

Intersections of climate, security and human mobility in the community of San Marcos, Curarén, Department of Francisco Morazán, Honduras.

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Portrait Photo:

Landscape of the village of San Marcos, including an iconic monolith of the region known as "Piedra Parada". Credits to Nohelia Palou-Zúniga.

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EXECUTIVE SUMMARY

Recent research has determined the importance of examining the relationship between climate impacts, insecurity, violence and human mobility dynamics in Honduras. Most studies focus on regional or national data to inform programs and strategies related to climate change, citizen security, migration, displacement, natural resource management, and food security. This study takes a localized approach, analyzing these interconnections at the community level to capture the climatic, environmental, social, economic, and cultural specificities of a single community: The village of San Marcos, municipality of Curarén, department of Francisco Morazán. This proposal aims to highlight the importance of understanding local specificities to inform as accurately as possible eventual public policies, programs, strategies or interventions designed for the region.

By employing qualitative methodologies with an ethnographic and participatory approach, this report identifies and explores the local pathways of the climate security and human mobility nexus in the community of San Marcos, incorporating local experiences and emphasizing the need for a systemic and participatory approach to addressing these challenges. The climate security and human mobility pathways identified in San Marcos are:

1. Restricted access to the community, exacerbated by climate extremes and insecurity, hinders access to food, markets, essential goods and basic services.

2. Climate impacts on local crops influence human mobility dynamics, mainly driven toward climate-sensitive economic activities.

3. Climate-influenced human mobility dynamics are linked to security risks and overall perceptions of insecurity.

4. Remittances enhance household resilience and social cohesion but also contribute to economic dependency and intra-community conflicts.

5. Violence and climate-related disasters force the sporadic displacement of individuals and families, most of whom move within the same community or municipality.

Accordingly, this research presents eight proposals for collective action, developed from the perspective of the community members of San Marcos, to address the interconnected local challenges of climate, security and human mobility. Just as the pathway analysis highlighted the need to recognize and address the problems in a systemic way, these proposals and action plans also seek to implement holistic solutions to the identified challenges. The participatory approach was fundamental in the formulation of these proposals, ensuring that the solutions align with the community's experiences, needs and priorities.

These community proposals and action plans include: promoting safe spaces to foster commerce and well-being within the community; improving and maintaining roads through cooperation and local labor; reducing the risk of over-indebtedness by diversifying income sources and strengthening productive capacities; enhancing agricultural productivity and food security through training in Climate Smart Agriculture; expanding access to legal migration opportunities for seasonal work; securing potable water year-round through the community purchase of water sources; Diversifying educational options and reducing school dropout rates through Local Technical Programs; and establishing a community clinic to provide maternal and child healthcare while creating local employment opportunities.

Taken by Julian Higuera Florez



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RESEARCH CONTEXT

This research is part of the Alliance Bioversity & CIAT and the CGIAR FOCUS Climate Security's efforts to examine the links between climate change and variability, conflict, insecurity, violence, human mobility dynamics and opportunities for peacebuilding and resilience in Honduras. These connections build on extensive scientific literature that explores the relationship between climate phenomena, human mobility and security, framed within the conceptual framework of human security, and referred to as the Climate Security-Mobility Nexus (Savelli et al., 2022).

Honduras has faced high levels of violence and insecurity in recent decades, including homicide, femicide, drug trafficking, and socio-environmental conflicts, all shaped by structural socioeconomic inequalities (IEP, 2022; CEPAL, 2022; ICG, 2023). Simultaneously, the country is highly vulnerable to climate change and variability, experiencing rising temperatures, shifting precipitation patterns and extreme weather events such as droughts, tropical storms and hurricanes (DNCC, 2018; Notre Dame, 2020; SERNA, 2020). These climate impacts are driving the loss of traditional livelihoods, increasing food insecurity, and reducing natural resources availability, disproportionately affecting the most vulnerable communities (GWP, 2019; FIAN, 2021; Fromm, 2023). Human mobility, as an adaptation strategy, can enhance community resilience in Honduras, but it also exposes individuals to security risks, including gender-based violence, and may contribute to social tensions (IOM, 2019; Recihman, 2022; Fetzek, 2023). Moreover, climate-induced displacement and violence can pose human security risks, heighten social conflicts, and undermine climate adaptation efforts (Peters et al., 2022; IDMC, 2023).

Higuera-Florez and Madurga-Lopez (2024) identify four pathways that conceptualize the intersections between climate, security and human mobility in Honduras: 1) Conflict and human security risks associated with climate-related migration; 2) Immobility and trapped populations; 3) Conflict and human security risks associated with displacement produced by climate-related and geophysical disasters.; and 4) Compounding risks and vulnerabilities produced by violent displacements. However, this framework is based on a systematic literature review that examines different contexts across the country and does not account for the specific local dynamics within individual communities or how these pathways translate in each specific region of the country. To address this gap, the present study is guided by the following research questions:

How do San Marcos villagers live through and experience the interrelated challenges of climate, security, and human mobility in their community



How to conceptualize climate security and human mobility pathways at the local level to reflect the specific context of San Marcos



What are the opportunities for cooperation and collective action in San Marcos to address the interrelated challenges of climate, security, and human mobility



Specifically, the objective of this research is to identify, explore, and illustrate at the local level how the interactions between climate, security and human mobility operate in the community of San Marcos, Curarén, department of Francisco Morazán. The choice of this community is due to the village's location in the Dry Corridor of Honduras, high emigration rates, dependence on basic staple crops, and widespread socioeconomic vulnerability. In addition, this location contrasts with a parallel study conducted in the coastal and fishing community of Cedeño, municipality of Marcovia, department of Choluteca.

Through an ethnographic and participatory approach, this research bases its efforts on structuring the local causal pathways of climate security and human mobility based on the experiences of the community members themselves. For this purpose, fieldwork was conducted between November and December 2024, coinciding with the recent passage of Tropical Storm Sara, as well as with the end of winter and the beginning of summer in the community. During this time, participant observation exercises and open-ended interviews were conducted, complemented with field diaries, semi-structured interviews, and life stories. In addition, gender-disaggregated focus groups were developed (one with men and one with women), where participatory methodologies were implemented, including transect walks, social mapping, timelines, seasonal calendars, problem trees, solution trees, and collective action plans.



In this way, this study intends to develop a comprehensive overview of the community of San Marcos and its inhabitants, in relation to the topics of interest, with the purpose of guiding future strategies, projects, and interventions that seek integrated solutions that can jointly address the different local problems related to the nexus, whether by governmental institutions, cooperation agencies, or grassroots community initiatives. Furthermore, this study seeks to reaffirm the importance of conceptualizing intersections - or nexuses - between climate, security, and human mobility from much more geographically focused and context-specific levels of analysis. Specifically, from micro and local levels based on qualitative research, in order to account for the particularities of each context, including cultural, socio-economic, political, climatic, and agro-ecological specificities. For this same reason, we also consider this study as an example for other research that can provide answers to community problems from other disciplines and fields of knowledge.



Taken by Julian Higuera Florez

COMMUNITY CONTEXT



San Marcos is a community located in the municipality of Curarén, south of the department of Francisco Morazán, Honduras. The municipality of Curarén is bordered to the north by the department of La Paz, to the south by the department of Valle, to the east by other municipalities of Francisco Morazán and to the west by the departments of Valle and La Paz. The border with El Salvador is less than 20 kilometers away. Curarén has 12 villages and 152 hamlets (INE, 2013) where 97% of the population self-identifies as Lenca (INE, 2013). The municipality has a low Human Development Index, calculated at 0.491, an average life expectancy of 73.6 years and an illiteracy rate of 31.1% (UNAH, 2022).

