general public who stay close to sites. Also, Contractor will be responsible to enhance the quality of environment.

- Contractors should provide garbage bins to all workers' accommodation and construction sites, for dumping wastes regularly in a hygienic manner in the area.
- *For Hazardous Waste Disposal*, the detailed site and soil investigation at sites will be conducted during the pre-construction stage. Sampling of contaminants of concern will be conducted and analyzed to understand the potential severity and size of the area affected. Soil and ground water samples shall be conducted by a licensed laboratory/firm, and the findings will inform the extent of remediation works (by evidencing how severe and how far the contamination is). Any contaminated soil will be extracted and disposed using appropriate, experienced, and licensed contractors. This process will be monitored by PAG/ADB and a no-objection provided once satisfied with sampling and management of this potential risk.

343. Residual impacts after mitigation measures: Low to moderate.

B.6 Flora and Fauna

344. As explained in Section B2 none of the declared environmentally sensitive areas are located within the project areas. It is not expected that any flora and fauna that are rare, endangered, endemic, or threatened will be affected. No migratory paths of small mammals and reptiles are being affected due to construction activities. The impacts related to project activities on any flora and fauna are temporary and will be mitigated through following measures:

- Selection of approved locations for material storage yards away from the environmentally sensitive or populated areas.
- Waste streams - Avoid entering construction waste (cement particles, rock, rubbles and wastewater) and sanitary waste to the surrounding water bodies.
- Spoil materials (soil, sand, rock etc.) generated from construction activities shall be used wherever possible for site levelling, back-filling etc. Any dismantled and demolished structural materials, if any, should be dumped in accordance with government norms.
- Preparation of the waste disposal plan for the project and selection of the disposal site is necessary by the Contractor. Prior approval should be obtained for linked facilities such existing dumping grounds / land fill sites from relevant local authorities. Dumped materials will interfere with the drainage pattern of the area, any water bodies, agricultural lands, marshlands and down slope or any environmental sensitive areas if not planned properly.

345. Residual impacts after mitigation measures: Low.

B.7 Health and Safety

346. Community and workers health and safety during construction will be protected through site security, traffic management, and community communication measures applicable to all project sites, with enhanced provisions for locations with elevated baseline risks.

347. For all project locations, secure perimeter fencing of a minimum of two meters height will be installed around construction sites, with warning signs in local languages (Tajik). Controlled access points with security personnel will prevent unauthorized entry, particularly by children.

348. Traffic management plans prepared by contractors and approved by local authorities will be implemented, with designated haul routes that avoid schools and residential areas where possible. Flagmen will be stationed during peak school hours to protect vulnerable road users, and speed limits of 15 km per hour on site and 30 km per hour on access roads will be enforced. Emergency vehicle access will be maintained at all times, and health care facilities operations will be coordinated to maintain patient access throughout construction.

349. Community communication will include project information boards at site entrances displaying Grievance Redress Mechanism contact information, regular updates to community leaders, and public meetings before construction and as needed throughout the project.

350. For those project sites in congested/urban areas, enhanced fire safety measures will be implemented. A site-specific fire prevention and response plan will be developed prior to construction, identifying fire risks including fuel storage, electrical installations, hot work, and temporary heating. A no-smoking policy will be established in high-risk areas, and daily inspections of electrical installations will be conducted.

351. Adequate fire suppression equipment will be provided at all risk locations: extinguishers at fuel storage areas, workshop areas, offices and worker accommodation, fire blankets in catering areas, and sand buckets for small liquid fires. All equipment will be inspected monthly.

352. A hot work permit system will require permits for all welding, grinding, or open flame work, with fire watch during and 30 minutes after work, and clear removal of combustible materials from work areas. Emergency response coordination with the local district fire department will be established, trained fire wardens (minimum two per shift) will be designated, fire drills will be conducted quarterly, emergency assembly points and evacuation procedures will be established, and emergency contact numbers will be posted prominently.

353. To manage asbestos-containing materials (ACM), works will be closely monitored where PAG will maintain a site-specific asbestos register identifying the location of the ACM roofing and will ensure that contractors are formally notified of this by inclusion of the EMP to the bidding documents work contracts. Contractors will adhere to a stop-work protocol to notify the PIU if suspected ACM or other hazardous materials are encountered or disturbed during construction. The PIU Project Manager will oversee implementation of these measures and ensure that any incident involving ACM is reported to ADB in accordance with project reporting procedure.

354. In addition, following mitigation measures will be implemented to minimize health and safety risks associated with the project activities are from vehicular movement, accidental risks, conflicts with workers and local communities etc.

- Contractor to prepare an effective traffic management and accident management plan for sites in congested/urban areas. The Contractor will post traffic managers at all access roads at the hospital/health center work sites and will ensure parking places are not encroached by placing any construction/waste material or parking of construction vehicles.
- Necessary training regarding safety aspects to the personnel working at the health facilities will be provided by the Contractor. The workers should wear PPE (Personal Protective Equipment), safety goggles, and other necessities during construction periods and during maintenance work. First aid facilities will be made available with the labor gangs and doctors called in from the hospital. Article 16 of the National Constitution of Tajikistan states that every employee has the right to

'suitable conditions of work'. The government adopted national standards such as the National Standard on Occupational Health and Safety GOST and Sapin. World Bank Group (IFC) EHS Guidelines and GIIP will also be followed.

- Contractor should take necessary action to enhance personal safety during the construction through following measures:
 - Organize awareness programs relevant to personal safety of the workers and general public in the area;
 - Installation of warning signs to particular locations such as transverse points of local road network by health facilities;
 - Provide protective safety belts, footwear, helmets, goggles, eye-shields and clothes to workers depending on their duty; and
 - Arrangement of proper first aid units and transport facilities to take injured people to the hospitals.
- The entire work sites should be fenced off and marked, so as to prevent the access of health facility patients and public to the construction site. When land clearing is complete, the work area is finished, and facilities are in place; all of the above impacts and risks will be neutralized.
- During construction, the PAG through Contractor will engage in public consultations and EMP trainings to improve workers and community members' knowledge, attitudes and practices on health and safety.
- The Contractor must adopt internationally and nationally adopted safety regulations during the construction of project facilities near houses, neighboring communities.
- The increase in construction traffic, especially heavy goods vehicles, along the local road networks will affect road safety and the risk of road traffic accidents and injuries. This risk is higher for pedestrians and cyclists and near vulnerable receptors such as hospitals and other social services. The Contractor must focus on the traffic safety awareness campaigns to communities that lives and communes along transportation corridors, imposing speed limitations with zero tolerance clauses in the worker codes of conduct for non-compliance, traffic signs on entry and exit points of the construction site, signs of caution about movement of transportation machinery.
- Construction traffic and construction work on various sites will generate noise. Construction-related day-time noise, as well as annoyance and other health effects in the general population around the various construction sites. Night-time noise associated with night-time construction traffic and offloading can cause sleep disturbance and therefore will be limited and as per agreement with local community. Controlled construction activities can address community health and safety risks and impacts associated with increased air pollution, noise, and traffic during the construction phase.
- The contractors will also implement precautions to protect the health and safety of construction workers. The occupational health and safety risks will be managed by applying measures in the following order of preference: avoiding, controlling, minimizing hazards, and providing adequate protective equipment. All workers will undergo a site induction/orientation that will highlight expectations on minimizing impacts to the physical and social environment. There will be an on-site and off-site code of conduct established that will outline roles, responsibilities, and consequences for non-compliance. Prior to construction, the site specific EMP will be finalized to include the following components:
 - Public health management plan

- Waste and hazardous material management
- ACM management plan
- Emergency response plan
- Traffic safety management component during construction
- Dust, noise and vibration management
- Occupational health and safety management
- In addition, each contractor's site-specific EMP will include measures for health and safety for personnel. The plan will be submitted to the PAG for review and appraisal and will include the following provisions for health and safety:
 - *Personal protection.* Provide personal protection equipment (PPE) appropriate to the job, such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and safety regulations, for workers.
 - *Emergency preparedness and response.* An emergency response plan to take actions on accidents and emergencies, including environmental and public health emergencies associated with hazardous material spills and similar events will be prepared, and submitted to the PAG for review and appraisal. A fully equipped first-aid base in each construction site will be provided.
 - *Records management.* A Records Management System will be established to document occupational accidents, diseases, and incidents, that: (a) includes a tracking system to ensure that incidents are followed up; (b) can easily retrieve records; and (c) can be used during compliance monitoring and audits. The system will be backed up on at least one external hard drive to protect records against loss or damage.
 - *Safety communication.* Ensure that safety, rescue and industrial health matters are given a high degree of publicity to all persons regularly or occasionally on the site. Posters drawing attention to site safety, rescue and industrial health regulations will be made or obtained from the appropriate sources and will be displayed prominently in relevant areas of the site.
 - *Training, awareness, and competence.* Train all construction workers in basic sanitation and health care issues, general health and safety matters, and on the specific hazards of their work.
- Most workers will be local residents around the project sites, but some of the workers might come from other regions and may stay in nearby accommodation planned by the Contractor. The Contractor to develop occupational health and safety plan for those workers from other regions as per EMP.
- The Contractor must train its project personnel, construction workers and laborers, and staff to have knowledge of sufficient emergency response systems put in place. Fire safety management training and mock drill should be practiced periodically and emergency equipment and facilities like fire extinguisher/water hose, first aid etc. must be available to manage fire hazard or any medical emergency.

355. Residual impacts after mitigation measures: Low.

B.8 Socioeconomic Matters and Physical Cultural Resources

356. Although there are no known archaeological, historical or cultural important sites along the locations of the proposed project facilities, in case of noticing possible sites of cultural, archaeological, or historical importance, the following procedures shall be implemented:

- Immediately upon noticing an item that could possibly be an artifact of cultural, archaeological, or historical importance, the finder (contractor) shall suspend all work and notify the PAG.

- The PAG shall observe and document (take photo, describe) the finding without physically inspecting it and inform the concerned district office.
- The PAG shall ensure that the contractor fences off the place of finding and facilitates the officials of the concerned department of district culture and fine arts to access the place of finding and recovering or otherwise protecting the artifact.
- The construction work may only resume with the permission of the concerned department.

357. Residual impacts after mitigation measures: Low.

358. **Overall construction residual impacts.** As described in above sections, the overall residual impacts of construction of the project facilities after mitigation measures is low.

C. Operational Phase Mitigation Measures

359. The following mitigation measures will be implemented to minimize operation stage impacts from the project facilities.

C.1 Medical and health care waste

360. The project will adopt a mixed healthcare waste management system based on facility typology. CESS laboratories will include on-site treatment systems (e.g., autoclave or equivalent), while rural health houses (RHHs), POEs, and selected PHC facilities will rely on centralized treatment at designated SES facilities, supported by a defined transport system. The waste management system will therefore comprise: (i) segregation at source; (ii) on-site storage; (iii) controlled transport; (iv) treatment at designated facilities; and (v) final disposal in accordance with national regulations and GIIP.

361. The operational waste management systems prescribed below are designed to comply with the comprehensive framework for health care waste management established in the national regulations (MOHSPP SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions) and international standards and GIIP i.e. World Bank Group's (IFC) EHS Guidelines for Health Care Facilities (2007)⁸, WHO Safe Management of Waste from Health-care Activities (a practical guide); and WHO Laboratory Biosafety Manual. This framework addresses waste minimization, segregation, on-site handling, storage, transport, treatment, and disposal, as detailed in these guidelines. The project's approach is fully aligned with these internationally recognized standards and GIIP.

362. Operational waste management addresses the generation of medical waste at each facility during operation. Given the current absence of licensed third-party hazardous medical waste treatment facilities in remote project areas of Tajikistan, all project health care facilities will be designed and equipped to be entirely self-sufficient in the treatment of their own medical waste. Site-specific solutions will be tailored to existing conditions and planned expansions, with a core principle of on-site treatment and no reliance on off-site disposal for untreated medical waste.

⁸ <https://www.ifc.org/content/dam/ifc/doc/2000/2007-health-care-facilities-ehs-guidelines-en.pdf>

363. The project will implement a centralized medical wastes management system including:

- On site facility-level handling and temporary storage and treatment arrangements which includes segregation at source using color-coded, labeled containers. Maximum storage time will be limited in accordance with temperature and biosafety requirements.
- On-site pre-treatment and secure storage at facilities.
- Controlled transport to designated treatment facilities where applicable
- Treatment and final disposal at compliant facilities with verified capacity and environmental performance

364. At Integrated CESS/SES laboratories, village health centers, and district clinics/polyclinics, the project facilities will include:

- Autoclave or equivalent decontamination system
- Secure, ventilated bio-waste holding area
- Segregated storage for chemical and hazardous waste
- Treatment and disposal system.

365. At POE Containers and village health houses facilities will include:

- On site facility-level handling and temporary storage
- Transportation to the nearest CESS for treatment and disposal.

366. Treatment technology selection (e.g., autoclave, non-burn technology) will be based on:

- Waste type and volume
- Environmental performance (emission etc.)
- Operational feasibility (including utilities and maintenance capacity)

367. The projected total hazardous waste generation across all facilities (health care containers, CESS, SES, RHC, RHS, DHC) establishes the following minimum treatment arrangement is shown in table VI-1 below.

Table VI-1: Projected total medical waste generation and treatment methods

Type of facility	Estimated daily medical waste generation	Recommended treatment method and configuration
40-ft ISO Health Container as a basic health facility and laboratory unit	1 kg/week	<ul style="list-style-type: none"> - On-site storage in small secured medical boxes. - Transport to the nearest CESS/SES (to be constructed under the project) for treatment and disposal. The transportation of waste will be carried out by medical vehicles from CESS facilities. The vehicles will be procured under the project. These CESS (SES) facilities will be constructed under the project which will have their own waste management system.
CESS facility at the POE of Tursunzoda	3-4 kg/day	<ul style="list-style-type: none"> - On-site treatment. The facility design will include its own medical waste management system. - Collection, storage, disinfection, treatment system (e.g., autoclave or equivalent) and disposal shall be

Type of facility	Estimated daily medical waste generation	Recommended treatment method and configuration
		carried out as per MOHSPP SOP/guidelines and GIIP on medical waste management.
Integrated SES	3-4 kg/day	<ul style="list-style-type: none"> - On-site treatment. The facility design will include its own medical waste management system. - Collection, storage, disinfection, treatment system (e.g., autoclave or equivalent) and disposal shall be carried out as per MOHSPP SOP/guidelines and GIIP on medical waste management.
Rural health clinics	3-5 kg/day	<ul style="list-style-type: none"> - On-site treatment. The facility design will include its own medical waste management system. - Collection, storage, disinfection, treatment system (e.g., autoclave or equivalent) and disposal shall be carried out as per MOHSPP SOP/guidelines and GIIP on medical waste management.
District PHC polyclinic	3-5 kg/day	<ul style="list-style-type: none"> - On-site treatment. The facility design will include its own medical waste management system. - Collection, storage, disinfection, treatment system (e.g., autoclave or equivalent) and disposal shall be carried out as per MOHSPP SOP/guidelines and GIIP on medical waste management.
Rural health house/center/post	6-8 kg/week	<ul style="list-style-type: none"> - On-site storage in small secured medical boxes. The storage will be carried out as per MOHSPP SOP/guidelines and GIIP on medical waste management. - Transport to the nearest CESS/SES (to be constructed under the project) for treatment and disposal. The transportation of waste will be carried out by medical vehicles from CESS facilities. The vehicles will be procured under the project. These CESS (SES) facilities will be constructed under the project which will have their own waste management system.

368. For POE mobile containers, rural health houses/centers, since the quantities of the medical waste generated will be very less (1-2 kg per week), stand along on-site waste management system is not viable. Therefore, the waste will temporary stored onsite in a safe box and then the accumulated waste will be sent weekly to the nearest project CESS for treatment and disposal. Transportation from POE/RHH to CESS will be the responsibility of CESS.

369. For VHC, District clinic, and CESS facilities, these will have an on-site waste treatment arrangement which will include collection, segregation, storage, disinfection, treatment and disposal. The waste treatment system should be compliant with the national (Tajikistan) and international (IFC/WHO) emission standards. The waste management system must be designed and operated as per national standards i.e. MOHSPP SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions) and international standards and GIIP i.e. World Bank Group's

(IFC) EHS Guidelines for Health Care Facilities (2007)⁹, WHO Safe Management of Waste from Health-care Activities (a practical guide); and WHO Laboratory Biosafety Manual. The on-site waste treatment system (e.g., autoclave or equivalent) shall be compliant with the national (Tajikistan) and international (IFC/WHO) emission standards. Transportation of waste shall be the responsibilities of CESS and disposal of waste shall be carried out as per MOHSPP SOP/guidelines and GIIP on medical waste disposal.

370. Waste generated at facility level will be segregated, stored in designated areas, and either treated on-site (where applicable) or transported to designated CESS (constructed under the project) for treatment and final disposal.

371. This approach for design and commissioning of the medical waste management system for each facility should be consistent with the MOHSPP SOP/guidelines on medical waste management and WBG/IFC/WHO Guidelines' recommendation that health care facilities be equipped with their own compliant treatment systems, with careful evaluation of incineration against other technologies, and with strict adherence to segregation protocols to minimize the volume of waste requiring specialized treatment.

372. Annex 4 to EMP provides general guidelines for the management of the health care waste in line with the national (MOHSPP) SOP/guidelines on medical waste management. Facility operators will follow these guidelines in preparing the medical waste management plans.

373. The complete health care waste will be segregated, and sharps, needles, pathological waste, and other medical waste must be stored in properly marked waste containers. Medical waste such as syringes, bandages, etc. must be collected at regular intervals once or twice a day. The medical and hazardous waste should be treated and managed as recommended in table VI-1 above. Annex 4 to EMP consists of all details for types of waste and treatment methods.

374. Non-medical solid waste from the project facilities should be collected, stored, and transported to the local municipal dump sites after prior approval from the local communities.

375. Medical/Chemical wastewater: Healthcare facilities have some chemicals, and they have to manage chemical wastes according to the legislation of the Republic of Tajikistan.

376. Sweeping and washing should be done to provide patients with a waste-free healthy environment. It is important that solid waste and sewage from the health facilities should not be a nuisance to the community.

377. Residual impacts after mitigation measures: Moderate.

C.2 Increased demand of utilities

378. Given identified constraints in some project areas, the design will include provisions for backup power supply and water storage where required to ensure safe and continuous operation of laboratory and waste treatment systems. Further, the project will ensure that CESS/SES facility staff are adequately trained in the operation and maintenance of treatment units, and that standard operating procedures (SOPs) for waste handling, biosafety, and treatment are implemented and supervised. This includes allocation of trained personnel,

⁹ <https://www.ifc.org/content/dam/ifc/doc/2000/2007-health-care-facilities-ehs-guidelines-en.pdf>

periodic refresher training, and monitoring of compliance with established protocols.

379. The building design should include features that address water and energy conservation would help considerably in regard to minimize supply of electricity, sewage, water, heating and electricity.

380. The building should be designed to ensure suitable heating, water, lighting, storage areas, proper ventilation, sufficient toilets & washrooms, and support infrastructure.

381. The project health facilities should design a management procedure in coordination with PAG to maintain the septic tanks, individual heat only boiler, water heater, electricity generators (if any) on the premises. PAG to ensure adequate funds are available for regular upkeep and maintenance of these facilities.

382. Residual impacts after mitigation measures: Low.

C.3 Increased GHG emission

383. The overall impact on the climate conditions from the proposed project during operation phases will not be significant, especially considering that the project will install new onsite medical waste treatment system to replace the old incinerators currently used at district hospitals/health centers.

384. The World Bank's EHS guideline states that GHG emission limit for project should not exceed 25,000³⁹ tons/annum is well within limits. Health facilities will install electric heating and electric boilers for hot water to avoid handling of coal, ash and its related impacts of using Heat only Boiler. A new waste treatment system with the latest technology will further contribute to reduction in GHG emissions.

385. Residual impacts after mitigation measures: Low.

C.4 Health and Safety

386. To deal with emergencies, the healthcare facilities management will have sufficient emergency response systems in place. The stairs of the building will be well designed and adequate for easy passage of the occupants. Fire safety management training and mock drill should be practiced periodically and emergency equipment and facilities like fire extinguisher/water hose, first aid etc. must be available to manage fire hazard or any medical emergency.

387. The risks from electric shocks will be minimized or avoided by providing security enclosures, establishment of warning signs, and careful design using appropriate technologies to minimize hazards.

388. Residual impacts after mitigation measures: Low.

389. **Overall operation residual impact.** During operation, the overall residual impacts of project facilities after mitigation measures are low.

D. Climate Change Mitigation and Adaptation Measures

390. **Climate change adaptation measures.** Table VI.2. consolidates adaptation strategies by output, ensuring consistency with the Climate Change Assessment and alignment with the project's financing plan.

Table VI-2. Consolidated adaptation strategy by project output

Project Output	Risk Rating	Key Risks Identified	Proposed Adaptation / Climate-Proofing Measures
Output 1: Surveillance and ISO Health Containers	High	Floods, Heatwaves, Seismic shocks, Landslides; cold chain fragility; connectivity disruptions; veterinary supply chain breakdowns	<ul style="list-style-type: none"> ▪ Flood-proof and elevate ISO containers; integrate insulation and passive cooling. ▪ Ensure seismic anchoring and shock-resistant design. ▪ Ensure redundant solar and battery backup systems. ▪ Ensure redundant communication channels (satellite, offline caching). ▪ Surge protocols for AMR/ AMC during outbreaks. ▪ Ensure hazard-resilient logistics hubs. ▪ Maintain buffer stocks for veterinary supplies.
Output 2: Laboratory Infrastructure and Biosafety	Significant	Floods, Seismic shocks, Landslides; infrastructure fragility; sample transport disruptions; zoonotic spillover risks	<ul style="list-style-type: none"> ▪ Apply climate-resilient construction standards (flood-resistant, seismic-resistant, slope stabilization). ▪ Ensure hazard-resilient logistics and decentralized storage. ▪ Ensure contingency transport routes and mobile collection units. ▪ Surge capacity protocols for diagnostics. ▪ Ensure strengthened biosafety protocols with climate-sensitive risk scenarios. ▪ Ensure blended learning platforms with hazard simulation exercises.
Output 3: PHC Reform, Facilities and Community Networks	Significant	Floods, Heatwaves, Seismic shocks, Landslides, Dust storms; infrastructure vulnerability; community network disruptions	<ul style="list-style-type: none"> ▪ Ensure climate-resilient construction of PHC facilities (elevated foundations, solar power, seismic anchoring). ▪ Ensure hazard-resilient mobility systems (hybrid vehicles, pre-positioning). ▪ Use hazard-resilient communication channels (SMS, radio, offline apps). ▪ Ensure climate-sensitive curricula and blended learning platforms. ▪ Ensure pre-produced IEC/ awareness campaigns for rapid deployment. ▪ Provide contingency financing for CSO networks.
Output 4: GRISH facilities	Significant	Floods, Heatwaves, Seismic shocks, Landslides, Dust storms; infrastructure vulnerability	<ul style="list-style-type: none"> ▪ Ensure climate-resilient construction of GBV facilities (elevated foundations, solar power, seismic anchoring). ▪ Ensure pre-produced IEC/ awareness campaigns for rapid deployment. ▪ Provide contingency financing for women-led groups.

Source: Project CRA Report, 2026

391. **Climate change mitigation.** The climate risk assessment outlines the multiple mitigation measures introduced in the project for climate change. These included:

- Renewable energy integration: ISO health containers, CESS centers, PHC facilities, and GBV shelters are equipped with solar PV systems, energy efficient HVAC, and LED lighting, reducing reliance on fossil fuel power.

- Hybrid and efficient vehicles: Procurement of hybrid cars for TB/HIV screening, Healthy Lifestyle Centers, and laboratory logistics reduces transport emissions by 20-35% compared to conventional vehicles.
- Digitalization of surveillance and diagnostics: Transition to digital One Health portals, AMR surveillance networks, and AI-enabled X-ray units lowers emissions by reducing paper use, chemical processing, and fuel-intensive data collection trips.
- Optimized logistics and supply chains: Modernized inventory and routing systems for veterinary and laboratory supplies reduce fuel consumption and associated emissions.
- Laboratory modernization: Climate-resilient CESS laboratories incorporate low-carbon building materials and digitalized biosafety protocols, cutting operational emissions from waste and monitoring processes.

