



CLIMATE & MOBILITY IN COLOMBIA

A Case Study for the Greater Caribbean Climate Mobility Initiative

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Colombia Snapshot

Study Locations

Barranquilla- a coastal urban area prone to flooding due to its location between the Magdalena River and the Caribbean Sea, relies economically on tourism and serves politically as a major receptor of Venezuelan refugees.

Santa Lucia- an inland rural area with a history of flooding leading to significant past climate displacement. Current concerns about river levels and El Niño persist amidst an economy reliant on climate sensitive sectors such as livestock, fishing and agriculture.

*"Here [in Santa Lucia] we have all experienced migration due to climate change in 2010, when the disaster occurred. Most of us here did it [migrated] due to climatic reasons."*²



Map 1. Map of Colombia showing areas where research was conducted. Image credit: Samuel Hall 2024.

Key Findings

1

Around 3 in 4 respondents have migrated in the past (74%), reflecting a multifaceted regional context marked by high migration rates from Venezuela, and internal displacement in Colombian tied to armed conflict.

2

Many residents aspire to move elsewhere but are not able to, suggesting high levels of involuntary immobility. More than half of the respondents (58%) report that they are considering moving but do not have the capacity to do so, while 37% have no desire to move (Figure 1).

3

Climate impacts are highly prevalent as 96% of respondents agreed they see the impact of climate change in their lives.

4

Colombian communities primarily rely on personal networks for support in adapting to climate change, employing strategies such as raising homes, using protective clothing, and enhancing infrastructure, despite socioeconomic constraints that limit mobility.

5

Climate change plays a substantial role in decision making on future migration for 3 in 4 (75%) respondents, with 13% reporting climate change to be the main driver. This is significantly higher than in other Caribbean countries studied, reflecting the centrality of environmental concerns in migration considerations within the country.

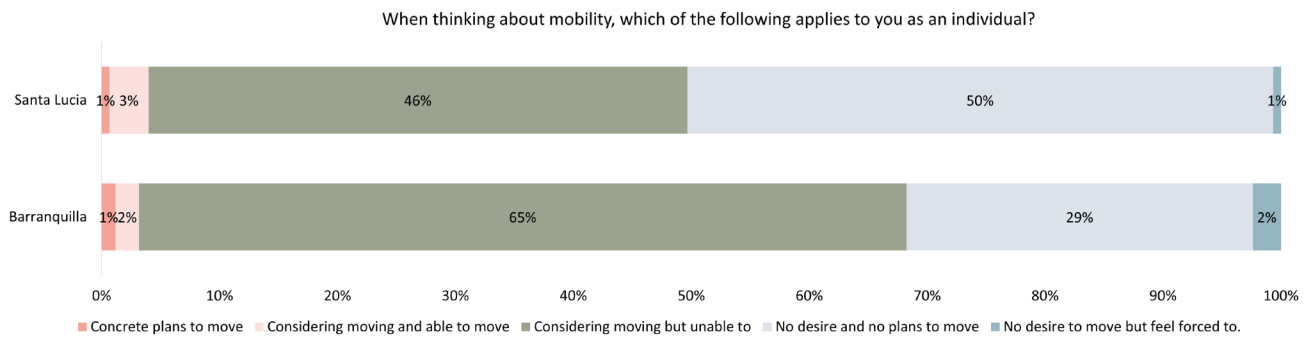


Figure 1. Mobility intentions and future decisions



Image 1. Venezuelan migrant community leader, La Loma informal settlement, Barranquilla, Colombia. Photo credit: Nicole Stoumen, 2024.

Introduction

Project Background

Samuel Hall, a research organisation specialised in migration and displacement, undertook research to address the critical issue of climate-induced human mobility in the Greater Caribbean region, assessing in particular how climate-related factors influence people's decisions to migrate or to stay, and the related outcomes.

This project is part of the Greater Caribbean Climate Mobility Initiative (GCCMI), a partnership of the Global Centre for Climate Mobility (GCCM), the Association of Caribbean States (ACS), the World Bank, the UN Development Programme (UNDP), UN Disaster Risk Reduction (UNDRR), UN Framework Convention on Climate Change (UNFCCC) and the International Organization for Migration (IOM). It aims to inform strategies for enabling people-positive adaptation journeys by strengthening adaptive capacities, supporting mobility and addressing climate-forced displacement in the region. The conceptual framework, based on Carling's ability/aspiration model developed for the African Climate Mobility Initiative (ACMI) was adapted for the GCCMI to focus on factors that shape people's vulnerability to climate change and their decision-making.

By collecting data in frontline communities affected by climate-related events, the findings from this field research complement the results of the Greater Caribbean Climate Mobility Model, which projects climate-induced movements up until 2050. Samuel Hall engaged with the modelling efforts during the simultaneous research phases, and both teams shared their results to ensure synergy and alignment. The research findings were presented during the GCCMI stakeholder consultations in May 2024 and will inform the GCCMI's Greater Caribbean Climate Mobility Report.