The village of San Marcos is divided into ten hamlets, including Central San Marcos, the main hub for access to services, transportation, and commerce. According to UNAH (2022), the community is made up of 409 households and has a population of approximately 2,129 inhabitants. There are three main access routes to San Marcos, which connect to the municipal center of Curarén, Nacaome and Langue. All routes are unpaved dirt roads that are difficult to navigate, especially during the rainy season, when damage and road interruptions are common. The community's inhabitants perceive that the difficulty of transit along these routes is one of the biggest problems they face in their daily lives, including challenges in obtaining and selling goods and services.

The village of San Marcos is located at an average altitude of 870 meters above sea level and is part of the Central American Dry Corridor. Its climate is characterized by two distinct seasons: a dry or summer season, between late October and early May, and a rainy or winter season, between May and October, with a break in the rains known as the *canícula*, which lasts approximately four weeks between July and August. However, local people report having identified changes in the climate, including the unpredictability of the beginning and end of the seasons, as well as more torrential rains during the winter and dry seasons with reduced water availability. Tropical storms and hurricanes have affected the community in different years, the most memorable being Fifi (1974), Mitch (1998), Eta and Iota (2020), Julia (2022), and Sara (November 2024).



Taken by Julian Higuera Florez

Regarding access to basic services, education is provided through primary schools in various hamlets and a high school in central San Marcos, where young people can obtain a Humanities diploma. For other high school specializations or specialized educational programs, students must travel to central Curarén. The community has a health center, a medical laboratory, and a dental clinic, currently managed by cooperation agencies. Regarding access to drinking water, the communities have their own water tanks that supply them throughout the year, though with significant shortages during the summer. Similarly, most communities have intermittent access to electricity, which is affected by damage to the power grid caused by strong winds and heavy rains. Meanwhile, the communities of the hamlets of Montañita and Escalón lack electricity service entirely.

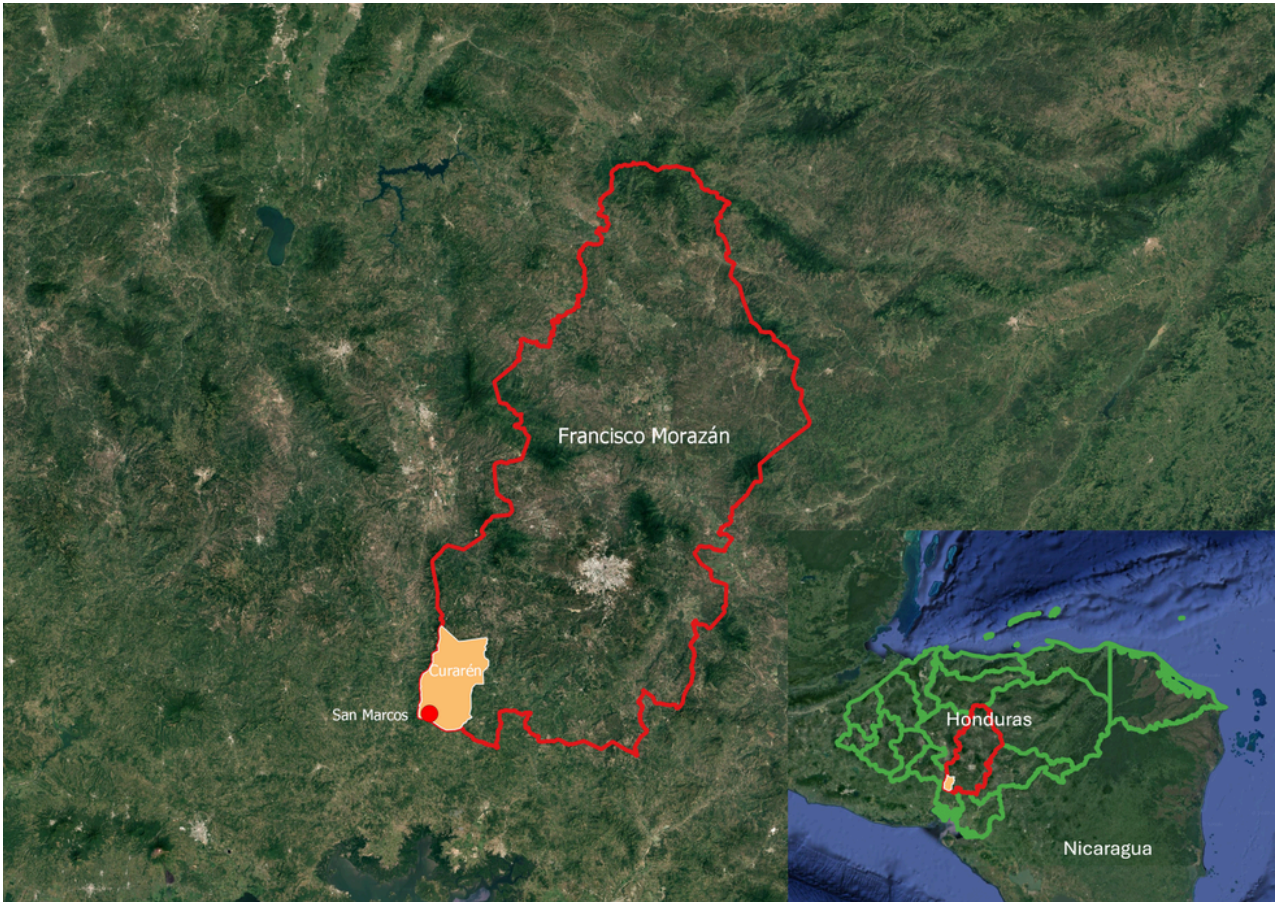
Regarding citizen security services, the municipality has not had a police station since 2010, even though residents report a high perception of insecurity, particularly linked to common crime, criminal activities, neighborhood conflicts, and gender-based violence. The main concern of the villagers is robberies and assaults committed on the municipality's roads, many of which have escalated into confrontations and homicides. In addition, thefts of houses, crops, and animals are reported as a concern in the hamlets farther from Central San Marcos. Likewise, the women of the community report feeling unsafe when traveling through village streets and highways due to fear of abuse and assault. Neighborhood and interpersonal disputes are not particularly high compared to other villages, although the lack of judicial and police attention is an aggravating factor that prevents the effective resolution of these types of conflicts.

To ensure the provision of basic services and foster social cohesion, there are active community organizations in the community, including the School Parents' Association, Water Boards, patronages, Catholic and Evangelical church groups, and soccer teams. Among the external organizations that collaborate with the community are the World Food Program, which provides support on child nutrition, and Childfund, which operates in conjunction with Acción Honduras in activities to combat child malnutrition and ensure access to health services.

Most people in the community engage in both commercial and subsistence agriculture. Currently, the only commercial crop that generates significant income for families is beans, while small-scale crops for personal consumption include corn, green plantains, sweet potatoes, mangoes, rice, *chipilín* (*Crotalaria longirostrata*), sugarcane, tomatoes, and squash, among others. The few individuals involved in non-agricultural occupations make a living from the trade of basic goods and food products, construction, and transportation. Regarding women, most work as homemakers and are involved in raising domestic animals such as chickens, ducks, and cows. While the majority rely on the income men earn from agriculture, some women seek to generate income through informal sales of food, domestic animals, and essential goods.

