

**Bogota Sub Bond (50446)**
**Project Basic Information**

Country: Colombia	Region: Colombia, Andes & Caribbean	Project No.: 50446
Project Legal Name: Bogota Subnational Bond	Company Legal Name: BOGOTA DISTRITO CAPITAL	
Project Business Sector: W-BF - Municipal Finance - Multiple Sectors [Project only]	Owning Department /Division: Regional Industry INF LAC & EUR	
Environment Category: A		

**IFC’s Disclosure Requirements**

 Date of initial ESRS disclosure  
 11/10/2025

Date of revised ESRS disclosure

 Date of clearance by client for factual accuracy  
 7/16/2025

Board Approval Date

**Project Description**

The proposed investment involves IFC financing of up to US\$125 million to the Municipality of Bogotá through subscription as an anchor investor to an up to US\$600 million offshore peso-linked green bond. This bond will be the first offshore green bond issued by a capital city in Latin America and the Caribbean (LAC) and by a municipality in Colombia. IFC proceeds will finance the Municipality of Bogota’s obligations under the Linea 2 del Metro de Bogota (in English, Bogota Metro Line 2 - BML2) being developed by the Bogotá Metro Company (EMB). EMB, fully owned, directly or indirectly, by the Municipality of Bogotá, is the entity responsible for the development and operation of the city’s metro system. Separately, BML2 will receive direct financing from other international and local financial institutions, including the IBRD (see <https://projects.worldbank.org/en/projects-operations/project-detail/P179822>).

EMB is expected to select and award a concession to a private party (“the Concessionaire”) by the end of 2025 to perform the civil works, provide rolling stock, and operation and maintenance. Construction is expected between 2027 and 2032. The BML2 includes a 15.5 km metro line (94% underground) with 11 stations and a 1 km elevated section, including a Patio-Taller (railyards-workshop) over a 22 hectares area. The alignment runs below the densely urbanized boroughs of Chapinero, Barrios Unidos, Suba, and Engativa, bordering the Juan Amarillo wetlands and heading to Calle 72. When operational, peak hour ridership is estimated at 46,500 passengers per hour per direction (pphd) in the first year, increasing to 49,000 pphpd by 2042. The BML2 aims to reduce traffic congestion, lower greenhouse gas emissions, and improve connectivity and access to jobs and services for underserved populations. The project is expected to benefit nearly 2.5 million people.

**Overview of IFC’s Scope of Review**

IFC’s review of this proposed investment consisted of appraising environmental, social, health and safety (E&S) information submitted by the EMB, including BML2’s Feasibility Study (2022), E&S Impact Assessment (ESIA), Stakeholder Engagement Plan (SEP), and the Resettlement Action Plan (RAP), disclosed herewith, as well as other publicly available information. IFC coordinated the due diligence with the IBRD and reviewed its E&S Review Summary and E&S Commitment Plan for the project (see <https://projects.worldbank.org/en/projects-operations/project-detail/P179822>).

The appraisal included discussions with EMB’s E&S staff, a visit to the proposed alignment and meetings with community representatives of two Neighborhood Councils (Junta de Accion Vecinal) in February 2025. A visit to validate Broad Community Support (BCS) for the project was conducted on May 19-20, 2025 and included interviews with representatives of five out of eight Zonal Committees, representatives from a commercial area, and government agencies in charge of gender aspects and engagement with vulnerable groups (e.g. peoples with disabilities).

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**Identified Applicable Performance Standards**

While all Performance Standards are applicable to this investment, IFC’s environmental and social due diligence indicates that the investment will have impacts which must be managed in a manner consistent with the following Performance Standards.

PS1-Assessment and Management of Environmental and Social Risks and Impacts
PS2- Labor and working conditions
PS3-Resource Efficiency and Pollution Prevention
PS4-Community Health, Safety and Security
PS5-Land Acquisition and Involuntary Resettlement
PS6-Biodiversity Conservation and Sustainable Management of Living Natural Resources
PS8-Cultural Heritage

**Environmental & Social Categorization and Rationale**

This project is classified as a Category A investment under IFC’s E&S Sustainability Policy due to its potential significant adverse environmental and social (E&S) risks, which include the physical resettlement of at least 1,847 social units (both including households and businesses’ owners), economic displacement, temporary impacts on business activities, and relocation of 17 street vendors. Other key E&S aspects involve the management of E&S risks during construction and operation through EMB’s and the Concessionaire’s E&S Management Systems (ESMS) and Management Plans (ESMP); contractor management; fair and safe working conditions; occupational health and safety (OHS); emergency preparedness and response (EPR); universal access, life and fire safety (L&FS); community health and safety; Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) aspects, tunneling and groundwater management, resource efficiency, pollution control, construction and demolition waste management, contaminated site management, air quality, noise and vibration management in residential and commercial areas, biodiversity, cultural heritage, and stakeholder engagement.

**Environmental & Social Mitigation Measures**

(Observations that are not to be disclosed must be recorded in ESG360)

IFC’s appraisal considered the environmental and social management planning process and documentation for the Project and gaps, if any, between these and IFC’s requirements. Where necessary, corrective measures, intended to close these gaps within a reasonable period of time, are summarized in the paragraphs that follow and (if applicable) in an agreed Environmental and Social Action Plan (ESAP). Through implementation of these measures, the Project is expected to be designed and operated in accordance with Performance Standards objectives.