392. **Greenhouse gas (GHG) emission reduction.** The collective project climate change mitigation measures are estimated to reduce over 170-360tCO₂e annually across outputs, with mitigation finance allocations ranging from 2% for training and modest digitalization to 5% for construction, vehicles, and major infrastructure investments. While adaptation remains the dominant focus, the project ensures that every major investment carries a measurable mitigation co-benefit, embedding low-carbon practices into the health system's modernization.

VI. INSTITUTIONAL CAPACITY AND IMPLEMENTATION ARRANGEMENTS

A. Implementation Arrangement

393. MOHSPP is the executing agency (EA) of the project, and the MOHSPP and CFS are the implementing agencies (IAs) of the project. A project steering committee chaired by the Minister of Health or any official designated by the Minister of Health will be established and provide strategic guidance, review performance, and take timely strategic measures to achieve the project outputs. MOHSPP will administer the grant proceeds and will be responsible for procurement, financial management, and overall project implementation activities. A project administration office (PAG) comprising officials from the ministerial departments concerned and externally hired PAG staff financed via the grant will be set up under MOHSPP. This PAG under MOHSPP will act as a project implementation unit (PIU). It will be responsible for overall management and coordination of the project.

1. Project Implementation Organizations

394. Following are the key players involved in EMP implementation during construction stage:

- MOHSPP as Project EA,
- MOHSPP and CFS as Project IAs,
- PAG under MOHSPP as PIU,
- Design and supervision consultant,
- Contractors,
- Committee for Environmental Protection, and
- Asian Development Bank as financier.

2. Roles and Responsibilities

395. **Executing Agency.** The MOHSPP as Project executing agency will be responsible for overall management and coordination of the Project including: (i) exercise Project supervision; (ii) provide policy coordination and guidance in the implementation of the Project; (iii) monitor implementation of the Project; (iv) coordinate and submit timely and accurate reports to ADB. MOHSPP will ensure compliance with environmental and social safeguards requirements and will ensure healthcare waste management arrangements remain functional during facility operation and maintained by qualified staff.

396. **Implementing Agency.** The MOHSPP and CFS as project implementing agencies will be part of the PAG, which will be reporting to MOHSPP. The PAG will be responsible for project coordination and day-to-day implementation of the project. Tasks of PAG will include procurement, disbursement, accounting, logistics management, reporting, monitoring, supervision, developing programs for training, and coordinating with MOHSPP and CFS and development partners, and consultants.

397. **Project Steering Committee.** The Ministry of Finance (MoF) is the responsible government body for coordination with ADB and other Development Partners for foreign assistance and oversight of grant disbursements and ensuring these are properly accounted for. The MOHSPP will form the Project Steering Committee that will be co-chaired by the MOHSPP and MOF Ministers and will comprise project manager of the PAG, representatives of MOF, MOHSPP and CFS department heads and development partners. It will be responsible for providing overall policy guidance to the project.

398. **Committee for Environmental Protection.** Environmental permitting and monitoring of Project implementation is within the responsibility of the State Ecological Review Committee and its regional offices. Furthermore, according to the 2012 Law on State Ecological Expertise, all civil works, including rehabilitation activities, should be assessed for their environmental impacts and the proposed mitigation measures should be reviewed and monitored by the CEP (Committee for Environmental Protection under the Government of Tajikistan).

399. **Project Administration Group (PAG).** The PAG will be responsible for project coordination and day-to-day implementation of the Project. The PAG will ensure compliance with assurances, including oversight of healthcare waste management system implementation and environmental and social monitoring during both construction and operation. It will monitor compliance with the EMP and SDDR, oversee implementation of the healthcare waste management system across project facilities, coordinate environmental and social monitoring during construction and operation, and ensure timely reporting to ADB. A fulltime Environmental and Social will be appointed and maintained throughout the project implementation.

400. **Design and Supervision Consultant.** The DSC will recruit one international and one national environmental and social (E&S) consultant for reporting during construction; review and recommend approval of contractor SEMP to PAG, prepare monitoring reports, undertake public consultations, and report on grievance redress. The DSC environmental and social consultants will also be responsible for updating the IEE/EMP, Social Due Diligence Report (SDDR); conducting training; conducting environmental quality monitoring; preparing semi-annual project EMP implementation reports; identifying environment and social-related implementation issues and undertaking site visits as required. The DSC environmental and social consultants will verify implementation of environmental and social mitigation measures, including healthcare waste management infrastructure and systems, during design and construction. The DSC environmental and social consultants with support from PAG will be responsible for coordination and supervision of the implementation of the IEE, SDDR and EMP including (but not limited to):

- updating IEE, SDDR and EMP after detailed project design is approved;
- overseeing incorporation of EMP recommendations into the bidding documents;
- supporting PAG in incorporating safeguard requirements into procurement and contract documents;
- ensuring that approval by CEP has been secured prior to the awarding of civil works contract;
- supporting PAG in operationalizing, monitoring, and reporting on the grievance redress mechanism (GRM);
- monitoring contractors to ensure adherence to the EMP and the contractor SEMP;
- preparing semi-annual monitoring reports on the Project EMP;
- coordinating consultation with local stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities, GRM, etc.; and
- supporting the PAG in conducting training, EMP compliance reviews, and annual report
- .

401. **Contractors.** Each contractor will appoint a qualified Environmental, Health and Safety Officer and will prepare a site-specific EMP consistent with the project EMP. The SEMP will cover construction-related impact management, including dust, noise, traffic, occupational and community health and safety, waste management, and other site-specific risks. Contractors will submit monthly SEMP implementation reports to the DSC. The contractor SEMP will be

reviewed and cleared by the PAG. To ensure that the contractors comply with the EMP provisions, the PAG will prepare and provide the following specification clauses for incorporation into the bidding procedures:

- a list of environmental management requirements to be budgeted by the bidders in their proposals;
- environmental clauses for contractual terms and conditions; and
- the full EMP and IEE in both English and Tajik languages.

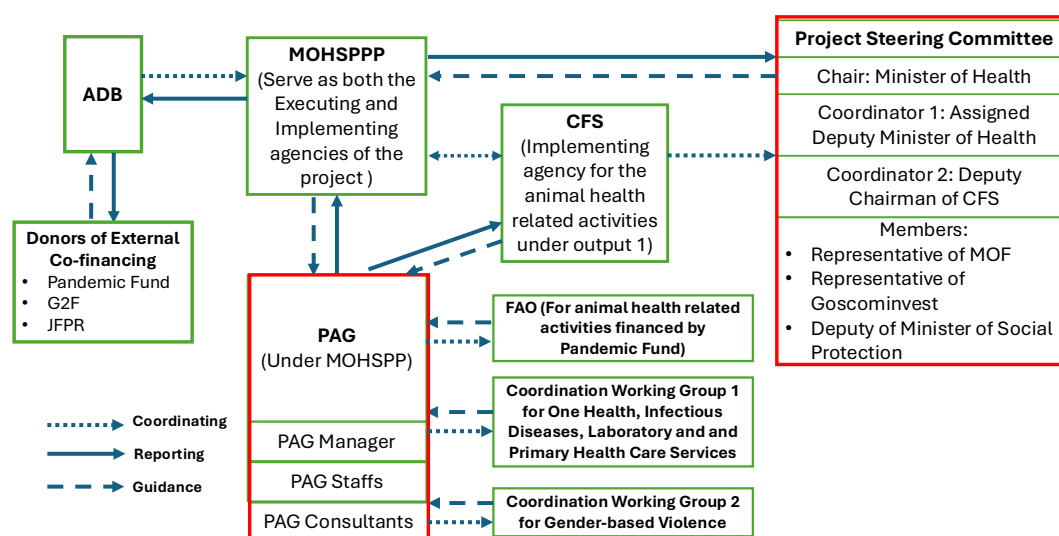
402. PAG will monitor and measure the progress of implementation of the EMP. In this regard semiannual environmental monitoring reports during construction stage will be prepared by the DSC and submitted to PAG for further submission to ADB through MOHSPP. Responsibilities for the implementation of the environmental mitigation measures and monitoring measures during construction phase will be taken over by the DSC environmental and social consultants who will report to the PAG on a regular basis. The tender and contract documents will clearly set out the contractor's obligations to undertake environmental mitigation measures set out in the EMP within 1 month after the reporting period.

403. **Asian Development Bank.** As project financing agency, ADB will be responsible for (i) review and approve the updated EMP, including disclosure; (ii) review bidding documents; and confirm project's readiness; (iii) conduct review missions; (iv) review and approve environmental progress sections of the project progress reports, and environmental monitoring reports, including disclosure; (v) review and approve environmental progress/monitoring reports and disclose on ADB project website.

3. Project Organizational Structure

404. The interactions between steering committed, MOHSPP, CFS, and PAG at the project level are shown in Figure VII-1. Additional third-party services may be employed by the MOHSPP and CFS as necessary. Further details on person/agencies responsible for EMP implementation are shown in Figure VII-2 and detailed activities are in Table VII-1.

Figure VII-1. Project organizational structure



Source: TrTa Team, 2026

Figure VII-2. Overall EMP implementation structure

Source: TrTa Team, 2026

Table VII-1. Institutional roles and responsibilities for EMP implementation activities

Activity	Responsible Person/Agency
Project Initiation Stage	
Establish PAG and award contracts	MOHSPP, CFS
Clearances/approvals from relevant Government of Tajikistan agencies-urban, water, power etc.	PAG, MOHSPP, CFS
Disclosure of project IEE and EMP details on MOHSPP and CFS websites	PAG, MOHSPP, CFS
Conducting discussions/meetings/workshops with communities and other stakeholders	ESO and other specialists at PAG
Updating IEE and EMP mitigation measures based on detailed design and discussions	ESO, PAG
EMP Implementation Stage	
Meetings at community/household level	ESO, Contractor
Implementation of proposed EMP mitigation measures	ESO, Contractor
Consultations with communities during EMP mitigation measures implementation	ESO, Contractor
Grievances Redressal	PAG/District Administration
Internal monitoring	PAG/ MOHSPP/CFS

ADB = Asian Development Bank, CFS = Committee on Food Security; EMP = Environmental Management Plan, MOHSPP = Ministry of Health and Social Protection of the Population of the Republic of Tajikistan, PAG = Project Administration Group, E&S = Environmental and Social Officer

B. Institutional Capacity

405. A capacity assessment of the MOHSPP and CFS for application of environmental safeguards in donor assisted projects was carried out. Environmental management for earlier donor assisted projects has been with the support of external consultants. MOHSPP has built up some experience in preparing environmental assessment documents and the experience of the conformance to the SEE/ECP requirements in recent years. MOHSPP's current approach to tackling environmental issues is on a project level basis although a harmonized approach is taken in line with the requirements of the funding agency.

406. The current capacity of MOHSPP and CFS to address environmental issues at headquarters and regional offices needs augmenting. At present there are no staff in MOHSPP and CFS with direct responsibility for addressing environmental issues on development partner co-funded projects.

407. The in-house capacity in MOHSPP and CFS to check the adequacy of the Project EMPs or that they are being implemented effectively by a contractor is limited by the resources to support travel to and accommodation at project sites. In the long term, it is recommended that a new unit responsible for environmental management be set up to develop the capacity of PAG and improve capacity in the MOHSPP and CFS.

408. The proposed capacity building includes (a) awareness training of the MOHSPP, CFS, PAG (including management) and contractors on environmental management as per Tajikistan and ADB requirements; (b) capacity building programs to improve the capability of environment staff at all levels in carrying out monitoring and implementing environmental management measures including facilities for instrumented monitoring; and (c) capacity building programs on environmental issues including waste management, pollution control and guidance on obtaining environmental licenses. The training programs will be conducted with staff and at locations to be agreed with MOHSPP, CFS, and PAG.

409. Contractor training workshops will be conducted by the PAG/DSC periodically as every new contractor is engaged during the first year and every six months for the second and third years: (i) to check on experience in the implementation of the works and the monitoring report on the implementation of the EMP (ii) to share lessons learned in the implementation and to decide on remedial actions (iii) consolidate response protocols if unexpected environmental impacts occur. In the medium to long term as the environmental responsibilities of MOHSPP and CFS, dedicated staff officers will be trained and developed with the aim of taking over the role currently undertaken by external consultants and specialists.

410. The project will ensure that CESS/SES facility staff are adequately trained in the operation and maintenance of treatment units, and that standard operating procedures (SOPs) for waste handling, biosafety, and treatment are implemented and supervised. This includes allocation of trained personnel, periodic refresher training, and monitoring of compliance with established protocols.

411. Detailed capacity development plan is included in the project EMP (prepared separately and included as Appendix 1 of this IEE).

VII. STAKEHOLDER ENGAGEMENT AND GRIEVANCE REDRESS MECHANISM

412. Meaningful participation and consultation during project concept planning, feasibility study, design and implementation is an important environment safeguards requirement. It can directly reflect the public's perceptions of environmental quality in the project's area of influence.

413. ADB's SPS 2009 has specific requirements for information disclosure and public consultation. Information disclosure involves delivering information about a proposed project to the public and to affected communities and other stakeholders, beginning early in the project cycle, and continuing throughout the life of the project. Information disclosure is intended to facilitate constructive engagement with affected communities and stakeholders over the life of the project. To make key documents widely available to the public, the SPS 2009 requires submission of following documents for disclosure on ADB's website (www.adb.org) for Category B Projects:

- (i) final IEE (upon receipt or prior to Board approval, whichever is earlier).
- (ii) a new or updated IEE, if required during project implementation.
- (iii) corrective action plans (for major non-compliance, if any) prepared during project implementation, and
- (iv) semi-annual environmental reports on the project's compliance with EMP.

414. ADB's SPS 2009 also requires that the borrower carry out consultation with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. Meaningful consultation goes beyond information disclosure. It involves two-way communication between the borrower and the affected communities and stakeholders, and active participation of affected communities and stakeholders in project design and implementation. Consultations will include presentations on environmental impacts, benefits and mitigation measures, project GRM, and ADB's Accountability Mechanism.

A. Stakeholder Identification and Mapping

415. ADB SPS 2009 defines stakeholders as "individuals or groups or institutions who can or are likely to (i) influence (promote, support, disrupt, or stop) the course of a project; and/or (ii) be affected (favorably or adversely) by the project. Based on this definition, stakeholders were identified to ensure as wide coverage as possible of the project area as follows:

- Residents, vendors and business people who live and work around the project facilities (healthcare facilities) specially the project affected persons,
- All type of patients in healthcare facilities,
- Management of healthcare facilities,
- Other government institutions including provincial and district agencies involved in environmental management, waste management and pollution control,
- the beneficiary community in general.

B. Public Consultation and Information Disclosure During Project Preparation

416. **Methodology.** Both formal and informal modes of consultation were used in the public consultation process for the project. Consultation with the stakeholders, beneficiaries, and local communities were carried out using standard structured questionnaires as well as unstructured questionnaires. In addition, focused ground discussions and personal discussions with officials, on-site discussions with project affected stakeholders, and reconnaissance visits have also been made to the project areas. The attempts were made to encourage participation in the consultation process of the government officials from different departments that have relevance to the project. Similarly, local people from different socio-economic backgrounds in the project

area, women groups, residents along the alignments, local vendors around the hospitals, and other concerned stakeholders were also consulted.

417. **Consultations Carried Out During Project Preparation.** Stakeholder engagement for the project was initiated at an early stage and carried out as part of the safeguards assessment process to ensure transparency, information disclosure, and incorporation of stakeholder inputs into project planning and design and environmental and social management. Consultations focused on health sector institutions and specialists who are directly involved in service delivery and will be affected by or benefit from the project.

418. During the initial reconnaissance mission conducted from 24 November to 5 December 2025, project technical and safeguards teams visited health facilities in six districts of Khatlon region. During these visits, information on the proposed project activities, scope of civil works, and potential environmental and social risks were shared with key stakeholders in the target districts. Consulted stakeholders included representatives and specialists from rural health houses, village health centers, and sanitary and epidemiological stations. These interactions provided an opportunity to discuss anticipated project benefits, identify operational challenges, and understand site-specific conditions relevant to environmental and social safeguards.

419. As part of the same mission, the safeguards team also conducted on-site assessments of existing facilities, with a particular focus on medical waste management practices and methodologies. The findings from these assessments helped identify gaps and risks related to waste segregation, storage, and disposal, which will be addressed through project design, capacity building, and EMP measures.

420. On 28 January 2026, the environmental and social safeguards team conducted a face-to-face consultation meeting with directors of all 18 SES facilities that are planned to be upgraded under the project. The primary purpose of this meeting was to disclose information about the upcoming project activities, anticipated environmental and occupational health risks, and safeguard requirements. The meeting also served as a platform to collect feedback and institutional inputs that will inform the establishment and operation of the project's GRM, including preferred communication channels and existing complaint-handling practices within the health system.

421. In addition, a consultation meeting was held with the Director of the State Sanitary and Epidemiological Surveillance Service of the Republic of Tajikistan under MOHSPP, Mr. Kurbonzoda Shamsiddin. During this meeting, the project scope, planned investments, and expected environmental and operational risks were presented and discussed. Mr. Kurbonzoda provided strategic guidance and suggested upgrading the central laboratory to strengthen coordination and oversight of regional laboratories, an input that supports the project's objectives of improving system-wide laboratory capacity and resilience.

422. Field level consultations continued in February 2026. For those sites which are difficult to access, virtual consultations were carried out in the months of January and February 2026.

423. Details of various consultations carried out during project preparation are summarized in Table VIII-1 and detailed proceedings of the consultations are provided in Appendix 3. It can be seen from the table that a total of 236 stakeholders participated in the consultation meetings consists of 51 (21.6%) females and 185 male participants. Consultation findings have been incorporated into the IEE, EMP, and project design including facility-level environmental management provisions.

Table VIII-1. Overview on public meetings and participation

Type of Meeting	Involved Key-Project Partner	Location	Date	Number of Participants		
				Female	Male	Total
Public Consultation on Project and Safeguards						
Coordination	Head of State Sanitary and Epidemiological Surveillance Service and Head of State Center for Sanitary and Epidemiological Expertise and Control in Transport and at Borders	Office of head of State SESS in Dushanbe	28.01.26	0	6	6
	Heads of SESS of the project intervention districts	State SESS in Dushanbe	28.01.26	3	21	24
Public consultations by physical visit to the project locations	Stakeholders and community consultation in Baljuvon	SESS office	4.02.26	3	10	13
	Stakeholders and community consultation in Khovaling	SESS office	4.02.26	6	16	22
	Stakeholders and community consultation in Muminobod	SESS office	5.02.26	6	18	24
	Stakeholders and community consultation in Darai Havash village Muminobod (RHH)	Darai Havash	5.02.26	2	4	6
	Stakeholders and community consultation in Hayoti naw village (VHC) Bahoriston village (RHH) Pakhtaobod village (RHH) Hamadoni district	Hayoti naw, Bahoriston, Pakhtaobod	6.02.26	2	6	8
	Stakeholders and community consultation in Rasht district	SESS of Rasht	9.02.26	2	12	14
	Stakeholders and community consultation in Tojikobod district	SESS of Tojikobod	10.02.26	2	9	11
	Stakeholders and community consultation in Tursunzoda	SESS of Tursunzoda	11.02.26	2	9	11
	Stakeholders and community consultation in Farkhor	Health center of Farkhor	28.11.25	3	10	13
	Stakeholders and community consultation in Khuroson	SESS of Khuroson	26.11.25	4	24	28
	Stakeholders and community consultation in Qubodiyon	SESS of Qubodiyon	26.11.25	5	7	12
Stakeholders and community consultation in Jayhoon	SESS of Jayhoon	27.11.25	4	6	10	
Stakeholders and community consultation in Navobod village, Jayhoon	Navobod village	27.11.25	2	5	7	
Virtual consultations over phone	SESS of Dusti district SESS of Panjakent district SESS of Ayni district SESS of Mastchohi Kuhi district SESS of Mastchoni Naw district SESS of Darvoz district SESS of Vanj district SESS of Rushon district Health center in Lakhsh district	Virtual / Remote consultation with interest groups	20.01.26 20.02.26	5	22	27
Total				51	185	236

Source: TrTA Consultant, March 2026

Figure VIII-1. Stakeholder and community consultation process



Stakeholders Consultation (Head of State SESS and Director of SESS)



Consultation process with the heads of districts SESSs and POEs of all project intervention sites



Community Consultations at Project Districts



Community Consultations at Project Districts



Onsite Community Consultations at Project Sites



Onsite Community Consultations at Project Sites



Community Consultations at Project Districts



Community Consultations at Project Districts

424. **Summary of Issues Raised and Response.** The consultation meeting participants were actively involved in the discussion. Questions and comments revolved around details of the project activities, including schedule of construction activities, supervision over the quality of construction works, and required land documentations. Responses and clarifications were provided to the questions and concerns raised by participants. They were also informed that the TrTA consultants will develop social and environmental impact assessment report based on the information collected during these kinds of discussions and sites' reconnaissance visits. The project information will be disclosed at local level, and it will be duly consulted throughout all the process and the project stages throughout design, preparation, implementation and completion.

425. The following table VIII-2 presents the key issues raised by participants during public consultations and response by consultants.

Table VIII-2. Issues raised and response from project team

Questions and Remarks from attendees	Answers by TrTA Consultants
Baljuvon district	
Concerns about the period of the construction works, start and duration?	The project requires adequate amount of time and procedures before commencement. All the preparation, design works, tender process, and resource allocation require time. Once all works accomplished as per required procedures, the project will start construction. It might be approximately by quarter 4 of this year or next year.
Will there be any controlling party to ensure the quality and usability of the project inputs such as construction works, testing equipment and other materials?	The project will establish a project management unit under the MOHSPP and most probably there will be DSC who will have required personnel to control over the contractor works and supplies. You are also always in the project location and the primary user of the facilities and equipment and can be involved in the design, quality control and other project inputs works.
Khovaling district	
A comment was made by the SESS specialist about interior design of the rooms and laboratories spaces in the new building and requested to involve local specialists in the design process. Because sometimes it happens that rooms within buildings are not sufficiently spaced to accommodate equipment and working space and sometimes too wide and there is useless area in the rooms	SESS specialists were encouraged to get involved in the process of the project implementation and review design when the specialists arrive in their district to allocate the building and design laboratories and administrative rooms within the building. If there is any question and/or concern, they have to raise it and get more information about the structural design. Also, the laboratory will be designed by specialized engineers and specialists, who will consider the equipment and machinery to be placed in the building. It is always good to get information from the project specialists and comment, raise ideas and concerns as they are the ones who will use the project facilities.
Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works	The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives at your place, get as much information as possible and suggest all your needs and requirements to the design team.
Rasht district	

Questions and Remarks from attendees	Answers by TrTA Consultants
Soonest start of construction works	The project requires adequate amount of time and procedures before commencement. All the preparation, design works, tender process, and resource allocation require time. Once all works accomplished as per required procedures, the project will start construction. It might be approximately by quarter 4 of this year or next year.
Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works	The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives at your place, get as much information as possible and suggest all your needs and requirements to the design team.
The Head of Jamoat raised a practical question regarding the availability of detailed information about the building layout and its specific location within the allocated land plot. She inquired whether the architectural design and site positioning had already been finalized, reflecting the community's interest in understanding the concrete plans for the facility.	Project representatives explained that while the land allocation has been confirmed, the detailed architectural drawings, building layout, and precise positioning within the plot will be developed during the project implementation phase. This approach allows for technical refinement based on site-specific assessments and stakeholder input gathered during the consultation process.
Tojikobod district	The project team acknowledged this essential requirement and confirmed that the facility design will adhere to national and international biosafety standards, including: <ul style="list-style-type: none"> - Functional separation of clean and dirty zones - Unidirectional workflow to minimize contamination risks - Appropriate ventilation and air pressure differentials - Designated waste handling and decontamination areas - Proper laboratory layout to ensure staff safety and sample integrity
SES workers raised a critical technical question regarding the building layout and design, specifically requesting that the facility design incorporate measures to avoid cross-contamination between clean and contaminated areas. This reflects professional awareness of biosafety principles and the importance of proper laboratory zoning.	The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives at your place, get as much information as possible and suggest all your needs and requirements to the design team.
Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works	Project representatives acknowledged that this design decision has not yet been finalized and will be determined during the detailed assessment and architectural design phase. The response indicated that the design approach will balance standardization for efficiency and cost-effectiveness with site-specific adaptations to address local conditions, service demands, and available land areas.
Tursunzoda district	
Participants raised an important planning question regarding whether the building design will be standardized across all districts or tailored to address local specifics and operational requirements in each target district.	