As for human mobility dynamics, historically the community has relied on constant travel to larger towns in the region, including the Curarén municipal center, Nacaome, and Langué, in order to access commercial products and specialized services, as well as to carry out institutional procedures. The need for income diversification has also motivated mobility to other rural areas for agricultural work, such as coffee harvesting, or to urban centers with greater employment opportunities, such as Tegucigalpa, San Pedro Sula, and Choluteca. Likewise, since the 1980s, and with a greater increase in recent decades, there has been migration to international destinations, with travel to the United States, Spain, and El Salvador being especially common.

Historically, men have been the ones who have migrated the most for labor reasons and in search of income diversification. However, in recent years, the community has experienced a significant increase in female migrants, especially to destinations such as Spain and Honduran urban areas where there is greater demand for traditionally female jobs, such as care and cleaning. Despite the lack of exact data on remittance income in the community, the economic dependence of many families on remittances from abroad is notable, including maintenance fees for children and the elderly. Likewise, the construction of houses, the purchase of land, and the raising of cattle are some of the investments made by remittances that are visible in the community.



Map 1: Location of the village of San Marcos in the municipality of Curarén, department of Francisco Morazán, Honduras.

Source: Own elaboration based on data from Google Satellite and the National Territorial Information System (SINIT).

INTERSECTIONS OF CLIMATE, SECURITY AND HUMAN MOBILITY IN SAN MARCOS

After the fieldwork and analysis of the collected data, five local pathways were identified through which the intersections between climate, security, and human mobility dynamics operate in the village of San Marcos, Curarén. Each of these pathways is deeply influenced by social, political, economic, and environmental factors, highlighting the need for a comprehensive approach and a systemic understanding of these issues. It is important to emphasize that these findings represent a specific way of structuring the studied intersections, based on participatory action and the documentation of the community members' daily experiences. For this reason, although the pathways were developed by researchers, they reflect the perspectives, opinions, and lived experiences of the community regarding these issues. More importantly, they are grounded in the causal relationships and connections as perceived by the village's residents themselves. Below, each of these pathways is presented, detailing the specific ways in which these intersections manifest within the community:

1. Restricted access to the community, exacerbated by climate extremes and insecurity, hinders access to food, markets, essential goods and basic services.

San Marcos community achieved its first road connection with the center of Curarén in the early 1990s. Previously, communication between villages was only on foot and with pack animals. Today, access to the community is via three unpaved roads that are difficult to navigate and connect to the Curarén municipal center and the municipalities of Langue and Nacaome. Curarén municipal center and Nacaome are the two main access points for essential goods and services, while Langue is particularly relevant because it is the main source area for buyers of the beans grown in the community.

The routes to these three municipalities are typically traveled by motorcycle, 4x4 vehicles, or, when the roads are in good condition, by buses operating on predetermined schedules. Additionally, residents have access to alternative paths that can only be traversed on foot or with pack animals. However, access—already challenging—is further compromised during the winter season, primarily due to heavy rains and landslides, which can leave the community isolated for several weeks. Below is a table detailing the access routes, distances, travel times, and costs (converted from Lempiras to U.S. dollars), depending on road conditions in both summer and winter.

Routes from San Marcos	Distance	Approximate Time		Average price*	
		Summer	Winter	Summer	Winter
To Nacaome	74 kms	4 hours	6 hours	4.8 USD	6 USD
To Curarén	28.5 kms	2 hours	2.5 hours	2.4 USD	2.4 USD
To Langué	55.5 kms	4 hours	5 hours	3.2 USD	10.4 USD

**The prices described in the table are only for transportation of people, since the cost of baggage and merchandise is additional, ranging between 1.2 and 2.4 USD per 25 kg.*

According to residents, the municipality conducts road maintenance once a year by sending machinery to level the roads and make them accessible. This work is typically carried out during the dry season due to the challenges of working during the rainy season. Similarly, there are grassroots community mechanisms that assist in road repair and upkeep. For instance, Water Boards and informal neighborhood associations often take responsibility for road maintenance. Additionally, each hamlet has two local assistants, subsidized by the municipality, who oversee road monitoring and control. However, these efforts do not resolve the structural issues related to communication and transportation.



Taken by Julian Higuera Florez

Community members link the poor condition of highways and roads to increased personal and community insecurity. In particular, incidents of robbery and assault have been occurring along the roads that connect the communities, primarily affecting merchants and transporters. These cases are influenced by weather conditions, as explained by a young woman from the community: *"Sometimes it's worse in the winter. Since the cars go slower, they [the thieves] place stones so they can't pass and can ambush them. It's worse in the winter because in the summer the road is in better condition, and the car moves faster"*. The limited presence of security services is associated with the difficulty police and other public forces face in reaching the village. The absence of a police station since 2010 forces visiting officers to return to their assigned posts in other parts of the municipality.

The state of the highways, insecurity along the roads, and the community's difficult access affect different dimensions of residents' security. For example, in terms of food security, most of the products consumed in San Marcos are sourced from other parts of the country. This increases their local cost due to the logistical challenges of transportation. As a young woman from the community explains: *"Buying in Nacaome is cheaper. For example, oil that costs 25 Lempiras (1 USD) there, is sold here for 40 Lempiras (1.58 USD)"*, reflecting a significant price increase. Below is a table showing examples of commodities and the price increases once transported to the community:


Product	Average price outside the community*	Average price in San Marcos*
Iodized salt	0.28 USD for lb	0.48 USD for lb
Oil	1 USD for lb	1.6 USD for lb
Rice	0.4 USD for lb	0.52 USD for lb
Sugar	0.4 USD for lb	0.56 USD for lb
Coffee	2.64 USD for lb	3 USD for lb
Potato	0.52 USD for lb	0.80 USD for lb
Tomato	0.60 USD for lb	0.80 USD for lb
Onion	1 USD for lb	1.6 USD for lb
Sweet chillies	0.2 USD for unity	0.48 USD for unity

* The prices described in the table are only for transportation of people, since the cost of baggage and merchandise is additional, ranging between 1.2 and 2.4 USD per 25 kg.

During the rainy season, access to food becomes even more challenging, as road blockages prevent vehicles carrying goods from reaching the community. This results in shortages of basic items such as eggs, chicken, bread, rice, and oil, sometimes lasting for extended periods. Additionally, residents report persistent difficulties in accessing foods essential for a balanced diet, even during the dry season when roads are more navigable. These include vegetables, fruits, meats, and dairy products, which are rarely produced locally. In their absence, these foods are often replaced by non-perishable and less nutritious options, such as sugary drinks or processed foods, which are more readily available in local stores.

Regarding access to specialized education, technical and high school programs are available in Curarén municipal center, Nacaome and Tegucigalpa. Due to its proximity, Curarén municipal center is the most common destination for students from San Marcos, offering programs such as a bachelor's degree in business administration and a bachelor's degree in computer science. However, attending school there significantly increases household expenses, as families must cover lodging and meals away from home. These costs tend to rise during the rainy season, when students are often unable to return to the community due to poor road conditions. Although to a lesser extent, the rainy season also leads to price increases for study-related goods and services in Curarén, further burdening students and their families.

A similar situation applies to healthcare services. Although the community has a basic health center, residents must travel to San Lorenzo, 57 km away, for more complex procedures or childbirth care. As a community nurse explained, trips to San Lorenzo Hospital are often made in a single privately owned 4x4 vehicle, with costs reaching up to \$200 USD. In medical emergencies, transportation arranged through referrals from the health center is typically covered by the Curarén municipal government. Additionally, in cases involving economically vulnerable families, the local church often mobilizes solidarity funds to help cover part of the emergency transportation expenses.