Applicable PSs summary

PS1: Assessment and Management of Environmental and Social Risks and Impacts  
 Environmental and Social Assessment and Management Systems: The Municipality of Bogotá has an Integrated Management System (IMS) with E&S policies and procedures consistent with national law and IFC’s PS1 (see <http://www.ambientebogota.gov.co/web/sda/politicasantambientales>). EMB, the entity responsible for the city’s metro lines, including the (BML2, implements these policies and its own IMS and E&S policies. The project’s E&S design and requirements and the Concession Agreement (CA) incorporate lessons from Bogotá Metro Line 1 (BML1) and adhere to various Lenders’ E&S Standards, including the IFC PSs, World Bank E&S Framework (ESF), and the World Bank Group’s Environmental, Health and Safety (EHS) Guidelines (General and Railways), as well as the E&S standards of the European Investment Bank (EIB) and the Interamerican Development Bank (IADB). The CA also requires that the Concessionaire maintain an ESMS aligned with local and Lenders’ E&S Standards including the IFC PSs. This includes defining the E&S organizational structure, assessing risks, implementing management programs, and conducting annual audits. The Concessionaire must also manage permits and maintain updated information on E&S management via a dedicated software that will be implemented by EMB. In addition to the above, for BML2, EMB will also have in place a Project Operations Manual (POM) as a core implementation document outlining technical, administrative, and E&S roles, instruments, and compliance mechanisms to ensure

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alignment with the Lenders' E&S Standards, including the IFC PSs, enabling effective risk management and accountability throughout the project lifecycle.

**Identification of Risks and Impacts:** In the early planning stages of the project, a Feasibility Study (2020) was conducted to analyse fourteen alternatives, aiming to minimize E&S impacts. This analysis considered financial, technical, and key E&S aspects such as ecological structure, land acquisition and resettlement, hydrogeology, biodiversity, noise, vibrations, and social infrastructure. Although local regulations did not require an environmental license or an ESIA for the project, EMB prepared an ESIA (dated July 2023) aligned with the Lender's E&S Standards, including IFC PS and WBG EHS Guidelines. This ESIA covers the pre-construction, construction, and operations and maintenance (O&M) phases, and includes baseline studies for noise, air quality, soil, hydrology, hydrogeology, geotechnics, flora and fauna. The ESIA also covers the project's ancillary infrastructure (AI) and associated facilities (AF), such as the electrical substation, transmission lines, disposal areas for excavated materials (ZODMES), access roads, workshops, and construction logistic and support areas. The final locations of the AI and AF will depend on the final designs and the selected Concessionaire. Once determined, and as covered under the ESIA and the Concession Agreement, the Client and Concessionaire must assess the E&S risks and impacts linked to AI and AF and implement the corresponding E&S management measures.

**Cumulative Impacts:** The ESIA assessed cumulative impacts (CI) based on IFC's "Good Practice Handbook: Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets" focusing on other infrastructure projects in Bogotá, in addition to industrial and commercial activities, and traffic and mobility. Expected CI include effects on air quality, noise levels, economic changes, land acquisition, and the capacity of disposal sites for construction and demolition waste. Before construction, EMB and the Concessionaire will update the Cumulative Impact Assessment (CIA) included in the ESIA, defining management strategies to mitigate CI. These strategies must include robust monitoring and adaptive management plans, stakeholder engagement, and collaboration with other projects and regulatory bodies. Per ESAP #1, the Municipality of Bogotá will cause EMB to require the Concessionaire to develop a Cumulative Impacts Assessment and Management Plan, aligned with the ESIA and Lenders' E&S Standards, including IFC PS1.

**Management Programs:** The ESIA outlines specific ESMP required for all project stages. According to the CA, the Concessionaire must develop and implement Concessionaire-Level E&S Management Plans (C-ESMPs) that align with the Lender's E&S Standards, including IFC PS, and the general ESMP defined in the ESIA. As per ESAP #1, the Municipality of Bogotá will cause EMB to require that the Concessionaire prepares and implements, among others, the following C-ESMPs in line with the ESIA and Lenders' E&S Standards, including the IFC PSs; Contractor and Suppliers Management Plan (CSMP); Assessment and Management of Cumulative Impacts; Chance Find Procedure for Cultural Heritage; Emergency Preparedness and Response Plan (EPRP), including Contingency Plan, for foreseeable risk scenarios; Traffic and Road Safety Management Plan; OHS Management Plan; Solid and Liquid Waste Management Plan; Hazardous Materials Management Plan; Water Use Efficiency Plan; Energy Use Efficiency Plan; Environmental Legacies and Land Contamination Management Plan (e.g. gas stations, industrial sites); Detailed Air Quality, Vibration and Noise Management Plan based on updated modelling; and Community Health and Safety Management Plan. Per ESAP #6, the Municipality of Bogotá will cause EMB to require that the Concessionaire prepares and implements the Tunnelling Underground Works Management Program; Groundwater Level Monitoring and Tracking Plan; and the Water Resource Management and Monitoring Program. Additionally, per ESAP #14 the Municipality of Bogotá will cause EMB to develop and implement a Biodiversity Management Plan aligned with IFC PS6.

