PROJECT STATUS REPORT (PSR)

07/01/2022 - 12/31/2022 - PSR-09455

PROJECT SUMMARY

Operation number
BL-T1121

Suboperation number
ATN/ME-17536-BL

Project Name
Enhancing Conservation in Belize's Protected Areas through Disruptive Technologies

Team Leader
Andres Rubio Chacon

Executing Agency
Ya'axché Conservation Trust

Purpose
The project's goal to preserve natural capital in the Maya Golden Landscape (MGL) by improving economic livelihoods of the communities that buffer the protected areas, reducing unsustainable farming practices, and strengthening the capacity for monitoring

Project cycle

Approval Date	Signature Date	First Disbursement Date	Last Disbursement Date
2019-08-29	2019-12-10	2020-05-15	2023-06-10

PSR SCORE

0 - 1 Red Flag
1 - 2 Yellow Flag
2 - 4 Green Flag

LEARNINGS

1. Risk and Lessons

1.1. Risk

1.1.1. What do you think is the biggest risk that threatens the achievement of the project objectives?

The inclement weather condition in the Toledo District has created some delays in establishing training sessions with farmers and other community members. The increased rainfall has also created a decrease in cacao production. For example, in January 2022 cacao production was at 7,095 lbs and in January 2023 it is at 6,369 pounds. We know that there will be higher yields onto the dry season, but production rates won't be as high as recorded in 2022. Similarly, with the bee apiaries, too much rainfall made some of the bees abscond and delayed honey production a bit. Beekeepers had to re-capture bees to replace the one that were absconded. The re-capturing took a while, but now all beekeepers are within the standard range of owning 2-4 hives.

1.2. Greatest Achievement or Failure

1.2.1. What has been the greatest achievement or failure in the last semester that affected the implementation of the project?

The greatest achievement of the project in the last semester has been the full creation of the Integrated Forest Management Database. This has helped the Community Outreach and Livelihoods collect vital livelihoods information that will enable us to develop a first ever livelihoods report for the program. The database is comprised of agroforestry and beekeeping components which are two smart agriculture practices that Ya'axché promotes heavily in the Maya Golden Landscape. Data has always been collected in an ad-hoc manner and stored in excel files; however now with the new database information can be entered directly into the system and reports produced for any datasets needed.

1.3. Findings and Lessons

1.3.1. What are the most useful findings and lessons from this project that when taken into consideration could improve the execution and results of existing projects and the design of similar projects in the future? A finding describes an action, circumstance or decision that was critical in determining the positive or negative evolution of the project (for example, switching from the development of a blockchain platform to a web-based shared database reduced the cost and time devoted to implementing the traceability capabilities required by the project). A lesson is a concrete, actionable proposal based on a finding that, in similar circumstances, would facilitate problem solving, risk mitigation, and the achievement of results (for example, Develop guidelines and criteria to identify candidates that could benefit from the implementation of a blockchain platform, and assess during the design if the selected project satisfies the criteria before committing to develop one).

One of the most challenging things of this project was the purchase of key valuable equipment. Due to the bank regulations and also a lack of US currency in the country the purchases were very delayed. In addition to that, the COVID restrictions also caused a hold up of shipment at the ports in the US and Belize. This was for tablets, laptops and other equipment. Ya'axché had to get a single supplier who was able to buy in big amounts to accommodate the purchases. We found this to be a bit easier. We also realized that for future projects we have to at least hire someone for procurement purposes. Ya'axché works with 10 projects or more on a yearly basis which often involved purchases and having one person dedicated to that will make the process easier.

2. Scalability and replicability

2.1. Scalability Plan

2.1.1. Now that the Project is in the execution phase, have you developed any concrete plan or action that will allow it to reach a greater number of users/clients/beneficiaries (or broader environmental or resilience to climate change and natural disasters impacts) in the future?