Questions and Remarks from attendees	Answers by TrTA Consultants
Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall CESS territory improvement works	The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives at your place, get as much information as possible and suggest all your needs and requirements to the design team.

426. Following are the cross-cutting issues and recommendations identified during the public / stakeholder consultations across project districts.

Common Issues Identified Across Districts:	<ul style="list-style-type: none"> • Asbestos-Containing Materials (ACM): All assessed SES facilities contain ACM in roofing materials, requiring careful handling, proper disposal, and worker safety measures during demolition activities. • Proximity to Residential Areas: All facilities are located in or adjacent to densely populated residential neighborhoods, necessitating careful management of construction-related impacts (noise, dust, traffic, vibration) and community engagement throughout implementation. • Inadequate Waste Management: Current waste management practices across all sites rely on primitive, self-made incinerators that lack safety features, emission controls, and environmental compliance. Urgent upgrading of waste handling, treatment, and disposal systems is required. • Poor Utility Infrastructure: Existing facilities experience frequent power interruptions and unreliable water supply, particularly during winter months. New facilities must incorporate backup power systems, water storage, and connections to centralized sewage networks where available. • Continuity of Services: Stakeholders emphasized the importance of maintaining disease surveillance and laboratory services during construction, requiring phased implementation approaches or temporary facility arrangements.
Key Recommendations for Project Design:	<ul style="list-style-type: none"> • Community Engagement: Continued consultation with local authorities, community leaders, and adjacent residents throughout implementation to ensure awareness of construction activities and mitigation measures. • Phased Implementation: Where feasible and space permits, adopt phased construction approaches that allow existing facilities to remain operational until new buildings are ready for occupancy, ensuring continuity of essential public health services. • Biosafety and Infection Prevention: Facility designs must incorporate proper zoning, unidirectional workflow, appropriate ventilation systems, and measures to prevent cross-contamination, as recommended by technical staff. • Capacity Building: Comprehensive training programs must be developed for SES staff on the operation and maintenance of new laboratory equipment, biosafety protocols, and waste management systems. • Environmental Management: Site-specific Environmental Management Plans must address ACM removal, waste management improvement, construction-related impacts, and occupational health and safety measures.

C. Future Consultations and Information Disclosure

427. Meaningful consultation to safeguard the environment and local residents will continue, and a dialogue channel will be maintained with the affected public and stakeholders throughout project implementation and operation. Such dialogue will ensure that public concerns are understood and dealt with in a timely manner. Different stakeholder engagement strategies will be employed based on the categorization of the stakeholders; whereby stakeholders with

higher levels of influence and interest will be engaged to a greater extent. Future public consultation will be conducted via questionnaire surveys, household visits, workshops, and consultation meetings per schedule or when there are complaints or unanticipated negative environmental impacts.

428. **Consultations during project implementation.** In addition to consultations undertaken during preparation of the project, consultations will take place during design and implementation. The PAG environment safeguard focal point will undertake consultations following the finalization of the detailed design and will conduct consultations within 4-6 weeks of construction starting and then again, every 3 months until the end of construction. This is set out in the Environmental Management Plan.

429. It is suggested that the consultations take the form of meetings and site-based discussions and include the following:

- Environmental impacts of civil works (e.g., solid and liquid waste, pollution, traffic);
- Any unforeseen impacts caused accidentally e.g. through spillages;
- Civil nuisance (e.g., noise, dust, disrupted business activities, social issues, community health and safety);
- Awareness on issues related to commissioning of the project health facilities; and
- GRM and its procedures including details of persons to contact and contact details.

430. In summary, informal interviews with affected people will focus on complaints about community disturbance from construction activities, as well as public concerns about public health care access issues.

431. **Consultations during operation.** The operator of the project facilities, in collaboration with MOHSP/PAG, CFS, provincial and district authorities, and other concerned agencies will undertake quarterly consultations with local residents to discuss any operational impacts or concerns of operation and implement corrective actions as may be necessary.

D. Grievance Redressal Mechanism

432. A project-specific GRM has been developed in compliance with Tajikistan and ADB's SPS 2009 requirement to address environmental, health, and safety concerns associated with the project construction and operation. The GRM is designed to achieve the following objectives: (i) provide channels of communication for local communities to raise concerns about environmental and social grievances which might result from the project; (ii) prevent and mitigate adverse environmental and social impacts to communities caused by project construction and operation; (iii) improve mutual trust and respect and promote productive relationships between the implementing agency and local communities; and (iv) build community acceptance of the project. The GRM is accessible to all members of the community, including women, youth, and poverty-stricken residents. Multiple points of entry are available, including face-to-face meetings, written complaints, telephone conversations, e-mail, and social media.

433. Public grievances to be addressed by the GRM will most likely include dust emissions, construction noise, inappropriate disposal of construction wastes, traffic, damage to private houses, safety measures for the protection of the public and construction workers, and/or hospital waste management.

434. Complete details of the GRM, including its access points, responsible parties, and a time-bound flow chart of procedures, are described in the project EMP (Appendix 1 of this IEE).

VIII. ENVIRONMENTAL MANAGEMENT, MONITORING, AND REPORTING PLAN

435. The management of environmental safeguard risks, measures, monitoring, and reporting for the project will be implemented through a project environment management plan (EMP). The EMP is an overarching document for environmental safeguards, but the mitigation and monitoring measures focus on all civil works.

436. **Environment management plan.** An EMP has been prepared for the project as a standalone document, and the details of the EMP are presented in Appendix 1 of this IEE. The objective of formulating the EMP is to propose appropriate mitigation measures and establish institutional arrangements to monitor and ensure compliance with the Tajikistan national environmental regulations, ADB's SPS 2009, and the project EMP. Such institutional mechanisms will seek to ensure continuous improvement of environmental protection activities during pre-construction, construction, and operation to prevent, reduce, or mitigate adverse impacts.

437. The EMP consists of six components: (i) institutional arrangements and environmental responsibility; (ii) environmental mitigation measures; (iii) environmental monitoring and reporting; (iv) institutional strengthening and training; (v) public consultation; and (vi) GRM.

438. The EMP may require updating after completion of detailed design and included as a separate annex in all bidding and contract documents. Contractors will be required to develop site-EMP that are fully responsive to the project EMP.

439. The overall responsibility for EMP implementation and compliance with grant/project assurances lies with the MOHSPP as project executing agency. MOHSPP, together with CFS, will be the implementing agencies for the project. A project implementation group (PAG) comprising officials from the ministerial departments concerned and PAG staff financed will be set up under MOHSPP, which will be responsible for general project implementation.

440. Semiannual environmental and social monitoring reports (SEMR) on EMP implementation will be provided to ADB (in format provided in Appendix 4) to report on implementation progress for the EMP.

IX. PROJECT ASSURANCES

441. All ADB-funded projects are required to comply with a standard set of assurances for environmental safeguards, which focuses on compliance with national laws and the project EMP. In addition, the following project-specific assurances are included in the project agreement between ADB, and the EA. Final wordings of these assurances are provided in the grant and project agreements.

- (i) MOHSPP will ensure that the project design incorporated integrated system project approach for healthcare waste management system based on facility typology. The waste management system should therefore comprise: (i) segregation at source; (ii) on-site storage; (iii) controlled transport; (iv) treatment at designated facilities; and (v) final disposal in accordance with national regulations and GIIP.
- (ii) MOHSPP will ensure that CESS/SES facility staff are adequately trained in the operation and maintenance of treatment units, and that standard operating procedures (SOPs) for waste handling, biosafety, and treatment are implemented and supervised. This should include allocation of trained personnel, periodic refresher training, and monitoring of compliance with established protocols.
- (iii) MOHSPP will ensure that the executing and implementing agencies implement all of the following measures before any of the ADB funds are provided to the PAG: (a) appoint at least one qualified environmental and social officer as full-time PAG staff to coordinate implementation of the EMP, resettlement plan, and gender action plan (GAP); and (b) ensure that the implementing agencies has assigned one safeguard focal staff to be responsible for daily coordination and implementation of the EMP, resettlement plan, and GAP.
- (iv) Before and during the implementation of works, MOHSPP shall cause the PAG and implementing agencies to organize and conduct training on implementation and supervision of the EMP for relevant staff in PAG, implementing agencies, construction supervision companies, and contractors, and shall ensure that the appropriate staff and officers receive such training.
- (v) MOHSPP will ensure that: (a) sustainable financial support for operation and maintenance of all project facilities will be provided after construction, including the digital management platform; (b) qualified operation and maintenance personnel will be assigned to manage all facilities during the project implementation and thereafter; and (c) periodical inspection on the performance the facilities will be conducted to identify and promptly resolve any operational issues.
- (vi) MOHSPP will and will cause implementing agency to ensure that: (a) any existing public services, including health care, drinking water supply, wastewater treatment, solid waste collection, and power and heating supply, will continue to be provided to communities during the civil works for the project; (b) any interruptions to such services are as limited as possible; and (c) prior to any such interruptions, consultations are held with all affected communities.

X. CONCLUSION AND RECOMMENDATIONS

442. **Conclusions.** This IEE including EMP was prepared as per ADB's SPS 2009, and domestic environmental regulations requirements to identify the environmental issues and risks associated with the proposed Integrated Regional Health Security and Primary Health Care Services Project to be implemented in Republic of Tajikistan. The assessment confirms that the project is classified as Category B for environment and the anticipated effective implementation of the EMP combined with application of good construction practices and proper operation and maintenance of the facilities will prevent or minimize all the identified significant environmental impacts of the project to an acceptable level.

443. The key parties for mitigation and monitoring measure implementation are the construction contractors and the operators of the health facilities. The implementation of the EMP will be closely monitored and reported on by the PAG established under MOHSPP.

444. Impacts associated with the construction works are predicted to be localized and short-term and limited to common well-known impacts from earthworks, construction of concrete structures and buildings. Key potential impacts include dust, noise, construction wastes generation, localized water and soil contamination, and occupational health and safety risks. These impacts will be prevented or minimized to an acceptable level through conventional methods and techniques, and particular attention will be paid to ensuring community and occupational health and safety.

445. The operational risks are primarily associated with the healthcare waste management chain, including risks during segregation, storage, transport, treatment, and disposal. Specific risks include: (i) improper segregation leading to hazardous exposure; (ii) leakage or spillage during storage and transport; (iii) failure of treatment systems due to inadequate utilities or maintenance; and (iv) inadequate capacity or non-compliance of disposal facilities. These risks are system-dependent and require integrated management across all stages. The project will adopt a mixed healthcare waste management system based on facility typology. CESS laboratories will include on-site treatment systems (e.g., autoclave or equivalent), while rural health houses (RHHs), POEs, and selected PHC facilities will rely on centralized treatment at designated SES facilities, supported by a defined transport system. The waste management system will therefore comprise: (i) segregation at source; (ii) on-site storage; (iii) controlled transport; (iv) treatment at designated facilities; and (v) final disposal in accordance with national regulations and GIIP. This on-site waste management system will form integral parts of the design, operation, and maintenance of the project facilities.

446. A robust grievance redress mechanism will be established as outlined in the IEE to receive and facilitate resolution of affected peoples' concerns and grievances about social or environmental impacts associated with the project. The GRM will address such concerns and complaints promptly, using a transparent process that is readily accessible to all affected persons. The GRM contains multiple entry points to allow affected people to approach the contractor, PAG, their local leaders, MOHSPP or ADB. The mechanism will ensure that all unplanned impacts which cause grievances for affected people are managed and a satisfactory outcome brought about swiftly.

447. Overall, the project is anticipated to bring beneficial and positive impacts on public health and the quality of life in the rural and border areas of Tajikistan by providing better health care facilities.

448. **Recommendations.** The assessments made in this IEE are based on the initial design and plans of the project facilities. The anticipated impacts are expected to be site-specific, largely temporary, and manageable with appropriate mitigation measures. The EMP includes conditions for site-specific surveys (e.g., ACM, contamination) and readiness (HCWMS and biosafety SOPs) prior to works/commissioning. The IEE and EMP will be updated following the detailed design of the project components, and the same will be submitted to ADB for review and approved to ensure compliance with SPS 2009 requirements. The IEE will also be updated if there are changes in project scope or location of the project facilities and components.

449. For the operational phase, it is important to have established operation and maintenance methods and procedures for all aspects of the health care facility operations including on-site medical waste management system, and medical waste handling and management procedures, occupational and community health and safety, and performance monitoring and control. It is also important that the MOHSPP ensures availability of sufficient budget for the operation and maintenance and for performance and compliance inspections and monitoring. CESS / SES facilities will not commence operation until environmental management systems, including healthcare waste management arrangements, are operational and verified.

**APPENDIX 1. ENVIRONMENTAL MANAGEMENT, MONITORING, AND REPORTING
PLAN**

**ENVIRONMENTAL MANAGEMENT, MONITORING,
AND REPORTING PLAN FOR THE
INTEGRATED REGIONAL HEALTH SECURITY AND
PRIMARY HEALTH CARE SERVICES PROJECT**

Republic of Tajikistan

April 2026

Prepared by the Ministry of Health and Social Protection of the
Population of the Republic of Tajikistan for the Asian Development Bank

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ENVIRONMENTAL MANAGEMENT PLAN

A. Introduction

1. This project environmental management plan (EMP) is developed for the proposed Integrated Regional Health Security and Primary Health Care Services Project (the project) to be implemented in the Republic of Tajikistan. The EMP has been prepared in accordance with the requirements of the Asian Development Bank's (ADB's) Safeguard Policy Statement ([SPS] 2009) based on available concept design information; and the initial environment examination (IEE) conducted for the project.

2. The EMP defines appropriate mitigation measures for the anticipated environmental impacts and defines the institutional responsibilities and mechanisms to monitor and ensure the compliance with Tajikistan's environmental laws, standards and regulations, and ADB's SPS 2009. The EMP specifies (i) objectives; (ii) implementing organization and responsibilities; (iii) mitigation measures; (iv) inspection, monitoring, and reporting arrangements; (v) training and institutional strengthening; (v) a feedback and adjustment mechanism; and (vi) the grievance redress mechanism (GRM).

3. The EMP will be reviewed and updated at the end of the detailed designs of project facilities, as required, in order to be consistent with the final design of the project facilities. The EMP (or its updated version) will be included as a separate annex in all bidding and contract documents. The contractors will be made aware of their obligations to implement the EMP, and to budget the EMP implementation costs in their proposals.

4. The EMP supervision and monitoring results will be used to evaluate (i) the extent and severity of actual environmental impacts against the predicted impacts, (ii) the performance of the environmental protection measures or compliance with related rules and regulations, (iii) trends of impacts; and (iv) overall effectiveness of the mitigation measures.

B. Institutional Arrangements and Responsibilities for EMP Implementation

5. The Ministry of Health and Social Protection of the Population of the Republic of Tajikistan (MOHSPP) is the executing agency of the project, and the MOHSPP and the Committee for Food Security (CFS) are the implementing agencies of the project. A project steering committee chaired by the Minister of Health or any official designated by the Minister of Health will be established and provide strategic guidance, review performance, and take timely strategic measures to achieve the project outputs. MOHSPP will administer the grant proceeds and will be responsible for procurement, financial management, and overall project implementation activities. A project administration office (PAG) comprising officials from the ministerial departments concerned and externally hired PAG staff financed via the grant will be set up under MOHSPP. This PAG under MOHSPP will act as a project implementation unit (PIU). It will be responsible for overall management and coordination of the project.

1. Project Implementation Organizations

6. Following are the key players involved in EMP implementation during construction stage:
- MOHSPP as Project EA,
 - MOHSPP and CFS as Project IAs,
 - PAG under MOHSPP as PIU,
 - Design and supervision consultant,
 - Contractors,
 - Committee for Environmental Protection, and

- Asian Development Bank as financier.

2. Roles and Responsibilities

450. **Executing Agency.** The MOHSPP as project executing agency will be responsible for **Executing Agency**. The MOHSPP as Project executing agency will be responsible for overall management and coordination of the Project including: (i) exercise Project supervision; (ii) provide policy coordination and guidance in the implementation of the Project; (iii) monitor implementation of the Project; (iv) coordinate and submit timely and accurate reports to ADB. MOHSPP will ensure compliance with environmental and social safeguards requirements and will ensure healthcare waste management arrangements remain functional during facility operation and maintained by qualified staff.

451. **Implementing Agency.** The MOHSPP and CFS as project implementing agencies will be part of the PAG, which will be reporting to MOHSPP. The PAG will be responsible for project coordination and day-to-day implementation of the project. Tasks of PAG will include procurement, disbursement, accounting, logistics management, reporting, monitoring, supervision, developing programs for training, and coordinating with MOHSPP and CFS and development partners, and consultants.

452. **Project Steering Committee.** The Ministry of Finance (MoF) is the responsible government body for coordination with ADB and other Development Partners for foreign assistance and oversight of grant disbursements and ensuring these are properly accounted for. The MOHSPP will form the Project Steering Committee that will be co-chaired by the MOHSPP and MOF Ministers and will comprise project manager of the PAG, representatives of MOF, MOHSPP and CFS department heads and development partners. It will be responsible for providing overall policy guidance to the project.

453. **Committee for Environmental Protection.** Environmental permitting and monitoring of Project implementation is within the responsibility of the State Ecological Review Committee and its regional offices. Furthermore, according to the 2012 Law on State Ecological Expertise, all civil works, including rehabilitation activities, should be assessed for their environmental impacts and the proposed mitigation measures should be reviewed and monitored by the CEP (Committee for Environmental Protection under the Government of Tajikistan).

454. **PAG. Project Administration Group (PAG).** The PAG will be responsible for project coordination and day-to-day implementation of the Project. The PAG will ensure compliance with assurances, including oversight of healthcare waste management system implementation and environmental and social monitoring during both construction and operation. It will monitor compliance with the EMP and SDDR, oversee implementation of the healthcare waste management system across project facilities, coordinate environmental and social monitoring during construction and operation, and ensure timely reporting to ADB. A fulltime Environmental and Social Officer will be appointed and maintained throughout the project implementation.

455. **Design and Supervision Consultant.** The DSC will recruit one international and one national environmental and social (E&S) consultant for reporting during construction; review and recommend approval of contractor SEMP to PAG, prepare monitoring reports, undertake public consultations, and report on grievance redress. The DSC environmental and social consultants will also be responsible for updating the IEE/EMP, Social Due Diligence Report (SDDR); conducting training; conducting environmental quality monitoring; preparing semi-annual project EMP implementation reports; identifying environment and social-related implementation issues and undertaking site visits as required. The DSC environmental and social consultants will verify implementation of environmental and social mitigation measures,

including healthcare waste management infrastructure and systems, during design and construction. The DSC environmental and social consultants with support from PAG will be responsible for coordination and supervision of the implementation of the IEE, SDDR and EMP including (but not limited to):

- updating IEE, SDDR and EMP after detailed project design is approved;
- overseeing incorporation of EMP recommendations into the bidding documents;
- supporting PAG in incorporating safeguard requirements into procurement and contract documents;
- ensuring that approval by CEP has been secured prior to the awarding of civil works contract;
- supporting PAG in operationalizing, monitoring, and reporting on the grievance redress mechanism (GRM);
- monitoring contractors to ensure adherence to the EMP and the contractor SEMP;
- preparing semi-annual monitoring reports on the Project EMP;
- coordinating consultation with local stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities, GRM, etc.; and
- supporting the PAG in conducting training, EMP compliance reviews, and annual report.

456. **Contractors.** Each contractor will appoint a qualified Environmental, Health and Safety Officer and will prepare a site-specific EMP consistent with the project EMP. The SEMP will cover construction-related impact management, including dust, noise, traffic, occupational and community health and safety, waste management, and other site-specific risks. Contractors will submit monthly SEMP implementation reports to the DSC. The contractor SEMP will be reviewed and cleared by the PAG. To ensure that the contractors comply with the EMP provisions, the PAG will prepare and provide the following specification clauses for incorporation into the bidding procedures:

- a list of environmental management requirements to be budgeted by the bidders in their proposals;
- environmental clauses for contractual terms and conditions; and
- the full EMP and IEE in both English and Tajik languages.

457. PAG will monitor and measure the progress of implementation of the EMP. In this regard semiannual environmental monitoring reports during construction stage will be prepared by the DSC and submitted to PAG for further submission to ADB through MOHSPP. Responsibilities for the implementation of the environmental mitigation measures and monitoring measures during construction phase will be taken over by the DSC environmental and social consultants who will report to the PAG on a regular basis. The tender and contract documents will clearly set out the contractor's obligations to undertake environmental mitigation measures set out in the EMP within 1 month after the reporting period.

7. **Asian Development Bank.** As project financing agency, ADB will be responsible for (i) review and approve the updated EMP, including disclosure; (ii) review bidding documents; and confirm project's readiness; (iii) conduct review missions; (iv) review and approve environmental progress sections of the project progress reports, and environmental monitoring reports, including disclosure; (v) review and approve environmental progress/monitoring reports and disclose on ADB project website.

3. Project Organizational Structure

8. The interactions between steering committee, MOHSPP, CFS, and PAG at the project level are shown in Figure EMP 1. Additional third-party services may be employed by the MOHSPP and CFS as necessary. Further details on person/agencies responsible for EMP implementation activities are shown in Figure EMP-2 and detailed in Table EMP 1.

Figure EMP-1. Project organizational structure

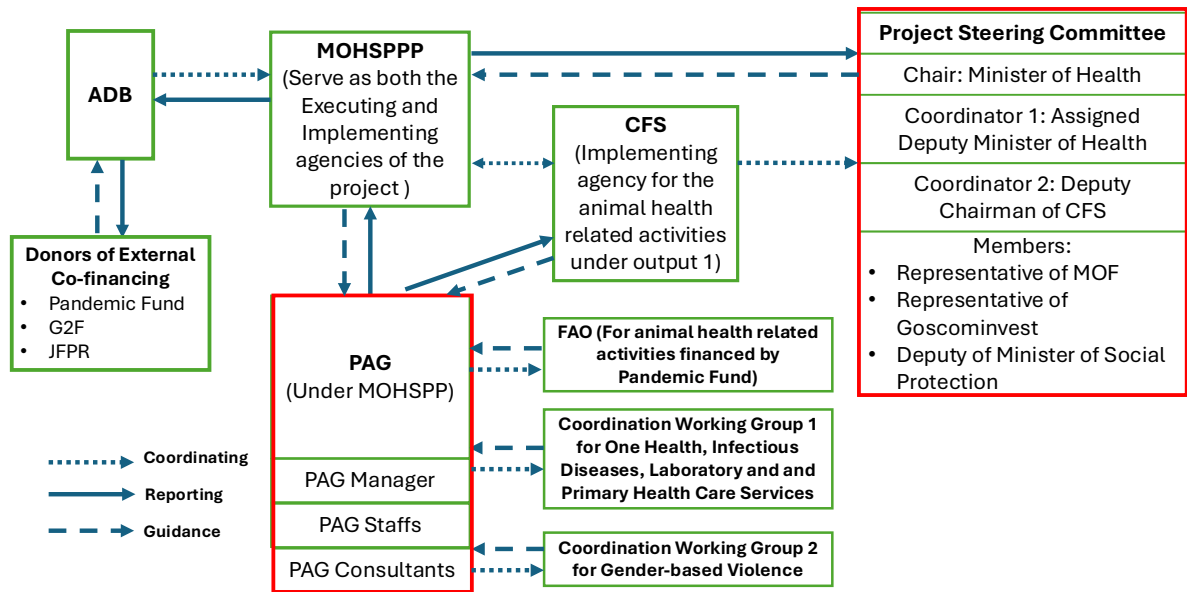


Figure EMP-2. Overall EMP implementation structure

Table EMP-1. Institutional roles and responsibilities for EMP implementation activities

Activity	Responsible Person/Agency
Project Initiation Stage	
Establish PAG and award contracts	MOHSPP, CFS
Clearances/approvals from relevant Government of Tajikistan agencies-urban, water, power etc.	PAG, MOHSPP, CFS
Disclosure of project IEE and EMP details on MOHSPP and CFS websites	PAG, MOHSPP, CFS
Conducting discussions/meetings/workshops with communities and other stakeholders	ESO and other specialists at PAG
Updating IEE and EMP mitigation measures based on detailed design and discussions	ESO, PAG
EMP Implementation Stage	
Meetings at community/household level	ESO, Contractor
Implementation of proposed EMP mitigation measures	ESO, Contractor
Consultations with communities during EMP mitigation measures implementation	ESO, Contractor
Grievances Redressal	PAG/District Administration
Project Initiation Stage	

ADB = Asian Development Bank, CFS = Committee on Food Security; EMP = Environmental Management Plan, MOHSPP = Ministry of Health and Social Protection of the Population of the Republic of Tajikistan, PAG = Project Administration Group, ESO = Environmental and Social Officer =

C. Potential Impacts and Mitigation Measures

9. Table EMP-2 and Table EMP-3 list the anticipated impacts and environmental safeguard issues of the project during the phases of design and pre-construction, construction, and operation, respectively, as identified by the project IEE. Corresponding mitigation measures are defined to minimize environmental impacts.