**Monitoring and Review:** According to the CA, the EMB and the Interventoria (Independent Technical Supervisor) are responsible for monitoring the project's E&S performance monthly, including the implementation of C-ESMPs, OHS performance indicators, permit status, grievance mechanisms, and improvement plans, among others. The ESIA contains a Monitoring and Review Plan (MRP) that outlines methodologies for monitoring air quality, noise levels, water quality, vegetation, fauna, and socioeconomic impacts. The MRP also includes strategies for stakeholder engagement and grievance mechanisms, with E&S reporting and monitoring obligations to be established in the bidding documents. The Secretaria Distrital de Ambiente (SDA) also has the discretion of imposing additional reporting obligations. In addition to the above, the project will be supervised by IFC and other Lenders.

**Organizational Capacity and Competency:** Through the development of BML1, EMB has enhanced its institutional experience and capacity to manage E&S risks and impacts, adhering to local legislation and the Lender's E&S Standards, including the IFC PSs. EMB currently has a competent multidisciplinary team for

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BML1, covering E&S management, land acquisition, human resources, and communications. This organizational structure will be applied to BML2. Per ESAP #2, the Municipality of Bogotá will cause EMB to develop an Organigram of the EMB Team to oversee the E&S aspects from construction through O&M. The ESIA and the CA specify that an E&S team will be formed by the Concessionaire and the Interventoria. Per ESAP #3, the Municipality of Bogotá will cause EMB to define the profiles of the E&S Teams of the Concessionaire and the Interventoria in charge of overseeing BML2.

**Emergency Preparedness and Response:** The Disaster Risk Management Plan (DRMP), detailed in the ESIA, includes emergency and contingency response plans and adopts a comprehensive approach to disaster risk management. It integrates prevention, mitigation, preparedness, response, and recovery measures to protect the project's infrastructure, environment, and communities. The DRMP analyzes risks from natural, anthropic, socio-natural, and operational threats, and outlines necessary components for emergency response and contingency management. Once the Concessionaire is selected, the DRMP must be updated according to the project's start conditions and included in the construction and operations ESMS. Per ESAP #1, the Municipality of Bogotá will cause EMB to require the Concessionaire to develop an Emergency Preparedness and Response Plan (EPRP), including a Contingency Plan, for foreseeable risk scenarios (routine, non-routine, and accidental) in line with the ESIA and the Lenders' E&S Standards, including IFC PSs and relevant WBG EHS Guidelines.

**PS2: Labor and Working Conditions**

The project is expected to have approximately 11,000 workers at peak or construction, with 40% hired locally, and 651 direct employees during operations.

**Human Resources Policies and Working Conditions:** EMB has an Internal Labor Regulations Policy (ILRP) that covers recruitment, working conditions, and employee rights adhering to national regulations to ensure labor rights and avoid discrimination. The ILRP promotes equal opportunities, freedom of association, and protection from harassment and abuse.

At the project level, the ESIA's includes a Labor Management Framework (LMF) that commits the project to hiring locally and inclusively, with specific targets for women, individuals with disabilities, ethnic communities, and young workers. Additionally, the CA mandates that the Concessionaire develops and implements a Labor Management Plan (LMP) in accordance with local regulations and Lender's E&S Standards, including IFC PS2, applicable to all employees and contractors. Hence, per ESAP #4 the Municipality of Bogotá will cause EMB to require that the Concessionaire adopts a LMP aligned with local regulations and Lenders' E&S Standards, including IFC PS2, including among other, measures related to freedom of association, non-discrimination, child labor, forced labor, harassment and abuse, migrant workers' protection, and workers' accommodations, while also covering working conditions, contract verification, social security benefits, salaries, working hours, disciplinary processes, and contractor management. Compliance with the LMP will be monitored by the Interventoria and EMB.

**Workers' Grievance Mechanism:** EMB has a Workers' Grievance Mechanism (WGM) in place to receive claims or complaints from workers, including an anonymous submission option. At the project level, the Concessionaire will be required to develop and implement a Worker's Grievance Mechanism (WGM). Per ESAP #5, the Municipality of Bogotá will cause EMB to have in place a WGM including specific provisions to address EMB's, the Concessionaire's and the Supervisor's employees and contractors' workers grievances in line with IFC PS2 including provisions to manage GBV and SEA/SH cases with a survivor-centered approach and a clear pathway to give support to survivors. The GBV and SEA/SH cases will be managed by trained personnel. The updated WGM will be communicated to direct and contractor's workers. EMB will require the concessionaire's WGM to be aligned to the updated EMB's WGM.

**Occupational Health and Safety:** Considering tunnelling, underground works, and handling of hazardous materials, the OHS risks during construction are substantial. The ESIA includes an OHS Management Plan (OHS-MP) to guide the Concessionaire in implementing OHS requirements in line with the Lenders' E&S Standards, including IFC PS. The OHS Plan mandates that the Concessionaire comply with local regulations and OHS-related Lenders' E&S Standards, including IFC PS. The Concessionaire's obligations to formulate and adhere to the OHS-MP are outlined in the CA. This agreement specifies that the Concessionaire must include a robust OHS Management Program, conduct regular safety inspections, and provide adequate OHS education and training to workers. The OHS Plan must be adopted by the Concessionaire and approved by the Supervisor before construction begins. Overall, Colombian OHS legislation and requirements align with PS2. According to ESAP #1, the Municipality of Bogotá will cause EMB to require the Concessionaire to

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develop an OHS-MP in line with the Colombian OHS legislation and requirements, Lenders' E&S Standards, including IFC PS2 and WBG EHS Guidelines.

