

Stakeholder Analysis, Management and Engagement Plan:

Building the Adaptive Capacity of Sugarcane Farmers in Northern Belize (BaC-SuF)



Submitted to Caribbean Community Climate Change Centre
(CCCCC)

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1. Acronyms and Abbreviations

ASR	AMERICAN SUGAR REFINING INC.
BELTRAIDE	BELIZE TRADE AND INVESTMENT DEVELOPMENT SERVICE
BSCFA	BELIZE SUGAR CANE FARMERS ASSOCIATION
BSI	BELIZE SUGAR INDUSTRIES LTD.
CCCCC or 5C's	CARRIBEAN COMMUNITY CLIMATE CHANGE CENTRE
CSPCA	COROZAL SUGAR CANE FARMER ASSOCIATION
DAE	DIRECT ACCESS ENTITIES
DFC	DEVELOPMENT FINANCE COOPERATION
GCF	GREEN CLIMATE FUND
NSCGA	NORTHERN SUGAR CANE GROWERS' ASSOCIATION
PSCPA	PROGRESSIVE SUGAR CANE FARMER ASSOCIATION
SCPC	SUGAR CANE PRODUCTION COMMITTEE
SAMEP	STAKEHOLDER ANALYSIS AND MANAGEMENT ENGAGEMENT PLAN
SICB	SUGAR INDUSTRY CONTROL BOARD
SIRDI	SUGAR INDUSTRY RESEARCH AND DEVELOPMENT INSTITUTE

2. Introduction

The purpose of this stakeholder analysis and management engagement plan report is to show the process Agricane and the Caribbean Community Climate Change Centre (CCCCC) has followed in order to listen to, collaborate with, and/or inform all existing stakeholders involved in the “Building the Adaptive Capacity of Sugarcane Farmers in Northern Belize (BaC-SuF)” project. This process entails identifying, mapping and prioritizing stakeholders to determine the best methodologies for effective communication, while making the best use of available resources and expertise in the country and the industry, in which the project is embedded.

A successful GCF project requires active engagement of stakeholders at all levels and throughout the project, from the generation of the project ideas to the planning, implementation, monitoring, evaluation and reporting. This fulfils the country ownership criteria of GCF and also ensures longevity of the project/programme. Multi-stakeholder engagement can also be a crucial factor for the success of a project. CCCCC as the project accredited agent should work closely with the farmer community, sugar mill and all support institutions of the project from its inception and can play a facilitative role for the multi-stakeholder process by ensuring that the relevant stakeholders are aware of the proposal and have access to information as necessary throughout the process. Stakeholders, especially from the four farmer associations, can contribute to the monitoring and evaluation of the implementation and results of the project.

The project will ultimately go through three different phases over its lifetime. Each of the phases have different stakeholder engagement methodologies, requirements and structures. The three project phases are 1) Project conceptualization leading to the project concept note 2) Project design leading to the detailed project design and funding application and 3) Project implementation and monitoring and evaluation.

This report describes the stakeholder engagement process (with supporting documentation) of the first two phases of the project cycle and the stakeholder engagement design for the third phase of the project.

For the purposes of this report stakeholders are considered all interested and affected parties involved with the project. This includes those stakeholders who will directly and indirectly benefit from the project, stakeholders with mandates aligned with the aims and objectives of the project and internal stakeholders (Project support staff and consultants)

3. Objectives of the Stakeholder Engagement Plan

The objectives of the SAMEP have five key dimensions:

1. To ensure that adequate and timely information on the project and GCF activities are shared with stakeholders, and that these stakeholders are given sufficient opportunities to voice their opinions, and integrate their views for future planning, designing, preparation and implementation of the GCF related activities.
2. To ensure that stakeholders have the chance to access and contribute to the technical, institutional and financial aspects of the project design in a manner which is participatory and provides a degree of external quality control
3. To connect stakeholders and build trust and a spirit of cooperation among stakeholders who will be part of the project leadership team thereby reducing the risk of conflict during the project implementation phase.
4. To provide guidance for internal monitoring and evaluation of engagement in GCF activities using a participatory approach with the full and effective involvement of all stakeholders in a transparent manner.
5. To facilitate effective implementation of project actions .

4. Guiding Principles of a Stakeholder Engagement Plan

This stakeholder engagement framework and process has been guided by following principles:

1. Multi-stakeholder approach: Ownership of the project by all the interested and affected stakeholders is a pre-requisite for the success of the GCF process in Belize. These stakeholders include but is not limited to the sugar cane farmers, sugar mill and sugar industry support/enabling institutions including financial institutions and input suppliers as well as the different government departments who fall outside of the sugar industry regulatory framework. The SAMEP will promote the culture of sharing responsibilities as well as accountabilities by all the stakeholders in GCF-related activities based on their roles and responsibilities assigned outside the project as well as roles and responsibilities derived from the participatory planning process.
2. Programmatic approach: The process will take into account existing stakeholder forums, designations and competencies and will build on these where possible to strengthen capacities and reduce duplication.
3. Promote gender and social inclusion in the sugar industry: The SAMEP will promote and ensure inclusive participation and gender sensitivity in its design and

functioning. Gender inclusion and the gender perspective will be mainstreamed in the project design and implementation and will build on specific recommendations contained in the gender assessment and action plan .

4. No conflict of interest of the stakeholders involved in the GCF process: The SAMEP must ensure that there is no conflict of interest of the stakeholders involved in the GCF process.

Stakeholder engagement will be considered an ongoing process thought the life of the project with necessarily follow up, continuous update and regular assessment of progress rather one of event. Engagement will change over the life of the project as the project moves from design to implementation and monitoring and evaluation.

5. Stakeholder Engagement

5.1. Stakeholder Identification and assessment

Project stakeholders can be divided into three main categories. The first category are those stakeholders that are directly involved with the sugar industry either as a farmer or a miller (value chain actors). The second category are those stakeholders in the industry supporting these value chain actors either for commercial reasons e.g., financial institutions or legislative reasons e.g., Sugar Industry Control Board. The third category are those stakeholders that are not involved with the sugar industry but are important to the project either as a governmental or non-governmental organization or organizations involved with climate change and resilience building activities in the country. This includes internal stakeholders such as CCCCC staff and consultants.

In undertaking the stakeholder identification and assessment, it is important to have an understanding of the legislative framework under which the sugar industry operates as this dictates some roles and responsibilities in the industry and by inference in the project design with regards stakeholder engagement.

The sugar industry in Belize currently operates under the Sugar Industry Act no. 27 of 2001. This act was passed to enable the following:

- To make new and better provision for the administration and control of the sugar industry in Belize;
- To provide for the organisational structure of the sugar industry through the establishment of the Sugar Industry Control Board, the Sugar Cane Production Committee, the Sugar Industry Research and Development Institute, the Sugar Cane Quality Control Authority and the Belize Sugar Cane Farmers Association;
- To provide for the establishment of the Sugar (Industry Development) Fund and the Sugar (Labour Welfare) Fund;

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- To further consolidate the laws regulating the control of the sugar industry and to repeal the Sugar Cane Industry (Control) Act, Chapter 283 of the Substantive Laws of Belize, revised edition 2000, and the Sugar (Special Funds) Act, Chapter 219 of the Substantive Laws of Belize, revised edition 2000

The act was amended in 2015 (No 1 of 2015). This amendment allowed for the following:

- Replacing the definitions of "association", "cane farmer";
- Providing differently for the association and representation of cane farmers;
- Providing anew for the registration of cane farmers and associations;
- To provide anew with respect to the Belize Sugar Cane Farmers Associations and the registration of cane farmers. Each association registered under this Act shall maintain a register of its members and each cane farmer shall register

The value chain actors are organized as follows: The farmers are grouped into harvest groups (HG), test groups (TG) and Farmers Associations. Currently there are 274 harvest groups, 19 test groups and 4 Farmers Associations. The primary purpose of the harvest groups is to provide logistical support to farmers through a harvest group leader system. This support is focussed on harvesting and haulage but may also include other areas of sugarcane production. Some harvest groups supply their members with inputs on credit while others provide crop husbandry services.

The test groups are created to align deliveries with quality and to make payments according to the quality received from each group.

The Farmers Associations are the apex farmer bodies and are responsible for the support, lobbying and overall welfare and sustainability of the farmers. The Farmers Associations are the institutions through which the project will connect with the individual farmers on the ground.

The 4 Farmer Associations that now exist have been established as a result of many factors, such as political allegiances, social cohesion and farm location. The initial Farmers Association, BSCFA still remains the dominant association in terms of production and number of members, but membership and cane production has been falling since the amendment of the Act due to differing political views (members transferring to alternative associations) and a reduction in yield (members that stop farming sugarcane).

Table 1: Distribution of Long Tonnes produced by different stakeholders

	BSCFA	PSCPA	CSCPA	BSI & SIRD	NSCGA
2001/2002					
2020/2021	53.8%	18.5%	10.9%	9.9%	6.9%



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During the engagement process, each association, after transparent and clear explanation of the project's intentions, showed similar levels of support for the project and the intended impact. The division of associations brings about a natural hesitancy and therefore independent intermediaries play an critical role in the engagement with the Farmer Associations.

Belize has two sugar mills, one situated at Orange Walk owned and operated by ASR Group and the second in the Cayo District in the west of Belize, owned and operated by the Santander Group. For the purposes of this project, only the ASR Group operated mill is considered an industry stakeholder as all the project beneficiaries deliver to this mill.

The sugar mill at Orange Walk was purchased by the ASR Group in 2012 when they purchased the shares of BSI, which was until then owned by the government of Belize. The sugar mill crushes an average of 1.4 million tonnes¹ of sugar cane annually producing around 140 000 tonnes of sugar. The mill also produces up to 30Mw of electricity. Recently ASR has invested in significant upgrades to the mill to increase the production of direct consumption sugars.

The farmers are considered as the primary recipients of the project support and therefore ownership of the project by them is critical. The mill, while not benefitting directly from the project have a large stake in its success as continued and ensured cane supply is critical to its business continuity. Thus, this category of stakeholders are considered the most critical and influential in the project design and execution. BSI has been included in the project design as an executing entity and the farmers associations representing the farmers have (through the project design consultation process) been designated as co-implementors of the project. Both these project roles are indicative of the status and influence that these stakeholders have in the project.

The second category of stakeholders include those institutions created through the sugar act to regulate and promote the sugar industry in Belize. These institutions include the following:

1. Sugar Industry Control Board (SICB). This is the institution tasked in the act with the overall control of the Sugar industry in Belize. The SICB has a number of institutions reporting through it including:
 - a. Sugar Cane Production Committee (SCPC). This committee is responsible for the allocation and monitoring of all production aspects in Belize
 - b. Sugar Industry Research and Development Institute (SIRDI). This institute is responsible for all research and development aspects of the sugar industry. SIRDI also manages a number of extension and developmental projects and delivers a significant amount of training to farmers in Belize

¹ 1 tonne=1000kg Metric tonne used in Belize

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- c. Sugar Cane Quality Control Authority (SCQCA) This authority is tasked with the testing and sampling of sugarcane at the mill

SIRDI, being the custodian of the technical aspects of any sugar intervention and operation are considered the most important and influential in this category of stakeholder. They have been involved right from the project conceptualization and are also designated as an executing entity in the project design. They also play a significant role as a neutral party in the sometimes tense commercial relationship between the millers and the growers. The sugar industry control board being the apex industry body created through the sugar act is influential in a project that involves the sugar industry. The chairman of this institution is identified as a key and significant stakeholder in the project.

Another important set of stakeholders identified that fall into the second category of stakeholders includes the financial institutions supporting farmers in the sugar industry. Key financial organizations identified as important to the project include Development Finance Corporation-DFC (also holds residual EU replant money on behalf of government) LICU credit union, Belize and Atlantic bank. The DFC is identified as the most influential stakeholder among this group.

Rip-IO, a private company working with BSI developing the smart sugar cluster has also been identified as an important stakeholder in the project.

Stakeholders that have been identified which fall into the third category of stakeholders (non-sugar industry stakeholders) includes the following:

1. Caribbean Community Climate change centre (GCF accredited entity)
2. Ministry of Agriculture
3. Green climate Fund
4. National Authorising officer -Ministry of Economic planning
5. Agricane consulting staff

The CCCCC has a pivotal role to play in the project. Not only are they the accredited entity which enables them to lead the project design process but in the context of the politically sensitive Belize sugar industry they are seen as truly neutral. This neutrality has enabled open and honest engagement with all stakeholders during the project design stage.

Agricane made a deliberate effort to include as many local experts in the project design team. These experts come from a range of sectors and industries in Belize which would be considered important for the success of the project.

5.2. Stakeholder engagement activities - project design phase

This section of the report describes the stakeholder engagement structures and strategies that have been developed and undertaken during the conceptualization and design phase of the project. Engagement during these two phases of the project has resulted in the stakeholder engagement plan for project implementation which is described in the next section of this report.

Effective engagement of stakeholders at an early stage helps to ensure that GCF project concepts demonstrate country-ownership and support from local communities and other stakeholders. It allows identification of potential impacts on stakeholders in the project's area of influence, the roles that they may play, and the flagging of issues, gaps and opportunities in project design at a time when adjustments are most easily made.

During the project conceptualization phase the key stakeholders identified were consulted and a two day working session was held with BSI and SIRDl to discuss the problem statement and needs (A full record of these engagements can be found in the approved project concept note for the project) Engagements were also held with all other key stakeholders

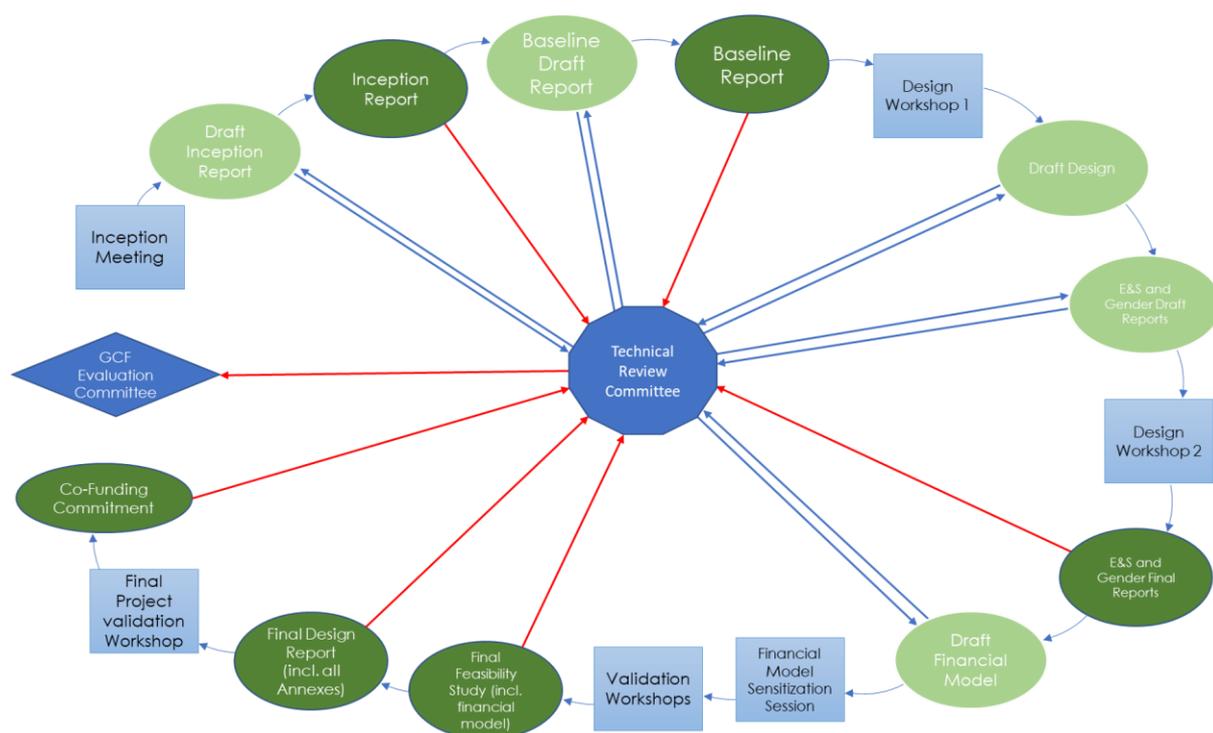
These engagements resulted in a conceptual project design being developed in response to the climate impact expected in the Belize sugar industry. This design was captured in the concept note. The elements of the project were clearly defined and captured in the different project components. Project implementation modalities were not that well defined however and needed quite a bit of changing in the final project design.

During the project design stage, the stakeholder engagement became far more systematic and programmatic. This is a pre-requisite for any participatory design process. It is interesting to note that due to COVID many of the stakeholder engagement activities took place either virtually, or in person or through a combination of both. While this type of engagement forced by the pandemic, is new to all concerned, having gone through this process as part of the design phase we would consider that using a blended approach to stakeholder engagement is a very efficient way of engaging and will become normal in stakeholder engagements in future.

The following diagram indicates the stakeholder engagement plan and activities and outcomes undertaken during the design phase:



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Key to stakeholder buy in and ownership during this phase of the project was the establishment of the technical review committee and the process of workshopping with stakeholders at every step of the design process. The technical review committee reviewed all of the Agricane deliverables before sign off from CCCCC. This ensured not only the technical correctness of the interventions but also ensured the activities were aligned with the farmers needs. The workshops held during the different phases of the project design allowed the space for stakeholders to input freely into the design process.

Based on the above, the following stakeholders were engaged during the different phases of the project design process.