10. The mitigation measures defined in the EMP will be (i) checked and incorporated into detailed design by the DSC with the EMP subsequently updated; (ii) incorporated into tender documents (where appropriate), construction contracts, and operational management plans; and (iii) implemented by contractors, under the supervision of DSC, PAG and implementing agencies. The effectiveness of these measures will be evaluated based on the results of environmental monitoring, and through EMP compliance checks conducted by the DSC, to determine whether they should be continued, improved, or adjusted.

Table EMP-2. Potential impacts and mitigation measures during design, pre-construction and construction

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
A	Design and Pre-construction Phase					
1	Location and design.	Exposure to safety related risks. Inadequate medical waste management system	<ul style="list-style-type: none"> - Setback of dwellings designed in accordance with permitted safety distances. - The project design will adopt a mixed healthcare waste management system based on facility typology. CESS laboratories will include on-site treatment systems (e.g., autoclave or equivalent), while rural health houses (RHHs), POEs, and selected PHC facilities will rely on centralized treatment at designated SES facilities, supported by a defined transport system. The waste management system will therefore comprise: (i) segregation at source; (ii) on-site storage; (iii) controlled transport; (iv) treatment at designated facilities; and (v) final disposal in accordance with national regulations and GIIP. - Design to include appropriate on-site medical waste management system following national and international standards and GIIP i.e. <ul style="list-style-type: none"> • MOHSPP SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions; • IFC EHS Guidelines for Health Care Facilities (2007); • WHO Safe Management of Waste from 	<p>SEMP approved prior to any civil works starting.</p> <p>IEE and EMP updated the following detailed to include waste management system.</p>	Design Consultant	PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			Health-care Activities (a practical guide); and <ul style="list-style-type: none"> • WHO Laboratory Biosafety Manual. 			
2	Building specifications and design parameters.	Release of effluents in receptors (air, water, land).	<ul style="list-style-type: none"> - Maintain adequate clearance, construction of structures; minimize digging close to the dwellings. - Avoid all underground utilities during design. 	Contractor obtained and maintained all necessary permits, licenses, certificates.	Design Consultant	PAG
3	Pre-construction baseline monitoring and survey of ACM and legacy medical waste	Environmental pollution and impacts. Health and safety risks from presence of ACM and legacy medical waste from existing health facilities	<ul style="list-style-type: none"> - For facilities involving renovation and rehabilitation such as Tursunzoda CESS facility, carryout site screening and ACM surveys prior to bidding. - Carryout pre-construction monitoring of air, water, noise, vibration, and soil quality. - Carry out pre-construction surveys for the presence of asbestos and ACM, and also hazardous materials and medical waste from installed incinerators at the existing facilities. 	Baseline monitoring reports. Survey report and record of ACM/contaminated sites/	Contractor, PAG	PAG
4	Demolition of buildings	Asbestos present as roofing material and insulation in some section of the buildings	<ul style="list-style-type: none"> - Prepare demolition plan - Prepare ACM management plan - Asbestos shall be handled carefully during dismantling, storage, and disposal. 		Design Consultant	PAG
5	Disturbance to adjacent lands and the people due to digging and construction operations. Interference with drainage patterns	Impact to the existing surface water environment.	<ul style="list-style-type: none"> - Appropriate siting. Construction facilities should be placed at suitable distances from drainage, natural flow paths, important ecological habitats and residential areas. - Careful site selection to avoid existing 		Design Consultant	PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			settlements.			
6	Baseline recordings for air quality, water, soil and noise level	Air pollution and noise generation.	<ul style="list-style-type: none"> - Prior to the start of any civil works, the Contractors will obtain measurements of air quality, water, soil and noise level of the site to serve as baseline parameters. - PAG to report on these pre-construction baseline recordings in the initial project SEMR (timing will depend on award of civil works contracts, as the contractors are responsible for collecting the baseline data). 		Contractors through contract provisions	PAG
7	Explosions/Fire	Hazards to life	<ul style="list-style-type: none"> - Design of healthcare buildings to include modern fire control systems/firewalls. - Provision of firefighting equipment to be located close to electrical/heating installations. 		Design Consultant	PAG
8	Permits and clearances	Legal environmental compliance	<ul style="list-style-type: none"> - IEE submitted to CEP for approval. - Statutory clearances and permits from environmental regulatory agency (CEP) are obtained. 		Design Consultant	PAG
9	Bidding and contract document preparation	Risk: EMP and other environmental safeguards requirement are not included in the contract therefore not implemented.	<ul style="list-style-type: none"> - IEE and EMP to be updated to consider the latest developments and changes as part of detailed design. - In the event that any design details change the locations or scope of the proposed Project works, and unanticipated 		Design Consultant	PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			<p>environmental impacts become apparent, this IEE and EMP will be reviewed, revised/updated accordingly. The revised/updated IEE/EMP will be cleared by ADB prior to the civil works commencement.</p> <p>- Incorporate environmental mitigation measures indicated in the EMP in bidding documents and contracts for the Project.</p>			
10	EMP training of contractors, engineers, workers and supervisors on EMP	Risk: Contractors are unaware of or do not implement mitigation measures.	- Contractors informed of all environmental safeguard requirements in EMP at bid stage and trained how to implement mitigation measures (in EMP and AMP) and monitor and use of checklists as part of awareness and mobilization training; and assistance with site-specific EMP.		Design Consultant	PAG
11	Grievance Redress Mechanism (GRM)	Impacts on communities	<p>- In accordance with GRM presented in the IEE, establish a grievance committee; provide GRM training for committee members and GRM access points; disclose the Committee's phone number, fax, address, and email to the public.</p> <p>- Ensure the GRM is functioning prior to the commencement of work.</p>		Design Consultant	PAG
12	Contractor obligations	Lack of capacity and EMP implementation.	<p>- Assign at least one person responsible for environmental, health, and safety (EHS) management.</p> <p>- Develop site-specific EMP, based on the project EMP. The site-specific EMP should include: (a) surface water and ecosystem protection; (b) spill control and management; (c) site drainage and soil</p>		Contractor	PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			erosion protection; (d) waste management; (e) hazardous material management; (f) health and safety; (g) temporary traffic management, and (g) all site-specific mitigation measures listed in the project EMP.			
13	Waste transport and disposal arrangement	Risk from uncontrolled transport and disposal of waste	- Contractors to confirm waste transport & disposal contracts with licensed waste management contractors, if required.		Contractor	PAG
B	Construction Phase					
1	Air quality affected by construction activities	Air Pollution due to removal of topsoil and loose soil storage at site may lead to dust emission. Vehicular movement will spread dust.	<p>Vehicle emissions:</p> <ul style="list-style-type: none"> - High standards of vehicle maintenance, e.g., in line with manufacturer maintenance requirements. - Prevent equipment /machinery idling when not in use. <p>Dust:</p> <ul style="list-style-type: none"> - Spray water on dry sites where earth is exposed, and visible dust is seen. - Remove mud from roads/site/vehicles when wet. - Cover loose materials, e.g. with tarpaulin during transport. - Re-vegetate any areas of soil after removal/damage to ground cover. <p>Work Planning:</p> <ul style="list-style-type: none"> - Minimize storage of loose materials on site. 	<p>Number of EMP breaches identified during monitoring.</p> <p>Number of environmental and Health and Safety incidents or accidents reported by contractor.</p> <p>Training and capacity building plan is followed.</p> <p>GRM is established and functioning.</p> <p>Number of issues raised through GRM.</p>	Contractor through contract provisions	Construction Supervision, PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			- Minimize exposing areas of disturbed soil.			
2	Noise generation activities/ mechanized construction	Civil work noise - noise, vibration equipment wear and tear and operator safety, efficient operation.	<p>Avoidance:</p> <ul style="list-style-type: none"> - Prevent equipment /machinery idling when not in use. - Civil works operation times shall be limited to 07:00 to 18:00 daily, unless facility management instructs otherwise. - Avoid loading/unloading/fabrication of materials in near any healthcare facilities wards with in-patients. <p>Minimization:</p> <ul style="list-style-type: none"> - High standards of vehicle maintenance, e.g., in line with manufacturer maintenance requirements. - Using mobile noise barriers e.g. for stationary noise emitting equipment such as generators. <p>Communication:</p> <ul style="list-style-type: none"> - Pre-warn site management on schedule for civil works noise generating activities. - Train staff in requirements to prevent noise. - Limit working hours to 8am-6pm or as the facility directs. 		Contractor through contract provisions	Construction Supervision, PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
3	Asbestos/ACM assessment and management	Risk from asbestos fiber exposure	<p>Identifying Asbestos/ACM and Managing asbestos:</p> <ul style="list-style-type: none"> - The contractor will follow the procedures provided in Annex 1A for ACM. <p>In addition:</p> <ul style="list-style-type: none"> - The contractor will conduct asbestos survey and register per site – to be submitted prior to physical work starting. - The contractor will issue a report confirming removal and disposal of ACM to PAG, prior to physical civil works. - No ACM will be used in civil works. - The contractor will include procedures for managing asbestos risk and a template for an asbestos survey in the Site-Specific EMP. 		Contractor through contract provisions	Construction Supervision, PAG
4	Occupational health and safety, community health and safety and environmental protection	Occupational health and safety incidents throughout civil works	<p>The contractor's Occupational health and safety (OHS) action plan ensures the contractor will:</p> <ul style="list-style-type: none"> - Ensure all staff carry out his/her OHS duties competently and diligently. - Maintain a safe working environment including by: <ul style="list-style-type: none"> • ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health; • ensuring workers wear required personal protective equipment; 		Contractor through contract provisions	Construction Supervision, PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			<ul style="list-style-type: none"> • using appropriate measures relating to chemical, physical and biological substances and agents; and • following applicable emergency operating procedures. - Provide a site accident record book which will be maintained where all major or minor accidents and incidents are recorded with actions taken. - Provide adequate first aid equipment provided on site. - Provide training on civil works hazards, documenting the training for inspection by the Project's team as required. Topics may include manual handling, electrical safety, use of power tools, asbestos, use of machinery, personal protective equipment, using chemicals and fuels, slip/trip prevention. <p>The contractor's Civil Works Training Plan ensures the contractor will train staff on:</p> <ul style="list-style-type: none"> - Occupational Health and Safety including any safe systems of work, toolbox talks or other methods. - Social and health issues (if workers are international or not from the local area) including training on preventing communicable diseases such as HIV and COVID-19. - GRM for the project and management of complaints. 			

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			- Asbestos risks and management.			
5	Emergency response procedures	Delayed response to emergencies	<p>The contractors provide an emergency response action plan. The plan will demonstrate how the contractor will:</p> <ul style="list-style-type: none"> - Respond to a worker injury (major and minor). - Respond to a spillage (major and minor). - Respond to a fire (on civil worksite or storage areas). - Respond appropriately to any other incidents anticipated by the contractor. 		Contractor through contract provisions	Construction Supervision, PAG
6	Solid and liquid waste management	Construction wastes causing adverse impacts on surrounding environments or human health	<p>The contractor will:</p> <ul style="list-style-type: none"> - Manage general solid waste from civil works in line with Government regulations. - Ensure all solid waste kept under control and covered containers. - Reduce waste generated at source through good civil works and materials planning. - Segregate and recycle waste (e.g. inert spoil for reuse elsewhere). - Store, transport and treat or dispose of non-hazardous waste in accordance with national laws and international best practices to ensure no escape of waste and will use a disposal site approved by the Regulatory Authorities. - Store, transport and treat or dispose of 		Contractor through contract provisions	Construction Supervision, PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			<p>hazardous wastes including asbestos waste in accordance with national laws and international best practice to ensure no escape of waste and will use a disposal site approved by the Regulatory Authorities.</p> <ul style="list-style-type: none"> - Ensure no waste is burned on site. - Manage contaminated and uncontaminated spoil without it negatively impacting the environment and its disposal in approved waste disposal sites. 			
8	Access road for ingress into premises	Increased land requirement for temporary accessibility.	<ul style="list-style-type: none"> - Existing separate gates used for construction and maintenance of access to the site wherever possible. 		Contractor through contract provisions	Construction Supervision, PAG
9	Surplus earthwork/soil	Runoff to cause water pollution, solid waste disposal	<ul style="list-style-type: none"> - Storage of excess soil near drainage and settlement areas stored in restricted areas and construction work should be carefully designed to minimize obstruction or destruction to natural drainage. - Excess soil from foundation excavation to be re- used on site or disposed of in accordance with construction site management plan by contractor. 		Contractor through contract provisions	Construction Supervision, PAG
10	Temporary use of land.	Losses to neighboring land uses/values.	<ul style="list-style-type: none"> - Contract clauses specifying careful construction practice. - Land will be reinstated following completion of construction. 		Contractor through contract provisions	Construction Supervision, PAG
11	Transportation and storage of materials.	Nuisance to the general public.	<ul style="list-style-type: none"> - Prepare a traffic management plan for construction traffic. 		Contractor through contract	Construction Supervision, PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			<ul style="list-style-type: none"> - Transport loading and unloading of construction materials should not cause nuisance to the people by way of noise, vibration, and dust. - Use dust suppressing water sprays on paths and stored demolished material/sand/gravel at the site. 		provisions	
12	Storage of construction material	Air emission from the construction activity during stacking/storage of soil, construction material at site.	<ul style="list-style-type: none"> - Construction materials should be stored in covered areas to avoid dust emissions, and materials should be bundled in environment friendly and nuisance free manner. - Avoid storage of construction materials beside the road, around water bodies, residential or public sensitive locations. 		Contractor through contract provisions	Construction Supervision, PAG
13	Electrical/fire safety Equipment layout and installation	Sparks and fire hazard during construction	- Record of all healthcare facilities, electric fittings and fire safety devices located within secure casings.		Contractor through contract provisions	Construction Supervision, PAG
14	Use of volatile organic compounds	Toxicity and air contamination in-side building	- Use of low or no volatile organic compounds – water based nontoxic etc.		Contractor through contract provisions	Construction Supervision, PAG
15	Provision of facilities for construction workers at work site	Contamination of receptors (land, water, air)	- Construction workforce facilities to include proper sanitation, water supply and waste disposal facilities at work sites.		Contractor through contract provisions	Construction Supervision, PAG
16	Community Health and Safety	Injury and accidents caused to residents in the area	<ul style="list-style-type: none"> - Prepare and implement a traffic management plan. - Installation of proper warning signage, installation of secured fencing, installation of safety signages, installation of sheet 		Contractor through contract provisions	Construction Supervision, PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			barriers to avoid people, children, animals falling into trenches, or projectile material hitting the residents walking by or damaging property, limiting work hours in public areas, coordination with local authorities.			

Table EMP-3. Potential impacts and mitigation measures during operation

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
C	Operation and Maintenance Phase					
1	Segregation of solid waste, medical waste, wastewater, needles, sharps	All waste is thrown into rivers basins, burnt and is a nuisance to local community	- Implementation of segregation, storage and waste disposal systems at healthcare facilities as listed in Annex 4 to EMP.	Records on waste management.	CESS / SES, Healthcare facility, part of O&M costs	PAG
2	Health Care Waste management	Risk of infectious diseases to community, staff	- Design and install dedicated on-site waste management system compliant with national regulations and international standards i.e. <ul style="list-style-type: none"> • MOHSPP SanPiN 190.010.090 Sanitary Standards and Rules for the Collection, Neutralization, Transportation, Storage and Disposal of Waste in Medical Institutions; • IFC EHS Guidelines for Health Care Facilities (2007); • WHO Safe Management of Waste from Health-care Activities (a practical guide); and 	Records on waste management.	CESS / SES, Healthcare facility, part of O&M costs	PAG

No.	Project Activity	Potential Environmental Impact	Mitigation Measures	Key Performance Indicators	Institutional Responsibility	
					Implement	Monitor
			<ul style="list-style-type: none"> • WHO Laboratory Biosafety Manual. - Proper disposal of waste such as needles, sharps, bandages, medical wastewater and other aspects as listed in Annex 4 to EMP 			
3	Effluent Management from CESS / SES	Chemicals, pathological waste from laboratories, medical equipment washing, cleaning, sewage flowing into pits and drains	<ul style="list-style-type: none"> - CESS / SES and project facilities to ensure that chemical waste, pathological waste effluent is collected and disposed of. - Maintenance and regular upkeep of sanitation systems to avoid surface discharge. 	Records on waste management.	CESS / SES, Healthcare facility, part of O&M	PAG
4	O&M of building equipment-heating, building insulation and generators, etc.	Loss of heating, high operational costs	<ul style="list-style-type: none"> - Insulation to ensure efficient operations. 	O&M records.	costs	PAG
5	Electric shock or accidents	Death or injury to the staff and public.	<ul style="list-style-type: none"> - Security warnings around fittings. - Careful design using appropriate technologies to minimize hazards. 	Incident records.	CESS / SES, Healthcare facility, part of O&M	PAG
6	Operation of electrical safety systems, fire safety systems.	Electric sparks, fire and explosion	<ul style="list-style-type: none"> - Record of all facilities electrical switchbox located within secure casings. 	Incident records.	costs	PAG
8	Training on Health and safety and emergency response	Lack of awareness for health and safety procedures.	<ul style="list-style-type: none"> - Training of personnel on safety and emergency response in compliance with District's Emergency Management Agency requirements. 	Training records.	CESS / SES, Healthcare facility, part of O&M	PAG
9	Capacity Building	Improve standards of implementation and monitoring.	<ul style="list-style-type: none"> - Training of MOHSPP as per training plan. 	Training records.	Contractor through contract provisions	Construction Supervision, PAG

D. Environmental Monitoring, Inspection and Reporting

1. Monitoring

12. Environmental monitoring is an important aspect of environmental management during construction and operation stages of the project to safeguard the protection of the environment.

13. In addition to the EMP, to ensure that project would not be generating a negative impact on the overall environment quality, an Environmental Monitoring Plan (EMoP) has been prepared. The parameters to be monitored are outlined in the EMoP. EMoP provides the periodicity of the measurements of environmental parameters – air, noise, soil, water and waste at the various health facilities to be implemented by the Contractor during the construction phase. The monitoring activities of the project include site supervision, verification of permits, monitoring of water quality, soil, noise, and air. Monitoring of the quality of water, soil, air and noise during the construction stage is a responsibility of civil works contractors. PAG specialists (who are contracted by PAG) will supervise civil works contractors. Monitoring of sanitary waste treatment should be done periodically to avoid water pollution. Other environmental good practices include noise abatement, maintaining hygienic conditions, maintenance of fire and safety equipment etc. Monitoring reports should be prepared once in six months with the corrective action plan for the problem areas.

14. The main objective of environmental monitoring is:

- to evaluate the performance of Contractor in mitigating negative impacts vs. the proposed measures in the EMP;
- to provide information on unanticipated adverse impacts or sudden change in impact; to determine if any impacts are irreversible in nature which required remedial measures and monitoring;
- to suggest improvement in environmental mitigation measures, if required.

15. Implementation of environmental mitigation measures will be ensured through both routine and periodic monitoring. The parameters to be monitored are outlined in the following plan in Table EMP-4. The PAG shall supervise the project regularly, and submit half yearly reports based on the monitoring data and laboratory analysis report.

16. The mitigation measures suggested requires monitoring of environmental attributes both during construction and operational phase of the project by the PAG. During the construction and operation phase of this project, the monitoring of the environmental aspects shall be done at the project sites by the PAG's environmental and social officer and design and supervision environmental and social consultants.

17. **Methodology.** The methodology to be followed for the measurements for various environmental quality parameters is described in the following paragraphs.

18. *Air, water, and soil quality.* These measurements should be conducted by the Contractor at the construction sites and nearby residential areas. Air quality measurements would be done once during daytime at the construction location, the boundary where the houses etc. is located near the boundary. In addition, there should be air quality measurements near the entrance roads. Water and soil monitoring will be conducted by collecting samples from the site and analyzing the same. Baseline measurements are to be taken prior to construction start. Regular monitoring measurements required during the construction phase will be conducted. However, the dust emissions can be easily mitigated with appropriate mitigation measures that will be proposed as part of the IEE and EMP.

19. During operation, potential sources of air emissions may include healthcare waste treatment systems (where applicable), backup generators, and other facility-related equipment. Any waste treatment technologies will be designed and operated in compliance with national standards and Good International Industry Practice, including appropriate emission controls

and maintenance. Air emissions will be monitored and managed in accordance with the Environmental Management Plan.

20. *Noise measurements.* Sensitive receptors concerning noise emissions are populated areas, or other social infrastructure facilities. Measurements for noise at identified sensitive hotspots and sensitive receptors to be measured before construction activities start.

21. EMP will include Noise monitoring by the Contractor as a requirement - to be undertaken prior to construction as pre-construction survey and to be monitored after. The baseline noise information will be collected according to existing receptors and their distance to the sites.

22. Noise monitoring should be collected at the receptor's location using a Class 1 Sound Level Meter capable of measuring LAeq averaged over time (properly calibrated). Noise levels would be monitored for daytime hours.

23. Noise measurements to be conducted at the locations indicated in the EMoP. Measurements are to be taken prior to construction start. Then regular monitoring measurements during the construction phase will be conducted.

24. Waste management monitoring. Construction and health care waste management monitoring will be conducted during construction as well as operation of the healthcare facilities through inspections, audits, and review of documentation. This also includes incidents of biosafety and chemical discharges.

Table EMP-4. Environment monitoring plan

Sl.	Issue	What parameters is to be monitored	Where is the parameter to be monitored (Sampling Location)	How is the parameter to be monitored?	When is the parameter to be monitored? Frequency?	Institutional Responsibility
A. Pre-Construction and Construction Stage						
1	Presence of asbestos containing material and hazardous waste at existing sites	ACM materials, hazardous/medical waste	At the sites of the existing health facilities	By means of review of ACM clearance documentation; ACM surveys reports; abatement completion certificate; disposal receipts; visual inspections.	Prior to bidding. Prior to start of demolition work and during demolition	Contractor as part of contract provisions
2	Air Quality Deterioration	PM10, PM2.5, SO2, NOx, SPM, CO (visible dust)	Boundary of healthcare facility	By means of suitable portable measurement device	Prior to start of construction as baseline monitoring and during construction activities. Monitoring measurements on a monthly basis during construction stage.	Contractor as part of contract provisions
3	Noise Construction works within healthcare facility at locations close to sensitive receptors such as schools, other hospitals, mosques, markets or other sensitive socioeconomic infrastructure.	Noise level [dB(A)]	Boundary of healthcare facility	By means of portable noise measurement device	Prior to start of construction as baseline monitoring and during construction activities. Monitoring measurements on a monthly basis during construction stage.	Contractor as part of contract provisions
4	Soil and water quality	Water sampling, Visible spills and/or soil staining, oil & grease	At respective new building locations.	Sampling and analysis, Inspections; observation	Prior to start of construction as baseline monitoring and once during construction time	Contractor as part of contract provisions

Sl.	Issue	What parameters is to be monitored	Where is the parameter to be monitored (Sampling Location)	How is the parameter to be monitored?	When is the parameter to be monitored? Frequency?	Institutional Responsibility
5	Worker's safety and health	Official approval for worker's camp; Availability of appropriate PPE; Organization of traffic on the construction site Provision of safety training to the staff according to the requirements of the individual workplace Safe transportation of construction material; Stockpiling of excavated materials and appropriate disposal	Job site and worker's camp	Inspection; interviews; comparisons with the Contractor's method statement	Weekly site visits by the hired Health and safety expert. Unannounced inspections during construction and upon complaint.	Contractor as part of contract provisions
B. Operation Stage						
1	Air Quality Deterioration	PM10, PM2.5, SO2, NOx, SPM, CO (visible dust)	Boundary of healthcare facility	By means of a suitable portable measurement device.	One time during commissioning Annual during operation	Healthcare facility as part of O&M costs
2	Soil	Visible spills and/or soil staining, oil & grease	1 location inside healthcare facility	Inspections; observation	One time during commissioning	Hospitals as part of O&M costs
3	Hospital Health Care Waste	Medical solid waste and medical wastewater management system including arrangements for segregation and storage.	Inside the healthcare facility	Inspections; audit, spot checks observation	Everyday recording waste management	Healthcare facility as part of O&M costs
4	Waste management	Waste disposal monitoring	Inside the healthcare facility	Inspections; audit, spot checks observation	Everyday recording waste management	Healthcare facility as part of O&M costs
5	Health and safety, pollution	Biosafety incidents, Chemical discharge	Inside the healthcare facility	Inspections; audit, incident records	Everyday recording waste management	Healthcare facility as part of O&M costs

Sl.	Issue	What parameters is to be monitored	Where is the parameter to be monitored (Sampling Location)	How is the parameter to be monitored?	When is the parameter to be monitored? Frequency?	Institutional Responsibility
6	Implementation of training programs	Number of orientation and trainings on safety, facility usage to patients, staff	Number of orientation and trainings conducted	PAG to develop scoring system	Regular	Healthcare facility as part of O&M costs

Abbreviations:SO₂-Sulphur Dioxide; NO₂- Nitrogen Dioxide; CO- Carbon Monoxide; Pb – Lead; PM_{2.5} - Particulate Matter <2.5; PM₁₀ - Particulate Matter <10; EC – Electric Conductivity; TSPM- Total Suspended Particulate Matter; DO - Dissolved Oxygen; TSS - Total Suspended Solids; BOD - Biological Oxygen Demand; ORP – Oxidation Reduction Potential; NAAQS - National Ambient Air Quality Standards specified by CEP.

