



Appraisal Environmental and Social Review Summary

Appraisal Stage

(ESRS Appraisal Stage)

Date Prepared/Updated: 09/28/2023 | Report No: ESRSA03018



I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P177467	Investment Project Financing (IPF)	Kyrgyz Air Quality Improvement Project	2024
Operation Name	Kyrgyz Republic Air Quality Improvement Project		
Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
Kyrgyz Republic	Kyrgyz Republic	EUROPE AND CENTRAL ASIA	Environment, Natural Resources & the Blue Economy
Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
Kyrgyz Republic	Ministry of Natural Resource , Ecology and Technical Supervision	06-Oct-2023	29-Nov-2023
Estimated Decision Review Date	Total Project Cost		
07-Sep-2023	50,000,000.00		

Public Disclosure

Proposed Development Objective

The Project Development Objective is to i) strengthen the capacity of the Kyrgyz Republic to manage air quality, and ii) reduce net PM2.5 emissions through clean heating and urban greening in Bishkek.

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

The project will help the government of Kyrgyz Republic to apply a sustained engagement on air quality management in the country and to improve air quality in Bishkek which could be scaled-up if outcomes are deemed to be successful. The project has four components: (i) strengthening the air quality management system; (ii) support the adoption of clean heating solutions; (iii) improving urban greening, and (iv) project implementation support. Component 1 aims to strengthen and operationalize the key elements of the AQMS. It will finance infrastructure, equipment, and technical



assistance to improve ambient air quality data collection, analysis and enhance air quality management and pollution control. Component 2 aims at piloting select interventions to create a market towards scale-up of clean heating technologies. by providing sub-loans to single-family households (SFHs) and private heating service entities through participating financial intermediaries to adopt clean heating technologies in SFHs. It will also support the development and adoption of appropriate institutional policy and regulatory measures on clean heating. Component 3 will finance works, equipment, and technical assistance to (a) create and maintain public green spaces; (b) expand irrigation system through water-saving and climate-resilient solutions essential to support and maintain urban greenery; and (c) build institutional capacity to support the broader urban planning agenda with community participation, focusing on healthy urban greenery and its maintenance. Investments under Components 2 and 3 will be targeted to Bishkek city.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings

The Kyrgyz Republic (Kyrgyzstan) is located in Central Asia and is bordered by Kazakhstan to the north, Uzbekistan to the west, Tajikistan to the south, and China to the east. The country is approximately 200 000 square kilometers (km²) in area, with a population of 6.6 million people. It is a land-locked, lower-middle-income country. It has rich endowments, including minerals, forests, arable land, and pastures, and has significant potential for expanding its agriculture sector, hydroelectricity production, and tourism industry. Its plentiful water resources make hydropower the most important energy source; it also has significant coal deposits and natural gas resources are marginal.

The country's climate is distinctly continental that has significant local variations. The climate varies regionally. The low-lying Fergana Valley in the southwest is subtropical and extremely hot in summer, with temperatures reaching 40 °C. The northern foothills are temperate, and the Tian Shan varies from dry continental to polar climate, depending on elevation. In the coldest areas, temperatures are sub-zero for around 40 days in winter, and even some desert areas experience constant snowfall in this period. In the lowlands, the temperature ranges from -6 °C in January to 24 °C in July. Annual precipitation varies from 180 mm in the eastern Tien Shan to 760 to 1,000 mm in the Kyrgyz Ala-Too and Fergana ranges. In the most populous valleys, rainfall ranges from 100 to 500 mm a year.

The geography and topography of the Kyrgyz Republic make it one of the most hazard-prone countries in Central Asia. Available data suggest that natural hazards incur significant economic losses in these countries, with costs between 0.5 and 1.3% of annual gross domestic product. Rising temperatures, changing hydrology conditions, and the frequency of extreme weather events associated with climate change will exacerbate the Kyrgyz Republic's vulnerability and reduce its ability to manage extreme events unless the appropriate adaptation measures are implemented. Drought is a common occurrence in the country, as are land and mudslides, avalanches, squalls, downpours, icing, frosts, breakthrough of glacial lakes, floods, rise of sub-soil waters, epidemics, pests, crop diseases, river erosion, and earthquakes, of which the country experiences 3,000 to 5,000 every year.

