EXECUTIVE SUMMARY

AGROSMART

(RG-L1164)

LAC has greatly expanded agricultural production in the second half of the twentieth century as a result of rapid mechanization, professionalization of cultivation practices, and introduction of high-yielding varieties, among others. However, important social and environmental challenges persist and have been increasingly unveiled, such as rural poverty, exclusion, and high disparity of productive performance among farms. A large portion of them were left behind: mainly small and medium-sized farms (SMSFs), which have low productivity and face vulnerable livelihoods and low climate resilience. Such scenario places increasing pressure on LAC's food systems to find new solutions to increase production while adopting a more inclusive and sustainable path.

The Food and Agriculture Organization (FAO) estimates the **global population will reach more than 9 billion people by 2050, requiring an increase of ~70% in food production**. Only 10% of this increase is expected to come from new cultivated areas while 90% of the increase MUST come from efficiency and productivity gains. Climate change effects add on an extra layer of difficulty as it is estimated that every 1-degree Celsius increase in global average temperature generates a 2% yield loss in agriculture.

Innovative solutions developed by ag-focused startups ('agtechs') can play a central role in addressing these challenges, especially for low productive SMSFs, both by reshaping agriculture value chains towards more inclusive, transparent, and favorable conditions, and by providing farm-level solutions to help smallholders and rural workers improve productivity, livelihoods, and climate resilience. The agtech entrepreneurial ecosystem, however, is still nascent and agtech startups face very limited availability of capital and specialized mentorship.

IDB Lab has an extensive track record in supporting innovative models for expanding access of small holder farmers to technology and investing in early-stage startups and VC funds in the region. Key lessons from these experiences were considered during the design of this project. These lessons stress the importance of beneficiary centric solutions and bottom-up approaches. Another lesson learned is that access to technological solutions has to be complemented with access to financing and knowledge in order to promote technology adoption, in particular for SMSFs. In addition, industry and local technical expertise; networks; experienced multidisciplinary teams; knowledge of local agriculture value chains; and the need to use flexible, tailored and blended financial instruments – grants, equity, mezzanine instruments and debt –, are relevant when working with agtechs in the region.

Agrosmart is a regional Company, founded and led by a Brazilian woman, specialized in delivering technology that collects and analyses data from field's sensors to create a smart irrigation and digital crop management system that can reduce water consumption by up to 60%, and energy by up to 40%, while increasing productivity by 20%. The Company is well known by IDB Lab, it is a portfolio Company of SP Ventures (one of IDB Lab's venture capital funds).