**PS3: Resource Efficiency and Pollution Prevention**

**Physical Climate Risk:** The project is well-aligned with climate resilience objectives, with overall physical climate-related risks considered limited. The ESIA includes a contingency plan for flood events and the ERP includes provisions for handling wildfires that could be caused by extreme temperatures and droughts. To address high precipitation and flooding risks near the Bogotá River in Suba District, the construction of a 4.8 m high embankment designed for a 1 in 500-year flooding event to protect the railyards-workshop is required. Regular monitoring and stakeholder engagement will ensure climate resilience, with residual risks considered low.

**Greenhouse Gases:** EMB will periodically quantify emissions using internationally recognized methodologies. BML2 aims to significantly reduce air pollution and CO<sub>2</sub>e emissions by shifting from private internal combustion vehicles to electric-powered public transportation. . It is estimated that BML2 will reduce the emission of approximately 28,896 tons of CO<sub>2</sub> per year into the atmosphere, by replacing other, more polluting modes of transportation in the city.

**Energy Efficiency:** During the construction phase, energy consumption is dominated by heavy machinery and equipment used for excavation, drilling, and infrastructure building. In the operational phase, energy usage shifts to the daily running of trains, station operations, and maintenance activities. BML2 employs several strategies to reduce energy consumption and optimize operational costs, including regenerative braking systems that recapture kinetic energy during deceleration and feed it back into the power grid. The project's automation and control center dynamically adjust train frequency based on passenger loads, minimizing excessive power usage during off-peak times. This demand-based scheduling, combined with energy-efficient station facilities and lighting, supports sustainability and cost-effectiveness in daily operations. Additionally, according to ESAP #1, and as required in the ESIA, the Municipality of Bogotá will cause EMB to require that the Concessionaire adopts an Energy Use Efficiency Plan and reference it in the C-ESMP (ESAP #1).

**Water Consumption:** The project is not expected to consume significant amounts of water. According to the ESIA, the water will be sourced from the local water utility company, and it is not expected to require water intake from natural sources. Given potential drought conditions in Bogotá, the Concessionaire will implement efficient water use measures, in collaboration with the water utility, consequently, per ESAP #1, the Municipality of Bogotá will cause EMB to require that the Concessionaire develops a Water Use Efficiency Plan, in line with the Lenders' E&S Standards, including IFC PS.

**Wastewater Management:** According to the ESIA, no wastewater will be discharged into natural water bodies or the ground during construction and operation. Domestic wastewater will be managed through portable toilets during construction and the existing sewer network during operation. Non-domestic wastewater will be collected, temporarily stored, and delivered to authorized companies for treatment and disposal. Although the ESIA mentions no discharges into natural waterbodies or the ground are expected, as per ESAP #1, the Municipality of Bogotá will cause EMB to require that the Concessionaire develops a Solid and Liquid Waste Management Plan describing the procedures for the liquid wastes final disposal applicable to the project's construction and operation, including industrial and domestic wastewater, in line with the Colombian legislation, and Lenders' E&S Standards, including IFC PS.

**Solid Waste Management:** The Project will generate a significant volume of various types of waste, including domestic, industrial, hazardous, and non-hazardous waste. To manage this, the ESIA outlines measures for the Concessionaire to implement regarding the generation, storage, collection, transport, treatment, and final disposal of waste. During construction, significant volumes of excavation, tunneling, construction, and demolition (RCDs) waste must be handed over specialized and licensed waste management companies, with at least 30 % of RCDs being reutilized as per local legislation. The Concessionaire must ensure that ZODMES and RCDs managers have the necessary E&S permits and appropriate conditions for their operation. Additionally, per ESAP #1, the Municipality of Bogotá will cause EMB to require the Concessionaire to develop a detailed Solid and Liquid Waste Management Plan that aligns with the ESIA, local regulations, and the Lenders' E&S Standards, including IFC PS.

**Construction Materials:** The ESIA outlines a Management of Materials Program requiring the Concessionaire to develop and implement measures to mitigate the environmental impacts of handling construction materials such as sand, aggregates, concrete, asphalt, prefabricated materials, bricks, and stone. The Concessionaire must ensure suppliers have the necessary permits, establish loading and unloading schedules, and properly

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cover, transport and dispose of materials at work fronts. Additionally, the Concessionaire must adhere to concrete and asphalt management measures to protect water, soil, and air quality. The ESIA also estimates the volumes of materials needed for construction and identifies potential sources in Bogotá and nearby municipalities.

**Hazardous Materials Management:** The ESIA includes a program for managing hazardous substances, particularly oils. Per ESAP #1, the Municipality of Bogotá will cause EMB to require the Concessionaire to develop a Hazardous Materials Management Plan (HMMP) that aligns with the ESIA, local regulations, and Lenders' E&S Standards, including IFC PS. This plan should encompass a comprehensive inventory of hazardous materials, proper storage and handling procedures, safe transportation methods, an emergency response plan, and regular personnel training. Additionally, it should involve continuous monitoring and inspections to ensure compliance with all relevant regulations and guidelines, thereby minimizing risks and ensuring the safety of personnel, the environment, and the surrounding community. The HMMP will consider the potential use of pesticides, including a comprehensive inventory of all pesticides, proper storage and handling procedures, safe transportation methods, and an ERP.