Kyrgyzstan's GDP grew at an average rate of 4.3 percent over the period 2016-2019. The main drivers of economic growth have been gold extraction and worker remittances. Despite the economic growth, 33.3% of the population live below the national poverty line in 2021. In the Kyrgyz Republic, the proportion of the employed population below \$1.90 purchasing power parity daily is 0.3% in 2022.

The power sector is relatively clean due to the high share of hydropower generation, while the heating sector remains heavily dependent on fossil fuels (coal and firewood). Around 90 percent of heating is based on coal, while 85 percent of



electricity generation capacities are based on hydro resources. The availability and reliability of heating are critical for the well-being of the population and the operation of public services. Given the cold climate and long heating seasons, lasting one-third to one-half of the year, access to reliable heating services is essential in the Kyrgyz Republic. Once the principal source for heating in the largest urban areas, coal-based District Heating (DH) systems are in poor condition with deteriorating service quality. Most DH infrastructure was commissioned 20-50 years ago and is under-maintained due to insufficient funds. As a result, generation assets operate at 20-50% of their capacity, heat losses are high and service quality is deteriorating. Due to the lack of access to centralized heating options, about 40% of urban households use inefficient and polluting coal-fired stoves and boilers, resulting in poor air quality.

Ambient air pollution has been a major environmental and health threat to the population and also a cause of significant economic loss in the Kyrgyz Republic. This is, particularly acute in Bishkek, its capital and the largest city.

Residential heating, transport, and windblown dust outside the city are the most significant contributors to high ambient PM_{2.5} concentrations. Together, these sources contribute to over 75% of the annual average ambient PM_{2.5} concentrations in Bishkek. A recent World Bank report estimates that fine particular matter (PM_{2.5}), which is the pollutant of the gravest health concern according to the WHO, attributed to 2,586 deaths and 5,319 years lived with disability in the Kyrgyz Republic in 2019, leading to significant labor loss and low labor productivity. The annual cost of health damage from ambient PM_{2.5} pollution in 2019 in the Kyrgyz Republic is estimated at USD 1,147 million (PPP), which is about 5.1% of GDP equivalent. International air quality standards (e.g., WHO, EU, US) are frequently exceeded, especially concerning SO₂ and PM. The highest average daily concentrations of PM_{2.5} in Bishkek in 2015-2020 was over 200 µg/m³, compared to 15 µg/m³ in the WHO air quality guideline.

The project activities under component 1- strengthening of the overall air quality management system will be implemented at the national level, focusing on strengthening the air quality management system. However, activities proposed under components 2 and 3 (strengthening of the overall air quality management system and implementation of clean heating solutions, respectively) will be limited to Bishkek city. Except for the activities under component 3, which would require smaller patches of land to create green spaces within and in the surroundings of Bishkek city, the remaining proposed activities will be implemented in existing facilities and, therefore, would be confined within the existing footprint of the building structures.

D.2 Overview of Borrower's Institutional Capacity for Managing Environmental and Social Risks and Impacts

The environmental assessment requirements in the Kyrgyz Republic align with the international best practices and are based on the following national laws and regulations: i) Law on Environmental Protection (1999), ii) Law on Ecological Expertise (State Environmental Review (1999), iii) Instruction on Procedures of State Environmental Expertise for Pre-Project, Instruction on Environmental Impact Assessment Performance Procedures (1997), and iv) Regulation on the Procedure for Environmental Impact Assessment (2015).

