San Lucas Village Climate Smart Community Resilience Plan

Figure 1. Village leaders and Community Members of San Lucas, Toledo District, Belize

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Technical Details:

Community	San Lucas
Protected area (if applicable)	N/A
Area of Influence	
Population	138
Families	29
Ethnicity	Q'eqchi Maya
Tenure	Communal Land/Collective Ownership
Date of Plan Development	December 2024 - January 2025
Date of updated plan	January 31st 2025
Evidence of FPIC	Activity Report
Leading impacts of Climate Change	1. Drought 2. Forest Fire 3. Flooding
Priority Actions required for community adaptation to Climate Change	1. Portable Water System 2. Sustainable Livelihoods
Participating Organizations	San Lucas Alcalde, San Lucas Village Council, Toledo Alcaldes Association, Julian Cho Society, Ministry of Rural Development

1. Summary

This climate-smart community development plan was developed through a series of participatory sessions with community leaders and community members of San Lucas. San Lucas Village has twenty-nine (29) families and a population of one hundred thirty-eight (138) Maya Q'eqchi Indigenous People. This document presents the community's priorities for actions and investments needed to assist the community to adopt and mitigate impacts of climate change. The local actions and priorities identified will enhance the stewardship of sustainable use and care of natural resources in and around San Lucas Village. The community's resilience and adaptation to flooding and drought is important, since these are threats to water and sanitation of the community. Water serves an essential service to the survival of community members especially to women and children. On the one hand unpredictable flooding increases risks to the water borne diseases that is directly related to water quality. On the other intense drought leads to a scarcity of fresh water for consumption. This is the dilemma that San Lucas faces as a vulnerable community to climate impact and consequently resulting in the residents prioritizing the need for access to quality fresh water in their homes.

2. Methodology

Table below shows a summary of the methodology undertaken to generate the Climate Smart Community Development Plan

Activity	Description
Initial Project Contact	Permission from the community and village leaders for us to be able to share the project plan to the community.
Preliminary engagement, Creating Awareness	Effective communication and understanding: Implemented the needs and measures agreed by the Alcaldes and Village Council to establish effective communication
Capacity Building	Presentation of Climate Change impacts and effects, local evidence of vulnerabilities. Materials were identified and prepared by the Julian Cho Society.
Workshop sessions	Determining local impacts of climate change vulnerabilities and risks. Identify the Main Effects of Climate Change in the Maya community Identified interventions or action required to mitigate the impacts of climate change.

	Data Validation and review of draft Community Development Plan report
Implementation	Develop a timeline for the implementation activity of the priority pillars and action on climate resilience. Community leaders to monitor the success of investments in favour of community climate resilience plan

3. Introduction: Social, Geographic and Environmental Context

San Lucas is among Forty-one of the Maya Indigenous communities in Southern Belize that have a distinct social, economic, and cultural systems. San Lucas community is a Q'eqchi Maya that comprises 29 families with a total of 138 populations.

It is one of the communities that continues to practice a form of Customary governance system, the *Alcalde System*[1]. The role of the Alcalde is to uphold the customary practices of the community such as the Fajina [2], burials, convening community meetings, and the Judicial role of presiding over court cases as a local Magistrate for petty crimes. Each community elects two traditional leaders every two years, an Alcalde and a Deputy Alcalde.

San Lucas is located off-coast of Toledo District, Belize, with approximately two hours and thirty minutes from Punta Gorda Town. The community members are dependent on the land and natural resources for their livelihoods, spiritual, and cultures. Most homes are traditionally built with Cohune leaves as the roofs. It is for the same purpose that the Maya people have historically defended the security and integrity of their lands and resources not only providing material sustenance, but it is the foundation of their identity and sense of community. San Lucas is one of the communities that is names and protected by the Caribbean Court of Justice ruling of 2015, that affirms rights to their customary lands.

San Lucas Community is in the process of implementing the 2015 Caribbean Court of Justice Consent Order [3] and have made progress in harmonizing the boundaries of their community lands with their neighbouring villages. This is a key step in the process of identifying and protecting their customary lands. The map below is a sketch of San Lucas' land.