“When the roads are damaged, there is no transportation to bring in goods, so everything becomes more expensive and harder to get. Whether it’s for education or healthcare, what you need just isn’t available. For example, with healthcare sometimes the medicine you need simply isn’t there. [...] You go to the health center and say, ‘I have this illness’, and they give you a prescription, but if you don’t have money, you can’t buy it. And even if you do have money, sometimes the medicine still isn’t available

Testimony from a young man in San Marcos.



The poor condition of the roads, in addition to limiting access to basic goods and services, significantly affects income generation-particularly from the community’s main economic activity: the cultivation of beans for sale in other regions. The commercial success of this crop depends heavily on road conditions and whether buyers can physically reach the village. In periods when buyers are unable to enter the community, the local price of beans tends to drop below regional market levels. For example, a 200-pound load of beans might sell within the village for between USD \$120 and \$140 during periods of high demand. However, if the product can be transported to nearby towns such as Langue, Aramecina, or Coray, the same load can fetch up to USD \$160.

The lack of commercial spaces for buying and selling products in the village is another issue identified by the community, closely tied to the poor condition of the roads. Residents recall that, starting in the 1970s, a weekly market was held every Friday in the central square, where local products were traded, and vendors and buyers from neighboring municipalities gathered. This market was the community's main commercial activity and provided an opportunity to stimulate the exchange of essential goods. However, this tradition gradually disappeared due to multiple factors: mobility restrictions during the COVID-19 pandemic, a rise in highway robberies, and the death of a large Amate tree (*Ficus insipida*) that once stood in the center of town, offering shade for vendors. Women in particular have been affected by the absence of a local market, as it has reduced their opportunities to diversify household income through the sale of food, livestock, and handmade products. The decline of the market has also had a ripple effect on nearby communities within the municipality of Curarén—especially those with limited access to larger trade hubs—which depended on the commerce once generated in San Marcos.

“Before, there was a bus that traveled to Nacaome every day. [...] I used to go to Nacaome to buy or sell things, and I could make the round trip in a single day. But now we have nothing, not even a direct route to get there. It's been about three months since any transportation has come through”

Testimony from an adult resident of San Marcos.



Taken by Julian Higuera Florez

2. Climate impacts on local crops influence human mobility dynamics, mainly driven toward climate-sensitive economic activities.

In the community of San Marcos, the main agricultural crops are beans, corn, and sorghum. Both corn and beans are fundamental to families' diets, serving as primary sources of sustenance—especially during periods of food shortage, typically identified during the months of June and July. Among cash crops, beans are the most important product. Corn is mainly used for internal trade within the community, especially in times of scarcity, while sorghum is primarily used as animal feed. It is especially in demand by the shrimp export industry, which gives it a higher market value than corn. However, sorghum has been disappearing from the community due to the difficulty of cultivating it and a plague that affected the crop ten years ago.

The three crops follow a similar planting and harvesting cycle; however, community residents report changes in these cycles as a result of climatic variations. Traditionally, the first harvest began with the April rains, and since two months had passed since planting, the crops were not significantly affected by the dry period known as the *canícula* or mid-summer drought, which occurs between July and August. The predominant agricultural practice, especially for corn, was to harvest only the first crop, which yielded enough grain to ensure families' annual subsistence. However, rains now begin around May 15, preventing crops from receiving the necessary amount of water before the *canícula*, and reducing yields to levels that are no longer sufficient to meet annual food needs. As a result, farmers face two options: either forego the first harvest or intensify their production by implementing two harvests per year—an approach that significantly increases production costs.

As for the *postrera* harvest, the planting and harvesting calendar has remained relatively stable, taking place between August and November. However, farmers note that the extension of the rainy season into November—whereas it previously ended in October—is negatively affecting yields, particularly for beans. The following table summarizes the agricultural seasons in the community, the changes observed in the planting and harvesting cycles, and the impacts associated with these shifts.

Planting Type	Before	Currently	Impact
First	April-July	May-August	The first crop used to guarantee annual subsistence, but now yields are lower. Farmers must choose between abandoning this crop or harvesting twice a year, which increases production costs.
Postrera	August-November	August-November	Although the agricultural calendar remains the same, the rains are increasingly extending into November, affecting the final stage of the crops and reducing their yield and quality.



Taken by Nohelia Palou Zúniga

The main climate-related impacts identified by the residents include the El Niño-Southern Oscillation (ENSO) phenomenon and an increase in torrential rains during October and November, caused by more intense and frequent tropical storms and hurricanes. These events trigger landslides that damage crops and road infrastructure, particularly in the mountainous areas of San Marcos. Additionally, such climatic phenomena lead to the spread of fungal and bacterial diseases in crops, as well as irregular maturation, reducing both the quantity and quality of harvests. Moreover, during November, December, and January, strong winds are reported to particularly affect corn crops in some cases.

Young man: "[...] It was a year, I think it was in 1998, when the hurricane hit. After the hurricane, two years later, the corn rotted. We spent a year eating rotten corn. The beans, from so much water, split open, and we ate them like that [...]. It was two years, years of heavy rain. And loss".

Interviewer: "And what happened this year with the rain and the beans?"

Young man: "Well, it left us without beans, without a harvest. The last storm that hit, the Sara phenomenon, left us without a harvest, without anything".

Testimony from a young man from San Marcos.

These climate impacts prevent farmers from harvesting the expected quantities based on their initial planting investments. Over the past four years, the community recalls being affected by three hydrometeorological events that damaged crops: Eta and Iota (2020), Julia (2022), and Sara (2024), with the first and last being the most devastating. These climate changes have increased uncertainty around the seasonal calendar historically followed by farmers, making it less reliable in the face of increasingly frequent climate events, now occurring approximately every two years. Such disruptions lead to uncertainty, economic losses, debt accumulation among producers, and negative impacts on families' food security. As one farmer from the community expressed: *"In November, we were getting ready to harvest and thresh, but it rained for eight days straight, day and night. During that time, our beans rotted; we were left with just a little for our own consumption"*.

Climate variability directly affects the price of a load of beans and, consequently, household income. Under favorable harvest conditions, the price can range between US\$140 and US\$160. However, when harvests are impacted by weather conditions, this value can drop significantly, reaching as low as US\$80. This decrease in both production and price negatively affects farmers, who struggle to meet the financial obligations incurred during planting. These debts include land rental, payment of labor involved in clearing, planting and harvesting, as well as the purchase of agricultural inputs such as fertilizers and herbicides. The table below provides an approximate breakdown of the basic costs associated with production.

Investment	Cost
Land rental	For beans, half of the production goes to the landowner. For corn, the payment is US \$7.94 per 6.25 lbs.
Day labor	Approximately US \$5.95 per day. Labor is required for land clearing, planting, herbicide application, harvesting, and threshing. The number of labor days and workers varies by farmer, but on average ranges from 42 to 50 workdays.
Fertilizer	US \$34 per quintal of urea.
Herbicide	US \$4.60 per 10 liters.
Seeds	If the previous harvest was lost and no seeds can be saved, purchasing seeds costs between US \$79.21 and US \$158.42, depending on the market price.

The financial resources to cover these costs come from various sources, including loans from banks and rural savings cooperatives, which are often subject to high-interest rates. Another option is borrowing from coffee plantation owners, with debts repaid either through monetary payments or by providing labor during the coffee harvest season. Additionally, some individuals within the community who are in a stronger economic position—whether due to local business activities, inheritances, migration to the United States, or remittances from family members abroad—lend money to others, typically with interest.

