USAID Climate Resilience and Index Insurance Program for Small Farmers in the Dominican Republic

Impact Evaluation Plan

USAID-CRII project aims at offering small farmers in the Dominican Republic the tools they need to cope with climate risk and improve their livelihoods. The program includes four complementary interventions:

- *Develop access to climate and weather information*: Several new weather stations are installed in order to give dairy producers better weather predictions so that they can better plan their production choices.

- *Implement "climate smart" agricultural practices*: Demonstration plots that promote the use of risk mitigating technologies (water tanks, dwells, etc.) have been implemented in key areas to help farmers learn about safe production practices.

- *Increase access to risk transfer mechanisms*: The development of an index insurance product that indemnifies farmers in case of droughts will help them recover after a loss, and also incentivize them to invest in better technologies that they used to shy away from because they perceived them as too risky.

- *Increase access to credit for small producers*: In order to invest in improved production technologies, farmers need credit. Using index insurance as a guaranty for lenders, we hope to make loans more affordable to farmer and more secure to lenders.

These interventions are accompanied by an impact evaluation that will measure how much the introduction of index insurance improves farmers' livelihood. Impact evaluations are useful for determining the effect of USAID activities on specific outcomes of interest. They compare changes in one or more specific outcomes to what would have happened in the absence of the intervention, called the *counterfactual*. This impact evaluation exercise allows us to answer some key questions for the future expansion of the program and its replication in other sectors/regions.

1 - Some questions we will answer in this project

- *Avoid poverty traps:* When a disaster hits farmers, they can be pushed to sell their assets in order to repay their loans and/or sustain everyday consumption. As a result, they are left with lower production assets, so that they cannot access to credit afterwards and are pushed further into poverty. Insurance can break this poverty trap circle by preventing them from selling their assets in case of a disaster.

- *Help farmers access to credit:* On-farm investments are often costly and risky for farmers, so that they are incentivized to produce using cheaper and less risky production methods that produce lower yields. Using Index Insurance as collateral to farmers' loans, we can lower these barriers. Farmers can contract loans and invest in new technologies, and if a disaster comes to hit their farm and reduce their incomes, insurance indemnities will repay their outstanding debt.

- *Compare default rates with and without Index Insurance*: Index Insurance can repay loans when a disaster happens. Hence, default rates should decrease and our financial partner will have the opportunity to reduce its interest rates and become more competitive on the credit market.

- *Determine the right price for Index Insurance*: If the insurance premium decreases by 1%, how large is the increase in demand for insurance and loans? Our impact evaluation exercise can answer this question so that our financial partner can later maximize its profits from this new activity.

2 – Our proposed Impact Evaluation Plan (comments very welcome)

An *Impact evaluation* estimates the effect of a program by comparing changes between a *treatment group* and a *control group* where the intervention is not implemented. The presence of a *control group* is crucial as it measures what would have happen in the *treatment group* if no program had been implemented. In the present project, we intend to estimate the impact of index insurance and credit when offered separately or in an interlinked product. In a *standalone contract*, the farmer remains the primary beneficiary of any indemnity that would be paid; in an *interlinked contract*, indemnities are first used to repay any outstanding debt, and then, any remaining is paid to the farmer.

In order to measure the impact of each component of the program separately and also bundled together, we want to create 4 groups of farmers in our pilot region. Each group will benefit from a different marketing campaign promoting a specific product. These groups are picked at random within the population of dairy farmers in the Northwest.

- *Control Group (Group 1)*: farmers in these associations are excluded from the program during the first year of implementation. They will be able to join the program next year. No marketing or educational activities will be conducted in these associations.

- *Standalone Index Insurance (Group 2)*: This group is offered the same loan conditions as Group1 (standard loan conditions), but can buy Index Insurance as a standalone product. If the demand for credit is higher in Group 2 than in Group 1, we can conclude that Index Insurance increases the demand for credit. We also anticipate the default rates will be lower in Group 2.

- *Improved credit supply conditions (Group 3)*: This associations will not be offered index insurance, but will benefit from more advantageous credit conditions, i.e. lower collateral requirements, lower interest rates, remodeled default rules, so that credit becomes more affordable/accessible for farmers. Comparing Group 1 and Group 3, we can measure the impact of credit conditions on demand for credit.

- *Interlinked contract (Group 4)*: In this group, we would offer an interlinked product in which insurance indemnities are first paid to the bank to repay any outstanding debt. The remaining, if any, would be given to the farmer to help him recover after his loss. Because default risk is lower in this group, credit conditions can be made more advantageous as in group 3. Possibly, the effect of the interlinked product on default rates and demand for credit is higher than the sum of the standalone Index Insurance and improved credit supply conditions effects taken separately.

Index Insurance and credit can been seen as risky tools for farmers, and they might be reluctant to give it a try. In each *treatment group* (Groups 2, 3 and 4), we will conduct educational games and distribute discount coupons that incentivize farmers to buy these financial products. These tools have been proved to significantly impact take up rates in this kind of programs.

Educational Games

Index Insurance is a new product that must be explained to farmers. We will train farmers to the use of this new risk management instrument by implementing educational sessions within each *treated* association. These training sessions are organized as little games that mimic production and investment decisions on the farm and help farmers familiarize with the product.

These training sessions can also be seens as marketing activities where we present the new products offered by our financial partner, increasing its access to its potential customers.

Discount Coupons
Index Insurance is a new product for farmers, and our experience tells us that they tend to fear new financial instruments. One way to get around this constraint is to offer discount coupons that cut the price of insurance for the first year. Customers tend to test new products more easily if they are offered a discount.
In pratice, these coupons have been shown to significantly increase take-up rates for insurance products. They also help us to estimate the *price elasticity of demand for index insurance (*if the insurance premium decreases by 1%, the demand for insurance increases by x%) which is an important pramter for our fnancial partner.

3 – Seven questions to determine if this Impact Evaluation Plan could suit you

Question #1: Would you be interested in offering Standalone Index Insurance contracts **and** Interlinked Index Insurance / Credit contracts?

Question #2: Would you be interested in modifying your loan conditions (interest rates, collateral requirements) to make it more attractive for insured farmers?

Question #3: Would you agree to market different products to the four groups of associations described above?

Question #4: Would you agree to let us choose which association can access to which product?

Question #5: Would you be interested to get our support in your marketing activities?

Question #6: Would you accept the discount coupons that we would distribute to farmers (we will compensate you for this income loss)?

Question #7: Are you interested in getting answers to the questions we raise?

If you are not sure to answer "Yes" to any of these questions, please let us know so that we can adapt our evaluation strategy to your own concerns or requirements. Please feel free to contact us for any question, or suggestion.

Our Impact Evaluation Plan