With the implementation of the project, it has allowed Ya'axché to leverage other funds to scale up the work of the Community Outreach and Livelihoods as well as the Protected Areas and Science Programs. Ya'axché will recruit other farmers from buffering communities that would like to become a part of the COL Program and replicate the interventions promoted such as cacao agroforestry, inga-alley cropping and beekeeping. The program also has intentions of expanding its horizons to other communities outside the Maya Golden Landscape such as San Vicente and Jalacte that borders Guatemala where degradation and deforestation is very high. We believe that Ya'axché can have a greater impact there, especially in its land restoration efforts. We are currently using drones to detect deforestation rates and mapped out potential restoration sites for future restorative interventions. Ya'axché is also scaling up its efforts in the wildlife program by recruiting additional farmers that have had wildlife conflict issues particularly with jaguar attacks on cattle. Ya'axché has been piloting the use of technologies such as fox lights, live fencing, and sonars on cattle farms to deter jaguar attacks. The technology has worked well that today we have 9 wildlife conflict model farms in the MGL. In addition to that, we are also scaling our education and awareness efforts to have more reach at the community level but also nationally through tv and radio shows.

2.2. Costs and Partners to Scale

2.2.1. Now that the project is in the execution phase, do you know how much it costs to offer your product / service per user / client / beneficiary? Is this a factor that could affect reaching a greater number of users / clients / beneficiaries in the future? Has any public or private institution requested this information from you, looking for scaling or replicating the model / product / service?

Ya'axche operates on a budget of 2.8 million Belize Dollars per annum. Program expenses which include Protected Areas, Community Outreach and Livelihoods and Science accumulates to 1,645 million Belize dollars per annum. Scaling our efforts and expanding our services in other communities outside the MGL will double the amount in expenses.

2.3. Facilitating or Hindering Factors

2.3.1. Has any of these factors affected the number of users/clients/beneficiaries (more/fewer) reached by the project compared to what was originally planned (or environmental or resilience to climate change and natural disasters impacts)?

[Behavioral changes required by users/clients/beneficiaries]

2.4. Scalability Scope

2.4.1. How feasible it is that the organization could reach a number of users/clients/beneficiaries 5, 10 or 100 times the number originally planned in the project design, five years after the project ends?

[It could reach less than 5 times the number of users/clients/beneficiaries originally planned in the project design five years after its closure]

2.4.2. How likely is the organization to reach that number five years after the project ends?

[Low probability (less than 50% but more than 10% chance)]

2.5. IDB Group business relation

2.5.1. Has a business relation been created with another part of the IDB Group different from IDB Lab?

No.

2.6. Replicability Partners

2.6.1. Are you aware of any other entity at a national or international level that has copied / replicated completely or partially the business model of the project? Did you collaborate in the process with that entity?

[Yes]

If Yes, Explain

Ya’axché has partnered with the Food and Agriculture Organization to replicate the climate smart agriculture aspect across ten communities in the MGL. This also includes capacity building for the formation of fire brigades across communities. It will also entail the development of a full management plan for the Maya Mountain North Forest Reserve also continue usage of technologies such as drones to help deter illegal activities in the protected areas that Ya’axché manages. The recognized work of the organization has also landed us in managing a new private protected area called the Boden Creek Ecological Preserve (see map below). This area is approximately 13,000 acres and is very important site for wildlife connectivity especially jaguars and white lipped peccaries. In the future Ya’axché would like to lobby the Government of Belize for potentially declaring all these PAs as part of the Southern Biological Corridor.

2.7. Replicability Scope

2.7.1. Number of users / clients / beneficiaries reached by entities that have fully or partially replicated / copied the business model / products / services implemented with the support of the project?

[N/A]

2.7.2. Have you experienced, in the last year, significant expansion (50% or more) of the reach of the business model of the project beyond what was expected in the original project design (due to increasing of the organizational size, operational scope or geographic spread)?

[No]

2.7.3. Number of users / clients / beneficiaries reached as of the end of the year?

[Less than 2 times the number of users / clients / beneficiaries planned in the original project design]

2.8. Sustainability

2.8.1. How do you think the project will continue once the IDB Lab financing ends? Examples: it has identified external financing sources to continue operating, it has reached the breakeven point through the sale of services and products, it has obtained the support of public institutions or the private sector, it will adjust the business model to remain viable (via franchises, etc.)

