

PROJECT SUMMARY

S4: DE-RISKING AGRICULTURAL PRODUCTION VIA DATA ANALYTICS AND SATELLITE IMAGERY

(RG-Q0048)

Drought and flooding are the most harmful extreme climate events in Latin American and the Caribbean (LAC), having caused nearly USD 20 billion losses in the last ten years, particularly impacting the agricultural sector and medium and small farmers, who are more vulnerable to extreme weather events and have less capital to withstand abrupt losses.

The LAC region currently lacks effective and viable alternatives for protecting farmers against such losses as the effects of systemic climate events (those which impact large portions of land) are not covered under existing insurance products offered by the traditional private insurance market, except for a few, highly costly, non-specialized insurance packages with very limited market penetration.

The project objective is to reduce the impact of extreme climate events, particularly drought and flooding, on agriculture, thereby de-risking the sector and helping stabilize agricultural production and commercialization in LAC. The purpose of the project is to support the consolidation and expansion of a new class of systemic climate-risk coverage solution developed by an Argentinian-based startup “S4”. To implement the solution, S4 structures climate hedging products against drought and flooding, based on its proprietary indices that track agriculture yield losses against historical levels using satellite data, machine learning techniques, and bio-agronomic algorithms. The contingent payment is based on the behavior of the indices, which is highly correlated with agricultural yields. The climate risk hedging products structured by S4 are then sold by reinsurance companies, which bear the climate risk, as financial hedging (options) to farmers and firms exposed to agricultural losses derived from drought and flooding.

The project will advance a company with a highly innovative profile. From the technological standpoint, S4’s intelligence system is a pioneer in processing and analyzing remote sensing satellite-generated vegetation and climate data to quantify and follow crop yields in an accurate and continuous way. From the business dimension, S4’s climate risk coverage solutions are delivered as financial products (“climate-risk hedging” instruments) backed by reinsurance companies, instead of as traditional insurance ones, to provide more transparency and reliability, and to facilitate distribution through multiple channels. If successful, the project will develop a new class of systemic climate risk coverage solution, capable of providing widespread protection from abrupt losses to exposed farmers and agriculture firms, in an economically viable and transparent manner, potentially positively disrupting the traditional agriculture insurance market, which has been characterized by limited climate-related coverage, inefficiencies along the supply chain, high transaction costs and low customer adoption.

The project will finance an equity investment of up to USD 1.5 million for a 7.45% stake in S4, as part of an equity round, which will provide S4 with early stage capital to consolidate the business in Argentina and expand it to Brazil. If successful, S4 expects to be able facilitate the provision of climate risk hedging to over 4 thousand small and medium-scale farmers and benefiting another 18 thousand large-scale farmers, firms and institutions exposed to climate risk along the agriculture value chain.