2. Monitoring Responsibilities

25. Environment safeguards monitoring will include (i) project readiness monitoring, to be conducted by the environmental and social consultants of the DSC team engaged under the project; (ii) environmental quality monitoring, to be conducted by a licensed environmental monitoring laboratory; and (iii) overall EMP compliance monitoring conducted by PAG with assistance of the DSC during project implementation and the first year of project operation.

26. **Assessment of project readiness.** Before construction, the environmental and social consultants of the DSC will assess the project's readiness in terms of environmental management based on a set of indicators (**Table EMP-5**) and report it to ADB and PAG. This assessment will demonstrate that environmental commitments are being carried out and environmental management system (**Table EMP-5**) are in place before construction starts, or suggest corrective actions if the project readiness indicators cannot satisfy.

Table EMP-5: Project readiness assessment indicators

Indicator	Criteria	Assessment
IEE and EMP update	The IEE and EMP updated after detailed design, and approved by ADB.	Yes No
Environmental management and supervision in place	PAG has a full time experienced environmental and social officer.	Yes No
	DSC is in place and has experienced and trained environmental and social consultants.	Yes No
	Qualified independent environmental monitoring laboratory contracted by PAG.	Yes No
	Environment focal officers assigned to each implementing agency.	Yes No
Site-specific waste management plan	Site-specific waste management plan approved and operational prior to commencing operation of laboratories or treatment equipment.	Yes No
Compliance with grant covenants and assurances	The borrower complies with grant covenants related to project design and environmental management planning.	Yes No
Public involvement effectiveness	Meaningful consultation completed; construction activities publicized at construction sites.	Yes No
	GRM established with entry points publicized.	Yes No
Tajik version EMP distributed to all parties	EMP translated and distributed by PAG.	Yes No
Contracts with environmental safeguards	Bidding documents and contracts incorporating the environmental activities and safeguards listed as grant assurances.	Yes No
Site construction planning (environmental)	Site-EMP prepared for each work site by the contractors and cleared by the implementing agencies.	Yes No
EMP financial support	EMP budget established and required funds set aside for EMP implementation by each implementing agency.	Yes No

ADB = Asian Development Bank, DSC = design and supervision consultant, EMP = environmental management plan, PAG = project administration group, GRM = grievance redress mechanism.

27. **Overall monitoring.** MOHSPP and CFS will be responsible for implementing monitoring systems for EMP implementation and will forward semi-annual monitoring reports to the Government and ADB. The reports will cover EMP implementation with attention to compliance and any required corrective actions. On-going consultation measures will be incorporated in the EMP. A template of the Environmental and Social Monitoring Report is attached as Appendix 4, which will be required to submit biannually by MOHSPP to ADB.

28. **Monitoring of Site-specific EMPs.** The PAG Environmental and Social Officer with support from DSC environmental and social consultants will monitor the Contractor's

implementation of site-specific environmental management mitigation measures. To this end, the training program has provision for training of the Contractor's staff. The PAG's Environmental and Social Officer will be the key person reviewing the implementation of EMP.

29. **Construction Contracts.** The Contractor will adhere to and comply with all measures and procedures identified in the EMP. The EMP and EMoP which are endorsed by the MOHSPP, will be monitored in accordance with ADB SPS 2009 requirements. Mitigation measures related to construction as specified in the EMP will be incorporated into civil works contracts, and their implementation will be primarily the responsibility of civil works contractors. In addition, civil works contractors will be requested to submit monthly progress reports on the implementation of EMP measures to MOHSPP/CFS /PAG.

30. The Annex 1 to EMP also lays down the following checklist/clauses for the Contractor to adhere to.

- Annex 1B: Environmental Safeguard Clauses for Civil Works Contracts.
- Annex 1C: Environmental Site Inspection and Monitoring Checklist.

3. Reporting

31. The MOHSPP in turn will be expected to report to the ADB on progress achieved against the EMP activities and milestones on a semiannual basis. Progress reports will include a description of implementable activities and their status; identify the responsible party(ies) involved in their implementation; and provide project management schedules and timeframes for doing so, along with their associated costs. The format for monitoring reports for environmental and social safeguards is shown in Appendix 4.

E. Institutional Strengthening and Training

32. The training program will be developed by PAG team comprising of Environmental and Social Officer who will be contracted with PAG during project implementation. Each training should last 1 day with a specific program and should include interactive problem-solving tasks.

33. Trainings on EMP implementation for Contractors, Waste Management, Emergency Response systems for all emergency situations, Occupational Health and Safety etc. are proposed to be held as per training program as shown in Table EMP-6 below. The costs for all the training programs (USD 25000) are included in the ADB funding for the project.

Table EMP-6. Training program - summary of training needs

Training topic	Summary of training purpose and content	Recipients/ Participants	Frequency or target date
Induction to EMP	Overview of EMP including site information, pollution risks and controls, and programs. Preparation of site specific EMPs and training on implementation to staff of Contractor(s)	All PAG engineers / contractors	At beginning of project
Review of EMP, Refresher training on EMP	Review of EMP including new changes and updates	All PAG engineers / contractors	One year after project start, or more frequently if required
Training on specific pollution risks and controls			
Emergency case response planning	To identify on-site "potential accident scenario" and how to plan potential emergency response actions.	All PAG Engineers /contractors/Local residents	During the project implementation

Training topic	Summary of training purpose and content	Recipients/ Participants	Frequency or target date
Air Quality Monitoring	Ambient Air Quality, volatile Organic Compounds (VOCs), Particulate Matter (PM), Ozone Depleting Substances (ODS), Greenhouse Gases (GHGs)	All PAG Engineers /contractors	During the project implementation
Water Conservation	Water Monitoring and Management, Process Water Reuse and Recycling, Heating Systems	All PAG Engineers /contractors	During the project implementation
Wastewater and Ambient Water Quality	Liquid Effluent Quality, Discharge to Surface Water, Discharge to Sanitary Sewer Systems, Land Application of Treated Effluent, Septic Systems, Wastewater Management	All PAG Engineers /contractors	During the project implementation
Hazardous Materials Management	General and medical Hazardous Materials Management, Hazard Assessment, Management Actions	All PAG Engineers /contractors	During the project implementation
Fire safety	Fire, and Explosion Prevention, Control Measures,	All PAG Engineers /contractors	During the project implementation
Occupational Safety, Health and Safety	Occupational Health and Safety Emergency Preparedness and Response, Community Involvement and Awareness	All PAG Engineers /contractors	During the project implementation
Waste Management	General Waste Management, Waste Management Planning, Recycling and Reuse, Treatment and Disposal, Waste Storage, Transportation, Treatment and Disposal, Commercial or Government Waste Contractors, Health Care Waste	All PAG Engineers /contractors	During the project implementation
Monitoring and evaluation (M&E)			
Participatory M&E of impacts	Simple methods for recognizing adverse impacts on environment Methodology of monitoring and evaluation on the water quality	Local residents, Healthcare facility management /Contractor	During the project implementation
Energy Efficiency and Green Buildings	Introduction to energy efficiency, heat loss, green concept	Local residents, Healthcare facility management	During the project implementation
Project management and implementation	M&E, Implementation assessment the program. Principle of donor organizations' support to local beneficiaries.	All PAG Engineers /contractors	At the beginning of the project

F. Environmental Management Plan Cost Estimates

34. The compliance with the EMP has been prepared based upon optimum and reasonable costs that are derived upon minimization of mitigation measures on a "least-cost" basis. The estimated budget for implementing the EMP is about USD 1.11 million (Table EMP-7).

Table EMP-7. Tentative Estimated costs for implementing EMP

#	Type of expenses	Cost Estimate (USD)
1	Environmental and Social Officer in PAG team (60 person-months @USD 4000 per month)	240,000
1	Promotion and advertisement of the EMP*	10,000

#	Type of expenses	Cost Estimate (USD)
2	Support the implementation of mitigation activities** (Based on Table EMP-8 below)	440,000
3	Reviewing and revising of IEE and EMP***	30,000
4	Environment Parameters testing (regularly quarterly) Included in civil works contract (based on Table EMP-9 below)	315,000
5	Training and Consultancy ****	25,000
6	Budget for the Monitoring activities (based on Table EMP-10 below)	33,000
7	Budget for public consultation and feedback	20,000
	Total	1,113,000
Notes:		
* "Promotion and advertisement of the EMP" include activities to provide awareness on EMP to relevant stakeholders and public communities in surrounding areas of construction sites as well as informing them of the roles and responsibilities of various parties involved. Costs may include development of promotional materials, advertising etc.		
** Mitigation activities are approximately 2.4-4.9% for individual package		
*** Revision of IEE/EMP, during detailed design and if major scope of project activities changes during implementation		
**** Training costs for items		
Grievance redressal - costs associated with the GRM such as travel, holding meetings, printing for information dissemination, raising awareness, are part of operational budget under DSC and PAG		

Table EMP-8. Cost estimate for mitigation measures – civil works contract

Description	Unit	Quantity	Rate USD	Amount USD
<i>Included in Civil Works Contract</i>				
Preparation of Construction EMP	Lumpsum	1		15,000
Asbestos and waste contamination survey	Lumpsum	1		20,000
Clearing of Construction Area	Lumpsum	1		20,000
Removal and Storage of Topsoil	Lumpsum	1		10,000
Protection of Land/Water Resource	Lumpsum	1		25,000
Management of Solid Waste and Sewage Waste from the Construction Camp	Lumpsum	1		50,000
Potential restoration of Work and Storage Site	Lumpsum	1		20,000
Dust suppression measures during dry period (water spraying)	Lumpsum	1		20,000
Securing of Storage and Equipment Maintenance Areas.	Lumpsum	1		20,000
Contractor's EHS Officers	Month	24x5	2,000	240,000
Total Mitigation Measures (A)				440,000

Table EMP-9. Cost estimate for design and supervision consultant's monitoring

Description	Unit	Quantity	Rate USD	Amount USD
Included in Design and Supervision Consultant's Contract				
DSC's Environmental and Social Consultants	month	60	5,000	300,000
Environmentalsafeguards training including waste management, HIV/AIDS prevention	Every 4 months during construction time	15	1,000	15,000
Total Monitoring Measures (B)				315,000

Table EMP-10. Cost estimate for baseline monitoring – civil works contract

Description	Unit	Quantity	Rate USD	Amount USD
Baseline Included in Civil Works Contract				
Noise and vibration monitoring and measurement over pre-construction and construction period	Number	60	200	12,000
Soil and water quality monitoring over pre-construction and construction period	Number	60	200	12,000
Dust and air pollutants Measurement over pre-construction and construction period	Number	60	150	9,000
Total Monitoring Measures (C)				33,000

35. The cost components include items such cost towards promotion, advertisement and implementation of mitigation activities (Contractor's civil works scope), review and revision of IEE/EMP is scope changes, Training and consultancy, monitoring of EMP and support implementation of mitigation activities etc. in entire location of healthcare facility and future public consultations required. These activities will be coordinated by the PAG Coordinator, Environmental and Social Officer, Design and Supervision environmental and social consultants and the Contractor.

G. Consultation, Participation, and Information Disclosure

36. Meaningful participation and consultation during project planning, feasibility study, design and implementation is an important environment safeguards requirement. It can directly reflect the public's perceptions of environmental quality in the project's area of influence.

37. ADB's SPS 2009 has specific requirements for information disclosure and public consultation. Information disclosure involves delivering information about a proposed project to the public and to affected communities and other stakeholders, beginning early in the project cycle, and continuing throughout the life of the project. Information disclosure is intended to facilitate constructive engagement with affected communities and stakeholders over the life of the project. To make key documents widely available to the public, the SPS 2009 requires submission of following documents for disclosure on ADB's website (www.adb.org) for Category B Projects:

- (i) final IEE (upon receipt or prior to Board approval, whichever is earlier).
- (ii) a new or updated IEE, if required during project implementation.
- (iii) corrective action plans (for major non-compliance, if any) prepared during project implementation, and
- (iv) semi-annual environmental reports on the project's compliance with EMP.

38. ADB's SPS 2009 also requires that the borrower carry out consultation with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. Meaningful consultation goes beyond information disclosure. It involves two-way communication between the borrower and the affected communities and stakeholders, and active participation of affected communities and stakeholders in project design and implementation. Consultations will include presentations on environmental impacts, benefits and mitigation measures, project GRM, and ADB's Accountability Mechanism.

1. Stakeholder Identification and Mapping

39. ADB SPS 2009 defines stakeholders as “individuals or groups or institutions who can or are likely to (i) influence (promote, support, disrupt, or stop) the course of a project; and/or (ii) be affected (favorably or adversely) by the project. Based on this definition, stakeholders were identified to ensure as wide coverage as possible of the project area as follows:

- Residents, vendors and business people who live and work around the project facilities (healthcare facilities) specially the project affected persons,
- All type of patients in healthcare facilities,
- Management of healthcare facilities,
- Other government institutions including provincial and district agencies involved in environmental management, waste management, and pollution control,
- the beneficiary community in general.

2. Public Consultation and Information Disclosure During Project Preparation

40. **Methodology.** Both formal and informal modes of consultation were used in the public consultation process for the project. Consultation with the stakeholders, beneficiaries, and local communities were carried out using standard structured questionnaires as well as unstructured questionnaires. In addition, focused ground discussions (FGDs) and personal discussions with officials, on-site discussions with project affected stakeholders, and reconnaissance visits have also been made to the project areas. The attempts were made to encourage participation in the consultation process of the government officials from different departments that have relevance to the project. Similarly, local people from different socio-economic backgrounds in the project area, women groups, residents along the alignments, local vendors around the hospitals, and other concerned stakeholders were also consulted.

41. **Consultations Carried Out during project preparation.** Stakeholder engagement for the project was initiated at an early stage and carried out as part of the safeguards assessment process to ensure transparency, information disclosure, and incorporation of stakeholder inputs into project planning and design and environmental and social management. Consultations focused on health sector institutions and specialists who are directly involved in service delivery and will be affected by or benefit from the project.

42. During the initial reconnaissance mission conducted from 24 November to 5 December 2025, project technical and safeguards teams visited health facilities in six districts of Khatlon region. During these visits, information on the proposed project activities, scope of civil works, and potential environmental and social risks were shared with key stakeholders in the target districts. Consulted stakeholders included representatives and specialists from rural health houses, village health centers, and sanitary and epidemiological stations. These interactions provided an opportunity to discuss anticipated project benefits, identify operational challenges, and understand site-specific conditions relevant to environmental and social safeguards.

43. As part of the same mission, the safeguards team also conducted on-site assessments of existing facilities, with a particular focus on medical waste management practices and methodologies. The findings from these assessments helped identify gaps and risks related to waste segregation, storage, and disposal, which will be addressed through project design, capacity building, and Environmental Management Plan (EMP) measures.

44. On 28 January 2026, the environmental and social safeguards team conducted a face-to-face consultation meeting with directors of all 18 Sanitary and Epidemiological Service (CESS) facilities that are planned to be upgraded under the project. The primary purpose of this meeting was to disclose information about the upcoming project activities, anticipated environmental and occupational health risks, and safeguard requirements. The meeting also served as a platform to collect feedback and institutional inputs that will inform the

establishment and operation of the project's Grievance Redress Mechanism (GRM), including preferred communication channels and existing complaint-handling practices within the health system.

45. In addition, a consultation meeting was held with the Director of the State Sanitary and Epidemiological Surveillance Service of the Republic of Tajikistan under MOHSPP, Mr. Kurbonzoda Shamsiddin. During this meeting, the project scope, planned investments, and expected environmental and operational risks were presented and discussed. Mr. Kurbonzoda provided strategic guidance and suggested upgrading the central laboratory to strengthen coordination and oversight of regional laboratories, an input that supports the project's objectives of improving system-wide laboratory capacity and resilience.

46. Field level consultations continued in February 2026. For those sites which are difficult to access, virtual consultations were carried out in the months of January and February 2026.

47. In total 236 stakeholders participated in various consultation meetings consists of 51 (21.6%) females and 185 male participants.

3. Future Consultations and Information Disclosure

48. Meaningful consultation to safeguard the environment and local residents will continue, and a dialogue channel will be maintained with the affected public and stakeholders throughout project implementation and operation. Such dialogue will ensure that public concerns are understood and dealt with in a timely manner. Different stakeholder engagement strategies will be employed based on the categorization of the stakeholders; whereby stakeholders with higher levels of influence and interest will be engaged to a greater extent. Future public consultation will be conducted via questionnaire surveys, household visits, workshops, and consultation meetings per schedule or when there are complaints or unanticipated negative environmental impacts.

49. **Consultations during project implementation.** In addition to consultations undertaken during preparation of the project, consultations will take place during implementation. The PAG environment safeguard focal point will undertake consultations following the finalization of the detailed design and will conduct consultations within 4-6 weeks of construction starting and then again, every 3 months until the end of construction. This is set out in this EMP.

50. It is suggested that the consultations take the form of meetings and site-based discussions and include the following:

- Environmental impacts of civil works (e.g., solid and liquid waste, pollution, traffic);
- Any unforeseen impacts caused accidentally e.g. through spillages;
- Civil nuisance (e.g., noise, dust, disrupted business activities, social issues, community health and safety);
- Awareness on issues related to commissioning of the project health facilities; and
- GRM and its procedures including details of persons to contact and contact details.

51. In summary, informal interviews with affected people will focus on complaints about community disturbance from construction activities, as well as public concerns about public health care access issues.

52. **Consultations during operation.** The operator of the project facilities, in collaboration with MOHSPP/PAG, CFS, provincial and district authorities, and other concerned agencies will undertake quarterly consultations with local residents to discuss any operational impacts or concerns of operation and implement corrective actions as may be necessary.

H. Grievance Redress Mechanism

1. Objectives

53. The Project in its scope foreseen establishment of a responsive, readily accessible, and culturally appropriate grievance redress mechanism (GRM) capable of receiving and facilitating the resolution of people's concerns and grievances related to the Project. It offers a forum to the project stakeholder, communities, and individuals to voice their concerns, seek clarifications to their queries, or register complaints related to the project's performance. The scope of the GRM addresses issues related to involuntary resettlement, social and environmental performance, and information disclosure.

54. Although no adverse impact on people and their assets is anticipated, the Social Due diligence Report briefly outlines the main GRM procedure and institutional arrangements which will ensure that all necessary procedures are in place in case any impact of private assets, access disruption, safety issues and any other unanticipated impact as a result of lack of access or disruption occur during the project implementation.

55. Establishing a functional GRM involves identifying the capacity gaps within the IA/EA and implementing a capacity building plan designed (when the project PAG, DSC and the Contractors established) to address the capacity deficiencies. The elements of the capacity building plan include:

- (i) assessment of an existing grievance mechanism, if relevant, and capacity needs of the IA/EA;
- (ii) developing the mechanisms or procedures designed to bridge the capacity gaps within the IA/EA;
- (iii) delivering a briefing for the GRM members so they can manage implementation of the mechanisms or procedures;
- (iv) coaching the GRM members across the entire Project processing and implementation cycle.

56. The affected persons will have the right to file complaints and/or queries on any aspect of the project. Under the adopted grievance mechanism, communities and persons may appeal any decision, practice or activity related to the project. PAG and MOHSPP will ensure that grievances and complaints on any aspect of the project are addressed in a timely and effective manner.

57. The fundamental objectives of the GRM are:

- (i) to reach mutually agreed solutions satisfactory to both, the project team and the affected persons, and to resolve any grievances locally, in consultation with the aggrieved party;
- (ii) to facilitate the smooth implementation of the Project, particularly to cut down on lengthy litigation processes and prevent delays in project implementation;
- (iii) to facilitate the development process at the local level, while maintaining transparency as well as to establish accountability to the local people.

58. The designated persons/ positions, members of the GRCs will be active for the duration of the Project. The PAG and DSC will ensure effective handling of any environmental and social enquiries related to the project. The PAG will monitor functionality of the GRM and reporting on the appeals and issues and their resolution status will be through semiannual social and environmental safeguard monitoring report.

59. All enquiries/grievances related to the project will be addressed with the participation of the Project safeguards monitoring team. The GRM covers issues related to social, environmental and other safeguard issues under the ADB SPS 2009 and applicable laws of Tajikistan.

2. Grievance Resolution Process

60. The project will establish a National Grievance Redress Committee (NGRC) at the MOHSP/PAG level who will be reviewing the grievance redress procedure on a monthly basis. NGRC will be involved in more complex cases and appeals/issues processing that are directly approached to it. Local Grievance Redress Committees (LGRC) will be established in each district and will report to the NGRC. The LGRC members of each district appointed person within SESS and other health institutions within the project intervention.

61. Social and/or environmental officer or health and safety engineer of the project shall visit the sites regularly to meet the local residents and workers at construction sites. Local communities and individuals can contact the LGRC in case of any appeals, requests or claims. To enable the communities' accessibility to the GRM contacts of grievance receiving focal person for each site will be shared to communities in the consultation process pre-commence of construction works. PAG under MOHSPP will issue a Decree on the establishment of the GRM with detailed grievance redress procedures.

62. Grievances can be lodged with any of the GRC members. The GRC member receiving a complaint will register the complaint, issue a receipt of the complaint, and inform the aggrieved person about the expected timeframe for the complaint review. The received complaint will be screened for eligibility. If the complaint is: (i) not related to the project; (ii) to be reviewed by a separate, more appropriate procedures (e.g. issues of fraud and corruption); (iii) nature of the issue is beyond the official mandate of the GRM or (iv) complainant has no standing to lodge a grievance, the focal person will inform the complainant in writing about the eligibility and inform about other appropriate avenues for addressing the complaint. This should be done within 14 calendar days of the grievance lodgment.

63. If the complaint is found eligible, it should be assigned one of the following categories:

- (i) A - inquiry, clarification, suggestion, request;
- (ii) B - complaint regarding alleged improper implementation of social and environmental requirements;
- (iii) C - allegation of fraud or corruption.

64. The complaint registered with the GRM should be reviewed, addressed, and a decision made on its relevancy to the project within 14 calendar days of lodgment. If the case is complex or requires more detailed investigation (e.g., inspection by technical experts or legal opinion from the state or certified private entities), the complaint review period may be extended to 30 calendar days or more, if necessary. In such cases, written notification should be sent to the complainant explaining the reasons for extension, describing the process, and indicating the expected dates for the delivery of the results of the revision.

65. The PAG under MOHSPP will maintain overall complaint register. This will include a record of all complaints and appeals for regular monitoring and follow up on the redressal process as well as for periodic review by ADB.

66. Complaints and appeals received during the construction period shall be addressed through the following steps and actions:

- **First step:** Complaints shall be lodged at the district level an appointed SESS officer (focal point). A Complaints Registration Book will be kept available at the SESS office for registration of written, verbal or over phone appeals. The focal point will inform project representatives such as environmental and social officer/consultants and/or health and safety engineer about the case. The team will review case and documents all review process with the involvement of the aggrieved person (or his/her representative) GRC member from the Contractor and any other relevant specialist from the local government institutions depending on the case subject. The period fixed for resolution of complaint is 14 calendar days.