GCF Project Phases	Stakeholders
Inception Report & Work Plan	CCCCC, SIRD, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA. Ministry of Economic Development
Baseline Report	CCCCC, SIRD, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA, Development Finance Cooperation, Department of Agriculture, Community members
Gender assessment & action plan Environmental and Social Assessment and Action Plan	CCCCC, SIRD, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA, Development Finance Cooperation, Department of Agriculture, Community members

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Draft Concept Project Design	CCCCC, SIRDI, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA, Development Finance Cooperation, Department of Agriculture, Community members
Draft Concept Project Design - Feasibility Study	CCCCC, SIRDI, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA, Development Finance Cooperation, Department of Agriculture, Community members
Risk Assessment & Mitigation Plan Stakeholder Analysis and Management and Engagement Plan	CCCCC, SIRDI, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA, Development Finance Cooperation, Department of Agriculture, Community members
Final Project Concept Design	CCCCC, SIRDI, BSI-ASR, Sugar Industry Control Board, PSCPA, CSCPA, NSCGA, BSCFA, Development Finance Cooperation, Department of Agriculture, Community members

Details regarding each stakeholder engagement with abbreviated notes can be read in **annex 1** of this report.

This stakeholder engagement process was designed with the following criteria in mind:

1. Develop a common vision and purpose with regards the project design process
2. Develop a process where honest and open communication can take place with stakeholders at each stage of the design process
3. Empower stakeholders to make decisions and own each element of the project by giving them technical oversight into the project design process
4. Align stakeholder competencies with project implementation needs
5. Elicit broad agreement as to stakeholder roles and responsibilities in the project implementation
6. Get full commitment of stakeholders to co-funding activities through the signing of a letter of commitment to co-fund.

During the design phase there was strong alignment of stakeholders to the aims and objectives of the project with everyone supporting the need for the project and agreeing the interventions proposed would contribute to overcoming the barriers and help support the needs identified. Reflecting on this strong alignment, it was concluded that this was due to a well develop and thought through concept note which clearly addresses the farmers and industry needs and had a strong stakeholder process underpinning the conceptual design.

There were however some issues raised by stakeholders which needed addressing during the engagement process in order to ensure total alignment of all stakeholders to the project aims and objectives. These are summarised below.

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1. Clarity was sought by stakeholders as to the exact role of the consultants (Agricane) in the process. Agricane had previously been engaged by the IDB with the support of BSI to develop a number of technical notes to support different elements of the sugar industry in Belize. This was resolved at the project inception meeting with all stakeholders where it was explained that CCCCC had appointed Agricane to undertake the project preparation tasks on its behalf.
2. There was significant discussion during the inception meeting and first project design workshop held with BSCFA regarding project implementation modalities and budget. They wanted to see farmers being the main recipients of the project benefits. They felt that empowering local contractors would ensure benefits from the project would remain local and would contribute to the sustainability of the project. This input was discussed and changes to the project modalities were made which was aligned with the input received from BSCFA.
3. One clear issue that was raised continually by stakeholders was the capacity of the mill to crush more cane. This was raised by farmers based on their experience of having carry over sugarcane when the mill was unable to receive it in good production years. It was explained to stakeholders that the aim of the project was not necessarily to produce more sugarcane but to produce a consistent volume of sugarcane from less land. Decrease the variability caused by climate change and be more productive thereby potentially releasing land for other crops and decreasing the pressure that farmers may feel to expand their land into environmentally sensitive areas. The project is clearly aligned with one of the principles of climate smart agriculture of increasing productivity and using less inputs to achieve more yield.
4. Other key issues raised during the stakeholder engagement which the project design does not address as it is outside the scope of the project but could impact the project outcome includes:
 - a. Roads and road infrastructure: This was raised on many occasions as an issue in the supply chain. This is strongly linked to climate as rainfall patterns and timing changes resulting in the need to harvest and haul in wet periods. This means deteriorating haulage roads and damaged fields. The project will not address the construction issues of roads directly due to the cost associated with this activity. Indirectly though the project design could mitigate some of the impacts through the introduction of new varieties which could have the impact of shortening the harvest period thus reducing the risk of harvesting during wet times
 - b. Tension between the mill and certain farmer groups: This tension was evident throughout the stakeholder consultation. This tension is expected and is found in many sugar industries around the world where farmers and millers need each other to exist but are often in competition over value

distribution and power dynamics in the value chain. While not obvious, climate change is potentially fuelling this tension. This is due to the fact that climate change is influencing the size and quality of the crop year on year. In a drought year, the crop is small and the mill does not have enough crop to cover its fixed cost of operating. In a good rain year, the crop is too large resulting in some instances the mill not being able to mill all of the cane and farmers having carryover cane. Either scenario is not good resulting in raised tensions. One of the project outcomes is therefore to stabilize yields to allow for a more certain environment for decision making and investment by both growers and millers.

- c. Youth and Gender: Many stakeholders raised the need to include youth and gender aspects into the project. Based on the evaluation of the climate risks faced by the industry, the needs expressed by stakeholders and the barriers to change, it is not obviously clear what discreet set of activities can be introduced to specifically address these aspects of the sugarcane productive sector or Belizean livelihoods in general in the project area. What is clear is that the activities designed in response to the threats of climate change can have specific target areas and indicators that ensure that gender and youth issues are adequately addressed.

Overall, most of the issues raised by stakeholders during the stakeholder engagement process have been addressed in the project design. Where issues have been raised which could not be addressed, they have been noted and included in the project risk assessment.

5.3. Final validation and co-funding commitment

A final validation session was held with all stakeholders during the week of 2-9 April 2022. During these sessions the final funding proposal and project strategy was presented. Included in this was the exact co-funding requirements and commitment from each stakeholder. These sessions culminated in each of the stakeholders signing or committing to sign the co-funding letters.

A transformation workshop was also held as part of this series of engagements. The purpose of this was to emphasize the transformational aspects of the project as well as to give some ideas as to how this transformation could be achieved.

5.4. Stakeholder management and engagement plan-project implementation

The key outcomes of a well-structured stakeholder engagement process during the project design phase of a project is that all stakeholders involved with the project fully understand the project and its outcomes, feel ownership of the project and are willing to invest time and resources into the project and clearly understand their roles and responsibilities in the project.

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During the design phase roles and responsibilities were discussed and refined through the different engagements and workshops. Based on these engagements the following project roles and responsibilities have been agreed.

1. Role and Responsibility of the **Farmers**:

- To ensure that the project is demand led by understanding the project rationale and design,
- Develop and understand their role in building theirs and industry resilience to the impact of climate change
- Commit to co-financing activities as per the project financial/co-financing plan
- Undertake on-farm activities required by the project
- Attend training and workshops as and when required

2. Role and Responsibility of the **Farmer Associations**:

- To hold the vision and to take a leadership position in understanding the elements required to build resilience to the impacts of climate change among members.
- To promote and communicate the project among its members
- To understand and commit to their role as co-implementers of the project by understanding the project theory of change and log frame along with activities and outputs being monitored from a project management perspective.
- To commit to co-financing project activities as per the project financial/co-financing plan (Fairtrade funds discussed in this regard)
- To “bid” for project lots on behalf of the members as and when requested to do so.
- To assist SIRDI to identify and manage seed cane sites
- To participate in project monitoring and evaluation activities

3. Role and responsibility of **SIRDI**:

- Technical advisor to the industry and the project especially with regards the technical aspects of the climate smart package of agricultural practices
- Provide a lead in developing and supporting the training and capacity building under component 3-Knowledge and Knowledge Systems ensuring holistic training is delivered including transformational aspects of the project

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- Seed Cane Nursery sites Identification and supervision (In conjunction with others in project team)
 - Provide secretariat to variety working group
 - Late stage variety evaluation work in conjunction with BSI
 - Contracting services and mentorship as part of the approved contractor list
 - Contribution to co-funding (contribution in kind)
4. Roles and responsibility **BSI**:
- Breeding program of new varieties through the variety breeding program
 - Maintain database of varieties and variety performance in different agro-ecological zones
 - Work with SIRDI in variety validation plots
 - Integrate lessons learnt from other farmer support projects into the project implementation
 - Leverage systems such as the block chain initiative into the project
 - Co-funding through the activities
5. Roles and responsibilities **CCCCC**:
- Project management and support through the project management unit
 - Liaison and reporting to GCF
 - Develop and audit procurement framework for the project
 - Facilitate payment of project activities
 - Liaison with other project stakeholders such as relevant government departments
6. Role and responsibility of **financial institutions**
- Support project activities through loans as required for farmer co-funding requirements
 - Extend loans / loan guarantees for existing and new contractors to procure equipment
 - Operate in good faith with respect to industry loan terms
7. Role and responsibility of the **Project**
- Component 1

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- Delivery of a broader range of seed cane varieties on time, at the right price
- Supporting the replanting and management of fields according to CSA practises (incl. soil health activities and replanting for mechanical harvesting)
- Training of contractors on CSA practices and ensuring the availability of fields (ensuring the market) for replanting and harvesting for the new and existing contractors
- Component 2
 - Support to introduce irrigation and drainage
 - Support in implementing an integrated pest management protocol
- Component 3
 - Providing support to align the industry on a transformation strategy
 - Provide the knowledge and knowledge systems to allow for Climate Smart Agriculture and help identify and establish new farming models
 - Equip industry tools to improve farmer and industry decision making
 - Identify a financial risk mitigation system for climate variability

The various roles and responsibilities have been communicated throughout the design of the project and a full responsibility assignment matrix can be seen below:



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Table 2: Responsibility Assignment Matrix

Activity	Farmers	Farmer Associations	SIRDI	BSI	CCCCC	Financial Institutions	Project
Component 1							
1.1.1 Establish seed cane variety information database and working group			P	P			A
1.1.2 Farmer seed cane sensitization and training		S	S	S			P, A
1.2.1 Identify seed cane nursery sites and seed cane production collaborators and protocols	S	S	S	S			P, A
1.2.2 Training of seed cane nursery collaborators	S	P	S	S			A
1.2.3 Plant seed cane nurseries							
1.3.1 Develop standards for contractors for land preparation and planting	S	S					P, A
1.3.2 Identify and train suitable contractors on business practises							P, A
1.3.3 Establish digital marketplace for contractor to replant facilitated via technology-based solution(s) and systems	S	S					P, A
1.3.4 Training on Climate Smart Agriculture for replanting	P	P	S	S	S	S, A	S, A



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1.3.5 Replant fields that are selected based on predefined criteria							
1.4.1 Ensure fields are suitably prepared for Mechanical Harvesting	P	P					S, A
1.4.2 Identify clusters of fields for viable Mechanical Harvesting		S	S	S		S	P, A
1.4.3 Upscale green Harvesting Programme and associated delivery parameters	S	S					P, A
1.4.4 Training for displaced cane cutters							
1.5.1 Identifying sources of financing and determining the criteria of financial inclusion						S	P, A
1.6.1 Develop soil management protocols for different residue and moisture regimes to be implemented at replanting and ratoon management			S				P, A
Component 2							
2.1.1 Develop criteria for irrigation and drainage to identify most vulnerable farmers and/or farms where conditions make implementation viable							P, A
2.1.2 Develop system to allow contractors to develop drainage and irrigation							P, A



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2.2.1 Plan, design and develop irrigation and drainage design parameters							P, A
2.2.2 Support development of identified irrigation and drainage							P, A
2.2.3 Water management and irrigation scheduling training	S	S				S	P, A
2.2.4 Identifying sources of financing and determining the criteria of financial viability							P, A
2.3.1 Develop pest management protocols for different residue and moisture regimes	S	S					P, A
Component 3							
3.1.1 Development of industry forum to agree on transformation strategy		S	S	S	S		P, A
3.1.2 Development of CSA adaptation strategy and training for industry stakeholders		S	S	S	S		P, A
3.2.1 Develop wholistic training strategy and training material to build climate resilience	S	S	S	S			P, A
3.3.1 Equip and use industry tools to distribute climate related data for good farmer decision making							P, A



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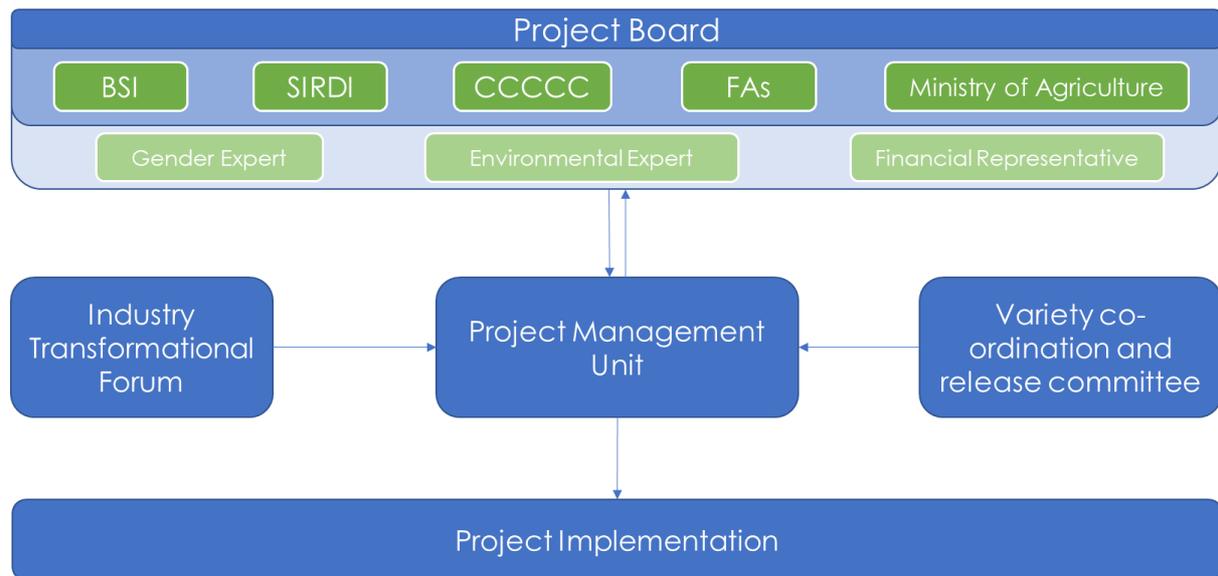
3.3.2 Integrate block chain and other systems into industry tools		S	S	S		S	P, A
3.4.1 Develop farming models through industry knowledge sharing	S	S					P, A
3.4.2 Training on acceptable farming models							P, A
3.5.1 Develop risk mitigation system for climate variability						S	P, A
3.6.1 Develop farmer economic and social vulnerability criteria							P, A
3.6.2 Identify Environmentally No-Go areas							P, A

P = Primary Responsibility; S = Secondary Responsibility / Supportive Role; A = Approval

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A project structure² has been created to enable the key stakeholders to perform their roles and responsibilities as well as ensuring that the broader stakeholder group is continually informed and updated about project activities thereby ensuring an enabling environment for the project to proceed.

The following diagram indicates the project organizational structure designed to implement the project and engage and manage stakeholders.



Key elements in the structure and stakeholder engagement and management are as follows:

1. **Project Board:** The project board is the body providing overall guidance and oversight to the project. The board will be comprised of voting and non-voting members with CCCCC (directly or through the PMU) providing secretariat services to the project board. The project board will be comprised of the following institutional representatives:
 - a. One member from each of the farmers associations
 - b. One member from SIRD
 - c. One member from BSI
 - d. One member from the ministry of agriculture

These members will comprise the voting block of the board- it is envisaged that voting may only be necessary to adjudicate on project resource allocation in the competitive bidding process (see draft project design report for more details)

² See Annex 1 for full project Organogram

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The project board will also comprise non-voting members whose main purpose will be in an advisory capacity to the board. Non-voting members will represent the following broad constituencies:

- a. A gender expert and advisor
- b. An environmental expert and advisor
- c. Someone representing the financiers on the project

The project board will be expected to meet quarterly or as required. Minutes of the meetings should be available to all identified project stakeholders on request.

It is the responsibility of the project board members to inform and update its constituency on a regular basis regarding project activities.

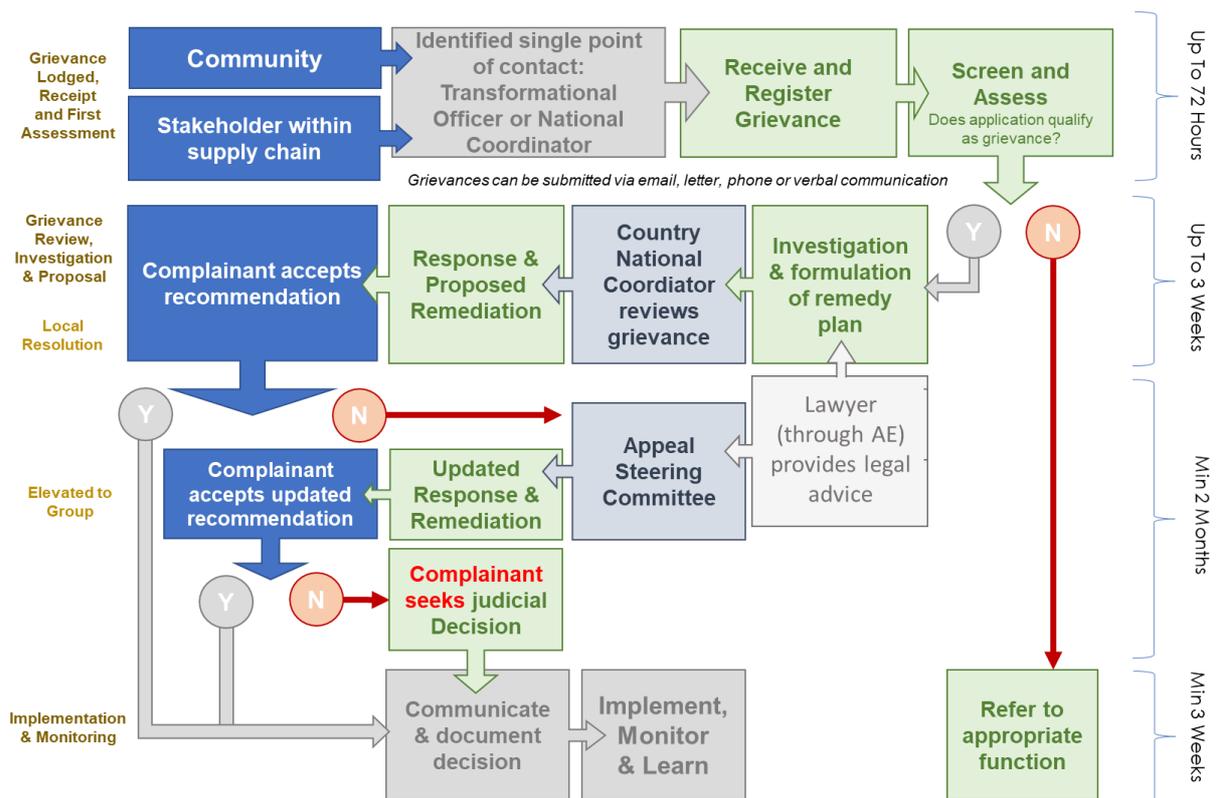
2. Industry transformation forum: The project proposes a number of transformational changes to the Belize sugar industry in response to the impact of climate change. These changes need to take place in the physical, institutional and financial domain. These changes to the industry will be difficult and will need a broad coalition of support from a range of stakeholders. The project therefore has a specific activity looking at developing an industry transformation strategy and thereafter a forum to provide critical insight and thinking into the transformation process. This forum will also allow stakeholders to design future industry projects and initiatives building on the start made by this project.
3. Variety co-ordination and release committee. This is a technical committee established to provide key technical support to the major component of the project. This committee will review the information received from the variety breeding and validation program and will advise on varieties ready for release.