When crops are severely affected by climatic conditions, many people in the community choose to migrate in search of better living conditions. One of the most common forms of mobility is seasonal migration to other regions of the country in search of work opportunities that allow them to earn income to subsist and pay off debts while waiting for the next harvest cycle in their communities. The most common types of labor under these circumstances include agricultural work such as coffee harvesting, sugar cane cutting and, to a lesser extent, employment in melon plantations and formerly in banana plantations. Among these, coffee harvesting is the most prominent due to the better pay it offers. In coffee plantations, workers are paid according to the number of cans they fill per day. Each can equals 100 pounds and the workers receive approximately US \$2.18 per can. A farmer from the community who migrates annually to work on coffee farms shared that he typically fills 8 cans per day, while his wife fills up to 11 cans, generating a combined weekly income of approximately US \$41.47.

In the community, a shift in traditional labor dynamics has been observed due to economic opportunities related to coffee harvesting. It is increasingly common for women to travel alone or with their children to participate in coffee harvesting, while men remain behind to manage the postrera corn harvest. Later, when the women return, the men often leave for sugarcane-growing areas to work in that sector. A local farmer noted, *“Women [only] tend to move when the local harvests have been poor; when the crops are good, they don’t leave usually, it’s just the men who go”*.

Seasonal migration in the region typically occurs during the dry season, aligning with the labor demands of various agricultural activities. For example, migration to coffee plantations generally begins in late November and extends until February for those traveling with children. For individuals who do not travel with minors, this period may last until April, depending on job availability and conditions in the destination areas. In the case of sugarcane plantations, workers begin migrating to Choluteca starting December 1st, while migration to plantations in the Sula Valley starts in January and continues until May, coinciding with families' return home to begin cultivation activities in their communities. Meanwhile, migration to melon plantations is concentrated between March and May, marking another key phase in seasonal migration patterns.

"There are people with limited resources who can't afford to plant much; they only grow enough for household consumption. It's not enough to sell or take to market. So they always have to migrate to afford what they need"

Testimony of a young woman from Curarén, interviewed during fieldwork.

However, the dependence on these activities also exposes people to additional risks, as the same climatic events that affect staple crops in their communities can also impact coffee, sugarcane, and melon crops in other regions despite differences in harvest cycles. This creates a dual vulnerability to climate variability, triggering a chain reaction of income and employment losses across multiple agricultural sectors. For example, in the case of seasonal migration to coffee plantations, many people from San Marcos who move after experiencing economic losses in their bean crops often arrive at the coffee farms only to find that the coffee harvest has also been affected—either by a lack of rain between April and May or by excessive rainfall between October and November. These climatic impacts can delay the ripening of the coffee grains or cause them to fall prematurely. A local farmer shared his experience: *"Sometimes we go [to the coffee farms], and the coffee is falling off, and the coffee is still green because of the rain. Green, like that, there's almost nothing on the trees... and we have to wait for it to mature"*. In such situations, workers must choose between waiting for the coffee to ripen—covering living expenses on the farm without generating income—or migrating elsewhere in search of work.

The dependence of the crop on the global climate also influences people's willingness to migrate seasonally at the local level. During the late 2024 and early 2025 season, the highest coffee prices in history were recorded, primarily due to drought and low coffee production in countries like Brazil, which, as a major producer, significantly influences international coffee prices. Higher prices translate into better pay for harvesters, as producers are eager to extract the crop quickly. Information about increased wages spreads through existing networks, potentially encouraging greater seasonal labor mobility in response to emerging economic opportunities in the sector

3. Climate-influenced human mobility dynamics are linked to security risks and overall perceptions of insecurity.

Mobility among members of the San Marcos community serves as an adaptive strategy to cope with livelihood challenges and limited access to goods and services, both of which are influenced by climatic conditions. However, despite the positive outcomes that mobility can bring to individuals and households in the village, residents of the community associate these movements with certain security risks —both during transit and at their destinations. These perceptions of insecurity are linked to migration toward other countries, Honduran cities or rural areas within the country for seasonal work. Additionally, the community also perceives risks in shorter trips within the same municipality or to neighboring municipalities, which are commonly undertaken to access basic goods and services or to engage in temporary agricultural or other informal labor.

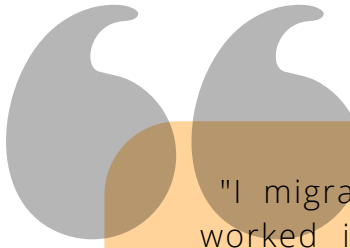
The security issues reported by the community during travel to other villages and nearby municipalities primarily include robberies and assaults, which in rare cases have resulted in homicides. A young resident of the village expressed this concern: *"If you come to do business —let's say you're coming from Concepción carrying your goods —the thieves are waiting for you on the road. You'll lose everything. You might even lose your life"*. At the time of the research, the community was still shaken by the recent violent death of a local man, who was killed less than a month earlier during an attempted robbery targeting a merchant on the region's roads. Additionally, fears of targeted attacks against women and other forms of gender-based violence remain major concerns among residents. The limited presence of law enforcement and the poor condition of the roads —worsened by adverse climatic conditions— further contribute to the sense of insecurity for those in San Marcos who need to travel. This perception of risk intensifies during certain times of the year, influenced by both the impact of weather-related deterioration of infrastructure and the seasonal cycles that mark periods of prosperity and scarcity for farming families.

According to the community, criminal activity on the roads increases during specific times of the year, particularly during peak periods of staple crops scarcity, such as corn, during the high-demand sales period for the community's main commercial crop, beans. These trends correspond with the months of June and July, when families face greatest food and income shortages, and with December and January, when the first bean harvests are sold. As a young farmer explained: *"They steal when there's a need or when they know someone has just sold their load [of beans]"*. Rainy days and the broader rainy season are also linked with heightened insecurity, as deteriorating road conditions, landslides, and blocked routes create favorable conditions for ambushes. A young woman from the community described the situation: *"In the winter, it's worse because cars move more slowly, so they [the assailants] place rocks to stop them and ambush them"*.

For those who migrate seasonally to work on coffee, sugarcane, melon, and other commercial farms, perceptions of insecurity are more often associated with health risks, exploitative labor conditions, and unstable incomes that limit access to basic goods and services during their stay. Most of these workers face precarious living and working conditions, often having to cover their own expenses for food, healthcare, and, in some cases, lodging. As a result, many choose to bring part of their harvest along with medicines, to avoid medical expenses in these work locations. One adult man who regularly participates in coffee and sugarcane harvests explained: *"You bring your own food so you don't have to spend money there (...) And you try not to get sick because otherwise it's at least 700 [lempiras], since over there, it's only private clinics"*. In addition to these challenges, seasonal workers are also vulnerable to robberies and assaults while traveling. The community further reports a rise in home burglaries during periods when houses are left vacant due to migration. Similarly, theft of crops, firewood, and livestock becomes more common when families are away. In response, neighbors have organized informal watch committees to protect the homes, lands, and animals of those temporarily absent.

Most people who migrate seasonally from the community travel to agricultural regions of Honduras, including Comayagua, El Paraíso, Choluteca and the Sula valley. However, some choose to migrate to small farms in El Salvador, due to the geographic proximity of San Marcos to that country and the perceived advantage of being paid in U.S. dollars. Despite this, the journey is widely associated with significant risks, particularly due to the need to cross the border irregularly and the threat posed by criminal groups operating in the area. Interviewees specifically mentioned the recent case of a woman from the community who drowned while attempting to cross the Goascorán River to reach El Salvador. This type of risk is especially high for those traveling with children, as minors are not allowed to cross the border without a passport and additional documents, requirements not enforced as strictly for adults.