The Ministry of Natural Resources, Environment and Technical Supervision (MNRETS) is the agency responsible for implementing the environment protection policy, regulation, coordination, and issuing licenses and permits in the Kyrgyz Republic. It requires a full EIA or a dedicated EIA section of the subproject's design documents, depending on the potential impacts of the project activities. The Department of State Environmental Examination and Environmental Management under MNRETS coordinates the State Environmental Review of the submitted EIA reports by the Project Implementing Unit (PIU) or Contractors responsible for preparing them. The State Service for Environmental and



Technical Supervision (SSETS) unit of the MNRETS is accountable for the inspection and oversight functions of monitoring compliance, along with the State environmental and labor protection policy requirement.

The project will be implemented by two Project implementation units (PIUs): the PIU at the Ministry of Natural Resources, Ecology, and Technical Supervision (MNRETS), which will be responsible for the implementation of project activities under Components 1 and 3, and the PIU at the Ministry of Finance (MoF) which will be responsible for implementing the project activities under Component 2. Each PIU will carry out its fiduciary functions, implement ESF requirements, and monitor and evaluate its respective components and activities. The MNRETS PIU will also be responsible for the overall coordination and reporting of the project implementation, including ESF aspects.

The financing scheme proposed under component 2.1 will be implemented by MoF through Participating Financial Intermediaries (PFIs), including state-owned and private banks. The PFIs will provide sub-loans to Household (HH) owners under consumer lending rules. As these will be small loans, the sub-loan activities are expected to have low adverse environmental and social risks or impacts; hence, by ESS9, the PFIs are not required to put in place and maintain Environmental and Social Management Systems (ESMS) but will apply the relevant national legal and regulatory provisions, supplemented by any corporate Environmental and Social Governance (ESG) policies and guidelines.

MNRETS has no prior experience with the Bank's Safeguards policies nor the ESF Environmental and Social Standards. Therefore, significant capacity-building will be needed to build the Borrower's capacity to manage the project's environmental and social risks through specific training on the ESF and for environmentally and socially responsive sub-project planning and implementation. The needed ESF capacity-building activities have been identified in the ESMF and included in the ESCP. Furthermore, the MNRETS PIU capacity will be strengthened by hiring or assigning one environmental specialist (with OHS experience) and one social specialist. The E&S specialists under MNRETS PIU would be required to coordinate with other agencies regarding the implementation of the E&S aspects associated with the activities they will support (Bishkek Municipality, KyrgyzHydromet). As for Component 2 activities, the MoF PIU has years of experience with on-lending projects, including Bank-financed projects, and is currently implementing the Emergency Support for MSMEs Project under the ESF. The existing PIU is staffed with environmental and social specialists who will be responsible for overseeing the PFIs' activities and reporting to the MNRETS PIU through regular reporting. Additional E&S staff could be recruited as needed to undertake the additional tasks under this project. The Borrower's performance on E&S requirements implementation will be assessed regularly based on project reports and site visits during the implementation phase.

Public Disclosure

II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Moderate

A.1 Environmental Risk Rating

Moderate

The Environmental Risk is rated Moderate. The project is expected to bring about positive environmental impacts by improving air quality, particularly in Bishkek, the country's capital and the largest city in the Kyrgyz Republic. The project implementation risks and anticipated adverse impacts will be temporary and typical for small to medium-scale