5.1.4. Grievance Mechanism

A grievance mechanism can be referred to as a formal complaint process that can be used by individuals, or groups of people, that are being negatively affected by certain business activities and/or operations. The grievance mechanism is also designed to allocate roles and responsibilities during grievances and provide the guidance to reach a fair conclusion on the matter.

For the implementation of the project, a grievance mechanism should be installed that provides sufficient care to the sensitivity to the grievance while ensuring the process is simple and easily understood by all parties involved. The following process flow of the grievance mechanism has been developed:

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The grievance mechanism process flow diagram shows the various roles and responsibilities that the project requires. Namely:

- **Community / Project Stakeholder:** The aggrieved party
- **Transformational Officer / National Coordinator:** Transformational Officers are the main point of communication between farmers and the project. The National Coordinator will communicate with all other project stakeholders
- **National Coordinator:** As the project manager, the national coordinator will take accountability of the project
- **Lawyer:** Where required, the Accredited Entity (CCCCC) may be required to intervene through the support of legal advice
- **Steering Committee:** Where required, the steering committee will represent an independent body with representatives from each of the project stakeholders, to provide guidance on selected cases.

This process ensures that all grievances are dealt with at the necessary level of management, independently and in a timely manner.

For the implementation of the project, it is important to engage project stakeholders throughout the project to ensure there is complete transparency in terms of the process of dealing with grievance and the process of decision making to reach the outcomes of each grievance.

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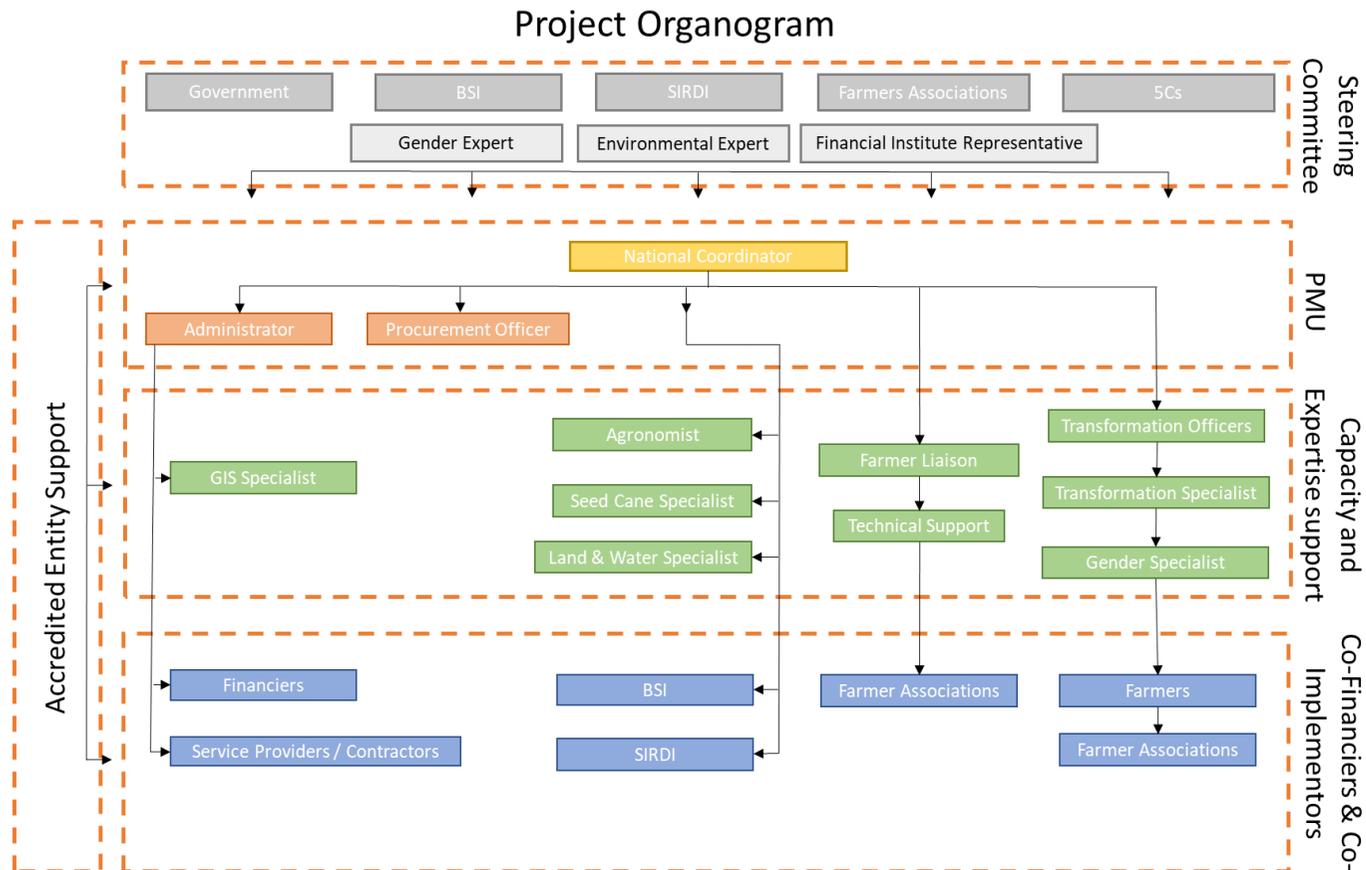
Finally, an implement, monitor and learn process should be developed to ensure project stakeholders develop their understanding of each grievance and can limit future grievances of a similar nature.

6. Conclusion

The process of stakeholder engagement and management in the first two phases (conceptualization and design) of the project “Building Climate resilience of the sugarcane farmers in northern Belize” has been robust and has achieved the aim of getting ownership and buy in for the project from all identified stakeholders. The clarity of the concept note developed in addressing the needs of the farmers and the industry has allowed for constructive engagement with stakeholders during the design phase of the project. The project design has built on this constructive engagement by creating a structure that puts the key stakeholders at the centre of ensuring project success while at the same time using the skills and knowledge of stakeholders to provide additional support to the different project activities.



7. ANNEX 1: PROJECT ORGANOGRAM





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8. ANNEX 2: STAKEHOLDER MEETINGS

Date	Meeting Description	Organisations at Meeting	Name of Participants	Discussion points	Tools Used
26/01/2021	Technical Meeting	Agricane	Mike Ogg	Project Kick off meeting	Project Concept Note, GCF manuals
			Andy Church		
			Marjorie Mbasela		
			Carlos Itza		
03/02/2021	Project Management	Caribbean Community Climate Change Centre Agricane	Ryan Zuniga	1. Introducing Dr Carlos Itza to Ryan & team	
			Tanisha Edwards	2. Understand critical success factors relating to project	
			Mike Ogg	3. Risks as seen by CCCCC	
			Marjorie Mbasela	4. Non negotiable activities/actions from a GCF perspective	
			Andy Church	5. Thoughts on co-financing	
			Carlos Itza	6. Anything else we should be aware of at this time	
03/02/2021	Stakeholder Inception meeting	Sugar Industry Research and Development Institution Agricane	Luciano Chi	1. Relevance-has anything changed in the last year that may need to be considered since the concept note was developed	Project Concept Note
			Leticia Westby	2. Balance of the project components-are the components correct and balanced	
			Mike Ogg	3. Project goal-your thoughts on the project goal and indicators	
			Andy Church	4. Project risks-what are the key project risks in your opinion	
			Marjorie Mbasela	5. Supporting work-what other projects/initiatives are being implemented/are in the pipeline which may support the project	
			Carlos Itza	6. Has SIRD done any work on identifying: a) Irrigation sites b) Sites for seed cane nursery c) If so what criteria have been used	
				7. Your thoughts on project implementation modalities, who should implement the project	
05/02/2021	Stakeholder Inception Meeting	Belize Sugar Industry-ASR Agricane	Olivia Avilez	1. Current relevance -has anything happened in the industry which would require a rethink?	Project Concept Note
			Susana Castillo	2. Your thoughts on the different project components and implementation strategies and modalities-who/which institution should own the process	
			Adrian Zetina	3. Your thoughts on the overall project goal, and what indicators should be used to confirm this goal	
			Mac McLachlan	4. Project risks, what will prevent the project from achieving the desired objectives?	
			Enersto Pop	5. Any other thoughts that you would have on the project	



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			Shawn Chavarria	6. The concept of a climate smart variety	
			Geovani Najera		
			Agricane Team		
08/02/2021	Stakeholder Inception Meeting	Sugar Industry Control Board	Marcos Osorio	1. Current relevance-has anything happened in the industry which would require a rethink?	Project Concept Note
		Agricane	Agricane Team	2. Your thoughts on the different project components and implementation strategies and modalities-who/which institution should own this process	
				3. Your thoughts on the overall project goal, and what indicators should be used to confirm this goal	
				4. Project risks, what will prevent the project from achieving the desired objectives?	
				5. Any other thoughts that you have on the project	
11/02/2021	Stakeholder Inception meeting	Progressive Sugar Cane Producers Association	Cosme Hernandez	1. In component 2 they would like to see more emphasis on developing a water master plan and perhaps water catchment and storage infrastructure which could benefit more farmers post project. They also feel that the balance (in terms of budget) between component 2 and component 1 is a bit skewed.	Project Concept Note
		Agricane	Anselmo Marin	2. A comment was made that there should be an activity which focusses on holistic farm planning including incorporating trees into the field layouts.	
			Carlos Itza	3. There was a suggestion that crop diversification should be included as an adaptation strategy to improve resilience at household level.	
11/02/2021	Stakeholder inception meeting	Corozal Sugar Cane Producers Association	Vladimir Puck	4. SIMIS should be the platform developed for information management and exchange in the sugar industry.	Project Concept Note
		Agricane	Jorge Cob	5. Soft skills and the development of new farming models should be a key feature of the proposed centre of excellence.	
			Leonardo Folgarait	6. Capacity of the different institutions that will be part of implementing different aspects of the project needs to be assured and, in some cases, project resources may be needed to support these institutions. For example, SIRD no longer has a farmer field school program operating at the moment.	
			Carlos Itza	7. Comment was made regarding the impact of climate change on the mill and milling operations in particular reference to mud being delivered to the mill. Is the Mill and milling operations doing anything to build resilience to climate change?	
				8. Farmers raised the fact that a new pest (stem borer) had become a problem since the drafting of the inception report. This should be considered in the project design	
12/02/2021		Northern Sugar Cane Growers Association	Ezekiel Palomo		Project Concept Note
		Agricane	Roy Navarro		
			Justaquio Pott		
			Carlos Itza		



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12/2/2021	Stakeholder inception meeting	Belize Sugar Cane Farmers Association	Oscar Alonzo		Project Concept Note
		Agricane	Marciano Novelo		
			Martin Salvado		
			Carlos Itza		
16/02/2021	Project management	Gender Inception Call with Dionne Chamberlain	Mike Ogg	Outline of gender report	
			Marjorie Mbasela		
			Dionne Chamberlain		
22/02/2021	Project management	Agricane Catch Up call with CCCCC	Mike Ogg	Update on progress of project	
			Marjorie Mbasela		
			Ryan Zuniga		
			Andy Church		
22/02/2021	Project management	Agricane Catch up call with William Usher	Mike Ogg	Outline soils and irrigation reports for baseline report	
			Marjorie Mbasela		
			William Usher		
26/02/2021	Stakeholder inception meeting	Project Inception Meeting -CCCCC	CCCCC	CCCCC Workplan	Power point presentation
			Agricane	Nomination for Technical Committee	
			BSI ASR	Other business	
			BSCFA		
			CARDI Belizw		
			PSCPA		
			CSCPA		
			SIRDI		
			NSCGA		
			Avila Rostant		
05/03/2021	Project management	Inception discussion	Ryan Zuniga	Discuss the report and proposed amendments to implementation plan.	PowerPoint Presentation
			Eishah St.Luce		



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			Mike Ogg		
			Marjorie Mbasela		
09/03/2021	Project management	Gender Catch Up	Dionne Chamberlain	Possible changes to gender assesment schedule	
			Mike Ogg		
			Marjorie Mbasela		
10/03/2021	Project management	CCCCC Strategy Catch Up	Olivia Avilez	Project catch up discussion	PowerPoint presentations
			Mike Ogg		
			Marjorie Mbasela		
11/03/2021	Project management	Catch up with Marvin Garcia	Mike Ogg	Project catch up discussion	
			Marvin Garcia		
12/03/2021	Project management	Introductions-Gender CCCCC Component	Mike Ogg	Introduction of Dionne and Elishah	
			Dionne Chamberlain	Gender component of the project and what is expected	
			Elishah St.Luce		
			Ryan Zuniga		
21/04/2021	Project management	Gender and Environmental Catch up	Mike Ogg	Project catch up before presentation to team	
			Marjorie Mbasela		
			Luan Mans		
			Dionne Chamberlain		
		CCCCC Team catch up	Mike Ogg	Project Catch up, discussion of next steps	
			Marjorie Mbasela		
			Luan Mans		
			Dionne Chamberlain		
			marvin Garcia		
			Modesto Ulloa		



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			Jeffrey Joseph		
			Vasni Pech		
			William Usher		
05/05/2021	Project management	CCCCC's proposal ToC & Logframe	Mike Ogg	Go through the terminologies and requirements of both the ToC and the Logframe at a high level and to do a short brainstorm of the content for the various components of each	
			Luan Mans		
			Marjorie Mbasela		
06/05/2021	Project management	CCCCC Catch Up and Gender Discussion	Mike Ogg	Project catch up	Gender report
			Dionne Chamberlain	gender report discussion to get views from the rest of the team	PowerPoint presentation
			William Usher		
			Luan Mans		
			Marjorie Mbasela		
			Modesto Ulloa		
			Vasni Pech		
			Marvin Garcia		
12/05/2021	Project design preparation	Design criteria presentation	Ryan Zuniga	Present the draft theory of change, log frame and design criteria to yourselves to ensure that our thinking is aligned with 5Cs	PowerPoint presentation
			Donneil Cain	Undertake design workshops with farmers and key stakeholders	
			Elishah St.Luce	Present draft design to farmers and key stakeholders.	
			Tanisha Edwards		
			Andy Church		
			Mike Ogg		
			Marjorie Mbasela		
31/05/2021	Project design criteria	CCCCC	Mike Ogg	1. Stakeholder engagement in project design	PowerPoint presentation
			Ryan Zuniga	a. Enabling	
			Tanisha Edwards	b. Partners	
			Dionne Chamberlain	The theory of change	
				d. Log frame	
				e. Narrative is still a work in progress	
				Participation and eligibility	
				Institutional roles and responsibilities	
				Technical parameters	



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				f. Varieties	
				g. Irrigation and drainage	
				2. Complete gender and environmental assessment and action plan	
				3. Financial feasibility assumptions	
				a. Collect outstanding data	
				4. Develop risk framework	
				a. Understand some of the risks in more detail	
				i. Social and institutional	
				ii. Technical	
				iii. Financial	
				5. Discuss any frequent management issues	
				a. Agree deliverable framework	
01/06/2021	Project design:Technical kick off	CCCCC/BSI/SIRDl	Mike Ogg	Agreed to add sugarcane farmers as co-implementers in the slides	PowerPoint Presentation
			Ryan Zuniga	Everyone should be available at all meetings/ workshops; CCCCC, BSI and SIRDl	
			Tanisha Edwards		
			Olivia Avilez		
			Susana Castilo		
			Luciano Chi		
			Leticia Westby		
02/06/2021	Project design-workshop 1	NSCGA	Mike Ogg	1. Climate change is impacting them significantly	PowerPoint presentation
			Roy Navaro	2. Need more information about how to build Adaptive Capacity	
			A White	3. Would this project include other crops?	
			I Palomo	4. Concerned about price and viability of sugarcane	
			E. Cob	5. Concerned that is sugarcane production increased the mill wouldn't be able to crush it	
			R. T. Cob	6. Overall, they are Happy to be part of project	
			Leticia Westby	7. Look forward to getting involved in the detailed planning	
			Mike Ogg		
			Ryan Zuniga		
			Dionne Chamberlain		
			Carlos A. Itza		
			Olivia Avilez		



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02/06/2021	Project design-workshop 1	CSCPA	Mike Ogg	1. Expressed support of project	PowerPoint presentation
			Nogawa	2. Felt that irrigation is an important component of the project	
			S. Osorio	3. Project working group to ensure Climate Smart activities were technically correct	
			V. Puck	4. Expressed need to identify varieties that grow on the upland and low land areas	
			J. Cob	5. Cane logistics & delivery to mill raised as an issue	
			Johnny Arana	6. Proposed a variety release committee made up of farmers to give farmers confidence	
			Carlos Itza	7. Expressed the need for early season variety to ensure cane quality in the early season was maintained	
			Leticia Westby	8. Want to see a project working group to make sure climate smart activities were technically correct	
			Leonardo F		
			Rodel Chau		
			Dionne Chamberlain		
03/04/2021	Project design-workshop 1	BSCFA	BSCFA Management	1. Clarification of the role of Agricane in this project and the link with the IDB project specific clarity is asked on this question	PowerPoint presentation
		CCCCC	Zune Canche	2. Clarity needs to be provided as to the difference between the PPF (design) "project" and the Building Climate Resilience of Sugarcane Farmers in Northern Belize project-the approved project. From the meeting it would seem that some do not understand the difference and the term the "project" was used interchangeably	
		Agricane	Ryan Zuniga	a. Would be good to talk about the different elements i.e., variety verification, pest control and funding proposal writing	
			Tanisha Edwards	3. Recurring theme of local ownership with a strong sense that SIRD I should take the project lead, linked with comments of this being a public sector project with little to no room for the private sector	
			Mike Ogg	a. Address the project team here in an unequivocal manner(CCCCC, BSI, SIRD I and Farmers) project design will define each one's specific roles and responsibilities. Without any one of these the project will be weakened and may not go ahead	
			Oscar Alonzo	b. Can speak about the public/private nature of the project and what that means	
				4. The BSI role in variety development and roll out-not really a project issue but you can make a statement that the investment that BSI has made in variety development is one of the factors that moved this project forward	
				5. Paradigm shift is mentioned in three different contexts (Probably need to spend a bit more time explaining how we see the paradigm shift resulting from the project)	
				a. Managing cane supply with milling capacity. This is mentioned as a concern by growers. I believe that we responded adequately and unequivocally in the meeting but still needs to be addressed. This is a recurring issue that was raised though the meeting.	