- **Second step:** If the Project Level Grievance Redress Committee is not able to resolve the grievance, or the aggrieved person is not satisfied with the GRC resolution, the case shall be lodged to the NGRC at the PAG MOHSPP. The focal person at PAG MOHSPP shall initiate the grievance review and convene the GRC meeting no later than 5 days since the complaint was registered as eligible. All supporting documents - photo and video materials, legal opinions, technical expert opinions (if practicable), outcome of the district level GRC meetings report shall be prepared prior to the meeting. The minutes of each meeting should be agreed and signed by all members of the GRC no later than 3 days following the gathering. The National GRC has an obligation to attempt to resolve the issue within 14 calendar days.

67. Once the complaint is resolved, the GRC will prepare a complaint closure note, where the complainant confirms the closure of the complaint and confirms his/her satisfaction or dissatisfaction on the resolution.

68. All efforts will be made to settle issues at the project level. All complaints and resolutions will be properly documented by the PAG and made available for review, monitoring and evaluation purposes. PAG environmental and social officer will keep in regular contact with the GRCs in the project districts and will have a database for the whole project's grievances cases and their status. This report will be regularly included in quarterly project progress reports as well as in the semi-annual safeguard monitoring reports.

69. The affected persons will have the right to submit their cases to a court of law at any point of time of the grievance redress process, regardless of the outcome of the GRM. All efforts will be made to settle the issues at the project level in a consultative manner to avoid/minimize litigation as much as possible.

70. Table EMP-11 presents the list of persons responsible for the Project related inquiries, appeals and grievances at Project / SES level.

Table EMP-11. Grievance redress committee members at project sites

#	Name	Position and Institution	Phone number
1	Zikirov Zikrullo	Head of SESS of Baljuvon	987 99 31 11
2	Mirzosharifov Manuchehr	Head of SESS of Khovaling	949 65 90 90
3	Ruzadorova Gurnora	Head of SESS of Rushon	93 552 63 39
4	Ustozoda Davlatali	Head of SESS of Vanj	900 05 88 40
5	Sharafzoda Abdusattor	Head of SESS of Jaihoon	93 101 09 55
6	Sangimamadzoda	Head of SESS of Dusti	93 533 33 83
7	Musofirov Mirzovali	Head of SESS of Darvoz	93 514 79 97, 917 14 79 97
8	Zaripov Shoramazon	Deputy head of jamoat	880880830
9	Amirkhudoev Dodikhudo	Head of community (mahala)	888778787
10	Odinaeva Shohzoda	Secretary of Darvoz SESS	937551832
11	Latifov Abduvali	Head of SESS of Kuhi Mastchoh	93 353 75 05, 00 244 75 05
12	Obidov Mahmadsaid	Head of SESS of New Mastchoh	93 600 74 70
13	Saidzoda Mizrob	Head of SESS of Tursunzoda	909 66 69 25, 009 88 88 70
14	Malikov Husein	Head of SESS of Ayni	118 08 45 45
15	Atokhujaev Burhon	Head of SESS of Panjakent	92 855 56 66
	Namozov A'zam	Head of SESS of Khuroson	904 56 66 65
16	Homidov Khushnud	Head of SESS of Rasht	93 530 59 00
17	Mirzomuddinova Nigora	Head of SESS of Tojikobod	93 783 31 45
18	Mizrobov Ibrohim	Logistician of SESS of Tojikobod	931304528
19	Jurazoda Muhtarama	Head of SESS of Farkhor	907 23 98 98

#	Name	Position and Institution	Phone number
20	Yusupov Jobirkhon	Head of SESS of Muminobod	918 92 62 49
21	Buriev Abdurashid	Head of SESS of Qubodiyon	

Source: MOHSPP, 2026

71. The following figure EMP-3 schematically presents the grievance redress process:

Figure EMP-3. Proposed grievance redress process

72. GRM proceedings may need one or more meetings for each complaint and may require field investigations by specific technical or valuation experts. Grievance cases shared by more than one complainant may be held together as a single case.

73. At each level of appeal, the GRC will be assisted, as required, by the professional capacity needed to solve specific cases. This may include among others:

- (i) Jamoat and/or hukumat and mahalla representatives
- (ii) Related land committee
- (iii) Representatives of the Agency for Architecture
- (iv) Agency for Environment and Forestry
- (v) Unitary Enterprise for Housing and Communal Services
- (vi) Technical expertise from professional water and sanitation engineers
- (vii) Representatives of Women's Affairs
- (viii) Other specialized organizations as necessary
- (ix) Representatives of non-government organizations/civil society organizations active in the area.

74. In addition, the complainants (minimum 2 persons) can appeal the decision and bring the case to the ADB Accountability Mechanism (AM) for any violation of ADB's policy requirements. The GRM at the project level does not in any way impede the affected persons' access to the ADB Accountability Mechanism (AM). However, the complainant will be encouraged to go through the project GRM first, as well as to address their complaint through the relevant operation department of ADB. The ADB regional department (RD) tries to resolve grievances and appeals, if not resolved at project level, at country and RD level. If unresolved at country/RD level, the complainant has the option to escalate it to AM through CRO through the contact information below:

Complaint Receiving Officer (CRO), Accountability
Mechanism Email: amcro@adb.org

ANNEX 1 to EMP: General Environmental Contract Clauses for Inclusion into Tender Documents and Civil Works Contracts

Annex 1A: Standard Construction Contract Environmental Safeguard Clauses

A. Environmental Protection and Control of Pollution

General

1. The Contractor shall observe and comply with all National Laws, Government Regulations, Presidential Decrees, and Ministerial Regulations pertaining to environmental protection, pollution control, waste management, and biodiversity protection. In conducting his/her construction activities, the Contractor shall take all necessary precautions to minimize environmental disturbance to the project area and surroundings and to prevent the escape of polluting substances into drains, streams, water courses, and ground water. The Contractor shall also utilize all necessary practicable methods and devices as they are available to prevent and otherwise minimize atmospheric emissions or discharges of air contaminants.
2. Except where otherwise agreed or provided for by the employer or expressly stipulated in Particular Specifications or Technical Specifications forming part of the Contract Documents, no separate payment will be made for complying with the provisions of this Clause and attendant sub-clauses; and all costs shall be deemed to be included in the prices for the Contractor's mobilization for construction, and the various rates and lump sum items for the works included in the priced bill of quantities.

Pollution of Water Courses and Streams

3. The emission of polluting liquids or other waste into drains, water courses, or ground water shall not be permitted.
4. No concrete or cement washings from the works or drainage from the Contractor's concrete batching and mixing areas, asphalt (hot mix) plants, or other manufacturing or production facilities shall be allowed to discharge into streams or drains without passing through an adequate system of settling ponds.
5. Storage of fuels, fueling and maintenance of plant and vehicles, etc. shall take place only on sites and under conditions that do not allow spilt fuels to be discharged to water bodies. Fuel storage and fueling areas shall be equipped with adequate protective measures to confine and retain accidental spillages. No drainage from fuel store and plant maintenance depots shall be allowed to be discharged without passing through an adequate arrangement of oil traps and separators.
6. Washing of vehicles shall not be permitted in streams but only in specially designated and equipped areas.
7. Adequate sanitary waste control facilities shall be provided in site offices and workers' camps, and sewage waste shall be collected regularly and disposed in accordance with relevant environmental legislation.
8. The Contractor shall accordingly be responsible for the installation, operation and maintenance of a comprehensive drainage system to all areas of the Works. The system shall be constructed such that no discharges of oil, cement, silt or other liquid or solid waste matter can enter the streams and water courses at the site; and it shall have all necessary solid waste and sediment traps, settling ponds, oil separators, etc., required to ensure that pollution of

drainage, streams watercourses and natural bodies of water does not occur. The Contractor shall be responsible for maintaining the system to the satisfaction of the Employer's Construction Supervisor and all costs of providing the system shall be deemed to be included in the various rates and lump sum items for the works included in the priced bill of quantities.

Air Pollution

9. The Contractor shall take all necessary steps to minimize air pollution resulting from his/her operations.

10. Except where stipulated in these Specifications for the disposal of vegetation and organic materials from clearing operations, the burning of waste materials for disposal, particularly oil and petroleum wastes, rubber, plastics and similar materials will not be permitted.

11. During the performance of the work required under the Contract or of any operations appurtenant thereto, whether on the Project Site or elsewhere, the Contractor shall take all steps necessary, and shall furnish all labor, equipment, materials and means, required to reduce dust nuisance from the Works, and to prevent dust originating from his/her operations from damaging orchards, and dwellings; or causing a nuisance to persons. The Contractor shall be held liable for any damage resulting from dust originating from his operations, including on Government roads, rights-of-way or elsewhere.

12. The emission of dust into the atmosphere shall not be permitted during the manufacture, handling and storage and handling of cement and of concrete aggregates, and the Contractor shall use such methods and equipment as are necessary for the prevention, or the collection and disposal, of dust during such operations. All truckloads of loose materials shall be covered during transportation.

13. Concrete batching and mixing areas, asphalt (hot mix) plants, or other manufacturing or production facilities shall be sited at least 500m from the nearest habitation. Emission outlets shall be fitted with pollution control devices in compliance with relevant current Government emission control legislation.

14. The cost of spraying water on access roads, aggregate stockpiles, etc.; or of any other methods of reducing the formation of dust; and the cost of furnishing and applying materials to maintain the works areas, adjacent areas, and roads, in a dustless condition, shall be deemed to be included in the various rates and lump sum items for the works included in the priced bill of quantities.

Noise Pollution

15. The Contractor shall take all necessary precautions to minimize the amount of noise and vibrations coming from construction activities.

16. The Contractor shall ensure that all plant and equipment is properly maintained in good operating condition, and that noisy construction activities shall be effectively sound reduced by means of silencers, mufflers, acoustic linings or shields, acoustic sheds or screens or other means, to avoid disturbance to any nearby noise sensitive receivers. All plant and equipment shall comply with relevant Government legislation covering sound emissions.

17. Operation of trucks and heavy vehicles and machinery shall be restricted to the hours of 06:30 to 19:00. No blasting or crushing is allowed inside healthcare facility premises.

18. All necessary measures shall be undertaken to protect healthcare facilities and other

adjacent noise sensitive receptors, including the use of noise barriers.

Damage to Property and Vegetation

19. The Contractor shall limit the movement of his/her employees and equipment within the project area and on adjacent land, including access routes approved by the Employer's Construction Supervisor, so as to minimize damage to natural vegetation and property, and shall endeavor to avoid any damage to land.

20. The Contractor shall strictly ensure employees and equipment do not enter any sensitive environmental areas that are demarcated as "no-entry" zones.

21. The Contractor shall preserve existing trees, plants and other vegetation that are to remain within or adjacent to the Works and shall use every precaution necessary to prevent damage or injury thereto. Trees or shrubs shall only be felled or removed where such impinge directly on the permanent works or necessary temporary works areas; and where such is approved by the Employer's Construction Supervisor.

22. On completion of the Works all areas disturbed by the Contractor's construction activities shall be restored by the Contractor to their original condition, or as may be acceptable to the Employer.

23. The Contractor shall be responsible directly to the Employer for any excessive or unnecessary damage to crops or lands arising from his/her operations, whether within the project area, on lands adjacent thereto, or adjacent to approved access roads: and deductions will be made from the payment due to the Contractor to cover the cost of such excessive or unnecessary damage, as determined by the Employer.

Asbestos Containing Materials (ACM) Management

24. The following measures and activities would include the following steps and requirements for proper mitigation:

- a. Determine if any sub-project would require the replacement, maintenance or demolition of: (a) Roofing, siding, ducts or wallboard; (b) Thermal insulation on pipes, boilers, and ducts; and (c) Other potentially asbestos-containing materials.
- b. Once the presence of ACM in the existing infrastructure has been presumed or confirmed and their disturbance is shown to be unavoidable, incorporate the following requirements in the civil works to be performed:
 - (i) containment of interior areas where removal will occur;
 - (ii) protection of walls, floors and other surfaces with plastic sheeting;
 - (iii) providing decontamination facilities (showers) for workers and equipment;
 - (iv) removal of the ACM using wet methods and promptly placing the material in impermeable containers;
 - (v) final clean-up with special vacuums and dismantling of the enclosure and decontamination facilities in a careful manner;
 - (vi) disposal of the removed ACM and contaminated materials in an approved landfill, burying it;
 - (vii) inspection and air monitoring during civil works by an entity independent of the contractor removing the ACM (might be done by environmental and/or sanitary inspectors).

B. Reporting

25. The Contractor shall maintain a record of all emissions and spills of liquid, solid and gaseous matter which occur at the site, whether into drainage, water courses, streams, on land, or into the air. This record shall be compiled daily and shall include details of the date, time and nature of the event, along with details of the remedial and clean-up measures carried out.

26. Copies of these records shall be given to the Employer monthly.

27. The Contractor shall also maintain a record of any complaints made by any Governmental or Community Organization or by the public, regarding his/her operations. This record shall contain the date and time of receipt of the complaint, the name and address of the complainant, and the action taken to remedy the situation. Copies of these records shall be given to the Employer monthly.

C. Environmental Management Plan

28. The requirements of this clause and attendant sub-clauses on Environmental Protection and Pollution Control notwithstanding; the Contractor shall observe and comply with all relevant environmental protection and mitigation, monitoring, and reporting requirements in the Environmental Management Plan (EMP) as stipulated in the Particular Specification. In the event of any conflict between the foregoing sub-clauses and the environmental protection and mitigation measures and pollution control requirements of the EMP, the EMP shall take precedence.

29. The Contractor shall prepare and submit to the Employer's Construction Supervisor a Construction Site specific Environmental Management and Monitoring Plan (SEMP) demonstrating the manner in which the Contractor will comply with the requirements of the foregoing sub-clauses on Environmental Protection and Pollution Control, the EMP, and any particular environmental mitigation measures as stipulated in the Particular Specifications or Technical Specifications forming part of the Contract Documents.

30. The SEMP shall be submitted within 15 working days of the Contractor receiving the Notice to Proceed with the Works, and shall include a waste management plan detailing procedures for waste management for the site covering all solid, liquid and gaseous waste materials and emissions. The waste management plan shall include procedures for the collection and disposal of all waste materials in such a way as to ensure that no damage is caused to the environment. Training shall be provided to workers about the appropriate implementation of the SEMP and waste management plan measures.

31. Where stipulated in the Particular Specifications or Technical Specifications forming part of the Contract Documents, and provision has been made in the Bill of Quantities; payment for the implementation of the SEMP will be made in accordance with the Unit Rates, Lump Sum or Provisional Sum Items included in the Priced Bill of Quantities.

Annex 1B: Environmental Safeguard Clauses for Civil Works Contracts

The general environment, health and safety obligations of the Contractor within this Contract, without prejudice to other official provisions in force, include the following:

- The Contractor shall ensure that the construction and decommissioning of project facilities comply with (a) all applicable laws and regulations of Tajikistan relating to environment, health and safety; (b) the Environmental Safeguards stipulated in ADB's Safeguards Policy Statement (2009); and (c) all measures and requirements set forth in the Generic environmental management plan (EMP).
- The Contractor shall establish a telephone hotline to receive community complaints, staffed at all times during working hours. Contact details shall be prominently displayed at the site. The Contractor shall disseminate in a timely manner information on the construction progress, including anticipated activities that might cause safety risk.
- The Contractor shall secure all necessary permits and licenses before undertaking the works.
- The Contractor shall assign sufficient qualified staff to manage site-EMP implementation, and ensure adequate financial resources are available to implement the site- EMP throughout the construction period.
- The Contractor shall provide equal pay for equal work, regardless of gender or ethnicity; provide those they employ with a written contract; provide the timely payment of wages; use local unskilled labor, as applicable, comply with core labor standards and the applicable labor laws and regulations, including stipulations related to employment, e.g. health, safety, welfare and the workers' rights, and anti-trafficking laws; and not employ child labor. The Contractor shall maintain records of labor employment, including the name, ethnicity, age, gender, domicile, working time, and the payment of wages.
- All buildings shall be designed in compliance with relevant the Government of Tajikistan's design standards and codes for energy-efficient, safe buildings, including but not limited to: Tajikistan national standards monitored by the Agency for Control of Buildings and Architecture. Only low or no volatile organic compound (VOC)-emitting materials shall be used (including paints, coatings, adhesives, carpet and furniture) to ensure high indoor air quality. Water-based nontoxic, no allergenic paint for drywall or plaster surfaces shall be preferred to latex or oil-based paints. All facilities shall be properly sited to minimize the risk of scouring that may result from increased intensity of precipitation as a result of climate change.
- The use of ACM as a new material in construction or renovation activities will not be supported under the project. Existing facilities where the ACM will be replaced/removed should apply a series of mitigation measures and monitoring activities which would ensure a proper handling of these materials avoiding any potential impacts on the workers' health. At the initial stage of project implementation the Contractor should be able to identify the locations where the ACM is present, its condition (e.g., whether it is in friable form or has the potential to release fibers), define the procedures for supervision and monitoring, as well as develop procedures on avoiding ACM destruction, and conduct training of its staff in handling the ACM. These issues and requirements regarding ACM should be reflected in the contract clauses. These clauses should also specify that the selected contractor notifies the relevant authorities (environment and/or sanitary inspections) of the removal and disposal of ACM and cooperates fully with representatives of the relevant agencies during all inspections and inquiries.
- The Contractor shall take necessary precautions to avoid interruptions to water supply,

wastewater collection, heating and other utility services during civil works.

- The Contractor shall prepare a construction site-EMP based on the construction EMP.
- The Contractor shall take appropriate sanctions against personnel violating the applicable specifications and provisions on the environment, health and safety.
- The Contractor shall document and systematically report to the healthcare facility management and the project administration group (PAG), of each incident or accident, damage or degradation caused to the environment, workers or residents or their assets, in the course of the works.
- The Contractor shall provide all relevant information about the EMP and the site-EMP to subcontractor/s and be responsible for their actions.
- The Contractor shall provide the healthcare facility administration and the PAG with a written notice of any unanticipated environmental, health and safety risks or impacts that arise during implementation of the contract that were not considered in the project EMP.

Annex 1C: Environmental Site Inspection and Monitoring Checklist

(Note: This form is designed for use by the project administration group (PAG) project coordinator during site inspections and monitoring and may not be exhaustive. Modifications and additions may be necessary to suit individual sub-projects and to address specific environmental issues and mitigation measures.)

Name of Health Care Facility:

Location:

Inspection Date:

Inspection Time:

Inspector(s):

Table EMP-12. Environmental site inspection and monitoring checklist

Inspection Item	Yes	No	N.A.	Remarks (i.e. problem observed, possible cause of nonconformity and/or proposed corrective/preventative actions)
Has contractor appointed a construction supervisor and is the supervisor on-site?				
Is information pertaining to construction disclosed at construction site (including construction period, contractor information, grievance hotline, etc.)?				
Are chemicals/hazardous products and waste stored on impermeable surfaces in secure, covered areas?				
Is there evidence of oil spillage?				
Are chemicals stored and labelled properly?				
Is construction equipment well maintained (any black smoke observed)?				
Is there evidence of excessive dust generation?				
Are there enclosures around the main dust generating activities?				
Does contractor regularly consult with healthcare facility management as well as nearby residents to identify concerns?				
Is there evidence of excessive noise?				
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?				
Is construction wastewater and domestic wastewater discharged to sewer systems (if possible), or are on-site treatment facilities (septic tank) provided?				
Is there any wastewater discharged to soil or surface water?				
Is the site kept clean and tidy (e.g. litter free, good housekeeping)?				
Are separated labelled containers/areas provided for facilitating recycling and waste segregation?				
Are construction wastes/recyclable wastes and general refuse removed offsite regularly?				

Inspection Item	Yes	No	N.A.	Remarks (i.e. problem observed, possible cause of nonconformity and/or proposed corrective/preventative actions)
Is safe supply of clean water and an adequate number of toilets provided for workers?				
Is personal protection equipment provided for workers?				
The contractor provides training of workers and supervisors, adequate equipment and supplies for the scope of works, including adequate clothing, gloves and respirators for occupational safety measures from ACM.				
Are clear information and warning signs placed at construction sites in view of the patients and staff as well as the public?				
Are all construction sites made secure, discouraging access through appropriate fencing?				
Are disturbed areas properly re-vegetate after completion of works?				
Were any complaints filed with the contractor, and have staff and nearby residents raised any concerns related to the performance of contractor?				
Any other problems identified or observations made?				

Signature:
 Name of PAG staff/ consultant:
 Date:

ANNEX 2 to EMP: INDICATIVE TEMPLATE OF CONTRACTOR'S SITE-EMP

A. General project information

A site-EMP should include the following generation information about the project:

- A description of the site location and the receiving environment, including the location of sensitive receivers;
- A description of the project construction works to be undertaken, including timeframes and construction hours;

B. Organization structure of environment management

- A description of the organization structure of the contractor;
- Identification of the person with responsibility for implementing the site EMP.

C. Management of the environmental issues

- Air quality
- Noise
- Site contamination
- Solid waste
- C&D waste
- ACH/hazardous waste
- Wastewater
- Sediment control
- Soil erosion
- Ecological resources
- Physical and cultural resources
- Community health and safety
- Occupational health and safety
- Traffic management
- Emergency response plan;
- Other issues identified

D. Communication and complaint resolution

- Description of the communication plant that outlines how and when consultation with potentially affected parties will be undertaken, and how potentially affected parties will be informed in advance of works that may have an off-site impact;
- Description of grievance redress mechanism.

E. Monitoring

- Monitoring objective
- The criteria against which monitoring results will be assessed
- The sampling times and frequency
- A map showing the sampling locations
- Parameters to be measured and analyzed
- A feedback loop from monitoring to corrective actions so that issues arising from monitoring drive the necessary corrective actions.

F. Training

To ensure the site EMP is implemented effectively, all workers and employees should be trained in environmental awareness and their responsibilities under the site EMP.

ANNEX 3 to EMP: General Guidelines for Occupational Health Asbestos Action Plan, Asbestos and Debris Estimation for Demolition or Refurbishment

A. Purpose of Assessment

1. Demolition or refurbishment work may involve workplaces or structures that contain or have contained hazardous materials, which may include lead, asbestos, polychlorinated biphenyls (PCBs), contaminated dust and combustible materials. The project implementation at hospitals would require:
2. Occupational Health Asbestos Action Plan: Control asbestos fiber exposures when demolishing, rehabilitating buildings and ensure its proper disposal from worksite.
3. Control disposal of debris waste from demolition of building (s).

B. Methodology for Action Plan

4. In order to ensure safe project implementation at each of the hospitals involved, the Contractor will ensure the following:

C. Estimation of Asbestos Containing Material (ACM)

5. The Contractor will undertake the following tasks for estimation of Asbestos (particularly):

Conduct Risk Assessment

- Study the type, condition and amount of asbestos present.
- Document the location of asbestos in relation to the proposed demolition or refurbishment – pipes, roof, walls etc.
- Are there any inaccessible areas that are likely to contain asbestos.
- Determine the method of demolition or refurbishment required and how will it affect the asbestos.
- Determine if the asbestos is likely to be damaged or disturbed as a result of the demolition or refurbishment work – if yes, can it be removed safely before work commences.

Conduct Asbestos Management Survey

- When was the building built?
- Is there any existing information about asbestos in the building? Get any reports or plans relating to the building.

6. The building plans may not have any information about asbestos ask the building de- signer, the architect or builder who is familiar with such buildings of the era.

7. Develop a checklist – list places and materials that may contain asbestos (for example):

- corrugated roofing, tiles, 'slates', gutters, downpipes, walls and panels;
- insulation under the roof, on beams and wall sides;
- boards and panels, and any insulation between them;
- insulation around pipes, on boiler, storage heaters;
- decorative coatings on walls or ceilings;
- insulation around windows, building fabric;

- Hazardous waste
Develop a damaged items report that contains list of any damage to materials surfaces or equipment.