civil works, rehabilitation, greening, and energy improvements and are mostly predictable and can be readily mitigated. Under subcomponent 1, a modern air pollution laboratory will be constructed in Bishkek, and a data center with the necessary IT infrastructure will be housed in the same laboratory. The procurement of equipment and mobile laboratories and the upgrading of the existing air quality lab and the air quality stations for surveillance monitoring of emissions from sources will also be financed under this Component. Investments supported under subcomponent 2 will cover a range of clean heating technologies (heat pumps, electrical boilers, and solar water heating) to households' owners and private entities through sub-loans to be provided by state-owned and commercial participating financial intermediaries (PFIs) under the consumer lending rules. Component 3 will mainly focus on piloting and developing urban green belts/corridors on the northwestern and southeastern outskirts of the city based on several considerations, including the location of the most polluted areas, wind direction, and the availability of areas for planting green spaces. It will also involve the construction of additional bore wells (19 wells), rehabilitating 2 existing borewells and 2-3 monitoring wells, and introducing water-saving solutions, such as drip irrigation, to ensure the sustainability of the newly created green belts. The potential adverse environmental risks and impacts associated with the above activities may include pollution due to dust, noise, emissions, and vibration; solid and liquid wastes, including hazardous and non-hazardous wastes; contamination of groundwater and soil from the civil works; solid waste associated with the disposal of old appliances (such as heating stoves and boilers, etc.) and installation of new ones planned under the clean heating solution activities. The impacts associated with greening activities might include using limited quantities of fertilizers and herbicides and potential risks to biodiversity from invasive plants if non-native species were utilized for greening. Occupational and community health and safety, and traffic safety/disruption during project implementation are also expected. The generation of waste from the labs and data center operation is also expected. There are also potential long-term impacts on the aquifers if water abstraction is not sustainably managed. These risks and impacts are manageable and primarily limited to the project sites (except for the movement of equipment/materials to/from the construction sites and disposal of solid waste, including hazardous waste, to a secure site identified by the respective authorities). The impacts associated with the sub-loan investment activities for the clean energy intervention are expected to be low due to the nature and amount of these loans (small consumer loans). Finally, although the Borrower's capacity is limited, the commitment of the Borrower to manage risks is high due to the criticality of the project activities for the population.

A.2 Social Risk Rating

Moderate

The social risk is rated as moderate. The Project will result in significant air quality improvements leading to major health benefits, particularly at the household level. Thus, the project is expected to provide generally positive social benefits due to energy efficiency and the use of cleaner renewable energy. It could also generate economic opportunities for enterprises, directly and indirectly, that are involved in or affected by the project. However, one aspect that warrants attention relates to the potential socio-economic impacts of the changes in the energy source for heating purposes. While much of the new energy could be environmentally friendly, some poorer households may find it difficult to afford such technological changes and may get excluded. An assessment of the scope and nature of this risk and a financial assistance strategy will be prepared as part of the Project to inform a fully inclusive green heating transition for poor and vulnerable households. As regards economic or physical displacement, the project investment activities are not expected to require land acquisition, restrictions on land use, or involuntary resettlement, as the energy efficiency investments, technologies and equipment are being placed in existing buildings. Similarly, greening activities will take place on pavements, road dividers, and other public spaces such as parks and other courtyards. The project is expected to engage direct workers and, possibly, contracted workers for whom Labor Management Procedures will be prepared as a part of the ESMF. Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risks are assessed as low but will be confirmed by appraisal. Stakeholder engagement will be a



key aspect of the project, given its involvement with the public facilities and residential buildings; the project will include grievance mechanisms (GMs) for labor-related issues and complaints about the project's environmental and social management.