Although temporary migration for agricultural work was traditionally carried out by the men of the community, recent years have seen a growing number of entire families and taking part in these labor movements trend is particularly visible in coffee harvesting, where women and children often collect equal or even. However, the participation of children and adolescents raises serious human security concerns, particularly related to child labor, inadequate nutrition, and poor health conditions. Community members report cases of children developing respiratory illnesses due to cold temperatures and a lack of appropriate shelter.



"I migrated for a while, and it is really difficult out there. I worked in La Lima, on the banana plantation with Chiquita. Before, it was called the Tesla Rail Company. I worked, I migrated from here, I had small children, and it is really difficult, even within the same country, because of how little they pay... There we are slaves to those companies. And they paid so little that, in the end, it all went to rent and food. You end up with nothing"

Testimony of an adult woman from Curarén.



Migration to urban areas within Honduras and El Salvador presents additional opportunities for income generation and access to public services. However, it is also linked to significant risks and perceptions of insecurity, as reported by members of the community. Honduran cities where people from San Marcos have traditionally migrated include Choluteca—due to its geographic proximity—as well as Tegucigalpa and San Pedro Sula, which offer greater employment opportunities and services. In El Salvador, the most chosen destinations are San Miguel and San Salvador. Those who migrate to these urban areas often confront security challenges typical of city environments, including the presence of organized criminal groups. Reports of robbery, assault, and extortion are frequent concerns. The community recalls, for instance, the tragic case of two young men from San Marcos who were murdered in El Salvador, allegedly by gang members. Additionally, many urban migrants from the community face housing difficulties in destination areas. They often live in precarious conditions in marginalized neighborhoods that are especially vulnerable to extreme weather events and other climate-related risks.

As with rural migration, urban migration from San Marcos was traditionally dominated by men and primarily linked to construction work or agricultural trade. However, in recent years, there has been a noticeable increase in the number of women migrating to cities. This shift is largely driven by the growing demand for labor in sectors typically associated with women, such as cooking, cleaning, and caregiving in restaurants, private households, and public service settings. The community associates these solo journeys by women with heightened risks, including gender-based violence, greater vulnerability to robbery and assault, and exploitative labor conditions. For instance, there are reports of women employed in kitchens and cleaning services who have faced workplace harassment or been denied the wages they were promised. A young woman from Curarén illustrates this challenge: *“Most of us women are housewives because there is no work here. Work doing what? If someone hires you to clean a house, no one will pay you because most women stay at home. The men work in the fields, and the women take care of the children and the house. There is no work”.*

Finally, community members identified several risks and insecurities associated with irregular transnational migration, particularly to the United States. In most cases, individuals through irregular channels rely on third-party guides, commonly referred to as coyotes, to facilitate their journey. However, the travel conditions and level of safety these smugglers provide vary greatly, depending on the networks involved and the amount of money paid. To finance these trips, most migrants are forced to sell assets or take on significant debt. Deportation further exacerbates their vulnerability, especially for those who borrowed money to make the journey. Community members who have been deported from Guatemala, Mexico, and the United States report facing serious difficulties in repaying the debts they accumulated before leaving.

While many individuals from San Marcos have reached destinations safely, their experiences highlight the strong link between irregular migration and serious risks such as accidents, theft, assault, kidnapping, and even homicide. For instance, one community member lost a limb in a train accident while traveling through Mexico. The community also recalls a group of young men from the municipality who were kidnapped by the criminal group Los Zetas during their journey through Mexico. Although they were eventually released, their families had to sell land and other assets to pay the ransom. These dangers are even more severe for women and children traveling alone, who face heightened risks of sexual violence and human trafficking. Even among those from San Marcos who have migrated with temporary work visas, concerns persist regarding human security. Individuals who traveled with pre-signed contracts from Honduras to work in agriculture or landscaping in the United States report serious issues, including breaches of agreed wages, excessive deductions for food and other necessities, unpaid overtime, and limited access to quality healthcare.



Taken by Nohelia Palou Zúniga

4. Remittances enhance household resilience and social cohesion but also contribute to economic dependency and intra-community conflicts.

Remittances play a vital role in strengthening household resilience in the San Marcos community. They have enabled families to improve their housing infrastructure, making homes more resistant to climate-related hazards such as heavy rains and strong winds. Remittances have also expanded access to productive resources for families who previously lacked them—such as agricultural land or livestock like chickens, pigs, and cattle—which serve as key adaptation strategies to cope with scarcity periods. At the community level, remittances have stimulated the local economy by generating employment in the construction sector and increasing monetary circulation. This, in turn, boosts local commerce and helps provide credit to farmers for crop development.

In San Marcos, it was also observed that migrants contribute to community development through remittances, supporting collective projects such as the construction and expansion of the basic education center and the financing of communal meeting spaces. These contributions have a positive impact on social cohesion. Notable examples include support for the maintenance of the local Catholic church and funding for soccer teams participating in community tournaments. These events not only foster social interaction but also create economic opportunities—particularly for women who sell prepared food during the tournament season. According to residents, migrants with deeper roots in the community and long-standing social ties are more likely to support such initiatives. Coordination of these contributions typically occurs through direct family contact or via social media platforms like Facebook, where community needs and fundraising campaigns are announced. This creative use of digital technologies highlights how migration and remittances function as interconnected elements within broader, adaptive strategies—strengthening social networks and enhancing the community's ability to respond to adversity.

However, several challenges associated with remittance flows were also identified. On one hand, the increased demand for land —driven by families with migrant relatives purchasing property—has caused land prices to rise, making access more difficult for households that do not receive remittances. This dynamic has contributed to localized land grabbing and heightened land insecurity. On the other hand, the unequal distribution of remittances has generated social tensions within the community, creating divisions between those who receive financial support and those who do not. These disparities have led to instances of discrimination and resentment, as well as economic inequalities that, in some cases, have resulted in robberies and assaults. A young woman from the community explained: *“There are assaults on those who have more, those who receive (...) To rob them that man shot a lady, and the lady was pregnant”*. Additionally, remittance-related tensions also affect family cohesion. Disagreements and feelings of abandonment may arise when expectations of financial support from migrant relatives are unmet, leading to internal conflicts and emotional strain within families.

Finally, although remittances contribute significantly to local economic dynamism, they can also foster economic dependency. This is reflected in the behavior of some community members who opt out of participating in economic-generating activities, considering that remittances are sufficient to meet their basic needs. As one woman in a focus group noted: *“Yes, especially the younger ones do not want to study or work because they already have everything covered with the remittances they receive, so they spend their time at home doing nothing”*.

Taken by Julian Higuera Florez



5. Violence and climate-related disasters force the sporadic displacement of individuals and families, most of whom move within the same community or municipality.

The community of San Marcos reported isolated and sporadic cases of people forced to move due to intra-family and intra-community conflicts, as well as impacts of extreme weather events. However, most of those displaced community members do not usually leave the village or municipality but instead relocate to other areas of San Marcos or nearby Curarén. This pattern contrasts with the common perception of displacement involving long-distance migration to rural or urban areas far from one's place of origin. Whether due to personal choice, limited economic resources, or the availability of local support networks, those forced to leave their homes tend to move to nearby locations. Nonetheless, the community also reports specific cases of people who have been forced to relocate to more distant areas, including rural regions with high labor demand or cities such as Choluteca, Tegucigalpa, and San Pedro Sula.