**Air Quality, Noise and Vibrations:** Air emissions, noise, and vibration risks were assessed in the ESIA and related management measures identified. Overall, given that the metro is electric and 94% underground, it is expected that related impacts are limited during operation and only be potentially significant during construction.

The Concessionaire must adapt and implement the Air Emissions Source Management Program described in the ESIA, complying with specific obligations such as updating the air quality modeling and baseline, developing dispersion maps, and identifying sensitive receptors. Based on these results, the Concessionaire must implement necessary measures to mitigate and control air emissions generated by the project's identified sources, with each measure analyzed for each work front and approved by the Interventoria. Noise generated during construction activities such as excavation, drilling, and heavy machinery can disturb nearby residents and wildlife, with the project's noise impact expected to be high and cumulative with other activities in the area of influence. In the operations phase, noise from train engines, wheels, braking systems, and the continuous operation of the railyards-workshop is particularly relevant, especially in the elevated section. During construction, vibrations caused by excavation, drilling, and heavy machinery can potentially damage nearby structures and cause complaints, while operational train movements are expected to have very limited impacts. The ESIA mandates the Concessionaire to strengthen the evaluation and management of vibration risks by analyzing effects on the structural integrity of buildings within the project's footprint, conducting detailed property characterizations ("Actas de Vecindad") before construction to record their status and ensure that updated information is available for claims related to vibration impacts during construction and operation.

Per ESAP #1 the Municipality of Bogotá will cause EMB to require that the Concessionaire develops an Air Quality, Vibration and Noise Management Plan based on an updated modeling and aligned with the ESIA, local regulations and the Lenders' E&S Standards, including IFC PSs and the WBG EHS Guidelines.

**Environmental liabilities:** As a lesson learned from BML1, the project's ESIA includes an Environmental Liabilities and Contaminated Land Management Plan (ELCS-MP). The purpose of this Plan is to reduce the effects of pre-existing soil contamination on the plots acquired for the project, such as former gas stations or vehicle maintenance areas. According to the ELCS-MP, as part of the land acquisition process, it is necessary to define and agree between the EMB, the Concessionaire and the landowners the risks and responsibilities associated with the decommissioning and final remediation of such plots, including the identification of environmental liabilities. The ELCS-MP is to be implemented by the Concessionaire through the C-ESMP. Per ESAP #1, the Municipality of Bogotá will cause EMB to require that the Concessionaire develops an ELCS-MP aligned with the ESIA, local regulations, and Lenders' E&S Standards, including IFC PS and WBG EHS Guidelines.

**Tunneling and Hydrogeology:** According to the ESIA and other related studies conducted by EMB, project-related tunneling is not expected to have adverse impacts on hydrogeological conditions or surface water bodies, including wetlands. The ESIA includes comprehensive conceptual and numerical hydrological risks and impact assessment, involving both groundwater and surface water dynamics. Aquifers underlying areas such as the Juan Amarillo and La Conejera wetlands, as well as Canal Salitre, Rio Salitre and Los Lagartos Lake were included in the assessment. Results of the numerical modeling indicate that the groundwater table is expected to remain stable, minimizing any impacts on surface water in wetlands or rivers in the project area of influence. This is primarily due to the low permeability of the overall soils, and the use of Earth Pressure Balance (EPB) boring machine for the construction of the tunnel. The ESIA also includes and Tunneling

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Underground Works Management Program (UWMP), a Groundwater Level Monitoring and Tracking Plan (GLMTP), requiring the Concessionaire to implement geotechnical instrumentation and groundwater monitoring during construction and operations phases, and a Water Resource Management and Monitoring Program (WMMP) to assess the effectiveness of the implemented measures to mitigate and avoid impacts in surface water flow dynamics and physicochemical characteristics. The TUWMP, GLMTP and WMMP must be implemented by the Concessionaire through the C-ESMP.

Per ESAP #6, the Municipality of Bogotá will cause the EMB to require that the Concessionaire updates the hydrological risk and impact assessment, together with related management plans and programs, as appropriate, in accordance with the final construction method and design, following alignment with the IFC PSs, WBG EHS Guidelines and internationally recognized standards and methods. Within the update, and prior construction, the Concessionaire is expected to address impacts on different hydrogeologic units, assessing the risks of cracking and settlement in clay sediments due to lowering water tables during droughts, and the impact of vibration, liquefaction, and seismic events on aquifers. Moreover, water level monitoring data must be collected and used to update the existing hydrogeological models, to allow for detailed analysis of the water table dynamics during the construction and operation phases. In addition to what is described in the ESIA, the UWMP is expected to include monitoring of gases produced by organic soil materials, and the WMMP must include provisions for stormwater, runoff and erosion management, water balance, drought monitoring, spill prevention and control, and a strengthened groundwater and surface water quality monitoring program, focused on wetlands protection.