B. Environment and Social Standards (ESS) that Apply to the Activities Being Considered

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts

Relevant

The environmental and social risks are both rated moderate. With the result, overall E&S risk is rated Moderate. The project recognizes the following standards as relevant: ESS1, ESS2, ESS3, ESS4, ESS8, ESS9, and ESS10. The project will have overall positive environmental and social impacts, as it is expected to result in improving air quality and air monitoring capacity. The project activities under Components 1, 2, and 3 involve small to medium-scale civil works and rehabilitation. These activities are aimed at the construction and upgrading of air quality laboratories, monitoring stations, and equipment targeted towards increasing air monitoring and enforcement capabilities of MNRETS and KyrgyzHydromet, increasing the uptake of cleaner heating options in the residential sector by replacing old coal-based stoves and boilers to supply heat. Furthermore, the activities also include piloting urban greening, creating green belts or corridors within Bishkek city, and constructing/ rehabilitating borehole wells to increase the supply of irrigation water to maintain the existing and planned new green spaces in the city. The specific sites/locations for these activities are not known at this stage. Project implementation risks and anticipated impacts will be typical for small to mid-scale works, and are therefore mostly predictable, and can be readily mitigated. These risks and impacts include but are not limited to dust generation, noise, and vibration; solid wastes, including hazardous wastes; disposal of old heating stoves and boilers and installation of a new one; wastewater, soil and underground water contamination from drilling the water boreholes, risks to biodiversity from invasive plants; limited use of fertilizers and herbicides; workers' exposure to occupational risks. There are also potential long-term impacts on the aquifers if water abstraction is not sustainably managed. The project will support water-saving technologies, such as drip irrigation. With regards to borewells, the team has identified that no solid data on impacts is readily available and applied for the grant resources to conduct a pre-feasibility study (FS). FS to be carried out during implementation will help to optimize the number and location of borewells to reduce the burden on groundwater balance. Since the project activities will be held within close vicinity of populated areas, traffic safety measures need to be clearly defined in site-specific ESAs. The risks and impacts of the project are expected to be temporary, site-specific, reversible, and easily manageable. In addition, no land acquisition or physical displacement is anticipated as works will mainly take place in existing public buildings. As indicated above, labor risks are moderate, and SEA/SH risks are low, though the latter will be confirmed during Appraisal. The greatest social risk of the project is the exclusion of poorer households from the program's technology. The project includes strong stakeholder engagement measures to ensure households are properly aware of the project and its benefits. Since the details of most of the sub-project sites are not known with certainty yet, the risks and impacts outlined above are addressed in the ESMF, SEP, and LMP, drafts of which have been prepared by the Borrower. These drafts will be finalized and disclosed before appraisal. The ESMF outlines the guiding principles of environmental screening, assessment, review, management, and monitoring procedures for all envisaged activities and identifies typical environmental and social risks and impacts likely to occur during implementation, specifies legislative and regulatory framework, considers procedures and institutional responsibilities, and provides an outline for site-specific Environmental and Social Management Plans (ESMPs) to be developed for each specific site. E&S risks and potential impacts will be managed through comprehensive screening procedures and mitigation measures



(aligned with the requirements defined in WB EHS and GIIP), as well as review, monitoring, reporting, and consultation procedures with clearly defined responsibilities. The ESMF provides guidelines and procedures for waste handling, storage, and management. In addition, the ESMF includes a list of approved/licensed landfills that contractors/sub-contractors should utilize. The ESMF also provides guidance and generic mitigation measures related to pollution abatement and resource efficiency in line with ESS3 requirements to manage risks and impacts that may arise from the civil works, and to avoid or mitigate the anticipated risks and impacts on the health and safety of workers and communities, including preparing emergency response plans and traffic management plans. Risks to biodiversity from invasive plants will be avoided through the selection of native plants and trees for greening activities and through proper management of any limited herbicides and fertilizers to be used to support and protect the planted trees that may affect non-targeted plants. The ESMF also includes chance finds procedures to be included in subsequent site-specific ESAs for all activities that may involve any excavation of earth. The Technical assistance (TA) to inform policy designs, strengthen existing regulations, develop economic instruments, and promote residential heat switching, energy efficiency, and technical studies needed to implement investment projects will also be subject to ESF due diligence procedures defined in the Borrower's ESMF. The ESMF and the LMP will guide the preparation of site-specific instruments (e.g., ESMPs, checklist ESMPs), and Contractor's Labor Management Plans (Contractor's LMPs) through the screening procedure, assessment of the anticipated environmental and social impacts associated with the project activities, monitoring requirements as well as roles and responsibilities for ensuring effective implementation of the ESMF requirements throughout the project lifecycle. The project will not finance any sub-projects categorized as Substantial or High for either environmental or social risks. An exclusion list that will prohibit the support of high and substantial risk activities, those listed in the IFC Exclusion List, and other non-eligible for financing is part of the Project's ESMF. The PIU, with the support of technical and supervision consultants, will oversee the preparation of the site-specific ESMPs and the Contractor's LMPs. The sub-project-specific ESMPs will be a part of the bidding documents and will subsequently become part of the construction contract. The awarded contractors will be responsible for the implementation of the site-specific ESMPs and Contractor's LMPs, and relevant elements of SEP as well as setting up a site-specific Grievance Mechanism (GM) for the project, as well as a GM for the workers more specifically. Contractors shall be staffed with E&S Specialists to implement E&S requirements. The PIU will be responsible for the supervision and monitoring of the implementation of site-specific ESMPs and Contractor's LMPs, and overall SEP implementation. It will also be responsible for closely monitoring the effective implementation of the site-specific ESA documents and reporting the status of implementation to the Bank, as agreed in the Environmental and Social Commitment Plan (ESCP).