Among the extreme weather events that have triggered displacement in the community of San Marcos, two main phenomena were identified: strong blizzards during the summer, and landslides caused by heavy rains during the winter. Community members also recall intense rainfall and windstorm linked to tropical storms and hurricanes such as Mitch, Eta and Iota, Julia, and Sara. Homes with weak infrastructure, particularly those located in high-risk areas, are especially vulnerable to these events. As a result, some households are forced to either remain in hazardous conditions or relocate to safeguard their families. Adobe houses with mud roofs are particularly susceptible to heavy rains, while those with zinc roofs are more affected by strong winds. As one man from the community explained, *"The houses fill with mud with the water on the roof"*.

When homes are damaged by landslides or windstorms, most families choose to carry out partial repairs or build temporary constructions on the same land. The shortage of safe land alternatives forces them to go to areas they know are vulnerable to future landslides or strong winds. In many cases these disasters affect not only the house itself, but also the crops planted nearby representing a double blow to families who lose both their shelter and their main source of livelihood. The lack of financial resources, the loss of crops, and the limited means to transport construction materials often result in new homes being built with inadequate materials, leaving them highly exposed to future blizzards and rains. As one man from the community explained, after his house was hit by a landslide during Storm Sara: *“Right now it collapsed on my house, and I have been working on removing the mud and reinforcing the wall. But we have to stay in the same place”*.

In cases where homes suffer severe damage and reconstruction is financially unfeasible, families often relocate to the homes of neighbors or relatives who offer temporary shelter. However, in many instances, they are required to pay rent, further straining already limited household resources. For example, during Storm Sara, residents of the Piedra Parada hamlet reported the collapse of a house that became uninhabitable, forcing the affected family to rent a room from a neighbor. In such situations, people leave their homes to protect their safety but face additional economic burdens and personal insecurity linked to renting in someone else's house. The community has also reported cases where, due to the lack of housing, individuals choose to seek permanent employment in urban centers in order to secure a safer and more stable situation for their families.

Displacement resulting from intra-family and intra-community conflicts in San Marcos is generally sporadic and often linked to disputes among individuals who consume alcohol, personal vendettas, and cases of gender-based violence. Similar to displacement caused by extreme weather events, most of these movements are local, with affected individuals relocating within the same community or municipality. However, it is also common for some victims of violence to experience involuntary immobility, as they are unable to leave and are forced to remain in places they perceive as unsafe. In the case of intra-community conflict, disputes between neighbors are typically rooted not in the use of natural resources but in personal disagreements or economic issues. While most of these disputes do not escalate to the point of forced relocation, there have been isolated cases in which threats have compelled individuals and their families to move.

In such situations, people often seek temporary refuge with friends or relatives in nearby villages or municipalities, especially while they report the incident to authorities in areas with access to a police station. However, in certain well-remembered cases, the individuals targeted by threats have chosen to move to more distant places, including major Honduran cities or even abroad. As one woman from the community shared, *“Some have left because of that—because of threats, or because they were doing well and got threatened. That’s why they leave”*.

Some community members have also identified domestic and gender-based violence as sporadic drivers of displacement within San Marcos. While most men in the village did not perceive this as a major issue, several women shared accounts of cases in which survivors were forced to remain with their aggressors due to economic dependency. They also noted that women who attempt to escape such violence often do so alone or with their children, typically relocating to the homes of relatives within the same village or in nearby towns. As one woman explained, *“It is common—the women who are suffering leave to seek help with their relatives in other towns”*. Only a few women mentioned specific cases in which survivors had moved to more distant areas of the country or abroad. In these instances, the women generally relied on support networks—such as family or friends—already established in those locations.

ACTION PLANS AND COMMUNITY PROPOSALS

The inhabitants of San Marcos identified and developed eight action plans to address the interconnected challenges of climate, security and human mobility in the community. Just as the pathway analysis emphasized the importance of systemic thinking, these proposals aim to offer integrated solutions that reflect the complex realities on the ground. The action plans are designed to mitigate the multiple vulnerabilities identified, taking into account the intricate interplay of social, economic, political, and environmental factors in the territory. A participatory approach was central to their formulation of these proposals, ensuring that each proposal is grounded in the lived experiences, needs, and priorities of the community. Through workshops, focus groups and collective analysis of community dynamics, residents of San Marcos actively contributed their knowledge, ideas and experiences, resulting in feasible and context-specific solutions. These action plans are, above all, a collective call from the community to government institutions, international organizations, and other stakeholders to support initiatives that contribute to the sustainable development and resilience of San Marcos.

The following section presents the community's proposals and action plans, detailing their main objectives, the key actors responsible for their implementation, and the resources required for their implementation:

Promote safe spaces to support local commerce and community well-being

The members of the San Marcos community consider the constant presence of the police in both the village and the connecting roads as essential to combat theft, assaults, and the insecurity that hinders free movement and disrupts normal commercial activities. To address this, they proposed an action plan in collaboration with the municipality and the police to build a new police station, utilizing available land and local labor in the village. Additionally, they designed community surveillance plans coordinated by local civic groups and neighborhood associations, to support the police in overseeing security efforts. As part of their initiative to create safe spaces for commerce, the community members also proposed constructing a marketplace in the village center, with support from the municipality and local merchants. Moreover, they emphasized the importance of community stewardship for a newly planted amate tree, which was placed last year in the same spot where the previous tree once provided shade for merchants visiting the town.

Improve and maintain roads through collaboration and local labor.

To address road connectivity and conditions, community members proposed road improvement and maintenance campaigns, with an emphasis on creating local employment opportunities. This action plan draws from the community's experiences in the early 1990s when state funding for road construction provided jobs for many, including women and people with disabilities, who took on care and service work for the laborers. The people of San Marcos have proposed forming economic partnerships between the municipality of Curarén, the government, and local businesses to finance road improvements and maintenance. This plan would not only enhance the quality of life for residents, facilitate commerce, and improve connectivity with the rest of the country, but also create employment opportunities for the majority of the community, many of whom face limited and unstable job prospects.

Reduce the risk of over-indebtedness by diversifying income sources and enhancing productive capacities.

The lack of employment opportunities and limited income diversification is a widespread issue in San Marcos. As a solution, the community proposes access to subsidized, low-interest seed capital for the development of income-generating activities. In the case of the men, priority was given to the use of the capital for agricultural activities, such as paying wages, purchasing fertilizers and acquiring irrigation hoses. On the other hand, women pointed out the importance of using this capital to organize groups focused on businesses selling basic products, fruits and vegetables, barbershops or beauty salons. Both types of activities are seen as key to mitigating the risk of recurring indebtedness faced by farmers and business owners in the community, due to the lack of sustainable means to support family businesses and economies.

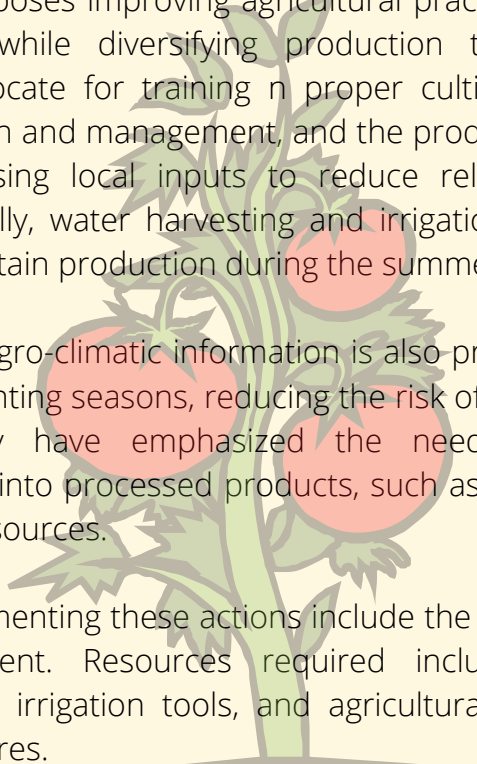
To implement this initiative, key stakeholders identified include government institutions, NGOs, women's groups, banks and cooperatives. The resources required for this initiative would include the materials for seed capital, such as hoses, valves and general tools, along with cash. Additionally, a space for business development and a bank account would be needed.