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				b. Unfair playing field with regards tax breaks that BSI has that the farmers do not have. We have been specifically asked to address this in the project design	
				c. The cost of building climate resilient practices into the farmer activities will work against viability. Although you addressed this in the meeting by saying that is why GCF is there, needs further clarification	
				6. The issue with poor road network	
				7. The issue of building climate mitigation factors into the project design	
				8. The need for competent and accountable service providers to support the project	
				9. The need for all farmers to undergo training in building climate resilience	
				10. A number of speakers expressed their support of the project and saw the need and the benefit that the project was bringing.	
03/06/2021	Project design-workshop 1	PSCPA	Luciano Chi	1. The project was well received	PowerPoint presentation
		SIRDI	Nelson Blanco	2. Climate changed was confirmed to be a serious problem	
		Agricane	Carlos A. Itza	3. The felt varieties are an important element of building adaptive capacity, having the right varieties at the right place at the right time	
		BSI-ASR	Elder Villamil	4. Availability of seed cane was raised as a barrier, at the right place at the right time	
			Anselmo Marin	5. Inclusion of young people and gender in project design as an important element to consider	
			Cosme Hernandez		
			Abihail Pech		
			Mike Ogg		
			Dionne Chamberlain		
			Victor Miranda		
			Susana Castillo		
			Olivia Avilez		
04/05/2021	Technical design meeting	BSI Offices		Discussed the various workshops and confirmed to follow up with the three associations to undertake the detailed planning.	
				With BSCFA, CCCC would organise a meeting directly with them	
				1. Leticia Westby, SIRDI, committed to confirming and setting up meetings with the three associations	



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				2. BSCFA- 5Cs would organise a meeting with them to specifically address the concerns raised at meeting with them	
				3. Started the process of agreeing the project design around the concepts of:	
				a. Local Ownership	
				b. Paradigm Shift	
				c. Additionality	
				d. Scalability	
				4. Agreed the programme for the rest of the trip	
07/06/2021	Project sensitization meeting	Development Finance Corporation	Franklyn Magloire	1. Ryan gave background to project	
		CCCCC	Dr Daniel*	2. Mike discussed some of the project details and the thinking developed from various workshops with farmers	
		Agricane	Ryan Zuniga	3. DFC confirmed they had funds remaining from the EU project and needed to be spent on climate smart agriculture in sugarcane in Northern Belize	
		BSI-ASR	Olivia Avilez	4. DFC confirmed that this project fitted in well with those funds	
			Mike Ogg	5. They stated five million dollars available	
				6. Range of financing options available	
				7. Activities: contractors, contracting services	
				8. Expressed need to endure sugar industry as a whole remained viable, invest in structural problems	
				9. Concerned of regulatory framework governing miller and grower	
				10. Ryan to write letter to General Manager of DFC to request the funds	
08/06/2021	Technical meeting	BSI Offices	Mike Ogg	Going through the different varieties	
			Adrian Zetina		
08/06/2021	Project roles and responsibilities	SIRDI	Luciano Chi	1. The project and its different elements	
		Agricane	Michael Ogg	2. SIRDI should play a role in technical assistance and training	
			Jeffrey Joseph	3. SIRDI were involved in the late stage verification aspects of the project with BSI	
			Elberto Cowo	4. Reaffirmed that SIRDI would have the ability to do some of the contracting but would look at the capacity, equipment and what it will entail	
			Gabriel Flores	5. A lot of work on pests, stemborer as part of the 5C's preparation project	



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			Saul Osorio	6. Meteorizing lab for frog hopper	
			Marvin Garcia		
			Ronaldo Gonzalez		
			Leticia Westby		
09/06/2021	Project design workshop 2	Corozal Farmers Association	Vladmir Nau	Affirmed approach and methodology	
		Progressive Farmers Association	Leonardo Foodamunt		
			Cosme Hernandez		
			Jaime Noguera		
			Abigail, Youngster		
10/06/2021	Project sensitization meeting	SIRDI Board Meeting	Luciano Chi	inform board formally about project and understand the responsibilities that may have in the project (presentation emailed)	PowerPoint attached Presentation
		CCCCC	Elishash St. Luce	they understood roles responsibilities and are happy of process	
		BSI-ASR	Cosme Hernandez	broadly agreed on Rs n Rs as suggested	
		Agricane	Vladmir Puck	SIRDI had capacity to assist in biology control of pests	
			Jaime Noguera	mechanical planting considered in design	
			Eluterio Cob	access to 7 weather stations to enhance weather data	
			Leticia Westby	accepted variety issues were important,	
			Adrian Zetina	raised issues around social impact of green cane harvesting but felt that the impact on job losses would be minimised as generally there is a shortage of cane cutters towards end of season	
			Olivia Avilez	strategy of contactors agreed-worried about quality assurance issues	
			Michael Ogg	accepted the challenge and responsibly of broadening g their training to include social and transformation aspects as required by the project	
10/06/2021	Project design workshop 2	Follow up meeting with BSCFA	BSCFA Management	Affirmed approach and methodology	
			Michael Ogg	Agreed the approach to use contractors to implement	
				Wanted to see only local farmers as contractors	
				Expressed hesitancy that the mill would crush all the cane	
				Agreed to overall roles and responsibilities	



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				Expressed support for the project	
10/06/2021	Project design workshop 2	BSI Management	Mac McLachlan	Presented discussions just had in terms of design, 4 elements,	
			Olivia Avilez	Fully endorsed approach and methodology for engagement with stakeholders.	
			Susanna Castilo	Supported strategy and way project design was moving	
			Shawn Chavarria	Reiterated their support for the variety breeding programme and will carry on with that as part of the project	
			Elishash St. Luce	in principle agreed to provided contracting services and mentorship, assessing business viability	
			Ryan Zuniga	get costs, build on experience in this regard-endorsed the used of block chain as mechanism tool to provide accountability in the project	
			Modesto Ullao	happy with the way things are going and reiterated the support for the project	
			Michael Ogg		
14/06/2021	Project sensitization	Ripe.io	Michael Ogg	Discuss the integration of the smart sugar cluster into the project design	
		CCCCC	Olivia Avilez		
		Agricane	Phil Harris		
15/06/2021	Project design	William Usher	Roy Navaro	went through project design	
		NSCFA	Mr Ploemo	soil health is a problem, needed to be addressed	
		Agricane	Mr Pook	contractors needed to be effective and consistent	
			Michael Ogg	left the template for them to fill in	
			William Usher		
16/06/2021	Project management	Carlos Itza	Carlos Itza	Project Catch up meeting: ESIA report	
		Agricane	Michael Ogg		
17/06/2021	Project management	Dionne Chamberlaine	Dionne Chamberlaine	Project Catch up meeting: Gender report	
		Agricane	Michael Ogg		
24/06/2021	Design workshop 3	BSCFA workshop	BSCFA management	Follow up from workshop 2 where some people could not attend	
		Agricane	Michael Ogg	General agreement and support of the project	
			Ryan Zuniga		
			Oscar Alonzo		
			Marjorie Mbasela		
			Luan Mans		



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			Zune Cashe	
			Elishash St. Luce	
28/06/2021	Project management	ESIA Catch Up Call; Dionne Chamberlaine & Carlos Itza	Michael Ogg	Report discussion
		Agricane	Marjorie Mbasela	
			Luan Mans	
			Dionne Chamberlain	
			Carlos Itza	
07/07/2021	Design workshop follow up	BSCFA Follow up workshop	BSCFA management	
		Agricane	Zune Cashe	
			Oscar Alonzo	
			Ryan Zuniga	
			Michael Ogg	
			Marjorie Mbasela	
			Luan Mans	
08/07/2021	Gender Catch up	Dionne Chamberlaine	Dionne Chambraine	Report discussion
		Agricane	Michael Ogg	
			Marjorie Mbasela	
			Luan Mans	
30/07/2021	CCCCC Catch up Meeting	CCCCC	Ryan Zuniga	Progress of project discussion
		Agricane	Michael Ogg	
			Marjorie Mbasela	
			Luan Mans	
			Tanisha Edwards	
13/10/2021	Feasibility Model sensitization	CCCCC	Luan Mans	
		SIRDI	Michael Ogg	
		Agricane	Ryan Zuniga	
		BSI	Donneil Cain	
		DFC	Ian Morrison	



		Ministry of Economic Development	Leroy Martinez		
			Keisha Rodriguez		
			Olivia T Avilez		
			Ahnivar Peralta		
18/10/2021	Feasibility Model sensitization	Agricane	Luan Mans		
		FAs	Michael Ogg		
			Oscar Alonzo		
			Zune Canche		
			Roy Navaro		
26/10/2021	CCCCC Catch up, Draft design and Financial Model discussion	SIRDI	Luan Mans	Present and discuss potential service providers for irrigation and digital marketplace	Presentation
		BSI	Michael Ogg	Project design and financial model agreed on	
		CCCCC	Luciano Chi		
		Agricane	Jeffrey Joseph		
			Marcos Osorio		
			Susana Castilo		
			Everisto Poy		
			Adriana Zetina		
			Ryan Zunuga		
			Olivia Avilez		
28/10/2021	Draft design and Financial Model discussion	BSCFA	Luan Mans	Project design and financial model agreed on	Presentation
		CCCCC	Michael Ogg	Continued support of the project and support in the form of co-funding agreed	
		Agricane	Alredo Otega	Smart sugar cluster as a key technology for the industry	
			Ermin Gonzales		
			Hilario Cusino		
			Zune Cashe		
			Evaristo Blaneo		
			Elvis Reyes		
			Herman Villas		
			Rul dof Rugena		
			Jacob Sabido		
			Jose Majil		



			Pancasi Bol		
			Ramon Uaryas		
			Salvator Martin		
			Oscar Aanzo		
			Ryan Zuniga		
			Eushah St Luce		
			Keishe Rodriguez		
			Tanisha Edwards		
			Magdaleno Zetina		
			Leonardo Cano		
			Estevan Villanueva		
29/10/2021	Draft design and Financial Model discussion	NSCGA	Luan Mans	Project design and financial model agreed on	Presentation
		CSCPA	Michael Ogg	Continued support of the project and support in the form of co-funding agreed	
		CCCCC	Daisy Nataly Che		
		Agricane	Enrique R. Cob		
			Roy Naunro		
			Eustagnio Poot		
			Leonard Folgarait		
			Palino		
			Lucio Yam		
			Joyce Cole		
			Vlademer L. Puck		
			Ryan Zuniga		
01/11/2021	Draft design and Financial Model discussion	PSCFA	Luan Mans	Project design and financial model agreed on	Presentation
		CCCCC	Michael Ogg	Continued support of the project and support in the form of co-funding agreed	
		Agricane	Cosme Hernandez		
			Abihail Pech		
02/11/2021	Draft design and Financial Model discussion	DFC	Luan Mans	Project design and financial model agreed on	Co-Funding Presentation



October 2021

		Ministry of Agriculture	Michael Ogg	Continued support of the project and support in the form of co-funding agreed	
		CCCCC	Ryan Zuniga		
		Agricane	Donniel Cain		
			Mr Novelo		
			Mr McGlore		
03/11/2021	Project Management	CCCCC	Luan Mans	Project budget	
		Agricane	Michael Ogg	Project disbursement process	
			Ryan Zuniga	Co-funding avenues	
			Donniel Cain		
11/04/2022	Technical Design Meeting	SIRDI	Jeffrey Joseph	Plan for week	
		Agricane	Leticia Wesby	Discussion of co-funding	
		CCCCC	Ryan Zuniga	Engagement with government officials discussion	
			Luciano Chi		
			Marcos Osario		
			Luan Mans		
			Michael Ogg		
04/04/2022	Feasibility and design validation and co-funding workshop	NSCGA	Daisy	Presented final design	Trip 3 workshop presentation
		CCCCC	Michael Ogg	Discussed project risks	
		Agricane	Luan Mans	Explained co-funding requirements and procedures	Co-funding proposal
			Ryan Zuniga		
			Jacob Sabido		
			Enrique R. Cob		
			Jose Majil		
05/04/2022	Feasibility and design validation and co-funding workshop	CSCPA	Vladimir Puck	Presented final design	Trip 3 workshop presentation
		PSCFA	Jorge Cob	Discussed project risks	
		CCCCC	Leonardo Fogarait	Explained co-funding requirements and procedures	Co-funding proposal
		Agricane	Cosme Hernandez		
			Nelson Blanco		
			Marcos Osario		
05/04/2022	Technical Design Meeting	BSI	Carlos Itze		



October 2021

		CCCCC	Olivia Avilez		
		Agricane	Ryan Zuniga		
			Micheal Ogg		
			Luan Mans		
06/07/2022	Feasibility and design validation and co-funding workshop	BSCFA	Oscar Aanzo	Presented final design	Trip 3 workshop presentation
		CCCCC	Alfredo Otega	Discussed project risks	
		Agricane	Ermin Gonzales	Explained co-funding requirements and procedures	Co-funding proposal
			Hilario Cusino	BSCFA gave comments on proposal-see annex	
			Zune Cashe		
			Evaristo Blaneo		
			Elvis Reyes		
			Herman Villas		
			Rul dof Rugena		
			Jacob Sabido		
			Jose Majil		
			Pancasi Bol		
07/04/2022	Government Validation Meeting	Various Government CEO's	Ryan Zuniga	Presented final project proposal	Government presentation CEOs
		SIRDI	Olivia Avilez	Discussed timelines and co-funding requirements and support	
		BSI	Carlos Pol		
		CCCCC	Keisha Rodriguez		
		Agricane	Tracy Pena		
			Hunter Hales		
			Johanna Noble		
			Nancy Ayala		
			Jose Novelo		
			Tennielle Hendy		
			Leticia Westby		
			Jeffrey Joseph		
			Marcos Osario		
			Deon Kelly		
			Leroy Martinez		
			Judith Leslie		



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			Luciano Chi		
			Luan Mans		
			Michael Ogg		
09/04/2022	Transformation workshop and co-funding commitment	SIRDI	Vladimir Puck	Presented final co-funding requirements	Co-financing requirements and GCF commitment letter templates
		BSI	Jorge Cob	Undertook co-funding signing	
		NSCGA	Leonardo Folgarait	Presented transformation workshop	Transformational thoughts presentation
		PSCGA	Carlos Itza		
		CSCPA	Cosme Hernandez		
			Nelson Blanco		
			Olivia Avilez		
			Ryan Zuniga		
			Luan Mans		
			Micheal Ogg		
			Vashni Pesh		
			Ernesto Pop		
			Susana Castilo		
			William Usher		

9. ANNEX 3: WORKSHOP PRESENTATIONS

9.1. Inception Meeting




BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

CCCCC Presentation

26 February 2021



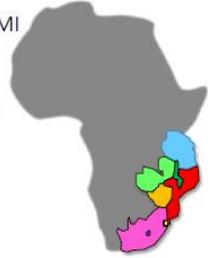
WHO IS AGRICANE

- The company is over 20 years old
- Service based organisation supporting Agricultural Development – worked in 24 countries.
- Presently working in 8 countries
- Leaders in large scale irrigated Plantation development
- Agricane has designed over 100 000 ha and developed over 40 000 ha of successful irrigated agriculture
- Recent projects in Dominican Republic & Cuba




Who is RMI

- A group of development professionals working to influence the development philosophies that underpin business-community engagements
- RMI provides services that enable successful partnerships between commercial agribusiness and communities
- RMI builds projects that builds resilience in communities, households and within supply chains
- We work in a number of different countries and supply chains



Project Team

Name	Speciality
Mike Ogg	Team Leader- Smallholder Farming Specialist
Andy Church	Agriculture Economist
Dr Carlos Itza	Natural Resource Management
Vasni Pech	GIS Specialist
Dionne Chamberlain	Gender Specialist
William Usher	Soils and Seed Cane
Jeffery Joseph	Irrigation and Drainage
Russel Longhurst	Irrigation Designs
William McKersie	Drainage Specialist
Modesto Ulloa	Green Cane Harvesting Specialist
Marvin Garcia	Pests and Diseases Specialist
Marjorie Mbasela	Project Administrator