ESS10 - Stakeholder Engagement and Information Disclosure

Relevant

The Borrower has prepared a draft SEP, which will be finalized before Appraisal, to ensure that key stakeholders in the project are informed about and included in discussions about project design and implementation. Given the growing interest in energy-efficient technologies and renewables, the project recognizes the need for an effective and inclusive engagement with all of the relevant stakeholders and the population at large. These include relevant government agencies, energy efficiency enterprises, financial entities and companies, schools and hospitals, private residential households, and civil society actors. The SEP includes information and analysis about (i) stakeholders; (ii) planning engagement modalities, namely effective communication tools for consultations and disclosure; (iii) enabling platforms for influencing decisions; (iv) defining roles and responsibilities of different actors in implementing the SEP; and (v) a Grievance Mechanism (GM). The GM will be accessible and transparent, with publicly available records of complaints and their outcomes. It will also be structured to handle confidential and sensitive complaints, such as



those that may concern SEA/SH. Finally, the SEP will include guidance on handling consultations within the ongoing context of COVID-19.

ESS2 - Labor and Working Conditions

Relevant

This standard is relevant. The project will have (i) direct workers hired to implement the project (PIU), (ii) and contracted workers. Contracted workers will include contractors and subcontractors (skilled and semi-skilled workers) hired to implement the sub-projects. There will also be government workers who will be involved in the implementation and supervision of project activities and recruited by the other implementing agencies. Community workers will likely not be required since the project is not expected to have any community-driven development-type interventions. Nor will there be engagement of primary supply workers, as per the ESS2 definition. All direct and contracted workers will be subject to the requirements of ESS2, including clear information on the terms and conditions of employment; principles regarding non-discrimination and equal opportunity; establishment of workers' organizations; rules prohibiting child labor and forced labor; and measures to ensure occupational, health and safety (OHS) at the worksite. Accordingly, a draft LMP in line with the requirements of ESS2 has been prepared and will be disclosed before appraisal. Government civil servants involved in the project will be bound by their existing public sector employment agreement or arrangement; hence, the provisions under this LMP will not apply to such parties. Nevertheless, their health and safety will be considered, and the measures adopted by the project for addressing occupational health and safety issues, including those specifically related to COVID-19, will apply to them. The potential risks associated with labor and working conditions, including OHS (exposure to physical and chemical hazardous associated with physical construction, drilling operations, and limited use of herbicides) and the corresponding provisions of ESS2 that will apply to all workers, will be determined for each subproject under the ESMP. Given that the project's small-scale activities will be located in urban and peri-urban areas, it will not be necessary for the project to provide onsite accommodation. Since all sites are expected to be in urban and peri-urban areas. Consequently, risks associated with labor influx are expected to be low. Drawing on national laws and procedures, the LMP includes a separate grievance mechanism to address any labor issues for project workers. The social and environmental staff in the PIUs will oversee the application of the standard and ensure compliance.