10. Standards

- IFC (2007) guidelines for asbestos-containing materials (ACM):1049
- The ILO Conference in Geneva (May 31-June 16, 2006), its resolution declares that the elimination of the future use of asbestos and the identification and proper management of asbestos currently in place are the most effective means to protect workers from asbestos exposure and to prevent future asbestos-related diseases and deaths. In Tajikistan, the Ministry of Education passed a special resolution prohibiting use of asbestos and asbestos nets in chemical and physical labs of secondary schools, vocational-technical schools and higher educational institutions twenty years ago already.¹¹⁵⁰
- Internationally recognized Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products (American Society for Testing and Materials [ASTM] E 2394).¹²⁵¹

11. Demolition, Removal and storage

- Estimate demolition time required and method to be used to demolish (mechanical, manual etc.)
- Prepare the plan for phased out removal of materials and temporary storage. Train workers on the removal and storage practices.

12. Company to prepare a list of Personnel protective Equipment required to be procured before demolition or repair.

13. Company shall prepare a layout plan based on the above surveys. How much disposal area (pit size) is required to safely dispose of asbestos removed?

14. Communication plan

15. The Contractor put up the layout plan clearly demarcating areas that contain asbestos. Colored and distinctive stickers on asbestos items indoors must be placed. The warning colors will be based on:

- Warning for the building contractor workers about pipe insulation, asbestos cement and the fire door panel that might be asbestos.
- Warning for the plumbers about the piping insulation and the asbestos insulating

10 International Finance Corporation. Environmental, Health, and Safety Guidelines, 2007.

http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/sustaina_bil-ity+framework/environmental%2C+health%2C+and+safety+guidelines/ehsguidelines

11 <http://news.tj/en/news/ilo-adopts-resolution-concerning-exposure-asbest>

12 ASTM International. ASTM E2394-11, Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products. West Conshohocken, PA, 2011. <http://www.astm.org/Standards/E2394.htm>. This standard describes work practices that protect worker and community health within the resources available in developing and industrialized countries. As much as possible it relies on readily-available tools, equipment, and supplies, and techniques that require careful and diligent workmanship but not the services of highly-skilled tradesmen. The standard is written for construction workers and tradesmen, for those involved in the preparation of contracts and tenders, and for government officials involved in developing regulations to protect worker and community health.

sheets on heating pipes in the building.

- Warn the electrician about the asbestos insulating board panel that the asbestos- containing switch box is screwed onto.

16. List type of personnel who can enter the area and wear what type of protection.

17. Put warning boards and parameter around the building so that hospital patients and outsiders do not enter the area or pick up any lose material in the area.

ANNEX 4 to EMP: General Guidelines for Health Care Waste (HCW) Management

Following are the requirements from the national guidelines and GIIP on medical waste management for type of facility. Each project facility should be designed and operated following these national guidelines.

A. Waste Classification and Segregation (in CESS, RHH, District clinic, POE)

Classification Tajikistan's sanitary norms establish five waste classes. **Class A** covers general non-hazardous waste (food scraps, packaging, cleaning debris), which constitutes 75–90% of all healthcare waste. **Class B** covers infectious waste, sharps, and pathological materials. **Class C** covers highly infectious waste from patients with especially dangerous infections or from high-pathogenicity laboratories. **Class D** covers pharmaceutical and chemical waste including expired drugs, cytotoxic, and mercury-containing devices. **Class D** covers radioactive waste from radiotherapy and laboratory procedures.

Segregation and Color Coding Segregation is the responsibility of the healthcare worker generating each waste item and must happen at the point of generation — never later. The system relies on mandatory color coding: black or white for Class A, yellow with a biohazard symbol for Class B, red with a biohazard symbol for Class C, any color except yellow or red for Class D, and lead-shielded containers with a radiation symbol for Class D. Mixing waste of different classes in the same container is strictly prohibited at all stages.

Containers and Labeling Each container or bag must be labeled with the facility name, date, time of sealing, and the name of the responsible person. Sharps must be collected in rigid puncture-resistant single-use containers and never recapped after use. All containers must be sealed when $\frac{3}{4}$ full — plastic bags by tying or tagged clasp, never by stapling. Spare containers must be available at every waste generation point.

Prohibited Actions and PPE Staff must never manually cut, destroy, or recap used sharps; manually compact waste; use soft packaging for sharps; or handle waste without full PPE (gloves, mask, closed footwear, and apron). All personnel working with waste, including cleaners, must be vaccinated against Hepatitis B and must be trained before handling any waste. Untrained persons are prohibited from participating in collection, storage, or transport.

B. On-site Storage Requirement

General Storage Requirements Every healthcare facility must designate a dedicated waste storage area that meets the requirements of the sanitary norms. The storage space must be included in building design for new construction, and its size must correspond to the volume of waste generated and the frequency of collection. The area must be fully enclosed, separated from food preparation and supply storage areas, and accessible only to authorized personnel. Adequate lighting and at least passive ventilation are mandatory.

Physical Standards Storage room floors must be impermeable with good drainage, walls must be covered with glazed ceramic tiles, and the ceiling must be painted with waterproof paint. The space must be easy to clean and disinfect. The entrance must be lockable to prevent unauthorized access, while remaining easily accessible to waste collection vehicles and authorized staff. Equipment for managing spills and leaks must be kept on site, along with a handwashing sink with running water and soap.

Storage Timeframes Infectious waste (Class B) must not be stored for more than 72 hours in winter or 48 hours in summer. Where refrigerated storage is available, infectious waste may be kept for over one week if maintained at 3–8°C. Highly infectious waste (Class C) must not be stored at all and should

be treated immediately at the point of generation. General waste (Class A) must be collected at least once per week, with food waste handled or refrigerated daily.

Class-Specific Storage Rules Hazardous and non-hazardous waste must always be stored separately. Pharmaceutical waste (Class D) must be stored apart from all other waste in accordance with the chemical characteristics of each substance — flammable, corrosive, and explosive materials require dedicated separate zones with appropriate ventilation and sealed flooring. Liquid chemical waste storage areas must have spill-containment trays. Radioactive waste (Class E) must be stored in lead-shielded containers, clearly labeled with the radionuclide type and date, and kept until radioactivity decays to safe levels — with shielding ensuring radiation outside the storage room does not exceed 2.5 $\mu\text{Sv}/\text{hour}$.

Cleanliness and Monitoring Storage areas must be cleaned at least once per week and disinfected regularly. All containers and trolleys used for waste must be washed and disinfected after each use. A responsible designated person must conduct daily monitoring of the storage area, ensure timely removal of waste, and maintain records of waste quantities for at least three years

C. Treatment Technology

General Principles Treatment technology selection must be based on local conditions and consider available resources and technical expertise.

Steam-Based Treatment (Autoclaving) Steam disinfection, typically performed by autoclave, is the preferred treatment method for infectious and sharps waste (Class B and C). It operates at low-to-medium temperatures of 100–180°C in a moist or dry thermal environment. To ensure complete deactivation of infectious materials, the process must be validated through certified and documented procedures. Validation requires regular biological, chemical, and physical testing. The process must achieve a 6-log reduction of vegetative bacteria, fungi, viruses, parasites, and mycobacteria, and a 4-log reduction of bacterial spores. Chemical indicators must be used for every treatment cycle to confirm effective disinfection, and results must be documented.

Incineration. Incineration is a high-temperature dry oxidation process operating at 850–1,100°C that converts organic and combustible waste into inorganic non-combustible residue, significantly reducing waste volume and weight. A two-chamber design is mandatory, with the primary chamber operating at a minimum of 850°C and the secondary chamber reaching 1,100–1,200°C to destroy chlorine-containing substances commonly found in medical waste such as PVC plastics. The secondary chamber must maintain a minimum air residence time of two seconds. In accordance with the Stockholm Convention, emissions of dioxins and furans must not exceed 0.1 ng toxic equivalents per cubic meter, which requires additional flue gas cleaning systems beyond the basic two-chamber design. Ash and residue from incineration must be treated as hazardous waste and disposed of at designated hazardous waste sites.

D. Transport and Disposal

Internal Transport Waste must follow fixed designated routes and scheduled collection times, avoiding patient care areas and clean zones. Separate elevators or staircases must be used where possible. Hazardous and non-hazardous waste must always be transported separately on dedicated color-coded trolleys — black for general waste, yellow for infectious waste, and separate containers for chemical and pharmaceutical waste. Trolleys must be labeled, used exclusively for their designated waste class, and cleaned and disinfected after every use. All transport personnel must wear full PPE at all times.

Trolley and Container Standards Trolleys must be easy to load, unload, and clean; free of sharp edges; fitted with drainage ports if enclosed; lockable when carrying hazardous waste; and appropriately sized for waste volumes. Waste must never be transported manually. Spare trolleys must be available for breakdowns, and vehicles must be cleaned and disinfected daily.

External Transport Waste transport companies must hold a valid license for the class of waste being carried, and all vehicles must display hazard signs on all sides. Vehicles must prevent spillage and odor, maintain cool temperatures, and be sealed against leaks. Waste must not be compacted during transit. Labels must remain firmly attached throughout. Refrigerated vehicles are recommended for infectious and sharps waste over long distances. A spill kit must be kept in the vehicle at all times, and drivers must be trained in hazardous waste transport.

Disposal of General and Infectious Waste General waste (Class A) must be collected daily and transported to an approved disposal site by municipal services or the facility itself. Deactivated infectious waste may be disposed of as general waste, accompanied by a deactivation certificate. Pathological waste must be buried in designated cemetery areas or placenta pits sited away from groundwater, or in a designated landfill zone that were covered immediately with soil.

Disposal of Sharps Even after deactivation, sharps retain physical injury and reuse risks. They may be disposed of in secure pits on facility grounds or encapsulated in cement before disposal. These methods apply only where manual handling is unavoidable and the general landfill is not adequately secured.

Disposal of Chemical, Pharmaceutical, and Radioactive Waste Chemical and radioactive waste must be handled exclusively by licensed specialized organizations under contract. Pharmaceutical waste must follow Ministry of Health Order No. 370, with controlled substances and cytotoxic drugs returned to the manufacturer where possible. Hazardous incineration ash must go to designated hazardous waste sites or be encapsulated. Radioactive waste must remain in shielded storage until decay reaches safe levels, after which all radioactive labeling must be removed before final disposal.

Prohibited Practices The following are strictly forbidden: burning waste in ordinary bins; overfilling containers; disposing of waste at unauthorized locations; salvaging materials from waste bins; and burying waste within health resort or treatment zones. All hazardous waste must be treated to eliminate hazardous properties before final disposal or sent to a designated hazardous waste landfill.

Appendix 2: IBAT MULTI SITE REPORT

Appendix 3: CONSULTATION DETAILS

A. Minutes of stakeholder / Public Consultation

1. Project: Integrated Regional Health Security Project

Key Stakeholder consultation meeting

Date: 28.01.2026, Wednesday **Time:** 8:30 to 9:00 am

Venue: Office of State Sanitary and Epidemiological Surveillance Service of the Ministry of Health. (MOHSPP building, 8th floor)

Participants:

Qurbonzoda Shamsiddin	Head of the State Sanitary and Epidemiological Surveillance Service
Akobirov Idibek	Director of the State Center for Sanitary and Epidemiological Expertise and Control in Transport and at Borders
Odinaev Salim	
Karimov Emomad	MOHSPP representatives

The meeting took place in the office of head of State SESS with participation of director for SES expertise and control in transport and borders where we have informed about the project components in the selected districts and POEs. Purpose of the TA consultants visit, required consultations with the SESS representatives at project districts level and communities interest groups in early stage of project planning and continued consultation in the process of project implementation were discussed. ADB safeguards policy requirements on social and environmental provisions were explained.

The head of State SESS who is overall in charge of the regional and central SESSs operations and management has showed gratitude to the project and expressed readiness in supporting the project because he is aware of the current conditions of deteriorated buildings, lack of laboratory testing equipment and transportation that causes difficulties in the operation and quality of the services provided by SESS institution at local and central levels.

The head and Mr. Akobirov, who manages control and services at border POEs, mentioned the almost non-existent existence of SESS services at the Points of Entry (POEs) due to the unavailability of buildings, laboratories and testing equipment. There were particular difficulties and shortages during the pandemic.

The head expressed that such projects would provide a valuable opportunity to improve the quality of SESS services, including building the capacity of specialists at local and central levels.

He fully supports the project and is ready to coordinate and collaborate at all stages of implementation. However, he also mentioned the lack of coordination, as, being the head of the State SESS, which is responsible for the overall operations and management of SESSs throughout the country, he has insufficient information about the project. He requested to include into the Project the central SESS office and laboratory in Dushanbe, as there are many shortfalls and difficulties due to a lack of laboratory testing equipment, despite the fact that many sampling and testing works are carried out through the central SESS.

Additional comments that the head of State Central SESS made were on the selecting locations of the SESS buildings in each district. He expressed that allocating SESS buildings in the territories of hospitals might be a good idea but we have to consider availability of land and territory within hospitals with feasibility of construction works without disturbance of the normal functionality of the hospital, there should be possibility of a separate access road to the SESS facilities, in the cases of closeness of the

existing SESS to the hospitals and other health services, consider development and establishment of new SESS on the existing location.

Another important note made by Mr. Qurbonzoda, was that the tuberculosis (TB) laboratory should not be integrated into the main SES facility. He provided a strong technical rationale based on Soviet-era practices and biosafety principles such as TB laboratories that require separate, isolated locations to ensure proper sanitary buffer zones. Historically, TB laboratories have operated separate, dedicated facilities. Continued separation is necessary to meet infection prevention and control standards. Regulations and requirements about TB laboratory testing and treatment and the level of separation and/or integration with other health services and facilities, should be further studies. This recommendation will be incorporated into the facility design considerations to ensure appropriate functional separation and biosafety compliance. including TB tests services in line with other laboratories tests within the SESS facilities.



Discussion process with the Head of State SESS and Director of SESS Expertise and Control in transport and at borders

2. Stakeholder consultation meeting with the SESS representatives from the project districts and central offices

Date: 28.01.2026, Wednesday **Time:** 9:00 to 12 am

Venue: Office of State Sanitary and Epidemiological Surveillance Service of the Ministry of Health. (MOHSPP building, 8th floor)

Participants:

- Head of the State Sanitary and Epidemiological Surveillance Service
- Director of the State Center for Sanitary and Epidemiological Expertise and Control in Transport and at Borders
- Heads of the 18 project districts Sanitary and Epidemiological Surveillance Service
- MOHSPP representatives

The project stakeholder consultation aimed to share information on the project's objectives, planned interventions, construction work, capacity-building programs, outcomes, environmental and social safeguards requirements, and the receipt and resolution of community appeals and grievances. The discussion was very open, with participants showing a high level of interest in the safeguards requirements, which they considered to be as important as other project deliverables, such as quality control of construction and supply works.

The consultation achieved its aim of increasing the main project stakeholders' awareness of the procedures and requirements of the ADB safeguards policy, particularly the avoidance and, if not possible, the mitigation of the project's negative social and environmental impact, the disclosure of project information to communities, the involvement of communities in project implementation and the work with contractors to hire skilled and unskilled laborers from the local labor market.

GRM procedure was one of the main discussion topics and envisaged GRM procedures and reporting was discussed. It is a bit early on establishment of the GRM as there is no PAG established for the project at this stage, but the districts SESSs representatives' views were collected about GRC representation at the project sites level, involvement of other relevant government institutions in the GRC.

The head of State Sanitary and Epidemiological Surveillance Service - Mr. Shamsiddin Qurbonzoda opened the meeting and provided general information on the overall issues, difficulties faced by the districts and border services offices. Expressed gratitude and support for the project initiatives and confirmed the high relevancy and importance of the project intervention.

Social and environmental consultants discussed objectives of the consultation meeting and urged the participants to feel comfortable to raise any concerns, issues and any required additional information about the project. The main objectives of consultations were to

- disseminate information to the stakeholders about the Project in terms of its activities and the scope of the works
- understand the views and perceptions of the participants with reference to safeguards requirements.
- discuss on the issues and special requirements if there is any public institution, community property other private facility in the vicinity of the project allocated lands that could be affected (directly and/or indirectly) by the project.
- examine the participants opinions on health safety issues during the construction period and on potential areas of concern such as the handling of construction waste and other pollution issues.
- identify levels and extent of community participation in Project implementation and monitoring
- establish an understanding for identification of overall developmental goals and benefits of the Project
- disclosure process of the project information to other government, non-government and public private sector stakeholders.
- discuss grievance redress mechanisms, how effectively and efficiently the GRM could be functional in the implementation phase, etc.

Dr. Salim provided overall information about the project, planned activities mainly on construction, equipment and supply, machinery support and other skills and capacity development initiatives of the project.

Social and Environmental Aspects and Policy Framework

The TA consultants explained to the audience the social and environmental aspects of the Project during the construction and operation phases. The potential effects to the local population and the environment were discussed.

Policy Framework of the Project in line with local laws, the Constitution of the Republic of Tajikistan and ADB's safeguards policy was explained to participants. As environmental and social safeguards are a cornerstone of ADB's support to inclusive economic growth and environmentally sustainable growth, ADB's safeguard policy aims to manage and reduce the environmental and social risks in development projects and minimize and mitigate, if not avoid, adverse project impacts on people and the environment. The Safeguards Policy applies to all ADB-supported projects. ADB works with borrowers to put policy principles and requirements into practice through project review and supervision, and capacity development support. The Safeguards Policy also provides a platform for participation by affected people and other stakeholders in project design and implementation. The suggested mitigation measures to the foreseen impacts were discussed.

Grievance Redress Mechanism

Although it is an early stage of project preparation, the PAG for the project has not been established, GRM as a reviewing and resolving communities and other stakeholders' issues and concerns was introduced to the participants. Envisaged steps to address the complaints of the local population were

explained to the meeting participants in line with the drafted Grievance Redress Mechanism (GRM). Consultants accentuated the attention of the audience on the necessity of the creation of the Grievance Redress Committee that will be functioning within the project with a representation and a focal person in each project site for receipt, registration and further processing of the appeals and grievances cases. Participants suggested that it will be rationale to have the SESS representatives for collecting and further processing of the grievances and appeals. Jamoat office and other communities' representatives (villages leaders) shall be important members of the GRC as well. The contractor also should have a person who will be closely involved in the resolution process and decision making of the appeals cases.

Questions and discussions

The consultation meeting participants were actively involved in the discussion. Questions and comments revolved around details of the project activities, including schedule of construction activities, supervision over the quality of construction works, and required land documentations. Responses and clarifications were provided to the questions and concerns raised by participants. They were also informed that the TA consultants will develop social and environmental impact assessment report based on the information collected during these kinds of discussions and site reconnaissance visits. The project information will be disclosed at local level, and it will be duly consulted throughout all the process and the project stages throughout of preparation, implementation and completion.

Key Stakeholders Consultation process photos



Consultation process with the heads of districts SESSs and POEs of all project intervention sites.

B. Wider Stakeholder Consultation Meetings in the Project Districts

Overview

The project stakeholder consultation was designed to share information on the project aim with planned interventions, construction works, capacity building programs and outcomes. Information on ADB environmental and social safeguards requirements were explained in more details and message was given that the safeguards requirements to be equally considered as other project deliverables such as quality control of the construction and supply works.

In accordance with the Asian Development Bank's Safeguard Policy Statement (ADB SPS, 2009), stakeholder consultation meetings were conducted during the project preparation stage to ensure meaningful consultation with affected people and other stakeholders. The objectives of the consultations were to (i) inform stakeholders about the proposed project activities and implementation schedule; (ii) disclose potential environmental and social impacts and associated risks during construction and operation; (iii) introduce the project Grievance Redress Mechanism (GRM); and (iv) collect feedback, concerns, and suggestions from stakeholders.

The consultation achieved its aim of increased level of informativity of the project stakeholders and communities about procedures and requirements of the ADB safeguards policy, especially avoidance, (if not possible) mitigation of social and environmental negative impact of the project, disclosure of the project information to the communities, involve communities in the project implementation, work with contractor on hiring skilled and unskilled labor from the locally available laborers, etc.

GRM procedure was one of the main discussion topics and envisaged GRM procedures and reporting was discussed. ADB SPS 2009 requires establishment of the GRM at early stage of project, hence with the establishment of PAG for the project, GRCs will be active to provide a platform for the communities and project workers to file their appeals and issues through GRM. At this stage, districts SESSs representatives and communities' views were collected about GRC representation at the project sites level and involvement of other relevant government institutions in the GRC.

The main objectives of consultations were to

- disseminate information to the stakeholders about the Project in terms of its activities and the scope of the works
- understand the views and perceptions of the participants with reference to safeguards requirements.
- discuss on the issues and special requirements to be considered in the construction process if there is any public institution, community property other private facility that could be affected (directly and/or indirectly) by the project.
- examine the participants opinions on health safety issues during the construction period and on potential areas of concern such as the handling of construction waste and other pollution and noise issues.
- identify levels and extent of community participation in Project implementation and monitoring
- establish an understanding for identification of overall developmental goals and benefits of the Project
- disclosure of the project information to other government, and public private sector and communities.
- discuss grievance redress mechanisms, how effectively and efficiently the GRM could be functional in the implementation phase, etc.

Social and Environmental Aspects and Policy Framework

The TA consultants explained to the audience the social and environmental aspects of the Project during the construction and operation phases. The potential effects to the local population and the environment were discussed. As environmental and social safeguards are a cornerstone of ADB's support to inclusive economic growth and environmentally sustainable growth, ADB's safeguard policy aims to manage and reduce the environmental and social risks in development projects and minimize and mitigate, if not avoid, adverse project impacts on people and the environment. The Safeguards Policy applies to all ADB-supported projects. ADB works with borrowers to put policy principles and requirements into practice through project review and supervision, and capacity development support. The Safeguards Policy also provides a platform for participation by affected people and other stakeholders in project design and implementation. The suggested mitigation measures to the foreseen impacts were discussed.

Grievance Redress Mechanism

Although it is an early stage of project preparation, the PAG for the project has not been established, GRM as a reviewing and resolving communities and other stakeholders' issues and concerns was introduced to the participants. Information on ways and steps to address the complaints of the local population were explained to the meeting participants in line with the drafted Grievance Redress Mechanism (GRM). Consultants accentuated the attention of the audience on the necessity of the creation of the Grievance Redress Committee that will be functioning within the project with a representation and a focal person in each project site for receipt, registration and further processing of the appeals and grievance cases. Participants suggested that it will be rationale to have the SESS representatives for collecting and further processing of the grievances and appeals. Jamoat office and other communities' representatives (villages leaders) shall be important members of the GRC as well. The contractor also should have a person who will be closely involved in the resolution process and decision making of the appeals cases.

Questions and discussions

The consultation meeting participants were actively involved in the discussion. Questions and comments revolved around details of the project activities, including schedule of construction activities, supervision over the quality of construction works, involvement of SESS specialist in the design of the internal communication and rooms of different designation within the building, etc.

Responses and clarifications were provided to the questions and concerns raised by participants. They were also informed that the TA consultants will develop social and environmental impact assessment report based on the collected information in the process of such consultation meetings and sites reconnaissance visits, which shall support the project in any relevant issue in early stage of the project and propose mitigation measures.

The project information will be disclosed at local level and stakeholders and communities will be duly consulted throughout all the process and the project stages throughout of preparation, implementation and completion. In General, the social and environmental consultants provided similar information in the process of the community meaningful consultations in all project districts as per the social and environmental thematic concerns and requirements.

C. Information on the Communities/Stakeholders Consultation Meetings

Baljuvon district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation
Planned and organized by	Zikirov Zikrullo – Head of SESS of Baljuvon district Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	Office of the head of SESS in Baljuvon District
Date	4 February 2026
Time	From 10:30 to 12:30
Participants	13 attendants (3 female, 10 male)
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of SESS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	<ul style="list-style-type: none"> ▪ Overall brief information about the project – aims, objectives, activities. ▪ Brief Introduction to the ADB social and environmental safeguards policy requirements ▪ Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts. ▪ Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence. ▪ Introducing environmental protection and impact mitigation approach. ▪ Introduction to the Grievance Redress Mechanism ▪ Others, Question and Answers Session.

Photos of the Consultation Process



Discussions/Comments by attending representatives

Stakeholders reported that the existing SES building, constructed in the 1990s, is in poor condition and does not comply with current sanitary standards. Participants emphasized that the new facility design should include auxiliary premises, such as storage areas for chlorine and other hazardous substances, as well as a garage. Community representatives proposed prioritizing the employment of local labor during construction. Additional concerns included ensuring adequate access for vehicles and heavy equipment and arranging a temporary facility to maintain uninterrupted SES operations during construction. Sensitive receptors in the vicinity include residential areas, district central road and government facilities. The demolition of the existing building and the presence of asbestos-containing materials were identified as issues requiring careful management.