Our Approach

- Strong focus on the GCF funding proposal guidelines
- Use the concept note as the basic planning premise
- Ensure all activities have and project components have strong climate rationale
- Ensure local ownership of the project design
 - Participatory
 - Strong local team
- Build on existing initiatives especially IDB strategic plan
- Ensure that project leads to transformational change and a paradigm shift



Overview of Activities

Activity 1: Project Inception:

Activity 2: Conduct Baseline Study

- Analyze future climate models
- Review of the present farming practices of sugarcane farmers to identify and assess any risks that are associated with their farming systems in the context of climate change
- Access barriers to change

Activity 3: Project Design (Project log frame, detailed budget, implementation timeline, risk matrix)

- Participatory process of project design

Activity 4: Conduct Feasibility Study - (include Technical, Scientific, Financial and Economic analysis)

Activity 5: Conduct Preliminary Risk Assessment and Matrix

Activity 6: Conduct Social and Environmental Analysis and Management and engagement plan (inclusive of a Gender analysis and gender action plan)



Work Plan

Month	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Activity										
Inception Phase										
Baseline assessment phase										
Detailed design phase										
Feasibility phase										
Risk assessment phase										
Environmental Social assessment and action plan										

Farmer Engagement:

- Activity 1- Client Inception Meetings
- Activity 2- Undertake a baseline and climate vulnerability assessment workshop
- Activity 3- Ongoing and detailed consultations with farmers and stakeholder; design workshop planned second half of April, conformation workshop planned second half of June
- Activity 4- Participatory development of a farm level finance model to
- Activity 5 - Consultations in identify and assess potential risks
- Activity 6 - Consultations in ensuring compliance with the social and environmental standards demanded by the GCF

9.2. Project Design Workshop 1

BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

Green Climate Fund Project Draft Design Workshop
June 2021

Executing Entities: Belize Sugar Industry (BSI) & Sugarcane Industry for Research and Development Institute (SIRDI)
Accredited Entity (AE): Caribbean Community Climate Change Centre (CCCCC)
Co-implimentors Sugarcane Farmers of Northern Belize

Purpose of the Workshop

- Better understanding of GCF requirements in a project and the Simplified Application Process
- Refresher aims and objectives of the project from the concept note
- Participation process to ensure the realities of farming sugarcane in Northern Belize are met in the project design-Your time to input



Agenda

- Introduction and welcome
 - Overall requirements of a GCF project
- Key Concepts in the Project design required by the Green Climate Fund
- Developing the project design
 - What is a theory of change
 - The design so far-based on concept note
- Discuss follow up working session

Key terms(used by GCF) to understand

- Local Ownership
- Paradigm Shift
- Additionality
- Scalable





October 2021

The GCF Project Development Process



Project Preparation Timelines

TASK	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Integration Phase	Start										
Baseline Assessment phase			Start								
Design phase				Start							
Feasibility study					Start						
Support studies and documentation						Start					
Project End											Start

SIRD | ASR | EARTH | Caribbean Community Climate Change Centre

Question 1

How Does Climate impact your sugarcane growing business ?

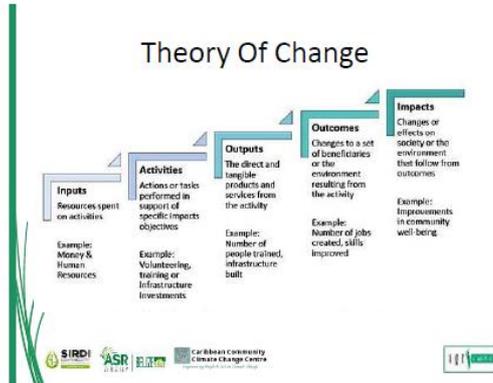


Question 2

What actions/activities do you think is needed to reduce the impact of climate on your sugarcane growing business ?

Project Focus Areas-From the Concept Note

- Project focuses on three main areas of building adaptive capacity
 - Varieties diversified, seed cane available as and when needed, planting in climate smart manner, and mechanical harvesting up scaled (Package of Climate Smart Activities)
 - Moisture management and improved crop husbandry
 - Knowledge and knowledge management
 - Takes a developmental and productivity approach to building adaptive capacity to climate change
 - Recognizes that sugarcane production is only one nodes in the sugar value chain
- SIRD | ASR | EARTH | Caribbean Community Climate Change Centre



Problem Statement

Sugarcane farmers in Northern Belize are becoming more economically, physically and socially vulnerable to climate change which is compounding issues of low productivity, poor access to a range of sugarcane varieties, traditional agronomic practices and untransformed farming models leading to the possibility of the farms no longer being viable thereby threatening the existence of the entire sugar industry and everyone's livelihoods linked to this industry.

Thematic Areas of vulnerability

1. Physical domain
2. Institutional/Social domain
3. Business domain

Sponsors: SIRD, ASR, EARTH, Caribbean Community Climate Change Centre

Question 3

What are the key barriers that you think will prevent you from building resilience to climate impacts?

Project Barriers

1. Component 1
 - I. Lack of suitable locally bred sugarcane varieties being released and available for replanting
 - II. Seed cane unavailable at right time and right place
 - III. Lack of suitable land preparation and planting contractors
 - IV. Current field layout and lack of harvest blocks and proper harvest practices
 - V. Cost of new measures in a low surplus cash flow environment
2. Component 2
 - I. Limited knowledge of irrigation and drainage development and systems
 - II. Cost of irrigation and drainage
3. Component 3
 - I. Resistance to change
 - II. ?????

Sponsors: SIRD, ASR, EARTH, Caribbean Community Climate Change Centre

Cross-Cutting Barriers

- Achieving each outcome requires overcoming two cross-cutting barriers:
 - Knowledge (Mind Set) of Climate Smart Agricultural and Production Systems
 - Lack of diversified farm models

Sponsors: SIRD, ASR, EARTH, Caribbean Community Climate Change Centre

October 2021

Project Impact

Increased adaptive capacity of sugarcane farmers in Northern Belize:

- A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people (gender) communities and regions
- A4.0 Improved resilience of ecosystems and ecosystem services



Project Outcomes

1. Increased adoption of climate smart practices (physical and mind set) with an increased mix of adapted varieties being planted
2. Stable yields, increased productivity and a more resilient and consistent supply chain.
3. Farmers increasingly using knowledge and knowledge systems to proactively (early warning, investing) build resilience to climate impact while at the same time transforming their farming systems to enable them to invest in on farm climate resilience building activities



Please Think About The Following



- Does the problem statement accurately reflect the problem faced by the farmers-reword if needed
- Provide one comment on each of the project outcomes
- Do the barriers identified accurately reflect your reality as cane farmers?
- Do you think overcoming these barriers will allow you to address your needs?



Component 1 Activity and Outputs

1. Activities
 1. Establish seed cane variety nurseries
 2. Identify and train suitable contractors / farmers to undertake replanting
 3. Develop system to inform replanting
 4. Identification of the most vulnerable farmers
 5. Upscale the green Harvesting Programme
2. Outputs
 1. Primary and secondary nurseries established
 2. 17000 acres sugarcane replanted
 3. 10000 acres green harvesting

"Adoption of climate smart practices"



Component 2 Activity and Outputs

1. Activities
 1. Participatory process to determine land criteria for irrigation/drainage
 2. Plan and design irrigation and drainage
 3. Develop soil and pest management protocols
2. Outputs
 1. Increased irrigation to 1000 acres and have a water management plan
 2. Develop drainage for 2000 acres
 3. Develop systems for climate smart soil and pest management

"Increased productivity and consistent supply chain"



Component 3 Activity and Outputs

1. Activities
 1. MoU signed between industry stakeholders
 2. Training strategy, material and program developed
 3. Use SIMIS for climate data to make better decisions
 4. Develop farming models through industry knowledge sharing
2. Outputs
 1. Industry aligned for transformation through Centre of Excellence
 2. Systems for continuous learning
 3. Industry tools used increase data availability for farmer decision making
 4. Multiple farming models enabling knowledge sharing and increased purchase power

"Knowledge and knowledge systems to proactively build resilience"





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Homework session-Agenda for Working Session

- Comment and augment the activities and outputs for each component
- Do you think that any other activities need to be added which will help achieve the project outcomes and impact? If so briefly describe
- How should farmers be identified for inclusion-who is the most vulnerable?
- What role should Farmer associations have in the project
- Identify the risks that you think will prevent the outcomes and impacts being achieved



Next Steps

- Follow up working meeting meetings to receive feedback and do more detailed planning
- Report back in a plenary session to all stakeholders
- Draft design project developed



Thank You



October 2021

9.3. Project Design Workshop 2

BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

Green Climate Fund Project Draft Design Workshop follow up
June 2021

Executing Entities: Belize Sugar Industry (BSI) & Sugarcane Industry for Research and Development Institute (SIRDI)
Accredited Entity (AE): Caribbean Community Climate Change Centre (CCCCC)
Co-Implementors: Sugarcane Farmers of Northern Belize

Key terms (used by GCF) to understand

- Local Ownership
- Paradigm Shift
- Additionality
- Scalable



"Increased adaptive capacity of sugarcane farmers in Northern Belize"

Project Focus Areas-From the Concept

Note

- Project focuses on three main areas of building adaptive capacity
 - Varieties diversified, seed cane available as and when needed, planting in climate smart manner, and mechanical harvesting up scaled (Package of Climate Smart Activities)
 - Moisture management and improved crop husbandry
 - Knowledge and knowledge management
- Takes a developmental and productivity approach to building adaptive capacity to climate change
- Recognizes that sugarcane production is only one nodes in the sugar value chain



Theory Of Change

Inputs: Resources spent on activities.
Example: Money & Human Resources

Activities: Actions or tasks performed in support of specific impacts objectives.
Example: Volunteering, training or Infrastructure Investments

Outputs: The direct and tangible products and services from the activity.
Example: Number of people trained, infrastructure built

Outcomes: Changes to a set of beneficiaries or the environment resulting from the activity.
Example: Number of jobs created, skills improved

Impacts: Changes or effects on society or the environment that follow from outcomes.
Example: Improvements in community well being

Please Think About The Following

- Does the problem statement accurately reflect the problem faced by the farmers-reword if needed
- Provide one comment on each of the project outcomes
- Do the barriers identified accurately reflect your reality as cane farmers?
- Do you think overcoming these barriers will allow you to address your needs?





October 2021

Problem Statement

Project Team's	Farmer's
<p><i>Sugarcane farmers in Northern Belize are becoming more economically, physically and socially vulnerable to climate change which is compounding issues of low productivity, poor access to a range of sugarcane varieties, traditional agronomic practices and untransformed farming models leading to the possibility of the farms no longer being viable thereby threatening the existence of the entire sugar industry and everyone's livelihoods linked to this industry.</i></p>	<ul style="list-style-type: none"> • ??

Project Barriers

Project Team's	Farmers
<ol style="list-style-type: none"> Component 1 <ol style="list-style-type: none"> Sugarcane varieties available Seed cane availability Land prep practices and planting contractors Current field layout harvest practices Cost of new measures Component 2 <ol style="list-style-type: none"> Limited knowledge of irrigation and drainage development and systems Cost of irrigation and drainage Component 3 <ol style="list-style-type: none"> Resistance to change 	<ol style="list-style-type: none"> Component 1 <ol style="list-style-type: none"> ?? Component 2 <ol style="list-style-type: none"> ?? Component 3 <ol style="list-style-type: none"> ??

Cross-Cutting Barriers

Project Team's	Farmers
<ul style="list-style-type: none"> • Knowledge (Mind Set) of Climate Smart Agricultural and Production Systems • Lack of diversified farm models 	<ul style="list-style-type: none"> • ??

Project Impact

Increased adaptive capacity of sugarcane farmers in Northern Belize:

- **A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people (gender) communities and regions**
- A2.0 Increased resilience of health and well-being, and food and water security
- A3.0 Increased resilience of infrastructure and the built environment to climate change
- **A4.0 Improved resilience of ecosystems and ecosystem services**

Project Outcomes

Project Team's	Farmers
<ol style="list-style-type: none"> Increased adoption of climate smart practices (physical and mind set) with an increased mix of adapted varieties being planted Stable yields, increased productivity and a more resilient and consistent supply chain. Farmers increasingly using knowledge and knowledge systems to proactively (early warning, investing) build resilience to climate impact while at the same time transforming their farming systems to enable them to invest in on farm climate resilience building activities 	<ol style="list-style-type: none"> ?? ?? ??

Stakeholder Responsibilities

Who should be responsible for what to successfully implement the project?

- 5Cs
 - ??
- BSI
 - ??
- SIRDJ
 - ??
- Farmers Associations
 - ??
- Farmers
 - ??



October 2021

Component Risks

What risks do you think will prevent the outcomes and impacts being achieved for each component?

- Component 1
– ??
- Component 2
– ??
- Component 3
– ??



Next Steps

- Draft design project developed
- Draft design circulated and discussed
- Report back in a plenary session to all stakeholders



Thank You





October 2021

9.4. Project design workshop SIRD I

BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

Green Climate Fund Project Draft Design Workshop
Institute (SIRD I)
June 2021

Executing Entities: Belize Sugar Industry (BSI) & Sugarcane Industry for Research and Development Institute (SIRD I)
Accredited Entity (AE): Caribbean Community Climate Change Centre (CCCCC)
Co-Implementors: Sugarcane Farmers of Northern Belize

Key terms (used by GCF) to understand

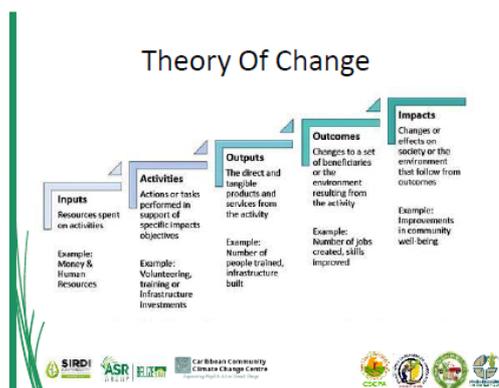
- Local Ownership
- Paradigm Shift
- Additionality
- Scalable



"Increased adaptive capacity of sugarcane farmers in Northern Belize"

Project Focus Areas-From the Concept Note

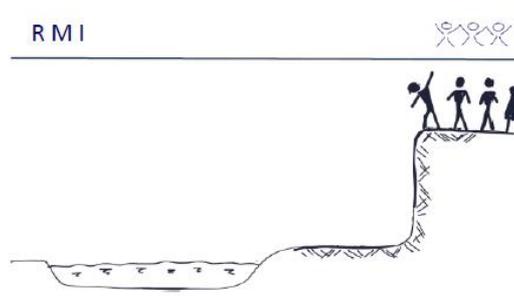
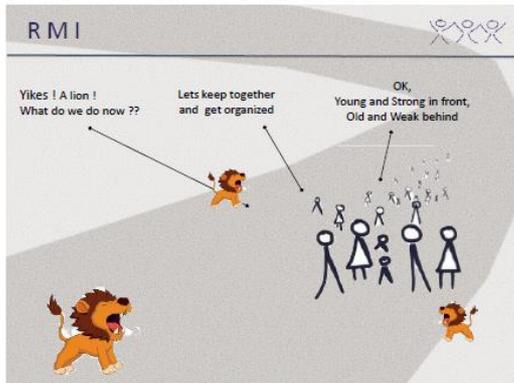
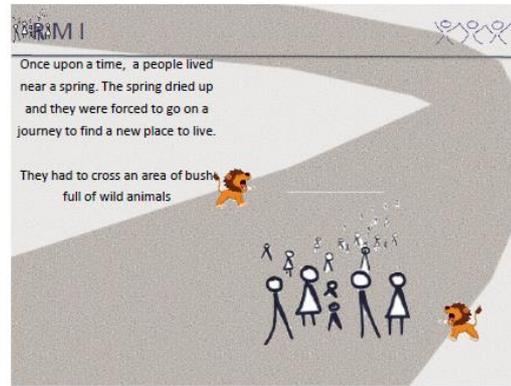
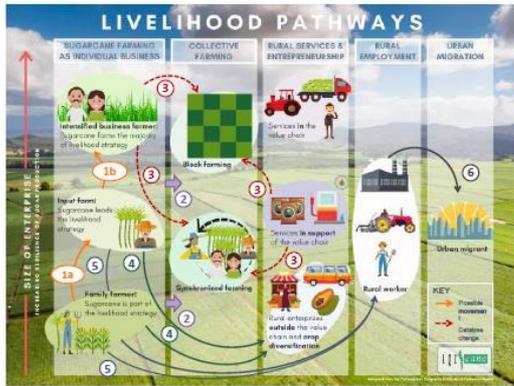
- Project focuses on three main areas of building adaptive capacity
 - Varieties diversified, seed cane available as and when needed, planting in climate smart manner, and mechanical harvesting up scaled (Package of Climate Smart Activities)
 - Moisture management and improved crop husbandry
 - Knowledge and knowledge management
- Takes a developmental and productivity approach to building adaptive capacity to climate change
- Recognizes that sugarcane production is only one nodes in the sugar value chain