**PS4: Community Health, Safety and Security**

**Community Health and Safety:** A comprehensive analysis of alternatives aimed at minimizing and managing community health and safety (CH&S) risks and impacts has been conducted as part of the BML2 feasibility study and the project technical designs already contemplate in advance the management of risks and impacts for the health and safety of the communities, including potential risks on structural stability of surface residential facilities, which is considered for the land acquisition planning, the record of neighbor consultation records (“Actas de Vecindad”), and the definition of the project’s Designated Infrastructure Reserve Area. The ESIA has included several management plans aimed to mitigate CH&S risk and impacts, and the Concessionaire’s ToRs includes provisions to develop a CH&S Management Plan (CH&S-MP). Per ESAP #1, the Municipality of Bogotá will cause EMB will require that the Concessionaire develops and implements a CH&S-MP in line with the Lenders’ E&S requirements, including IFC PS4 and relevant WBG EHS Guidelines, covering aspects such as: management of cumulative CH&S impacts; public exposure to operational accidents; natural hazards (e.g., extreme weather events, natural disasters, etc.); spread of communicable diseases in public transportation; universal accessibility criteria; road and transportation safety criteria. In addition, for mitigating noise, vibration and air quality impacts on nearby communities, per ESAP #1, the Municipality of Bogotá will cause EMB to require that the Concessionaire develops and implements a detailed Air Quality, Vibration and Noise Management Plan. Compliance with these requirements will be monitored by the Interventoría.

**Life & Fire Safety (L&FS):** The project design includes ventilation and evacuation systems for the tunnel, as well as robust fire detection and control systems for stations and other buildings with public access in compliance with local regulations and international standards (i.e., NFPA).

Per ESAP #7, prior to construction, the Municipality of Bogotá will cause EMB to ensure that a qualified L&FS expert confirms that the planned design of the L&FS system along the metro line and at each station adheres to the WBG General EHS Guidelines’ L&FS section and the requirements of the CA. This includes an analysis of the Smoke Management System (required for large underground stations), and evacuation and smoke management modeling (CFD or similar). The Concessionaire’s L&FS Master Plan for the design and construction of the system and stations must comply with local building codes, fire department regulations, local safety legal requirements, and internationally recognized standards. An audit and certification by a qualified L&FS expert will be required for the L&FS Master Plan and the technical design of fire protection systems. The design will incorporate universal design and accessibility features based on Colombian regulations.

Per ESAP #8, prior to starting operations, the Municipality of Bogotá will cause EMB to engage a qualified L&FS expert to review and certify that the construction of the L&FS systems has been carried out according to the accepted design. This will include a commissioning report of L&FS systems and a letter of certification from the L&FS professional confirming that the metro line and L&FS systems were constructed as per the LFS Master Plan and approval by the Bogota fire department. Additionally, per ESAP #9, prior to operation, the Municipality of Bogotá will cause EMB to require the Concessionaire to develop a Life and Fire Safety

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(L&FS) Program for Operation in line with IFC PSs, WBG General EHS Guideline and WBG EHS Guidelines for Railways and internationally recognized standards. This program, certified by a qualified L&FS expert, will include prevention, inspection, testing, maintenance of the L&FS systems, and crowd management procedures during emergency events.

**Traffic Management / Pedestrian Safety:** According to the ESIA, roads will not be subject to permanent alterations and only temporary traffic impacts during construction are expected and will be managed following local regulations. Per ESAP #1, the Municipality of Bogotá will cause EMB to require the Concessionaire to prepare a Traffic and Road Safety Management Plan to address potential traffic-related E&S impacts on roadways and communities.

**Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH):** The ESIA has thoroughly assessed GBV and SEA/SH risks for both construction and operation phases. Due to the major civil works and the presence of many construction workers the GBV and SEA/SH risks are significant; hence, per ESAP #10 the Municipality of Bogotá will cause EMB to implement a GBV and SEA/SH Action Plan and updated Code of Conduct (CoC) for all project workers (EMB, Interventoria, Concessionaire, Contractor and Subcontractors) for construction, operation and maintenance. During operations, GBV and SEA/SH risks are particularly relevant for metro system users, EMB has developed Management Plans to reduce the GBV and SEA/SH risks to be implemented in collaboration with the Bogotá Women's Secretary. Provisions to implement GBV and SEA/SH mitigations have been also included in the Concessionaire's ToRs. Therefore, per ESAP #14 the project's Community Grievance Mechanism must be equipped to handle GBV and SEA/SH and related grievances, including a secure and confidential pathway for survivors to access local support services. EMB will monitor the GBV cases during their engagement with the local support services during construction and operations.

**Security Personnel:** The project will employ private security managed by the Concessionaire for which the ESIA includes related mitigation measures to comply with local legislation and IFC PS4. These measures involve analyzing physical security risks, conducting background checks for security personnel, providing training in human rights, ethics, conduct, and relationship with users, regulating the use of firearms and non-excessive force, and establishing response protocols for physical security incidents. Per ESAP #11, the Municipality of Bogotá will cause EMB to develop a Security Management Policy aligned with IFC PS4 and the Handbook on the Use of Security Forces for construction and operation.

### PS5: Land Acquisition and Involuntary Resettlement

Based on a census conducted in 2022, it is estimated that project-related land acquisition will involve 880 properties resulting in the economic and physical displacement of 1,847 social units (households and businesses owners). 72% properties are of residential use, 49.6% are occupied by renters, 44.6% by owners, and 11.2% are vacant. Additionally, the census identified 17 informal vendors occupying public spaces.