Ya'axché maintains it grants/fundraising scheme active with continuous submission of project concepts to secure funding for program and operational sustainability. Ya’axché has managed to secure 1.6 million out of its 2.8 million annual budget. The prospect of fundraising looks promising especially in the area of climate smart agriculture practices. Ya’axché will continue to aggressively fundraise for its programs but also for its goal of replicating its efforts in the MGL and beyond.

3. Implementation

3.1. Facilitating or Hindering Factors

3.1.1. What specific aspects have (positively or negatively) affected the implementation of the project the most?

[External shocks that affect the economy in general (natural disasters), Other]

Others, Which?

The inclement weather conditions that have prevailed in the Toledo District have caused delays in the arrangement of certain trainings with beneficiaries; however, this has allowed the extension officers to arrange better dates and time which resulted in greater participation.

3.1.2. Explain in detail how these factors that you identified have made the implementation of the project easier or more difficult

The factors mentioned above caused delays but was not significant enough to have stalled the activities. It delayed the scheduled trainings but did not cause any impediment for the activities not to happen.

3.2. Novel Tecnologies Factors

3.2.1. If the project makes use of novel technologies or methodologies, what factors have facilitated or hindered the implementation of the technological solution initially proposed by the project?

[Data availability, Other]

Others, Which?

Prior to the establishment of the integrated forest management database, Ya'axché did not have a repository to store data sets and information was collected in an ad-hoc manner. The project brought the opportunity to develop a robust database which catered for the strengthening of socio-economic data that is useful for the compilation of yield data. The extension officers can now use their smart devices to collect accurate yield information from the farmers Ya'axché works with. These interventions are honey production, apiary mapping, agroforestry systems including cacao and coffee yields, and inga-alley cropping with corn and beans production. The end goal is to maintain the database as a main repository of information. Ya'axché has plans to develop a livelihoods report that will be shared with the Ministry of Agriculture and other state departments.

4. Development Outcomes (Quantitative)

4.0 Has your project contributed to any of the following indicators in the last 12 months (last year)?

[4.1. Number of companies benefited]

4.1. Number of companies with improved business performance or productivity

Total

1

Companies Owned/Led by Men

1

4.1.2. Indicate which indicator in the results matrix is related to your answer, or how did you calculate this number?

Indicator 4. Number of cocoa producers trained

4.1.3. What type of services did the companies receive?

[Non-Financial]

4.1.4. Please select how the project is benefiting these companies

[Improved productivity or business performance (e.g. improved sales/reduced costs/improved profitability/return on capital/yields/labor productivity]

4.5. Data Source

4.5.1. What kind of verification sources have you used to report the data you provided in this section? (Please select all that apply)

[Administrative information]

5. Development Outcomes (Qualitative)

5.1. Target population identified in the design

Is the target population that was identified in the design being reached by the project? Select the target population actually reached by the project that was originally identified in the project design.

[Indigenous population, Entrepreneurs, Women, Rural population]

5.2. Population served NOT identified in the project design

5.2.1. Select if there are Groups that were NOT originally identified in the project design but are being reached in the execution phase?

[Senior adults]

5.3. Facilitating or Hindering Factors

5.3.1. Factors that have affected (facilitated or hindered) reaching these groups, or the resilience/environmental impacts, in the numbers/dimensions that the project had originally planned.

[Interest of clients/users/beneficiaries, Market Size, Institutional Capacity, Prices]

5.3.2. Explain in detail how these factors that you have identified have affected the ability of the project to reach the groups (achieve resilience/environmental impacts) in the numbers/dimensions originally expected

There is still a challenge to recruit new women to be direct beneficiaries for climate smart practices (agroforestry, beekeeping). There is a cultural barrier that may to this day still influence in increased participation in field activities that are perceived as jobs for men in the indigenous communities. Also, there is a fear of bees by women to engage in beekeeping. Ya'axché engages in exchanges and gender inclusive capacity building to increase participation of women and youth. Organized group in cacao agroforestry require further strengthening understand market size and understand the importance of investing time at start of setting up a business to be able to see financial returns by implementing the proper management practices to increase productivity and be able to meet market demand and production forecasts. The price of cacao is still at a low and may require high investment to maintain organic certification.