ESS3 - Resource Efficiency and Pollution Prevention and Management

Relevant

[Explanation - Max. character limit 10,000] The ESS3 is relevant to the project. Overall, the proposed project activities will contribute to reduced air emissions and improved urban air quality in the country, particularly in Bishkek. The existing air quality monitoring systems of the KyrgyzHydromet and MNRETS will be upgraded to allow for accurate pre-project/post-project monitoring to quantify air quality improvements over time, especially PM 2.5, as a result of the project. However, the project is expected to result in temporary, site-specific, reversible, and easily manageable adverse impacts associated with the implementation of some interventions (construction of the air quality lab, borehole wells, greening activities, and installation of clean and efficient energy equipment). These impacts may include pollution from construction waste, and packaging materials; generation of dust, noise, and vibration due to the operation and movement of construction equipment and drilling compressors; spills of fuels and lubricants during construction; pollution of soil, surface, and underground water and sediments from drilling; and generation of waste from the replacement of old coal boilers/ stoves used for space heating and hot water. It will also include impacts from the potential limited use of fertilizers and herbicides associated with greening activities. Guidance and procedures for the assessment of risks associated with proposed works, its impacts, and proposed mitigation measures related to relevant requirements of ESS3, including use of raw materials, water use, air pollution, handling



and disposal of waste including hazardous materials, and hazardous waste are provided in the ESMF, and related mitigation measures will be specified in the site-specific ESMPs. The Borrower should comply with the requirements of ESS3, the WBG's General EHS Guidelines, and pertinent national legislation regarding the collection, storage, transportation, and disposal of hazardous wastes. The ESMF will include sections on pollution prevention and management, focusing on issues that might arise while replacing energy equipment and civil works for facilities' construction and rehabilitation. Furthermore, the ESMF includes provisions and guidelines on the potential use of agrochemicals for greening purposes. Following the measures recommended in ESMF and detailed in site-specific ESMPs, the contractors will avoid or minimize the release of pollutants. The project will also integrate efficient irrigation technologies such as sprinkler and DRIP irrigation as well as energy-efficient/green-labeled equipment that will contribute positively to the efficient use of natural resources. The capacity building of the different public utility companies and local authorities in Bishkek would also indirectly provide guidance on more efficient irrigation, water management, and energy use. The project is also expected to reduce Green House Gas (GHG) emissions through emissions avoidance by supporting the switch from coal to clean heating in residential buildings, and removal from the atmosphere by increasing the green space with potential for carbon sequestration. The net GHG reduction from the project is estimated to be 2.1 million metric tons.

ESS4 - Community Health and Safety

Relevant

This standard is relevant. The proposed project activities will overall improve the air quality thus leading to improved wellbeing of the communities. However, during the project implementation, potential adverse impacts on the health and safety of the surrounding communities may occur due to the proposed works. These impacts are identified as the generation of noise, waste, dust, unauthorized entrance to sites, traffic management, and traffic safety. These risks and impacts have been assessed as part of the EMSF. Adequate measures will be provided in the ESMPs to avoid or mitigate the anticipated risks and impacts on the communities (e.g., fencing of construction sites, placement of warning signs and information on construction sites, restricting activities to daytime, dust and noise suppression measures, truck and heavy machinery transportation route planning). The ESMF includes general guidelines for preparing emergency response plans to respond to accidental events such as fires or other crises. Similarly, general guidelines for traffic management plans are included in the ESMF. Additional guidelines will be given for sites located in sensitive areas - near schools, hospitals, etc. Potential risks concerning the disruption of residential activities during clean energy equipment installation (such as noise, dust, etc.) will be assessed and mitigated through sub-project-specific measures. Generation of potentially contaminated waste from replacing (e.g., heavy heating oil) boilers and heating systems is likely. Management of construction waste and hazardous wastes needs to be conducted in a manner that would safeguard the environment and the communities where the disposal is planned. All waste management activities must also include adequate mitigation and rehabilitation practices, as appropriate. SEA/SH risks are low, as activities will not involve labor influx and will be carried out by local professionals; the LMP includes a Code of Conduct for Contractors and Subcontractors.

ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Not Currently Relevant

The project's investment activities are taking place within existing buildings and in public spaces such as roadside avenues, pavements, parks, etc. The project is not expected to involve land acquisition, restrictions on land use, and involuntary resettlement, nor will the investment activities result in physical or economic displacement. Should, however, the need for land acquisition arise, the Borrower will prepare a Resettlement Plan (RP) in accordance with the provisions of this standard.

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ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources

Relevant

This standard is relevant. The project activities involve the creation of an urban greening pilot in the form of green belts/ corridors on the northwestern and southeastern outskirts of the city to reduce urban air pollution. The green belts are proposed to be created at limited stretches of available land usually with no or very little vegetation. These activities do not pose any significant potential risks or impacts on biodiversity or living natural resources. However, the selection of types of plants and trees for greening activities would need to be assessed to avoid the introduction of invasive species. The Botanical Garden under the National Academy of Sciences of the Kyrgyz Republic will be involved in designing the green belts/ corridors, including selecting native and climate-adaptive tree species. Furthermore, the impact of the possible use of selective small quantities of herbicides and fertilizers to support and protect the planted trees may affect non-targeted plants and other biodiversity species, and would hence need to be properly managed in line with national law (Law no. 12 on the chemicalization and protection of plants) and relevant GIIIP requirements. There may also be limited felling of trees on the land where the air quality lab will be constructed. In such cases, compensation measures to replace the trees by planting new ones will be specified in the site-specific ESA. The ESMF also includes a screening checklist for the identification and assessment of biodiversity risks from all project activities. Any potential significant impacts on biodiversity will be excluded through the exclusion screening.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

Not Currently Relevant

This standard is not relevant, as there are no Indigenous Peoples in the project area.

ESS8 - Cultural Heritage

Relevant

This standard is relevant. While the proposed construction and rehabilitation activities are not expected to impact known cultural heritage resources, civil works will entail excavations and earthwork. The ESMF includes appropriate “chance finds” procedures to be included in subsequent site-specific ESAs for all activities that may involve any excavation of earth. “Chance find” clauses will also be added to the contracts, defining procedures for contractors/subcontractors when cultural heritage is encountered.

ESS9 - Financial Intermediaries

Relevant

This standard is relevant. The financing scheme proposed under component 2.1 will be implemented by MoF through Participating Financial Intermediaries (PFIs). Sub-loans in local currency will be provided to households interested in switching to clean solutions under consumer lending rules, without collateral, with expected five years of maturity. The size of the single loan for households will likely not exceed US\$5,000 per HHs. The PFIs are fully responsible for the loan repayment to the MoF. Sub loans will also be available to private entities interested in expanding their businesses relating to clean heating technologies and services in Bishkek. Lending to PFIs will be open to both state-owned and commercial banks subject to meeting the eligibility criteria and according to the terms and conditions set in the Project Operation Manual (POM). The investments for installing clean energy technology in single houses are low, and the associated risks are also assessed to be low. As such and by ESS9, the PFIs are not required to put in place and maintain Environmental and Social Management Systems (ESMS) but will apply the relevant national legal and regulatory provisions, supplemented by any corporate Environmental and Social Governance (ESG) policies and

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guidelines. As part of their general monitoring and reporting on sub-component implementation, the PFIs will include any environmental and social issues that might come up for review by the E&S Specialists of the MoF PIU.

B.2 Legal Operational Policies that Apply

OP 7.50 Operations on International Waterways

Yes

OP 7.60 Operations in Disputed Areas

No

B.3 Other Salient Features

Use of Borrower Framework

No

The use of borrower's framework is not considered for this project.

Use of Common Approach

No

Common approach is not considered under this project.

C. Overview of Required Environmental and Social Risk Management Activities

C.1 What Borrower environmental and social analyses, instruments, plans and/or frameworks are planned or required by implementation?

- Environmental and Social Management Framework
- Labor Management Procedures
- Stakeholder Engagement Plan
- Environmental and Social Commitment Plan

Public Disclosure

III. CONTACT POINT

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V. APPROVAL

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