EMB is responsible for implementing the land acquisition and resettlement process for which it has developed a Resettlement Action Plan (RAP) in accordance with local requirements and the Lenders' E&S Standards, including IFC PS5. The RAP is aligned with IFC PS5. EMB has developed and implementing a "Procedure for Requesting Administrative Police Action" to address eviction cases which is aligned with local regulation and PS5. Per ESAP#12, the Municipality of Bogotá will cause EMB to adopt the RAP through an administrative act to be applied to whatever kind of land acquisition and resettlement implemented by EMB or the Concessionaire, as needed. Additionally, per ESAP #13 the Municipality of Bogotá will cause EMB to update the census of affected people with an adequate disclosing of cut-off date to ensure compliance with the Lenders E&S Standards, including IFC PS5. The RAP outlines a grievance mechanism process that is aligned with the project's Communi

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## Stakeholder Engagement

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**Bogota Sub Bond (50446)**

The ESIA process involved extensive consultation with affected communities and other stakeholders. Over 40,000 people, including affected communities, businesses, people with disabilities, LGTBI representatives, and vulnerable groups, as well as public institutions, were informed and consulted through various channels between 2021 and December 2024. While not directly impacted by the project, the Cabildo Muisca de Suba, an indigenous peoples group interested in the project, has also been engaged during the ESIA process.

These consultations included meetings to discuss the project, its potential E&S impacts, and planned mitigation measures. EMB invited participation in consultation events via its website, social networks, and WhatsApp. During these events, EMB explained the BML2 project and addressed key concerns such as land acquisition and resettlement, technical specifications, and modal integration. The opinions collected from the affected communities and users were integrated into the ESMPs. Stakeholders' inputs related to project design, universal access, and safe and secure mobility must be considered by the Concessionaire. In particular, regarding people with disabilities, EMB consulted with institutions and CSOs developing policies and strategies for better inclusion and their feedback was incorporated into the physical design of the project. Recommendations from these institutions on how to disseminate information and EGM were also included for Concessionaire's consideration. After the ESIA process, engagement with stakeholders has been maintained through information dissemination activities and responses to specific information requests.

EMB has developed a comprehensive draft Stakeholder Engagement Plan (SEP) based on thorough stakeholder identification. The SEP is structured with four programs: information, dissemination, assistance, and participation. Participation of stakeholders in the project's direct area of influence is planned to be carried out through eight local participation committees (Zonal Committees) and working groups. Additionally, there is ongoing engagement and information validation with two specific groups: social units affected by the resettlement process and business owners along the project's alignment. The engagement and management of the social units affected by resettlement are managed under the RAP. As per ESAP#15, the Municipality of Bogotá will cause EMB to prepare a final SEP in line with the Lenders' E&S Standards, including IFC PS1. The Concessionaire will be responsible for the implementation of participation programs that are developed within the framework of the SEP and the ESIA as required in the Concessionaire's ToRs. The Concessionaire will have EMB's support during implementation, and compliance will be supervised by the Interventoria.

EMB has in place an external communication channel it is website (see <https://www.metrodebogota.gov.co/atencion-servicios-ciudadania>) and it has developed a robust for BML1, which is already being used for BML2, and included in the draft SEP. Per ESAP #16, the Municipality of Bogotá will cause EMB to equipped the existing CGM (including an organizational chart describing the functions and resources) to receive, register, and facilitate the resolution of GVB/SEAH including a survivor centered approach and to respond to resettlement cases..

The full version of the ESIA and other project-related information is available at <https://www.metrodebogota.gov.co/linea-2>.

**Broad Community Support**

Assessed

BCS Comment :

**Local Access of Project Documentation**

The full version of the ESIA and other project-related information is available at <https://www.metrodebogota.gov.co/linea-2>.

**Environmental & Social Action Plan (ESAP)**

Is there an ESAP to be disclosed for this project?