Enhance agricultural productivity and food security by providing training in Climate Smart Agriculture (CSA)

Given the community's dependence on agriculture as the primary livelihood source and the limited food diversity affecting food security, the community proposes improving agricultural practices for cultivating beans and corn while diversifying production through vegetable gardens. They advocate for training in proper cultivation techniques, disease identification and management, and the production of fertilizers and insecticides using local inputs to reduce reliance on external products. Additionally, water harvesting and irrigation systems will be implemented to sustain production during the summer season.

The integration of agro-climatic information is also proposed to provide data on optimal planting seasons, reducing the risk of crop loss. Women in the community have emphasized the need for training in transforming crops into processed products, such as pickles and jellies, to diversify income sources.

Key actors in implementing these actions include the community, NGOs, and the government. Resources required include seeds, water harvesting systems, irrigation tools, and agricultural inputs like foliar fertilizers and manures.



Expand access to legal migration opportunities for seasonal work abroad.

The inhabitants of San Marcos view temporary migration to the United States, Europe, Canada, Mexico or other Latin American countries as an opportunity to improve their quality of life and diversify their income. To facilitate this, they propose measures to ease the process of obtaining temporary work visas (between six months to a year) allowing them to generate income, travel safely, and return home. This proposal contrasts with irregular forms of migration, exposes individuals to various risks and insecurities, as well as the challenge of permanent family separation. Specifically, community members suggest campaigns by the municipality, central government and embassies to provide legal advice and streamline visa and permit applications. They also propose the creation of "job fairs" to facilitate direct contact between employers and interested foreign companies. Proponents of this action plan emphasize the importance of including travel opportunities for women and individuals over 35 years of age, as these groups often face fewer opportunities to migrate for legal work.

Secure year-round access to potable water through community acquisition of water sources.

Faced with the lack of potable water during the summer and the inability to access water for irrigating family gardens and small crops, the inhabitants of San Marcos proposed an action plan to purchase communal land with year-round water sources and develop water distribution projects for households. This model builds on the existing system managed by community water boards, which are responsible for the administration and maintenance of the wells and current water distribution networks. However, the cost of land with permanent water sources has increased in recent years, making coordinated purchases unfeasible. For this reason, the community proposes seeking support from the municipality, interested NGOs, diaspora members, and local collaborators to collectively acquire this land and connect the water sources to household supply systems. This strategy would not only improve public health and hygiene but also enable year-round irrigation of home gardens.

Diversify educational opportunities and reduce school dropout rates through Local Technical Programs.

Given the limited educational opportunities beyond the high school degree in science and literature —typically aimed at preparing students for university—the women of the community propose the creation of technical programs in areas such as Business Administration, Computer Science, Agronomy, Mechanics, and Accounting and Finance. This initiative seeks to diversify training and employment options for young people, enabling them to access education without needing to leave their community. In doing so, it seeks to reduce the financial burden associated with specialized education, which is one of the main factors contributing to school dropouts.

For the implementation of this proposal, key actors have been identified, including the Parents' Association, the broader community, and neighboring villages that would also benefit from the initiative. These groups would collaborate with the Ministry of Education and the local government. A plot of land is already available within the same complex as the existing basic education center, meaning that the primary needs would be construction materials, classroom furniture, and qualified teachers in the relevant technical disciplines.

Establish a community clinic to provide maternal and child healthcare while creating local employment opportunities.

The women's focus group identified significant challenges in accessing medical care during pregnancy, postpartum, and for newborns due to the absence of specialists, inadequate medical equipment, and poor road conditions —especially those that hinder the transportation of women in labor. In response, the women of the community proposed the construction of a maternal and child health clinic to ensure access to essential care within the village. Additionally, the clinic is seen as an opportunity to generate local employment; therefore, they suggest implementing training programs for community members to take on roles in nursing, maintenance, and facility management.

The key actors identified for the implementation of this action include the community boards, local grassroots organizations, the health committee, the Ministry of Health, ChildFund, the municipal government, and community members living abroad who could contribute through remittances. In terms of material resources, the initiative would require suitable land with access to potable water and electricity, as well as construction materials, trained personnel, furniture, and medical equipment.

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this research was to analyze, from a local perspective, the intersections between climate, security and human mobility in the community of San Marcos, with the objective of understanding how these dimensions interact and shape specific dynamics within a particular geographic and socioeconomic context. To this end, a qualitative methodology with an ethnographic and participatory approach was employed, allowing for the visibility of community experiences and specificities, as well as the structural conditions that define the territory. These include its location within the country's so-called Dry Corridor of the country, the precarious country's.

From this specific context, five local pathways were identified that illustrate the interrelationships between climate, security and human mobility:

1. Restricted access to the community, exacerbated by climate extremes and insecurity, hinders access to food, markets, essential goods and basic services.
2. Climate impacts on local crops influence human mobility dynamics, mainly driven toward climate-sensitive economic activities.
3. Climate-influenced human mobility dynamics are linked to security risks and overall perceptions of insecurity.
4. Remittances enhance household resilience and social cohesion but also contribute to economic dependency and intra-community conflicts.
5. Violence and climate-related disasters force the sporadic displacement of individuals and families, most of whom move within the same community or municipality.

In this complex scenario, it is essential to adopt systemic solutions that simultaneously tackle the climate, economic and social challenges facing the community. As part of the research, participatory processes were also carried out, allowing the residents of San Marcos to develop collective action plans to address the interconnected issues of climate, security, and human mobility. The participatory methodology ensured that the proposed solutions reflect the experiences, capacities, needs and priorities of the community.

Action plans include: promoting safe spaces that foster commerce and well-being within the community; improving and maintaining roads through cooperation and local labor; mitigating the risk of over-indebtedness through income diversification and strengthening productive capacities; strengthening agricultural productivity and food security through training in Climate-Smart Sustainable Agriculture; expanding access to legal migration opportunities for seasonal work abroad; facilitating the community purchase of water sources to ensure access to potable water year-round; diversifying educational options and reducing school dropout rates through local technical programs; and constructing a community clinic to provide maternal and child care and generate local employment. These proposals underscore the importance of coordinating efforts between the community, local institutions, and external actors to implement action plans that address the various prioritized issues.

Throughout the development of the research, several recommendations emerged for future studies with complementary approaches that can enrich the analysis of the issues and local actions needed to address the intersections between climate change, security, and human mobility. Key recommendations include conducting more studies at the local level to better capture the specific dynamics of each community. We also suggest fieldwork at different times of the year to account for seasonal variability in environmental and social factors. Additionally, we emphasize the importance of exploring opportunities for work and development within the community, promoting research that not only generates knowledge but also strengthens local capacities and improves living conditions. One specific example is the implementation of agro-climatic services at the local level, which could help reduce uncertainty in the seasonal calendar and prevent economic losses for farmers. In conclusion, it is crucial to continue deepening these issues by promoting interdisciplinary approaches and comprehensive strategies that foster the sustainable and resilient development of communities affected by climate change and its multidimensional impacts.

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