Questions and Remarks from attendees

Answers by TA Consultants

Concerns about period of the construction works, start and duration?

The project requires adequate amount of time and procedures before the commencement. All the preparation, design works, tender process, resource allocation require time. Once all works accomplished as per required procedures the project will start construction. It might be approximately by quarter 4 of this year or next year.

Will there be any controlling party to ensure the quality and usability of the project inputs such as construction works, testing equipment and other materials?

The project will establish a project management unit under the MOHSPP and most probably there will be PSC who will have required personal to control over the contractor works and supplies. You are also always in the project location and the primary user of the facilities and equipment and can be involved in the design, quality control and other project inputs works.

Khovaling district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation
Planned and organized by	Mirzosharifov Manuchehr – Head of SESS of Khovaling district Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	Office of the head of SESS in Khovaling District
Date	4 February 2026
Time	From 14:30 to 16:30
Participants	22 Attendants (6 Female, 16 Male)
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of SESS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	<ul style="list-style-type: none"> ▪ Overall brief information about the project – aims, objectives, activities. ▪ Brief Introduction to the ADB social and environmental safeguards policy requirements ▪ Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts. ▪ Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence. ▪ Introducing environmental protection and impact mitigation approach. ▪ Introduction to the Grievance Redress Mechanism ▪ Others, Question and Answers Session.

Photos of the Consultation Process



Discussions/Comments by attending representatives

In the process of discussion SES staff and local stakeholders highlighted the importance of functional and needs-based design of the new SES facility. It was recommended that designers closely coordinate with medical personnel to ensure appropriate laboratory layouts, adequate ventilation systems, and measures to prevent cross-contamination. Sensitive receptors around the proposed site include residential areas and government buildings. No demolition works or asbestos-related issues were identified. There was not any other major issue and/or concern raised by the participants.

Questions and Remarks from attendees

A comment was made by the SESS specialist about interior design of the rooms and laboratories spaces in the new building and requested to involve local specialists in

Answers by TA Consultants

SESS specialists were encouraged to get involved in the process of the project implementation and review design when the specialists arrive in their district to allocate the building and design laboratories and administrative rooms

the design process. Because sometimes it happens that rooms within buildings are not sufficiently spaced to accommodate equipment and working space and sometimes too wide and there is useless area in the rooms

within the building. If there is any question and/or concern they have to raise it and get more information about the structural design. Also, the laboratory will be designed by specialized engineer and specialists, who will consider the equipment and machinery to be placed in the building. It is always good to get information from the project specialists and comment, raise ideas and concerns as they are the one who will use the project facilities.

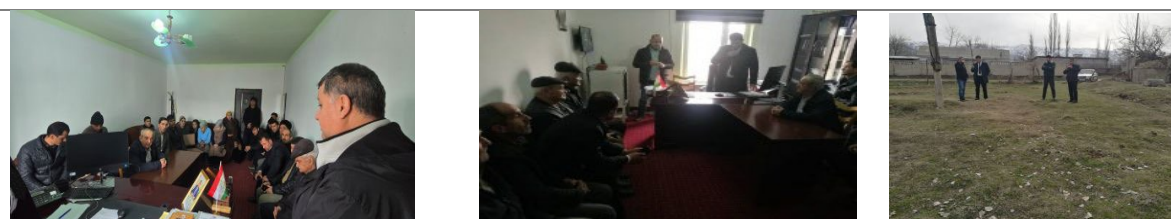
Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works

The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives to your place, get as much information as possible and suggest all your needs and requirement to the design team.

Muminobod district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation
Planned and organized by	Yusupov Jobirkhon – Head of SESS of Muminobod district Sirojov Abdullo – Head of Darai Havash village, jamoat Tutiyon Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	Office of the head of SESS in Muminobod District Darai Havash village, Tutiyon jamoat, Muminobod District
Date	5 February 2026
Time	From 09:30 to 12:30 in Muminobod town From 14:00 to 15:30 in Darai Havash village, Tutiyon jamoat, Muminobod
Participants	24 Attendants (6 Female, 16 Male) in Muminobod town 6 Attendants (2 Female, 4 Male) in Darai Havash village, Muminobod
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of SESS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	<ul style="list-style-type: none"> ▪ Overall brief information about the project – aims, objectives, activities. ▪ Brief Introduction to the ADB social and environmental safeguards policy requirements ▪ Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts. ▪ Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence. ▪ Introducing environmental protection and impact mitigation approach. ▪ Introduction to the Grievance Redress Mechanism ▪ Others, Question and Answers Session.

Photos of the Consultation Process with the SESS and Community in Muminobod town



Photos of the Consultation Process with the Community and jamoat representatives in Darai Havash village, jamoat Tutiyon of Muminobod district (location of Rural Health House (RHH))



Discussions/Comments by attending representatives during consultation in the SESS location

Stakeholders discussed potential alternative sites and noted that the existing SES building was constructed in the 1980s. Participants raised concerns regarding inadequate medical waste management, particularly the absence of a proper incineration facility, and emphasized the need to improve waste handling practices under the project. An alternative construction site with a larger land area was proposed; however, this site is currently occupied by an operational SES facility, limiting its immediate feasibility. The surrounding area includes residential neighborhoods and government facilities. No demolition activities or asbestos-containing materials were reported for the proposed site.

Discussions/Comments by attending representatives during consultation in the RHH location

Consultations in Darai Havosh Village were conducted on 5 February 2026 regarding the proposed construction of a Rural Health House. Safeguards team expressed concerns about the suitability of the selected site, noting its proximity to a mudflow stream, ongoing soil erosion, and gully formation. The site was also considered difficult to access for the local population. Selected site is very close to the residential plots of neighboring villagers that increases risk of entering to the neighboring lands (although those are empty lands with no solid structures). This could raise community members quarrel misunderstandings with the construction workers. Territory is near to the livestock shelters and not very pleasant and adequate sanitation. Safeguards team recommended selecting an alternative site that is safer and more accessible to ensure long-term sustainability of the facility and easier accessibility. Village has other alternative locations that could accommodate the facility without any impact to other lands.

Hamadoni district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation
Planned and organized by	Murodzoda Murodbek Head of KATS of Hamadoni district Zaituna – Gender Integration Consultant, TA Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	District Health Center (DHC) of Hamadoni district Hayoti Naw village of Hamadoni district Bahoriston village of Hamadoni district Pakhtaobod village of Hamadoni district
Date	6 February 2026
Time	From 09:00 to 9:30 in Central DHC of Hamadoni district From 10:00 to 11:30 in Hayoti Naw village, Hamadoni district From 13:00 to 14:00 in Bahoriston village of Hamadoni district From 14:30 to 16:00 in Pakhtaobod village of Hamadoni district
Participants	8 Attendants (2 Female, 6 Male)
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of KATS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	

- Overall brief information about the project – aims, objectives, activities.
- Brief Introduction to the ADB social and environmental safeguards policy requirements
- Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts.
- Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence.
- Introducing environmental protection and impact mitigation approach.
- Introduction to the Grievance Redress Mechanism
- Others, Question and Answers Session.

Photos of the Consultation Process with the KATS representative in Hayoti Naw (location of Village Health Center (VHC))



Photos of the Consultation Process in Bahoriston village Rural Health House location



Photos of the Consultation Process in Pakhtaobod village Rural Health House location



Discussions/Comments by attending representatives during consultation in the VHC location

It was identified by safeguards team that the currently selected site already hosts an operational village health center in good working condition. The site was reported to have sufficient land area to accommodate additional facilities if required in the future. No significant environmental or social concerns were raised during the consultation.

Discussions/Comments by attending representatives during consultation in the RHH location

A consultation meeting was conducted on 6 February 2026 in Boghiston Village. Stakeholders supported the proposed site, noting that it has sufficient land area, appropriate documentation, and good accessibility for the population. The site is located near a secondary school (in approximate 700 meters) and was considered suitable for service delivery. Head of current RHH highlighted the lack of a permanent rural health facility in the village, as current services are provided from a small, rented premise. The proposed construction was therefore strongly supported. The school representative – head teacher and village leader were requested to control construction works, movement of heavy machinery at the periods of children going and coming back from the school. Head teacher was requested to inform children about safety measures and not entering construction territory, use opposite road side while working in the area during the school assemblies with children.

Discussions/Comments by attending representatives during consultation in the RHH location

Consultations in Pakhtaobod Village were held on 6 February 2026. Stakeholders confirmed that the selected site meets all technical, environmental, and social requirements. The site has sufficient land area, proper documentation, and good access for the local population. No concerns or objections were raised during the meeting. In this location similarly middle school is located in the vicinity of the project site. Teacher and the head feldsher were asked to raise safety concerns and carefulness of children, not enter to the construction site, etc.

Rasht district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation
Planned and organized by	Homidov Khushnud – Head of SESS of Rasht district Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	Office of the head of SESS in Rasht District
Date	9 February 2026
Time	From 12:30 to 14:30
Participants	14 Attendants (2 Female, 12 Male)
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of SESS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	<ul style="list-style-type: none"> ▪ Overall brief information about the project – aims, objectives, activities. ▪ Brief Introduction to the ADB social and environmental safeguards policy requirements ▪ Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts. ▪ Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence. ▪ Introducing environmental protection and impact mitigation approach. ▪ Introduction to the Grievance Redress Mechanism ▪ Others, Question and Answers Session.

Photos of the Consultation Process



Discussions/Comments by attending representatives

The consultation meeting in Rasht District brought together local government representatives, community leaders, and Jamoat workers to discuss the proposed construction of the Sanitary and Epidemiological Station (SES) facility. The meeting was characterized by strong community support and active participation from local authorities, demonstrating effective stakeholder engagement at the early stage of project preparation.

The consultation meeting generated full support from all participants, including Mahalla leaders and Jamoat workers, for the construction of the new SES building. Participants acknowledged the critical need for modern health infrastructure in the district and expressed their commitment to facilitating the project implementation. Community leaders offered to assist in coordinating with local residents during the construction phase to minimize disruptions and ensure smooth project delivery. Land allocation and current status of SESS. The allocated land area for the Rasht District SES facility measures 0.17 hectares. The site currently contains several obsolete buildings dating from the 1950s, which are no longer functional and do not meet modern health facility standards. These existing structures will require demolition prior to the construction of the new facility.

Facility operations. The current SES facility serves both Gharm city and the broader Rasht district, with 25 full-time employees providing essential public health services to the population. The existing operational capacity highlights the importance of upgrading infrastructure to support the growing service delivery demands.

Infrastructure Considerations: Centralized sewage pipeline located approximately 5 meters from the land plot, facilitating connection to municipal wastewater infrastructure

Access road challenges: The current two-lane access road is frequently used by local shop customers and residents for parking, which may create logistical difficulties for heavy construction vehicles and material delivery. Even current situation is observed being not regulated and there are many difficulties for movement. Situation will require regulated traffic movement on the access road by identifying other parking area. Road signs do not allow for parking on this road but requirements are not obeyed.

Questions and Remarks from attendees	Answers by TA Consultants
Soonest start of construction works	The project requires adequate amount of time and procedures before the commencement. All the preparation, design works, tender process, resource allocation require time. Once all works accomplished as per required procedures the project will start construction. It might be approximately by quarter 4 of this year or next year.
Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works	The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives to your place, get as much information as possible and suggest all your needs and requirement to the design team.
The Head of Jamoat raised a practical question regarding the availability of detailed information about the building layout and its specific location within the allocated land plot. She inquired whether the architectural design and site positioning had already been finalized, reflecting the community's interest in understanding the concrete plans for the facility.	Project representatives explained that while the land allocation has been confirmed, the detailed architectural drawings, building layout, and precise positioning within the plot will be developed during the project implementation phase. This approach allows for technical refinement based on site-specific assessments and stakeholder input gathered during the consultation process.

Tojikobod district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation
Planned and organized by	Mirzomuddinova Nigora – Head of SESS of Tojikobod district Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	Office of the head of SESS in Tojikobod District
Date	11 February 2026
Time	From 9:30 to 11:30
Participants	11 Attendants (2 Female, 9 Male)
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of SESS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	<ul style="list-style-type: none"> ▪ Overall brief information about the project – aims, objectives, activities. ▪ Brief Introduction to the ADB social and environmental safeguards policy requirements ▪ Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts.

- Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence.
- Introducing environmental protection and impact mitigation approach.
- Introduction to the Grievance Redress Mechanism
- Others, Question and Answers Session.

Photos of the Consultation Process



Discussions/Comments by attending representatives

The consultation meeting in Tojikobod District involved direct engagement with SES laboratory staff and health workers who provided valuable technical insights based on their operational experience. The meeting demonstrated strong buy-in from facility staff who will be the primary users and beneficiaries of the improved infrastructure.

The Head of Laboratory expressed full and enthusiastic support for the construction of the new SES building. Staff members emphasized that the currently used temporary wooden sheds are no longer suitable for laboratory operations, lack proper biosafety features, and do not meet minimum infrastructure standards for public health facilities. They highlighted the urgent need for modernized purpose-built laboratory space to effectively conduct disease surveillance and testing activities.

Land Allocation and Current Infrastructure: The allocated land area for the SES is 0.10 hectares. Despite the limited area, the site is strategically located in close proximity to the district hospital and polyclinic, facilitating coordination and sample referral between health facilities.

Current Facility Conditions: The existing SES facility operates from two mobile wooden containers, which represent highly substandard and temporary infrastructure. Both structures lack proper insulation, sanitation, climate control, and biosafety features. The temporary nature of these facilities severely limits operational capacity and poses occupational health risks to staff.

Waste Management Practices: Medical waste is currently managed through burning in a self-made furnace, which lacks emission controls, operator safety features, and compliance with waste management standards. This practice poses environmental and health risks and requires immediate improvement under the project.

Infrastructure Requirements: The consultation confirmed the critical need to transition from temporary, makeshift facilities to a permanent, properly designed SES building that meets modern public health laboratory standards and provides a safe working environment for health personnel.

Questions and Remarks from attendees

SES workers raised a critical technical question regarding the building layout and design, specifically requesting that the facility design incorporate measures to avoid cross-contamination between clean and contaminated areas. This reflects professional awareness of biosafety principles and the importance of proper laboratory zoning.

Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works

Answers by TA Consultants

The project team acknowledged this essential requirement and confirmed that the facility design will adhere to national and international biosafety standards, including:

- Functional separation of clean and dirty zones
- Unidirectional workflow to minimize contamination risks
- Appropriate ventilation and air pressure differentials
- Designated waste handling and decontamination areas
- Proper laboratory layout to ensure staff safety and sample integrity

The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives to your place, get as much information as possible and suggest all your needs and requirement to the design team.

Tursunzoda district

Project	Integrated Regional Health Security Project
Subject	Key Stakeholder / Community Meaningful Consultation

Planned and organized by	Saidzoda Mizrob – Head of SESS of Tursunzoda district Faizullo Kudratov – Social Safeguards Consultant, TA, Davron Isaev – Environmental Safeguards Consultant, TA
Venue	Office of the head of SESS in Tursunzoda district
Date	11 February 2026
Time	From 12:30 to 14:30
Participants	11 Attendants (2 Female, 9 Male)
Opening Remarks	<ul style="list-style-type: none"> ▪ Head of SESS - Introduction of inviting persons to attendees ▪ Consultants - Purpose of the public consultation and participation. ▪ Agenda.
Information Provision/Presentations	<ul style="list-style-type: none"> ▪ Overall brief information about the project – aims, objectives, activities. ▪ Brief Introduction to the ADB social and environmental safeguards policy requirements ▪ Explaining whether adverse social and negative environmental impacts are expected and the types and scale of such potential impacts. ▪ Introducing compensation approach in the cases of unanticipated and/or temporary impact occurrence. ▪ Introducing environmental protection and impact mitigation approach. ▪ Introduction to the Grievance Redress Mechanism ▪ Others, Question and Answers Session.

Photos of the Consultation Process



Discussions/Comments by attending representatives

The consultation meeting featured substantive technical discussions with the Head of SES and facility staff, who demonstrated detailed knowledge of operational requirements and provided specific recommendations for facility design and project implementation approach. The meeting reflected strong institutional engagement and professional expertise among participants.

Proposals and Recommendations from Participants

1 Adherence to Sanitation and Safety Standards: The Head of SES emphasized the critical importance of ensuring that the building layout meets all relevant national and international standards for sanitation and safety, with particular focus on avoiding cross-contamination between different functional zones of the laboratory.

2 Exclusion of Tuberculosis Laboratory: SES staff proposed that the tuberculosis (TB) laboratory should not be integrated into the main SES facility. They provided a strong technical rationale based on Soviet-era practices and biosafety principles:

- TB laboratories require separate, isolated locations to ensure proper sanitary buffer zones
- Integration of TB testing within general SES facilities could compromise biosafety
- Historically, TB laboratories have operated in separate, dedicated facilities
- Continued separation is necessary to meet infection prevention and control standards

This recommendation will be incorporated into the facility design considerations to ensure appropriate functional separation and biosafety compliance.

3 Training on New Equipment: SES workers proposed that upon completion of the new building and installation of modern laboratory equipment, all facility staff must receive comprehensive training on the operation, maintenance, and safety protocols for the new diagnostic instruments and systems.

This reflects awareness of the capacity-building requirements for effective technology transfer and sustainable operations.

4 Phased Construction Approach: The Head of SES proposed a pragmatic implementation strategy to ensure continuity of services:

- The existing SES building should remain operational throughout the construction period
- The new facility should be constructed and fully equipped first
- Only after the new building is ready for occupancy should the old building be demolished
- The allocated land area is sufficient to accommodate both structures simultaneously during the transition period. This phased approach would prevent service interruptions, maintain disease surveillance capacity during construction, and ensure a smooth transition for staff and operations.

Baseline Site Information

Land Allocation and Current Facility: The allocated land area for SES is 0.44 hectares, providing sufficient space for the proposed phased construction approach. The existing facility, constructed in the 1960s, is a single-story carcass building in very poor condition that requires constant renovation and maintenance. Despite its deteriorated state, the building continues to serve both Tursunzoda city and the broader district.

Facility Operations: The current SES facility employs 43 full-time staff members, making it one of the larger facilities among those assessed. The substantial workforce underscores the importance of maintaining uninterrupted service delivery during the construction and transition period.

Environmental and Social Baseline:

Sensitive Receptors:

- Asbestos-containing materials (ACM) present in the existing building roofing
- Adjacent residential houses and populated areas
- Centralized sewage system located in close proximity to the site, enabling connection to municipal wastewater infrastructure

Waste Management Practices:

Medical waste is currently managed through burning in a Soviet-era incinerator that is in very poor condition. The outdated equipment lacks modern emission controls, safety features, and operational reliability. Urgent improvement of waste management practices is required under the project to meet environmental and occupational health standards.

Infrastructure Condition:

The 1960s-era building suffers from structural deterioration, inadequate ventilation, poor insulation, and obsolete utility systems. The facility's poor physical condition compromises both service quality and staff working conditions, reinforcing the urgent need for replacement infrastructure that meets contemporary health facility standards.

Questions and Remarks from attendees	Answers by TA Consultants
<p>Participants raised an important planning question regarding whether the building design will be standardized across all districts or tailored to address local specifics and operational requirements in each target district.</p>	<p>Project representatives acknowledged that this design decision has not yet been finalized and will be determined during the detailed assessment and architectural design phase. The response indicated that the design approach will balance standardization for efficiency and cost-effectiveness with site-specific adaptations to address local conditions, service demands, and available land area.</p>
<p>Concerns were raised for the need of other required secondary structures such as barns, garages, fencing and overall SESS territory improvement works</p>	<p>The project design of the facilities, main and secondary structures and area improvement works is not known by us at this stage. However, your concerns will be mentioned in our reports for concerned specialists to review and consider. When the design and engineering team arrives to your place, get as much information as possible and suggest all your needs and requirement to the design team.</p>

Appendix 4: SAMPLE OUTLINE OF A SEMI-ANNUAL ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Following the requirements of the ADB Safeguard Policy Statement (2009)¹³ and the Operations Manual section on safeguard policy¹⁴ (OM F1), borrowers/clients are required to establish and maintain procedures to monitor the status of implementation of safeguard plans and ensure progress is made toward the desired outcomes.

The following is a suggested report structure:

A. Executive Summary

This section describes concisely the key information / facts of project progress and EMP compliance status, significant findings, and recommended actions and next steps.

B. Introduction

- (i) Report purpose
- (ii) Report content

C. Project Introduction and Implementation Status

- (i) Location / scale/size/capacity
- (ii) Reporting period covered by this monitoring report (month/year)
- (iii) Description of project implementation status (design, construction, operation, or closure stage)
- (iv) Key developments and any major changes in project location and design, if any

D. Relevant Environmental Permits / approvals or Compliance Certificates Issued by government agency(ies) (include name of agency), Issuance dates and duration of validity, Permit conditions and renewal requirements, Other relevant standards and/or certificates (e.g., ISO 14000 Environmental Management Systems and Standards)

E. Compliance with Applicable Environmental Safeguard Requirements

Implementation of EMP (citing changes in the EMP, where warranted) at construction or operation phase, focusing on mitigation measures and monitoring program. Attach copies of monitoring reports. If standards or thresholds are exceeded, specify the corrective actions implemented or to be implemented.

- (i) Institutional arrangements
- (ii) Status of environmental requirements in bidding documents / works contracts
- (iii) Compliance status/implementation of the project mitigation measures
- (iv) Implementation of the project monitoring program
- (v) Environmental compliance with national requirements
 - a. Compliance with national standard requirement
 - Waste generation
 - Soil pollution
 - Air pollution
 - Noise pollution
 - Occupational safety and hygiene
 - Inspection on compliance with national requirements
 - b. Compliance with ADB requirements

13 <https://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf>

14 <https://www.adb.org/sites/default/files/institutional-document/31483/om-f1.pdf>

- Information disclosure and public consultations
 - Grievance redress mechanism
 - Training and capacity building
 - Compliance to grant and project assurances
- c. C&D and ACM assessment report
- (vi) Cost incurred of EMP implementation during the reporting period
- (vii) Compliance to environment-related grant covenants
- (viii) Issues for follow-up/pending corrective actions
- F. Grievance Redress Mechanism**
- (i) Date established and description of organizational arrangements
- (ii) Complaints, grievance, or protests received from local communities, recorded dates and organizations involved, actions taken to resolve grievances; any outstanding issues and proposed measures for resolution
- G. Occupational and Community Health and Safety**
- (i) Training programs carried out
- (ii) Incidents¹⁵ recorded, including date, scale of damage and injury¹⁶, if any; authorities in charge of investigation/recording, and media or community reactions, if any; action taken to respond to the incident; and any outstanding issues and proposed measures
- (iii) Other health and safety events or out-reach activities
- H. Environmental Management Capacity Building and Training Arrangements**
- (i) Number of staff, qualifications, and experience in environmental management
- (ii) Awareness of: (i) environmental issues, (ii) health and safety, (iii) national environmental laws and regulations, and (iv) applicable ADB's environmental safeguard requirements
- (iii) Training programs carried out
- (iv) Assessment of environmental management capacity needs (including planned capacity building programs)
- I. Social Safeguards Requirements**
- (i) Update on the status of land allocation for the project construction, the land ownership, and any unforeseen risks and/or encroachments occurred during the project implementation.
- (ii) Update on mitigation measures to address temporary impact, such as limited access to utilities and resources, any temporary impact on livelihoods of local communities, and private enterprises.
- J. Information Disclosure and Stakeholder Engagement**
- (i) Details of information disclosure and consultations, if any, with affected people, local communities, civil society groups, and other stakeholders
- (ii) Details of approach/methodology on addressing the concerns and issues raised at consultations

¹⁵ Including incidents that have caused damage on the environment or to human health, and/or attracted attention of outside parties (e.g., fire, explosion, chemical or oil spill, and pollution release).

¹⁶ Including fatalities, serious injuries (requiring emergency treatment or hospitalization), lost time accidents (requiring more than one day off work to recover), and incidents involving compensation claims.

K. Conclusion

- (i) Overall compliance of subprojects/components
- (ii) Key achievements
- (iii) Key problems/open or pending issues
- (iv) Solution
- (v) Lessons learned
- (vi) Follow-up actions/next steps

Support materials to be attached include:

- Matrix indicating compliance with environmental related requirements and clauses
- Construction and demolition waste report
- ACM report
- Photos of construction activities/monitoring/site visits/training and public consultations
- Grievance logs and other related documentation
- Environmental monitoring reports and certificates/others