Yes

**Bogota Sub Bond (50446)**
**Mitigation Measures / Environmental & Social Action Plan (ESAP)**

SNo	Description	Anticipated Completion Date
1	The Municipality of Bogotá will cause EMB to develop and implement a Biodiversity Management Plan (BMP) aligned with IFC PS6.	10/30/2028
2	The Municipality of Bogotá will cause EMB to update the census of affected people with an adequate disclosing of cut-off date to ensure compliance with the IFC PS5	7/1/2027
3	The Municipality will cause EMB to equip the current (including an organizational chart describing the functions and resources) Community Grievance Mechanism (CGM) to receive, register, and facilitate the resolution of GVB/SEAH including a survivor centered approach and to respond to resettlement cases	10/30/2028
4	<p>The Municipality of Bogotá will cause EMB to require that the Concessionaire develops the following E&amp;S Management Plans in line with the ESIA, IFC PSs, and relevant WBG EHS Guidelines:</p> <ul style="list-style-type: none"> <li>-Contractor and Suppliers Management Plan (CSMP)</li> <li>-Cumulative Impact Assessment and Management Plan</li> <li>-Chance Find Procedure for Cultural Heritage</li> <li>-Emergency Preparedness and Response Plan, including Contingency Plan, for foreseeable risk scenarios.</li> <li>-Traffic and Road Safety Management Plan</li> <li>-Occupational Health and Safety Management Plan.</li> <li>- Solid and Liquid Waste Management Plan</li> <li>- Hazardous Materials Management Plan</li> <li>-Water Use Efficiency Plan</li> <li>-Energy Use Efficiency Plan-Environmental Legacies and Land Contamination Management Plan (e.g. gas stations, industrial sites)</li> <li>-Detailed Air Quality, Vibration and Noise Management Plan based on an updated modeling.</li> <li>-Community Health and Safety Management Plan</li> </ul>	10/30/2028
5	The Municipality of Bogotá will cause EMB to implement a Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Action Plan and update their Code of Conduct (CoC) for all project workers (EMB, Supervisor (Interventoria), Concessionaire, Contractors and Subcontractors) for construction, operation and maintenance. EMB will require the Concessionaire and their contractors to implement a GBV/SEAH Action Plan as part of the EEMPPPs to assess, mitigate and avoid GBV/SEAH related risks.	10/30/2028
6	The Municipality of Bogotá will cause EMB to require that the Concessionaire updates the hydrological and hydrogeological risk and impact assessment, together with related management plans and programs, as appropriate to the final construction method and design in alignment with the IFC PS, WBG EHS Guidelines and internationally recognized standards and methods. These management plans and programs include Tunneling Underground Works Management Program (UWMP), Groundwater Level Monitoring and Tracking Plan (GLMTP), and the Water Resource Management and Monitoring Program (WMMP).	10/30/2028
7	The Municipality of Bogotá will cause EMB to require that the Concessionaire develops and adopts a Labor Management Plan (LMP) aligned with local regulations and IFC PS2, including among other, measures related to freedom of association, non-discrimination, child labor, forced labor, harassment and abuse, migrant workers' protection, and workers' accommodations, while also covering working conditions, contract verification, social security benefits, salaries, working hours, disciplinary processes, and contractor management.	10/30/2028
8	The Municipality of Bogotá will cause EMB to ensure that a certified professional confirms that the planned design of the life and fire safety (L&FS) systems along the metro line and at each station adheres to the WBG General EHS Guidelines' L&FS Section, specifically the description (or rational analysis) of the Smoke Management System (required for large underground stations), and evacuation modeling and smoke management modeling (CFD or similar). The design will also provide features of universal design and accessibility based on the Colombian accessibility regulations.	10/30/2028

**Bogota Sub Bond (50446)**

9	The Municipality of Bogotá will cause EMB to engage a suitably qualified L&FS professional acceptable to IFC to conduct a review, as part of project commissioning, to certify that the construction of the LFS systems has been carried out in accordance with the accepted design.	10/30/2028
10	The Municipality of Bogotá will cause EMB to require that the Concessionaire develops a Life and Fire Safety (L&FS) Program for Operation in line with IFC PS, WBH EHS Guidelines and internationally recognized standards certified by a qualified L&FS expert, including prevention, inspection testing and maintenance of the L&FS systems, and crowd management procedures during emergency events.	10/30/2033
11	The Municipality of Bogotá will cause EMB to develop an Organigram of the E&S Team that will oversee the environmental, social, resettlement, labor, health and safety, and communication aspects for the construction, operation and maintenance of Line 2.	10/30/2028
12	The Municipality of Bogotá will cause EMB to develop the profiles of the E&S Teams of the Interventoria (Supervisor) and the Concessionaire that will oversee the environmental, social, labor, health and safety aspects for the construction and operation of Line 2.	10/30/2028
13	The Municipality of Bogotá will cause EMB to adopt the Resettlement Action Plan aligned with IFC PS5 through an administrative act to apply to whatever kind of project-related land acquisition and resettlement is implemented by EMB or the Concessionaire, where needed.	7/1/2027
14	The Municipality of Bogotá will cause EMB to develop a Security Management Policy aligned with IFC PS4 and Handbook on the Use of Security Forces during Construction and Operation EMB will require their security contractors and the concessionaire's ones to develop Security Management Plans.	10/30/2028
15	The Municipality of Bogotá will cause EMB to complete a final Stakeholder Engagement Plan in line with IFC PS1. EMB will require the concessionaire to implement the final SEP as required in the Concessionaire's ToRs	10/30/2028
16	The Municipality of Bogotá will cause EMB to develop a Workers' Grievance Mechanism (WGM) including specific provisions to address EMB's, the Concessionaire's and the Supervisor's employees and contractors' grievances in line with IFC PS2 including provisions to manage Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) cases with a survivor centered approach and a clear pathway to give support to survivors. The GBV and SAE/SH cases to be managed by trained personnel. The updated GM to be communicated to direct workers and contractor's workers.	10/30/2028

**Activity Log/Comments**

**Workflow Initiated by Judith Josefina Flores Zavaleta ( Draft Environmental and Social Review Summary)** Jul 16, 2025 11:43 PM ET

Comments:

**Cleared by Mandar Parasnis (ESRO Clear)** Jul 17, 2025 12:51 PM ET

Comments:

**CRU Member Approved and Appraisal Disclosure Initiated by Ejura Phoebe Audu** Nov 10, 2025 04:08 PM ET

Comments:

Client clearance received on 07/16/2025. Processed under delayed disclosure procedure for bonds.

**Supporting Documents**

S.No.	Document Details
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