INDICATORS

Overachieved Achieved Pending In process Overdue

C1: Promoting climate-smart and sustainable farming practices

Weight: 65% **Qualification:** Satisfactory

100%

	Indicators	Planned	Achieved	Status
I5	Number of farmers with customized farm management plans (sex disaggregated)	60 (2023-08-10)	61 (2022-06-15)	
I1	Advanced Curriculum developed for Agro-forestry	1 (2021-08-10)	1 (2021-10-29)	
I2	Curriculum developed for Beekeeping	1 (2021-08-10)	1 (2021-10-29)	
I3	Number of farmers trained in Cocoa agro-forestry (cumulative and sex disaggregated)	100 (2023-08-10)	163 (2022-12-30)	
I4	Number of people trained in beekeeping (cumulative and sex disaggregated)	30 (2023-08-10)	30 (2022-12-30)	
I6	Digital beekeeping tool operational	1 (2022-08-10)	1 (2022-12-30)	
I7	1 farm management tool for extension agents	1 (2021-08-10)	1 (2020-12-15)	
I8	Number of Ya'axché extension agents trained (sex disaggregated)	5 (2021-08-10)	5 (2020-11-25)	

C2: Leveraging technology to improve surveillance and monitoring of protected areas

Weight: 26% **Qualification:** Satisfactory

100%

Indicators	Planned	Achieved	Status

I1	Technology Use Plan developed	1 (2021-08-10)	1 (2021-04-12)	✓
I2	Integrated database platform operational	1 (2022-08-10)	1 (2021-10-26)	✓
I3	Number of Ya'axché Staff trained in use of digital technology (sex disaggregated)	10 (2022-08-10)	10 (2022-06-09)	✓
I4	Study Tour	1 (2021-08-10)	1 (2021-12-20)	✓

C3: Engagement and Communication

Weight: 9% **Qualification:** Satisfactory

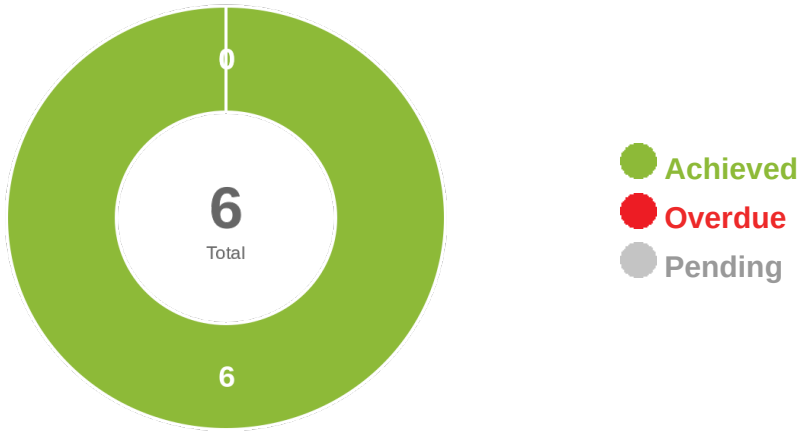
100%

	Indicators	Planned	Achieved	Status
I1	Communication plan developed	1 (2021-08-10)	1 (2022-06-30)	✓
I2	Flagship report on the state of the MGL published	1 (2022-08-10)	1 (2022-03-31)	✓
I3	Multimedia Case study on cacao agroforestry and beekeeping in protected areas	1 (2023-08-10)	1 (2022-09-19)	✓

C4: Project Administration

Weight: 0% **Qualification:** Satisfactory

MILESTONES



Milestones	Achieved Value	Due Date	Achieved Date	Status
*Prior Conditions	1	2020-06-10	2020-05-12	✓
*State of the Park Report	1	2022-06-10		✓
*Digital curriculum	1	2020-12-10	2021-01-14	✓
*Rapid assessment and technology use plan	1	2021-06-10	2021-04-12	✓
*Training - Cocoa farmers and beekeepers	1	2021-12-10	2021-12-31	✓
*Integrated database	1	2022-12-10		✓