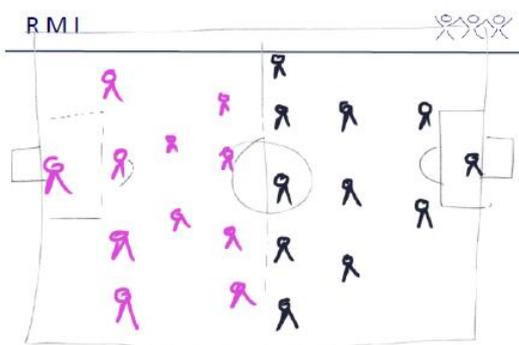
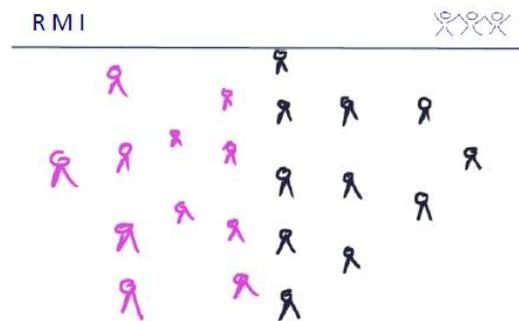
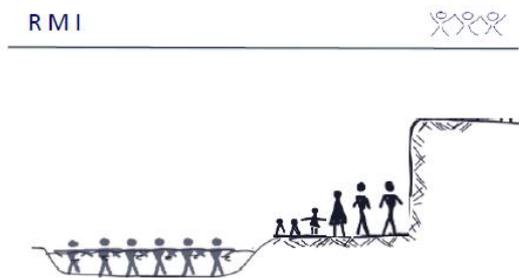
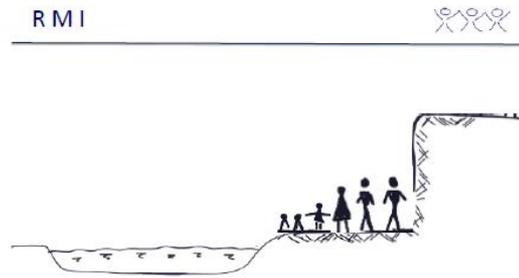
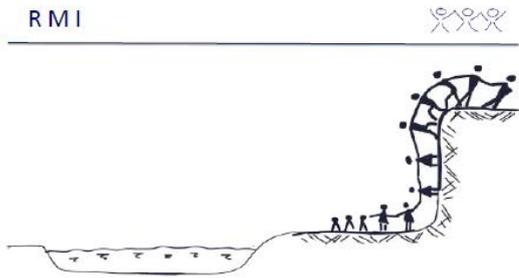
Possible/Probable Role of SIRD I in the Project

- Technical advisor-Climate Smart Package
- Execute Knowledge and Knowledge Systems
 - Holistic including transformational aspects of the project
- Seed Cane Nursery Identification and supervision (In conjunction with others in project team)
- Late stage variety evaluation work in conjunction with BSI
- Contracting services and mentorship

October 2021



October 2021



THANK YOU



October 2021

9.5. 5Cs Feasibility Study Financial Model Introduction Presentation

BUILDING THE ADAPTIVE CAPACITY OF
SUGARCANE FARMERS IN NORTHERN BELIZE:
FEASIBILITY STUDY

CARIBBEAN COMMUNITY CLIMATE CHANGE CENTER
PROJECT PREPARATION FACILITY FOR GREEN CLIMATE
FUNDING

Feasibility Study Model Review
October 2021

RM 

Agenda

- Welcome and Introductions
- Purpose of the feasibility introductory session
- Feasibility study process
- Feasibility study financial model
- Feasibility study model outputs
- Next steps



Purpose of the Session

- Provide feedback on the project design and feasibility study process
- Introduction to the financial model
- Description of scenarios and assumptions
- Sample Outputs
- Setting the stage for in-person workshops at the end of October to finalise the model



Feasibility Study Process

- ToC developed in the project design is used as the basis for the feasibility model
- Industry stakeholder engagement to provide inputs on assumptions
- Model developed based on inputs provided and activities described in ToC
- *Verification of model assumptions*
- *Finalise model and feasibility narrative developed*



Financial Model

- The model is developed to show the feasibility of varying scenarios
 - Current practise
 - Ideal practise under current conditions
 - Current practises with expected future climate conditions
 - GCF interventions (per component, for full intervention and per activity in an automated scenario builder)
- Outputs from the model indicate
 - The feasibility of the GCF interventions
 - GCF financial contribution per activity and for project management costs



Financial Model – Current Practise

- Farmers mitigate risk by reducing inputs
- Lower inputs result in lower yields
- Practises used to replant are not according to Best Agricultural Practises or as efficient as possible
- Seed Cane used from existing cane, not from clean seed cane. Pure seed with disease testing is recommended
- Continuing with current practises jeopardises sustainability for farmers and the sugar industry within the current competitive world market and changing environment



Financial Model – Ideal Practise

- Represents site and grower best practises
- Increased inputs increases the costs
- Better practises increases potential yields
- Better practises ensures the sustainability of the farmer (better soils, better crop) and the industry (more constant supply of cane)
- Improved TCH opens up land for alternative crop, livestock or other income earning activities
- Improved TCH reduces slash, bush and farming of forest resources



Financial Model – Climate Future

- Based on current practises considering the expected impact of climate change
- Yield expected to decrease potential yields by up to 20% as a result of climate change (similar to that experienced during the 2019/20 crop season)
- Will result in a less consistent supply of cane, resulting in more stand over cane and more mill stoppages



Financial Model - Assumptions

- Assumptions are key to establishing an accurate the model
- Sheets “Cane Costs Revenue assumpt” and “Yield Forecast” provide the assumptions identified from stakeholder engagements
- All other sheets draw on a combination of these assumptions in addition to making scenario based assumptions
- All units within the model are Long Tonne, BZ\$ and Acres, unless stated otherwise



Financial Model – GCF Implementation

- Component 1: Climate Smart Agronomy
 - Considers improved more intensive practises for land prep, planting, ratoon management and soil health
 - SC’s Requires expanding variety purity and genetic base, preferably with early maturing types to increase Pol% cane the 1st trimester, and allow greater flexibility for crushing cane volume and reducing risk of stand over.
 - Clean, tested and verified seed cane is used (genetic purity, insect free, and disease free)
 - Land prep for mechanical harvesting (This harvest option allows for green harvest, one of the principals associated to Green Climate Fund, and SC’s support)
 - Improved practises and increased inputs increase the cost of production, but results in increased yields
 - Sensitivity analysis* is used to calculate feasibilities at different levels of GCF intervention and different prices for cane per LT

*Sensitivity Analysis is a financial model that determines how target variables are affected based on changes in other variables known as input variables.



Financial Model – GCF Implementation

- Component 2: Moisture Management
 - Considers current practises as the basis of the model
 - Includes irrigation, drainage and pest control
 - Irrigation and drainage is amortised over 10 year at 8%
 - Sensitivities are used to calculate the feasibility at different levels of GCF intervention and different prices for cane per LT



Financial Model – GCF Implementation

- Component 3: Knowledge and Knowledge Systems
 - Focuses on developing and building systems
 - Project interventions and outputs are not captured within the Sheet: “Component 3” but are captured through the project outputs and overall impact of the project
 - Component 3 ensures the sustainability of the project interventions

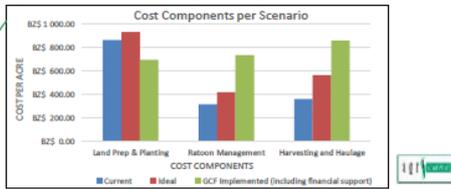




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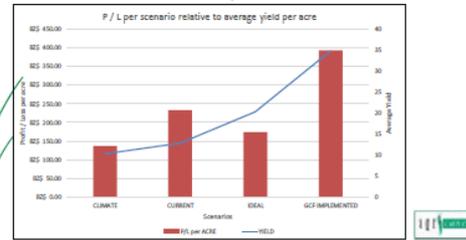
Financial Model – Input Costs

- Costs for differing scenario's vary and can be reviewed within the model sheets
- Does NOT include potential improved equipment and labour use efficiencies achieved by block farming and grower collaboration
- GCF grant is included in costs, reducing the cost to the farmer



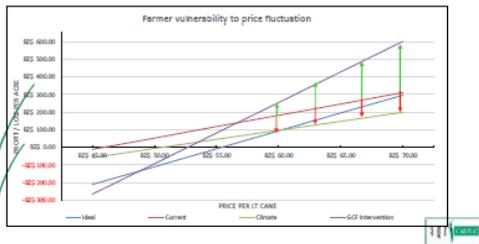
Financial Model – Project intervention

- Different costs calculated under each scenario result in different Profit / Losses



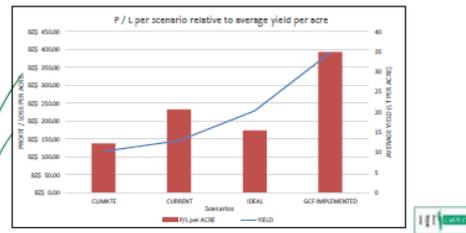
Financial Model – Cost Drivers

- Main cost drivers are **Price per ton..**



Financial Model – Cost Drivers

- Main cost drivers are **Price per ton & Yield per acre**



Financial Model - Outputs

- Sugarcane price and GCF intervention sensitivities relative to P/L are captured within each component tab

Current Cane Price per T (USD)	Average Profit / Loss per acre
\$25.00/ton	-\$173,369
\$25.50/ton	-\$13,115
\$26.00/ton	\$67,669
\$26.50/ton	\$266,576
\$27.00/ton	\$465,483

Marketing %	Current Profit / Loss per acre	Value of Investment per acre
0%	\$143,000	\$0.00
10%	\$129,100	\$13,900
20%	\$115,200	\$27,800
30%	\$101,300	\$41,700
40%	\$87,400	\$55,600
50%	\$73,500	\$69,500
60%	\$59,600	\$83,400
70%	\$45,700	\$97,300
80%	\$31,800	\$111,200
90%	\$17,900	\$125,100
100%	\$4,000	\$139,000

Financial Model - Outputs

- Additionality activities are funded by GCF and Co-Funded by industry

Activity	Cost	Funding Source
Activity 1.1.1 (Land Prep for conversion of cane)	\$100,000	GCF
Activity 1.1.2 (Harvesting and haulage)	\$200,000	GCF
Activity 1.1.3 (Ratoon management)	\$150,000	GCF
Activity 1.1.4 (Planting)	\$100,000	GCF
Activity 1.1.5 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.6 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.7 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.8 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.9 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.10 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.11 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.12 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.13 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.14 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.15 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.16 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.17 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.18 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.19 (Ratoon harvest)	\$100,000	GCF
Activity 1.1.20 (Ratoon harvest)	\$100,000	GCF



October 2021

Financial Model - Outputs

- PMU and Ongoing costs that support the project's activities are also accounted for

Project Management	PMU	Ongoing	Total
Project Management Ongoing Costs	USD 4,000,000.00	USD 1,500,000.00	USD 5,500,000.00

- Total financial contributions for project implementation

Contribution	PMU	Ongoing	Total
Total Financial Contributions	USD 4,000,000.00	USD 1,500,000.00	USD 5,500,000.00



Next Steps

- Industry Stakeholders to review the model assumptions and outputs
- Follow up workshop to discuss model and finalise figures at the end of October
- Any questions on model workings can be directed at Luan Mans – luanmansconsulting@gmail.com



Thank You





October 2021

9.6. Co-Funding workshop

BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

CARIBBEAN COMMUNITY CLIMATE CHANGE CENTER
PROJECT PREPERATION FACILITY FOR GREEN CLIMATE FUNDING

Co-funding workshop
November 2021

RMI

Agenda

- Present overview of the project
- Present financial model outputs
- Discuss co-funding opportunities

Project Design Development Process

- Industry Concept Note – defines project parameters
- Baseline – identifies barriers and opportunities
- Participatory Planning Workshops – get buy-in and understanding from stakeholders
- Draft Project Design – provides framework for theory of change
- ToC and Logframe – description of barriers, paradigm shift and monitoring and evaluation
- Project Feasibility – financial model and narrative (outputs important)
- Crosscutting Studies – Gender, Environment, Risk Assessment
- Populate and Submit GCF Funding Proposal with annexes
- On track to deliver by end of 2021

Problem Statement

Sugarcane farmers in Northern Belize are becoming more economically, physically and socially vulnerable to climate change which is compounding issues of low productivity, poor access to a range of sugarcane varieties, traditional agronomic practices and untransformed farming models leading to the possibility of the farms no longer being viable thereby threatening the existence of the entire sugar industry and everyone's livelihoods linked to this industry.

Thematic Areas of vulnerability

1. Physical domain
2. Institutional/Social domain
3. Business domain

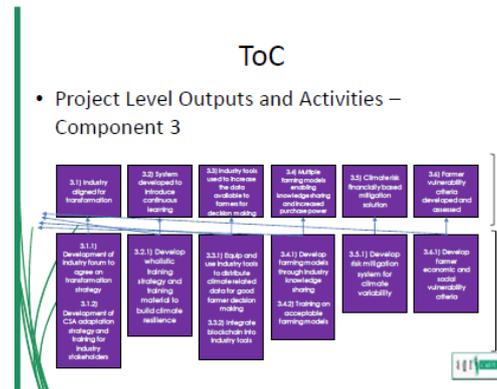
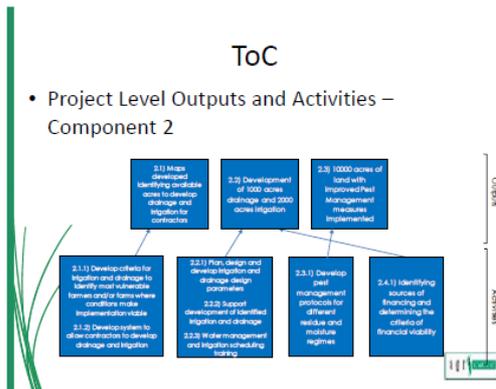
Project Design

- Fund Level Impact and Outcome

ToC

- Project Level Outputs and Activities – Component 1

October 2021



Industry Transformational change

- Introducing and uptake of new varieties,
- Develop of seed cane nurseries and seed cane roll out systems,
- Facilitating diversified contracting and contracting services,
- Preparation for and ramping up mechanical green harvesting,
- Diversified farming models,
- Soil health through the use of effective microbials,
- Moisture management systems
- Strengthening of farmer support systems (sugar cluster, SIMMIS etc)



Feasibility Model

- Model updates based on feedback received
 - Model to show economic feasibility showing project economic impact on:
 - Increased efficiency
 - Increased use of machinery
 - Reduction in land requirement
 - Opportunity to diversify
 - Model to show impact of varying climate models



GCF & Co-Funding

- GCF funds additionalities related to adaptive activities that are climate smart
- Co-Funding commitment includes
 - Funding activities that industry already funds
 - Funding activities that the GCF is not able to fund
 - Supporting the funding of activities that will make the industry more resilient



GCF & Co-Funding

Additionality Activities	Cost per acre US Total cost	Number of acres	% Grant Intervention	Value of GCF Financial Support	% Co-Funding	Value of Co-Funding	Source of Co-Funding
Activity 1.4.1: Land Prep for mechanical harvesting	\$25 120,00	10000	100%	\$25 1 200 000,00	0%	\$25 0,00	-
Activity 1.2.1: Establish new cane nurseries	\$25 3 200,40	294	100%	\$25 941 530,20	0%	\$25 0,00	-
Activity 1.2.2: Irrigated with different Varieties	\$25 970,35	33000	40%	\$25 4 402 402,00	55%	\$25 5 180 725,50	BA's (Self-Funded, Bank Loans, Fair Trade Levies)
Activity 2.2.1: Drainage	\$25 25,00	3000	100%	\$25 75 000,00	0%	\$25 0,00	-
Activity 2.2.1: Irrigation	\$25 2 383,73	2000	50%	\$25 2 383 725,16	50%	\$25 2 383 725,16	BA's (Self-Funded, Bank Loans, Fair Trade Levies)
Activity 2.3: Soil Health - Plant	\$25 201,25	30000	100%	\$25 2 012 500,00	0%	\$25 0,00	BA's (Self-Funded, Bank Loans, Fair Trade Levies)
Activity 2.3: Soil Health - Rotation (Dry)	\$25 475,00	5000	60%	\$25 2 825 000,00	40%	\$25 1 150 000,00	BA's (Self-Funded, Bank Loans, Fair Trade Levies)
Activity 2.3: Integrated Pest Control (Dry)	\$25 330,00	5000	50%	\$25 825 000,00	50%	\$25 825 000,00	BA's (Self-Funded, Bank Loans, Fair Trade Levies)





October 2021

GCF & Co-Funding

	Total cost	% Grant Intervention	Value of GCF Financial Support	% Co-Funding	Value of Co-Funding	Source of Co-Funding
Systems Development						
Activity 1.3.3: Develop digital marketplace for contractors to explore mechanized and technology-based solutions) and systems	BZ\$ 54 000,00	100%	BZ\$ 54 000,00	0%	BZ\$ 0,00	-
Activity 2.1.1: Equip and use industry tools to generate climate related data for good farmer decision making	BZ\$ 40 000,00	100%	BZ\$ 40 000,00	0%	BZ\$ 0,00	-
Activity 3.2.2: Integrate blockchain into industry tools	BZ\$ 400 000,00	50%	BZ\$ 200 000,00	50%	BZ\$ 200 000,00	SIRD, BS
Support Systems / Mechanisms						
Activity 3.3: Construct a new Quarantine Support	BZ\$ 3 000 000,00	0%	BZ\$ 0,00	100%	BZ\$ 3 000 000,00	SFC
Activity 3.3: Develop risk mitigation system for climate variability	BZ\$ 40 000,00	0%	BZ\$ 0,00	100%	BZ\$ 40 000,00	FAY, SIRD
Ongoing Industry Support						
Universal research & cane seed origin	BZ\$ 3 500 000,00	0%	BZ\$ 0,00	100%	BZ\$ 3 500 000,00	BSI
Other?? TBD	BZ\$ 4 500 000,00	0%	BZ\$ 0,00	100%	BZ\$ 4 500 000,00	BS, SIRD, FAY

