

Description of the Regional Context for Operation RG-T2384

- 1.1 With a share of 33% of the region's emissions, compared to 65% globally, the energy sector of LAC is comparatively less carbon-intensive.¹ This is mainly due to the high reliance of the region's power sector on hydropower, which accounts for 62% of the installed capacity and 70% of power generation. Despite the relatively low-carbon footprint of LAC's energy matrix, historic trends and forecasts indicate that LAC's energy consumption and GHG emissions are on the rise, with electricity demand growing at a rate of 4.8% annually over the next 10 years, and with large energy infrastructure investments planned for the upcoming decades. According to the International Energy Agency (IEA) the region is expected to almost double the energy demand over the next two decades.²
- 1.2 GHG emissions from the transport sector in LAC are growing at a fast rate, having reached approximately 30% of the overall GHG emissions from the energy sector.³ Economic development, rapid urbanization and motorization, inadequate mass transit options, and inefficient freight and logistics sectors are some of the drivers that increase GHG emissions in the transportation sector. In addition to these, urban sprawl, larger commuting distances, higher costs of commuting by public transport, as well as a gradual growth in the size, weight and power of passenger vehicles, are additional factors that contribute to increase GHG emissions from the transport sector.
- 1.3 Tropical deforestation contributes with approximately 20% of annual global GHG emissions. In comparison to other regions, in LAC, land use, land-use change and forestry (LULUCF) is a larger contributor to GHG emissions (33%).⁴ LULUCF is characterized by extensive changes in land vegetation, destruction of forests, expansion of agriculture, construction of large infrastructure projects and land degradation. Curbing deforestation and implementing sound forest management practices could significantly reduce the region's GHG emissions, as well as bring about a suite of co-benefits associated with sustainable rural development, poverty reduction, and conservation of ecosystem services, such as access to safe drinking water and the protection of biodiversity.
- 1.4 Agriculture in LAC accounts for approximately 5% of the region's Gross Domestic Product (GDP), 16% of employment⁵ and is central to food security. The impacts of climate change on agricultural activities are one of the highest concerns for regional governments and communities. According to IPCC's Third Assessment Report "Climate change will have different types of effects in the regions of the world. It was stated that in South America, floods and droughts would become more frequent and this will cause sediment loads and the degradation of the quality of water in some areas. Yields of important crops are projected to decrease in many locations of LAC."⁶

¹ *Ibid.*

² OECD/IEA, 2012, World Energy Outlook 2012. Available at: <http://www.iea.org/publications>.

³ WRI, *op.cit.*

⁴ *Ibid.*

⁵ World Bank, Development Indicators. 2014. Available at: <http://data.worldbank.org/data-catalog>.

⁶ "Application of environmentally sound technologies for adaptation to climate change". UNFCCC (FCCC/TP/2006/2), 2006.

- 1.5 Technology encompasses tangible assets (e.g. infrastructure and machinery), intangible assets (e.g. know-how, skills and practices), and institutional and organizational frameworks. EST are technologies that can reduce GHG emissions and/or reduce the vulnerability to climate change, while contributing to sustainable development objectives. Under these definitions, the development and transfer of EST becomes a requirement for the transition to low-carbon, climate-resilient development paths, which is an explicit goal sought by countries in LAC. However, the development and transfer of EST requires enabling environments and is hampered by barriers of various types: (i) policy and regulatory barriers; absent, inconvenient or poorly enforced policies and regulations are a deterrent for the adoption of EST and may distort some of their competitive advantages when compared to conventional technologies with higher environmental and social impacts. Policy and regulatory barriers may arise from, *inter alia*, an incomplete understanding of policy effects (including unintended consequences), the legacy of outdated frameworks, political instability, lack of resources for enforcement, or a clash of interests; (ii) financial and economic barriers; insufficient access to financial resources, high cost of capital, poor understanding of risks, lack of adequate risk management instruments, inexperience with EST-specific business models and adverse incentives are obstacles for securing financing for investments in the development and adoption of EST. These obstacles, while they may affect all type of investments, tend to have a particularly hard impact on investments on EST due to their usually higher upfront costs and innovative nature; (iii) technical and capacity barriers; lack of necessary technical skills and experience, unavailable maintenance and technical support, performance uncertainty and unreliability, incompatibility with existing hardware and practices are common examples of technical barriers that may slow down the adoption of EST. Usually, technical barriers are compounded by regulatory (e.g. lack of standards) and financial (e.g. insufficient access to financing) barriers, demanding a comprehensive intervention to create an enabling environment; and (iv) information and awareness barriers; in some contexts, information and awareness barriers are a primary obstacle for the adoption of EST. Complete and up-to-date information on technology options may not be readily available, misconceptions on performance, costs and availability of EST may prevail, and the market opportunities for EST may be unknown or uncertain.
- 1.6 The project contributes to the objectives under the Ninth General Increase in the Resources of the Bank (GCI-9) (AB-2764), which prioritizes sustainable growth in LAC, including the promotion of global environmental sustainability, addressing the challenges presented by climate change, while ensuring that energy requirements for development are met.