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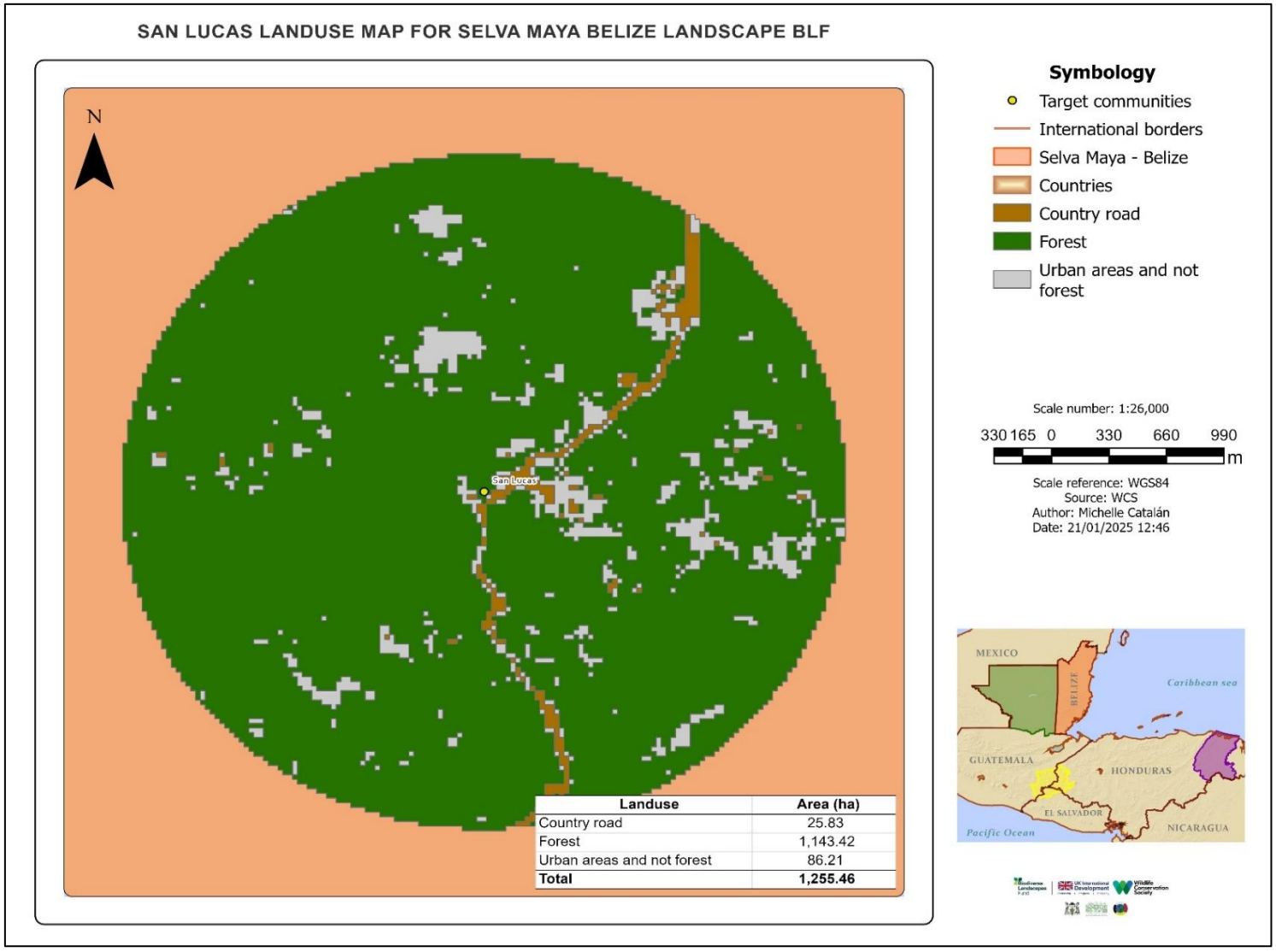
[1] "Alcalde system" means the traditional governance system of the Maya People used by Maya Villages of Southern Belize, and includes the roles of the Ab'ink, Alcaldes and Village Police all as defined and empowered by Maya Customs.

[2] Fajina is the reciprocal labor, collective ownership and stewardship of the land that allow us to be community. "The Future We Dream"

[3] In the Caribbean Court of Justice Maya Leaders Alliance vs. Attorney General of Belize 2015 Consent Order



Landuse	Area (ha)
Country road	25.83
Forest	1,143.42
Urban areas and not forest	86.21
Total	**1,255.46**

Figure 1. San Lucas Land use map for selva maya Belize landscape BLF.

4. Major Impacts of Climate Change

The table below shows the results of the community consultations providing a list of local vulnerabilities that impact people, their livelihoods and natural resources.

5.1. People

The results of the community meeting provided in the table below shows insights into the community's climate risks and vulnerabilities. It shows how San Lucas identified the main climate change impacts on the community members as follows: 1st Drought, 2nd Rainy and Unstable weather.

Drought and unstable weather are the two main climate vulnerability the community identified that has severely impacted the community's wellbeing. These two vulnerabilities affect human health in accessing water for essential service. During dry season there is a lack of water availability in the community, with scarcity of water it increases concentration of pollutants, increase competition among community members and domestic animals. San Lucas community stated that they observe in the rainy season, an increase in health illnesses especially among children, expecting mothers and cases of asthma.

The interviews and community meetings at San Lucas are in consensus that the entire community lacks quality water throughout the year and that the severity is high.

Table 1. Community Vulnerabilities and Response Measures.