Thank You

Feedback from BSI on project preparation activities

Feedback from SIRD on project preparation activities



October 2021

9.7. Site Visit 2 Workshop Farmers Association financial model and validation

BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

CARIBBEAN COMMUNITY CLIMATE CHANGE CENTER
PROJECT PREPERATION FACILITY FOR GREEN CLIMATE FUNDING

PROJECT DESIGN, FEASIBILITY STUDY AND RISK ASSESSMENT WORKSHOP
October 2021

Agenda

- Project Design feedback review-Final thoughts
- Theory of Change discussion
- Feasibility Study feedback and validation
- Co-Funding requirements
- Project Risk Discussion

Project Design Development Process

- Industry Concept Note – defines project parameters
- Baseline – identifies barriers and opportunities
- Participatory Planning Workshops – get buy-in and understanding from stakeholders
- Draft Project Design – provides framework for theory of change
- ToC and Logframe – description of barriers, paradigm shift and monitoring and evaluation
- Project Feasibility – financial model and narrative (outputs important)
- Crosscutting Studies – Gender, Environment, Risk Assessment
- Populate and Submit GCF Funding Proposal with annexes
- On track to deliver by end of 2021

Project Strategy

- Project implemented through local contractors with support from PMU
- Project will scale up industry systems (smart sugarcane cluster, SIMIS) to manage and coordinate project activities
- Transformational change through introducing new varieties, seed cane nurseries, contracting and contracting services, ability for mechanical green harvesting, diversified farming models, soil health through the use of effective microbials, moisture management systems and the use of farmer support systems

Project Strategy

- Project Activities implemented through lots and farmers associations bid for lots on behalf of members
- Bids will be evaluated through a number of criteria, including:
 - Farmer vulnerability,
 - Alignment of transformational goals of the project,
 - Gender and youth
 - Equitable benefit across farmer associations
 - Technical feasibility (soil, access to water, etc)
 - Financial commitment (Co-funding from farmers and farmer associations)
- Project will provide support to farmer associations through the PMU and dedicated transformation offices

Project Roles and Responsibilities

- Farmers:
 - To ensure that the project is demand led by understanding the project rationale and design
 - Develop and understand their role in building theirs and industry resilience to the impact of climate change
 - Commit to co-financing activities as per the project financial/co-financing plan
 - Undertake on-farm activities required by the project
 - Attend training and workshops as and when required
- Farmer Associations:
 - To hold the vision and to take a leadership position in understanding the elements required to build resilience to the impacts of climate change among members.
 - To promote and communicate the project among its members
 - To understand and commit to their role as co-implementers of the project by understanding the project theory of change and log frame along with activities and outputs being monitored from a project management perspective.
 - To commit to co-financing project activities as per the project financial/co-financing plan (Fairtrade funds discussed in this regard)
 - To "bid" for project lots on behalf of the members as and when requested to do so.
 - To assist SIRD I to identify and manage seed cane sites
 - To participate in project monitoring and evaluation activities



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GCF & Co-Funding

	Total cost	% Grant Intervention	Value of GCF Financial Support	% Co-Funding	Value of Co-Funding	Source of Co-Funding
Systems Development						
Activity 1.3.3: Establish digital marketplace for contractors to explore facilitated sale technology-based solution(s) and systems	BZ\$ 54,000.00	100%	BZ\$ 54,000.00	0%	BZ\$ 0.00	-
Activity 3.3.3: Equip and use industry tools to distribute climate related data for good farmer decision-making	BZ\$ 40,000.00	100%	BZ\$ 40,000.00	0%	BZ\$ 0.00	-
Activity 3.3.2: Integrate blockchain into industry tools	BZ\$ 400,000.00	50%	BZ\$ 200,000.00	50%	BZ\$ 200,000.00	SARDI, BCI
Support Systems / Mechanisms						
Activity 1.3.5: Computer base Curriculum Support	BZ\$ 3,000,000.00	0%	BZ\$ 0.00	100%	BZ\$ 3,000,000.00	DFC
Activity 1.3.7: Develop risk mitigation system for climate variability	BZ\$ 40,000.00	0%	BZ\$ 0.00	100%	BZ\$ 40,000.00	FAO, SARDI
Ongoing Industry Support						
Vertical research & cane seed origin	BZ\$ 3,500,000.00	0%	BZ\$ 0.00	100%	BZ\$ 3,500,000.00	ICI
On-farm TSD	BZ\$ 4,500,000.00	0%	BZ\$ 0.00	100%	BZ\$ 4,500,000.00	BSI, SARDI, FAO

Thank You

9.8. Site Visit 3 Workshop – Final Project validation and securing of Co-funding

BUILDING THE ADAPTIVE CAPACITY OF SUGARCANE FARMERS IN NORTHERN BELIZE

CARIBBEAN COMMUNITY CLIMATE CHANGE CENTER PROJECT PREPERATION FACILITY FOR GREEN CLIMATE FUNDING

Co-Funding Discussion
April 2022

RMI

1

Agenda

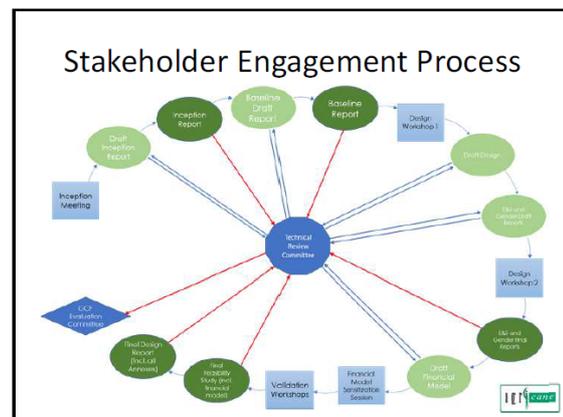
- Update you on project
- Remind you of:
 - Project Theory of Change and project design
 - Project implementation strategy
 - Project Roles and Responsibilities
 - Project Implementation Process
- Discuss your Co-Funding commitment

2

Project progress

- All stakeholder consultations completed by the end of this week
- CCCCC reviewing all project documentation and Agricane to finalize by the end of this week-Key document funding proposal and annexes
- To be submitted by the end of this month to GCF
- Iterations with GCF to follow and project to commence at end of this year

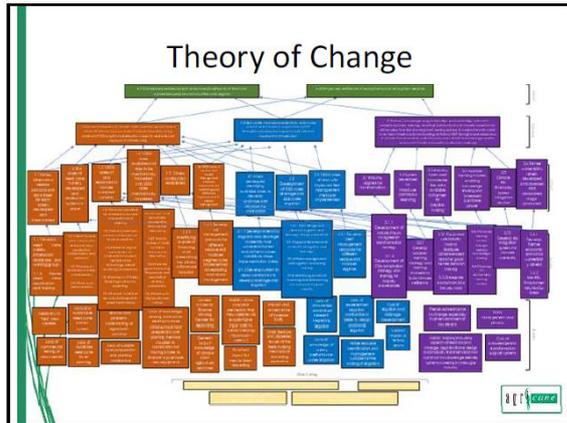
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October 2021



5

Project Strategy

- Project implemented through local contractors with support from PMU
- Project will scale up industry systems (smart sugarcane cluster, SIMIS) to manage and coordinate project activities
- Transformational change through introducing new varieties, seed cane nurseries, contracting and contracting services, ability for mechanical green harvesting, diversified farming models, soil health through the use of effective microbes, moisture management systems and the use of farmer support systems

6

Project Strategy

- Project Activities implemented through lots and farmers associations bid for lots on behalf of members
- Bids will be evaluated through a number of criteria, including:
 - Farmer vulnerability,
 - Alignment of transformational goals of the project,
 - Gender and youth
 - Equitable benefit across farmer associations
 - Technical feasibility (soil, access to water, etc)
 - Financial commitment (Co-funding from farmers and farmer associations)
- Project will provide support to farmer associations through the PMU and dedicated transformation offices

7

Project Roles and Responsibilities - Farmers

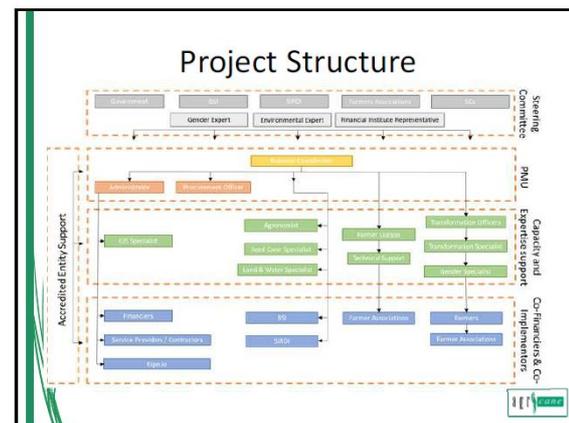
- To ensure that the project is demand led by understanding the project rationale and design,
- Develop and understand their role in building theirs and industry resilience to the impact of climate change
- Undertake on-farm activities required by the project
- Attend training and workshops as and when required

8

Farmers Association

- To hold the vision and to take a leadership position in understanding the elements required to build resilience to the impacts of climate change among members.
- To promote and communicate the project among its members
- To understand and commit to their role as co-implementers of the project by understanding the project theory of change and log frame along with activities and outputs being monitored from a project management perspective.
- To commit to co-financing project activities as per the project financial/co-financing plan (Fairtrade funds/loans)
- To "bid" for project lots on behalf of the members as and when requested to do so.
- To participate in project monitoring and evaluation activities

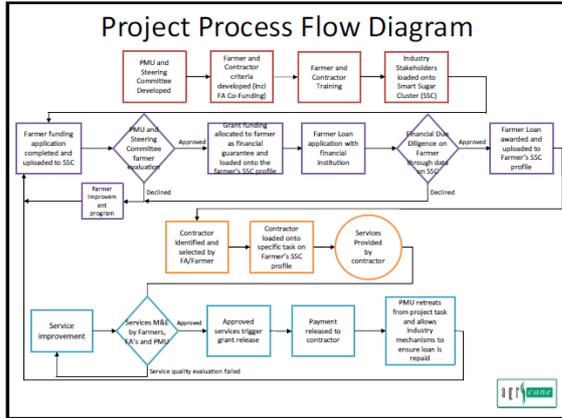
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10



October 2021



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GCF & Co-Funding

Additional Activities	Cost per acre OR Total cost	Number of acres	% Grant Intervention	Value of GCF Financial Support	% Co-Funding	Value of Co-Funding	Source of Co-Funding
Activity 1.A.1: Land Prep for mechanical harvesting	\$ 60,00	10000	100%	\$ 600 000,00	0%	\$ 0,00	-
Activity 1.2.3: Establish new cane nurseries	\$ 1 681,97	294	100%	\$ 484 499,00	0%	\$ 0,00	-
Activity 1.3.5: Replant with different Varieties	\$ 648,24	10000	40%	\$ 2 592 960,00	60%	\$ 3 889 440,00	FA's (Self-Funded, Bank Loans, FairTrade Levis)
Activity 1.4.3: Mechanically Harvest	\$ 360,00	2000	0%	\$ 0,00	100%	\$ 720 000,00	FA's (Self-Funded, Bank Loans, FairTrade Levis)
Activity 2.2.1: Drainage	\$ 17,50	1000	50%	\$ 8 750,00	50%	\$ 8 750,00	FA's (Self-Funded, Bank Loans, FairTrade Levis)
Activity 2.3.1: Irrigation	\$ 1 691,86	2000	50%	\$ 1 691 863,00	50%	\$ 1 691 863,00	FA's (Self-Funded, Bank Loans, FairTrade Levis)
Activity 2.3.2: Soil Health - Plant	\$ 100,63	10000	100%	\$ 1 006 250,00	0%	\$ 0,00	-
Activity 2.3.3: Soil Health - Rotoon (Spr)	\$ 437,50	4000	50%	\$ 875 000,00	50%	\$ 875 000,00	FA's (Self-Funded, Bank Loans, FairTrade Levis)
Activity 2.3: Integrated Pest Control (Spr)	\$ 165,00	4000	50%	\$ 330 000,00	50%	\$ 330 000,00	FA's (Self-Funded, Bank Loans, FairTrade Levis)

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Project Funding Breakdown

	Component 1	Component 2	Component 3	Other	Total	Total per Annum
GCF	\$6 309 772,00	\$2 139 438,00	\$686 000,00	\$1 747 750,00	\$10 882 959,26	\$2 176 591,85
Farmer Associations	\$5 507 128,00	\$2 032 488,00	\$24 500,00	\$0,00	\$7 564 115,08	\$1 512 823,02
- NSCGA (9%)	\$495 641,33	\$142 279,18	\$1 715,00	\$0,00	\$529 488,00	\$105 897,61
- CSCFA (12%)	\$669 855,36	\$385 847,84	\$4 410,00	\$0,00	\$1 060 113,20	\$272 308,14
- PSCFA (21%)	\$1 156 496,88	\$508 122,00	\$6 125,00	\$0,00	\$1 670 743,88	\$378 205,79
- BSCFA (58%)	\$3 194 134,29	\$1 016 244,00	\$12 250,00	\$0,00	\$3 262 628,29	\$756 411,51
BSI	\$1 769 000,00	\$0,00	\$2 500,00	\$0,00	\$1 781 000,00	\$356 200,00
DFC	\$1 500 000,00	\$0,00	\$0,00	\$0,00	\$1 500 000,00	\$300 000,00
TOTAL	\$15 085 899,00	\$4 171 925,00	\$713 000,00	\$1 747 750,00	\$21 728 074,34	\$4 345 614,87

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Co-Funding Commitment

The Commitment says:

1. You are supporting the project
2. You are supporting the transformation the project intends to make
3. You are committed to financially support the respective activities as best as possible
4. You own the project and are custodians of its success

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The Co-Funding Letter

To be printed on letterhead of co-financer

[name], [state]

To: [Name and Address of Accredited Entity]
and
The Green Climate Fund "GCF"

Re: Co-financing commitment letter for [project/programme name] in [country]

Dear Madam/Sr,

I am writing to you to express our commitment to support [project/programme name] in [country] that was proposed to the Green Climate Fund (GCF) for funding.

This is to confirm the type of financial instrument (e.g. loan or grant) contribution of [name of co-financing institution] to co-finance the project [or programme], should the proposal be approved, with a total value of [amount in USD/EUR/€].

Sincerely yours,

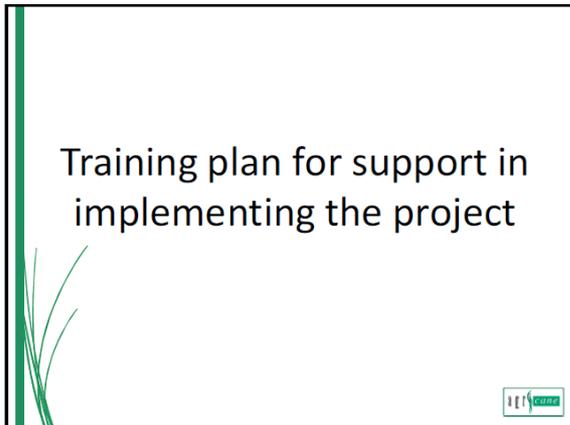
[Name of signatory]
[Title]

15

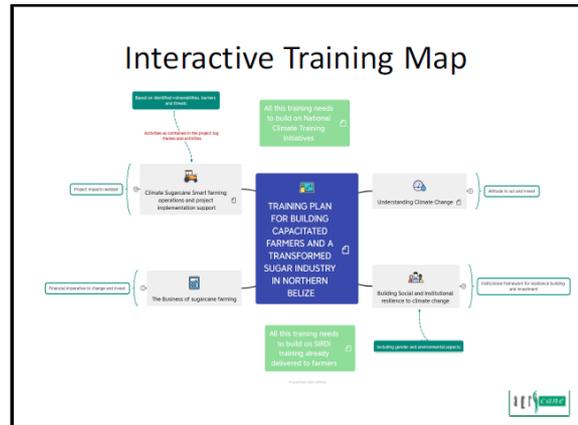
Thank You

16

October 2021

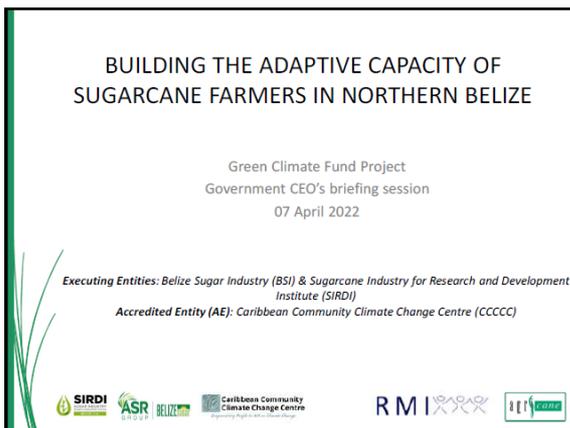


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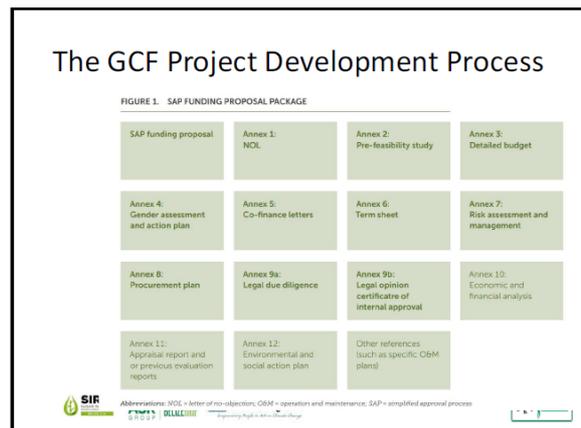


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9.9. Site Visit 3 Workshop – Government CEOs meeting



1



2

October 2021

Component 2 Outputs

1. 2000 acres irrigated
2. Water management plan developed
3. Develop drainage for 1000 acres
4. 4000 acres under IPM pest management

"moisture management and consistent supply chain"

Sponsors: SIRD, ASR, BELIZE, Caribbean Community Climate Change Centre

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Component 3 Activity and Outputs

1. Industry aligned for transformation through development of agreed transformation strategy
2. Systems for continuous learning
3. Industry tools used increase data availability for farmer and stakeholder decision making
4. Multiple farming models enabling knowledge sharing and increased purchase power

"Knowledge and knowledge systems to proactively build resilience"

Sponsors: SIRD, ASR, BELIZE, Caribbean Community Climate Change Centre

10

Project Strategy

- Project implemented through local contractors with support from PMU
- Project will scale up industry systems (smart sugarcane cluster, SIMIS) to manage and coordinate project activities
- Transformational change through introducing new varieties, seed cane nurseries, contracting and contracting services, ability for mechanical green harvesting, diversified farming models, soil health through the use of effective microbials, moisture management systems and the use of farmer support systems

Sponsors: SIRD, ASR, BELIZE, Caribbean Community Climate Change Centre

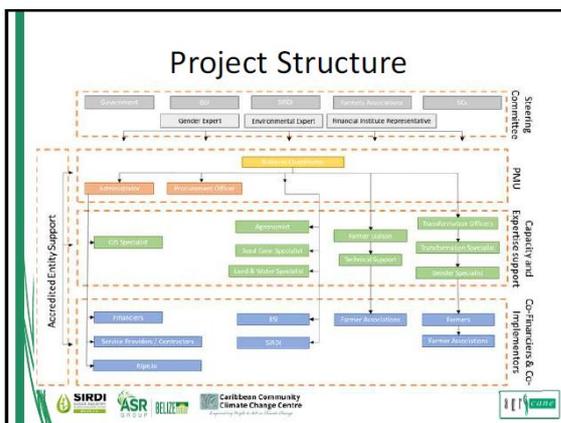
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Project Strategy

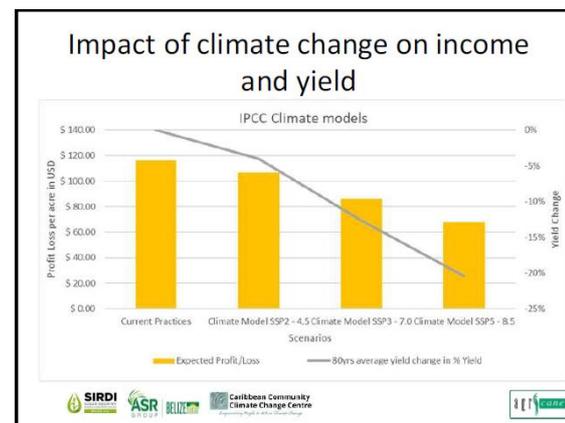
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- Bids will be evaluated through a number of criteria, including:
 - Farmer vulnerability,
 - Alignment of transformational goals of the project,
 - Gender and youth
 - Equitable benefit across farmer associations
 - Technical feasibility (soil, access to water, etc)
 - Financial commitment (Co-funding from farmers and farmer associations)
- Project will provide support to farmer associations through the PMU and dedicated transformation offices

Sponsors: SIRD, ASR, BELIZE, Caribbean Community Climate Change Centre

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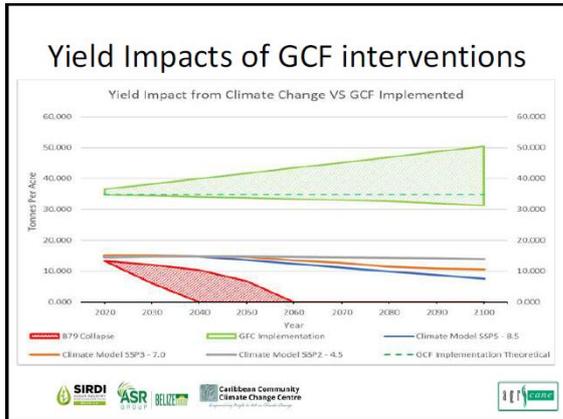
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14



October 2021



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Project IRR

IRR of the full package of interventions, in combination with GCF grant funding, over 10 years will be up to **19%**

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Total Costs	\$5 123.12	\$2 403.91	\$2 326.94	\$2 255.36	\$1 920.26	\$1 838.33	\$1 800.77	\$1 747.22	\$1 697.43	\$1 664.33
Grant Costs	\$2 645.67	\$120.50	\$120.50	\$120.50	\$120.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Farmer Costs	\$2 477.45	\$2 283.41	\$2 206.44	\$2 134.86	\$1 799.76	\$1 838.33	\$1 800.77	\$1 747.22	\$1 697.43	\$1 664.33
Revenue	\$2 731.80	\$3 449.49	\$2 932.14	\$2 726.91	\$2 536.03	\$2 358.51	\$2 193.41	\$2 039.18	\$1 897.08	\$1 764.28
Cashflow	-\$2 390.32	\$1 045.69	\$605.21	\$471.55	\$615.77	\$500.18	\$392.64	\$292.63	\$199.65	\$99.94

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GCF & Co-Funding

Additional Activities	Cost per acre OR Total cost	Number of acres	% Grant Intervention	Value of GCF Financial Support	% Co-Funding	Value of Co-Funding	Source of Co-Funding
Activity 1.4.1: Land Prep for mechanical harvesting	\$ 60.00	10000	100%	\$ 600 000.00	0%	\$ 0.00	-
Activity 1.2.3: Establish new cane nurseries	\$ 1 681.97	294	100%	\$ 5494 499.00	0%	\$ 0.00	-
Activity 1.3.5: Replant with different Varieties	\$ 648.24	10000	40%	\$ 2 592 960.00	60%	\$ 3 889 440.00	FA's (Self-funded, Bank Loans, FairTrade Levies)
Activity 1.4.3: Mechanically Harvest	\$ 360.00	2000	0%	\$0.00	100%	\$ 720 000.00	FA's (Self-funded, Bank Loans, FairTrade Levies)
Activity 2.2.1: Drainage	\$ 17.50	1000	50%	\$ 8 750.00	50%	\$ 8 750.00	FA's (Self-funded, Bank Loans, FairTrade Levies)
Activity 2.2.1: Irrigation	\$ 1 691.86	2000	50%	\$ 1 691 863.00	50%	\$ 1 691 863.00	FA's (Self-funded, Bank Loans, FairTrade Levies)
Activity 2.3: Soil Health - Plant	\$ 100.63	10000	100%	\$ 1 006 250.00	0%	\$ 0.00	-
Activity 2.3: Soil Health - Ratoon (5yrs)	\$ 437.50	4000	50%	\$ 875 000.00	50%	\$ 875 000.00	FA's (Self-funded, Bank Loans, FairTrade Levies)
Activity 2.3: Integrated Pest Control (5yrs)	\$ 165.00	4000	50%	\$ 330 000.00	50%	\$ 330 000.00	FA's (Self-funded, Bank Loans, FairTrade Levies)

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Project Funding Breakdown

	Component 1	Component 2	Component 3	Other	Total	Total per Annum
GCF	\$6 309 772.00	\$2 139 438.00	\$686 000.00	\$1 747 750.00	\$10 882 959.26	\$2 176 591.85
Farmer Associations	\$5 507 128.00	\$2 032 488.00	\$24 500.00	\$0.00	\$7 564 115.00	\$1 512 823.02
- NSCGA (9%)	\$495 641.52	\$142 274.16	\$1 715.00	\$0.00	\$529 488.00	\$105 897.61
- CSCFA (12%)	\$660 855.36	\$365 847.84	\$4 410.00	\$0.00	\$1 061 540.77	\$272 308.14
- PSCFA (21%)	\$1 156 496.88	\$508 122.00	\$6 125.00	\$0.00	\$1 891 028.77	\$378 205.75
- BSCFA (58%)	\$3 194 134.24	\$1 016 244.00	\$12 250.00	\$0.00	\$3 782 057.54	\$756 411.51
BSI	\$1 769 000.00	\$0.00	\$2 500.00	\$0.00	\$1 781 000.00	\$356 200.00
DFC	\$1 500 000.00	\$0.00	\$0.00	\$0.00	\$1 500 000.00	\$300 000.00
TOTAL	\$15 085 899.00	\$4 171 925.00	\$713 000.00	\$1 747 750.00	\$21 728 074.34	\$4 345 614.87

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Questions and discussion

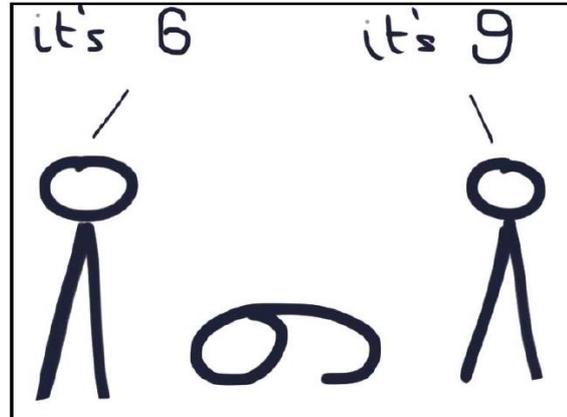
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October 2021

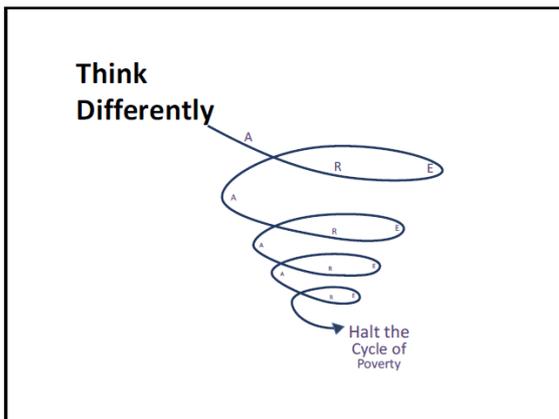
9.10. Site Visit 3 Workshop – Transformational thoughts



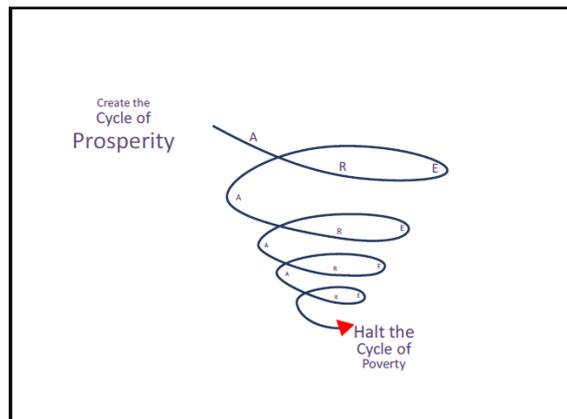
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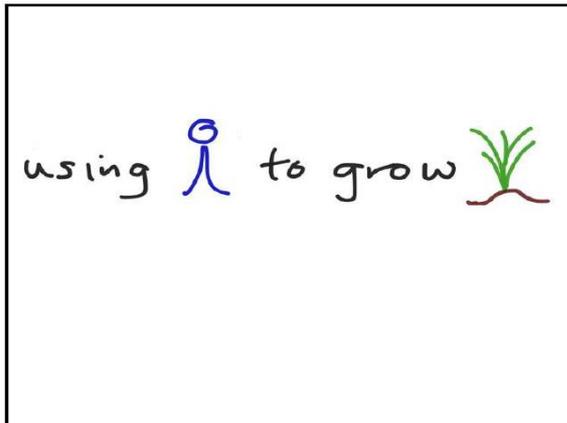


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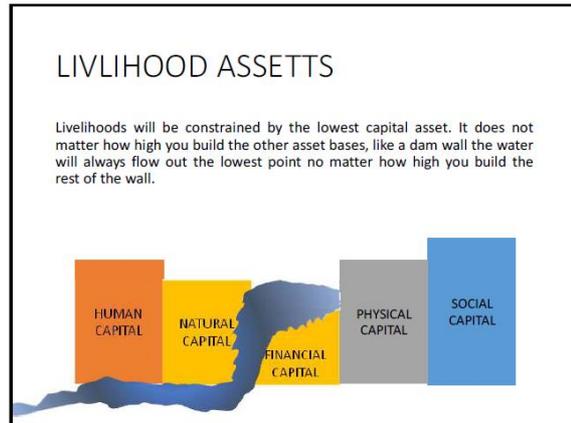


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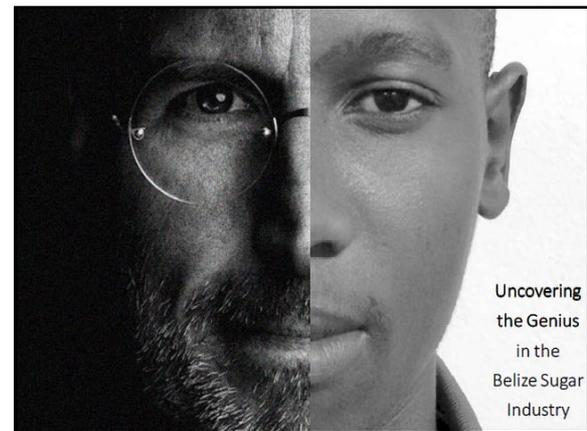
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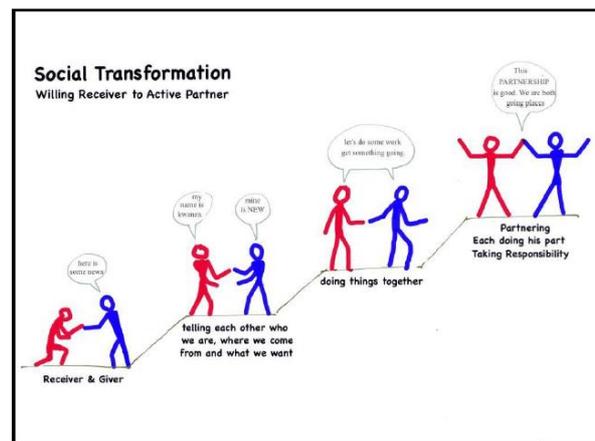
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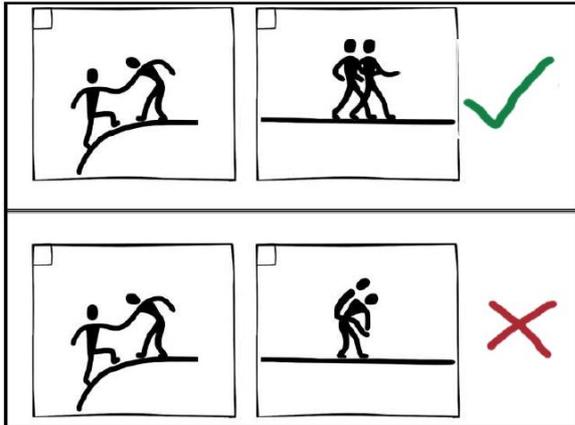


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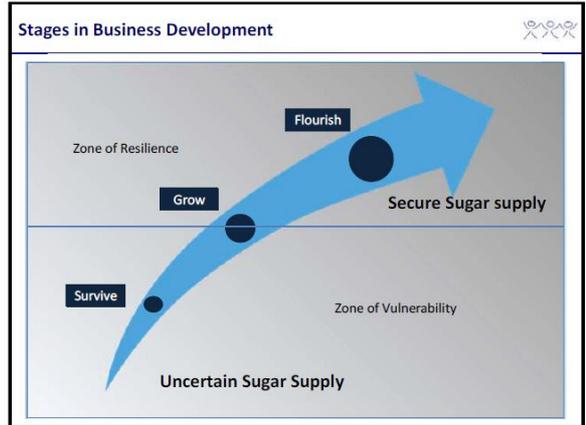


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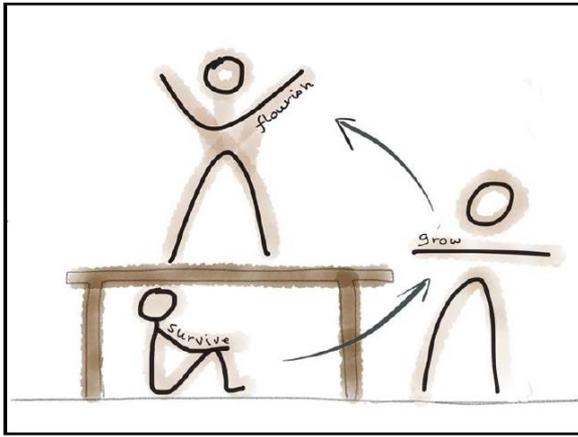
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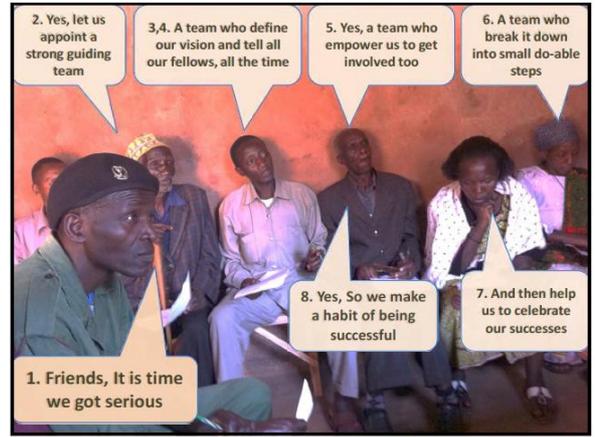
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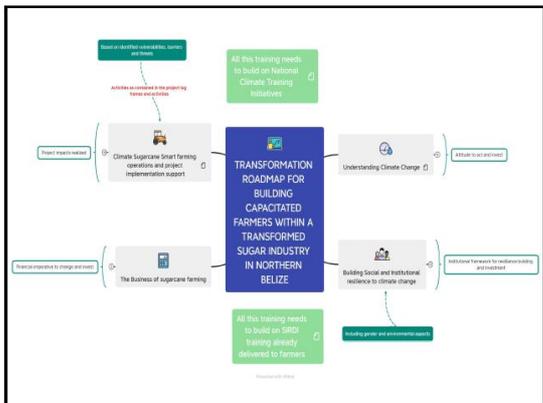
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