Vulnerability	Impacts Requiring Mitigation	% Population Affected	Actions Identified
Droughts	Dried-up creeks. Lack of water availability to supply households for consumption. Women and young people including expectant mothers are walking longer distance to access the creek for bathing and washing. Increases concentration of pollutants, increases competition of scarce water sources.	100	Contribute to the installation of the main distribution line for the San Lucas water system.
Rainy/Unstable Weather	Increased the risks in health issues for ill and Expectant mothers. Increase risk of erosions and sedimentation in creeks	100	Reduce dependency on the one village creek by contributing to the installation of the main line for the San Lucas water system
Forest Fire	Smoke increases the risk of heart attacks, stroke, and respiratory infections in elders. Resulting in closure of schools for children in the community.	50	Capacity building on firefighting – Techniques, equipment and others

5.2. Livelihoods:

The community of San Lucas continues to experience the negative effects of drought, which lead to loss of income and decrease in crop productivity rate. For a Maya community like San Lucas that depends on subsistence farming for economic viability and social equity, a decrease in agricultural production and reduced harvest due to factors of extreme drought and unstable weather leads to severe consequences on their livelihoods. The community identified two vulnerabilities as priorities: Droughts and Forest fire. San Lucas also raised concerns that when their local food sources are impacted, the community members are forced to rely on more expensive external food sources, that's not as nutritious and economically sustainable. Therefore, the community identified an action of raising local chickens for subsistence is a priority. The community's population affected is 100 % and severity categorized as high. This action is identified as an immediate intervention for income generation to alleviate income loss from vulnerabilities identified.

The community identified that by integrating local chicken as a subsistence and income-generation activity, the community can improve food security, livelihoods, and build resilience against the impacts of drought or other agricultural setbacks. Also, the community will reduce their dependency on external food sources, and allowing them of more self-sufficient as a mitigation of climate change.

Table 2. Agricultural Risk Assessment and Resilience Strategies

Vulnerability	Impacts Requiring Mitigation	% Population Affected	Actions Identified
Droughts	Decrease productivity rate of crops, Loss of cash and income generation from produce.	100	Integration of local chicken as a subsistence and income-generation Mechanize Farming
Rainy/Unstable Weather	Increase the risk of losing crops, especially corn and beans. (rains a lot and for long period, the produce start to germinate)	100	Integrate of mechanize rice farming for income generation
Forest Fire	Destroys trees and introduces grass species in the affected areas. Increases additional human labour and effort Destroys the Cultural and Sensitive Natural Areas (Copal),	100	Integration of local chicken as a subsistence and income-generation.

5.3. Natural Resources:

San Lucas Village continues to enhance stewardship of their forested areas that holds significant ecological, economic, and cultural value for their community. The forests support the livelihoods of indigenous people through various direct and indirect means. However, these forests are vulnerable to droughts and forest fires, which can drastically affect both the environment and the community's wellbeing. San Lucas identified forest fire as a major impact to natural resources and livelihood of the community. For a community like San Lucas, the forest is more than just a resource, it's an essential part of their cultural heritage and identity. Loss of forest and the community's cultural and sensitive natural area specifically the Copal trees has left the community's economic and cultural practices vulnerable, villagers harvest Copal resin for spirituals and economic purposes.

Table 3. Environmental Vulnerabilities and Ecosystem-Based Adaptation Strategies

Vulnerability	Impacts Requiring Mitigation	% Population Affected	Actions Identified
Droughts	Decrease production of fruit trees. Increase the risk of wildfire.	100	Integration of local chicken as a subsistence and income-generation.
Rainy/Unstable Weather	Increase risk of erosions and sedimentation.	100	Contribute to the installation of the main distribution line for the San Lucas water system.
Forest Fire	Destruction of Forest, Destruction of Cultural and Sensitive Natural Areas (Copal), Increase risk of erosions and sedimentation.	100	Integrate nursery with Copal species Mechanize farming

5. Actions/investment Required to Adopt and Mitigate Climate Change

At the community meeting held on December 18th, 2024, the community of San Lucas identified two vulnerabilities that urgently needed to be addressed with one action. The most urgent call for climate resilient action is to advance the installation of the main line for the San Lucas water system.

This will improve the wellbeing of expectant mothers, elders and children walking from long distances to collect drinking water, conduct washing clothes, dishes and bathing to the immediate availability of water in their households. During drought it increases concentration of pollutants and increases competition for scarce water sources.

Table 4. Community Priorities, Impacts and Proposed Interventions

Category	Impact Required to Mitigate	Priority	Actions/Interventions	Community Contributions
People	Accessibility to water in households	High Priority	Installation of main pipeline for the Water System	Labour through the fajina system in installation of main distribution pipeline for the Water System
Livelihoods	Sustainable Livelihoods	Priority	Local Chicken Raising Mechanized Farming	Community members to provide labour and maintenance

6. Community Priority Development Needs in the context of Climate Change

The community of San Lucas has identified a series of priority sustainable development initiatives that are essential for fostering resilience to climate change. These initiatives are interconnected and require specific actions to ensure long-term resilience.

6.1. Priority Service

1. Improve health clinic infrastructure
2. Availability of medical practitioner in the community
3. Priority Infrastructure
4. Upgrade roads, bridges, and transportation infrastructure to withstand extreme events

6.2. Priority Livelihoods

1. Establish local storage of grain produce
2. Capacity building in value added products
3. Promote ecotourism activity in community