Methodology

Location	<p>Six Association of Caribbean States (ACS) member countries in the Greater Caribbean region, chosen for their diverse climate events and mobility patterns.</p> <ul style="list-style-type: none"> • Costa Rica • Suriname • Colombia • Jamaica • The Bahamas • Antigua & Barbuda <p>Two municipalities in the department of Atlántico, Colombia Suriname, selected to represent a diverse mix of urban and rural settings, both origin and destination areas for displaced populations, and regions experiencing a range of climate-related impacts.</p> <ul style="list-style-type: none"> • Barranquilla • Santa Lucia
Selection Criteria	Mainland country, key economic sectors affected by climate change (tourism, agriculture, services), extreme weather events (floods) and slow onset events (sea level rise, droughts).
Key Phases	Desk review and research design, data collection and analysis, consultations and reporting (September 2023- September 2024).
Research Tools	370 household surveys, four focus group discussions, and two in-depth key informant interviews were conducted to examine the relationship between migration and climate, focusing on mobility features, climate change adaptations, and the impact on decision-making.

Further information on site selection, methodology, and regional findings can be found in the synthesis report.

Note on data collection and localisation

In February 2024, a local Colombian research team led by Samuel Hall staff conducted fieldwork in the department of Atlántico, Colombia in the municipalities of Barranquilla (in particular in the informal settlements of La Loma and Ciudadela de Paz) and Santa Lucia. A total of 404 in-person surveys were conducted with community members and four focus group discussions were held with 24 participants from the sample area, including women, community leaders, fishermen, and farmers. In depth interviews were conducted with three key informants representing relevant institutions and civil society groups.

The research in Colombia was carried out as part of a regional study undertaken in six countries: Costa Rica, Colombia, Suriname, The Bahamas, Jamaica, and Antigua & Barbuda. The study aimed to understand the full range of mobility outcomes for populations in the Greater Caribbean region affected by climate change, examining the degree to which these outcomes are climate-related, how climate mobility interacts with other mobility dynamics, and the perceptions of those who have moved due to climate impacts. Throughout the data collection, Samuel Hall's team implemented a localisation approach, encouraging local researchers to lead the process and for communities to define the study's concepts themselves. A localised approach ensures that the research process is tailored to the specific context of the affected communities involved in the study.

Note on contextualisation

This study offers an in depth exploration of two selected communities in each of the selected six countries. Given the limitations on timeframe and scope, the findings do not represent the perceptions of the entire communities, countries, or the region as a whole. Rather, they provide a snapshot into the experiences of individuals and households experiencing the impacts of climate-related factors on their life decisions. All findings should therefore be contextualised to each specific location's dynamic and features. Additional fieldwork within each country would offer a more comprehensive view, and additional country case studies would provide a deeper comparison within the region.



Image 2. Local research team at enumerator training in Barranquilla, Colombia. Photo credit: Laura López, 2024.

Key terminology and concepts

Climate Change	"Long-term changes in the Earth's climate that are warming the atmosphere, ocean and land. Climate change is affecting the balance of ecosystems that support life and biodiversity, and impacting health. It also causes more extreme weather events, such as more intense and/or frequent hurricanes, floods, heat waves, and droughts, and leads to sea level rise and coastal erosion as a result of ocean warming, melting of glaciers, and loss of ice sheets." ²
Climate Adaptation	"Actions that help reduce vulnerability to the current or expected impacts of climate change like weather extremes and natural disasters, sea-level rise, biodiversity loss, or food and water insecurity." ³
Climate Resilience	"Resilience is the capacity of a community or environment to anticipate and manage dangerous climatic events and recover and transform after the ensuing shock, with minimal damage to societal well-being economic activity, and the environment." ⁴
Vulnerability	"The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to be affected by the impact of hazards." ⁵

² United Nations Development Programme (UNDP). "Climate Dictionary: An Everyday Guide to Climate Change." <https://www.undp.org/iran/news/climate-dictionary-everyday-guide-climate-change>

³ UNDP. "Climate Dictionary: An Everyday Guide to Climate Change."

⁴ UNDP. "Climate Dictionary: An Everyday Guide to Climate Change."

⁵ United Nations Office for Disaster Risk Reduction (UNDRR). "Vulnerability." <https://www.undrr.org/terminology/vulnerability>

Context & Profiles

Locations Profile: Climate Risks and Mobility Dynamics

Climate change is a compounding driver of migration and displacement in Colombia. As the country with the second largest number of internally displaced people (6.8 million), climate displacement cannot be extracted from the country's history of internal armed conflict and associated land degradation.

These issues are particularly detrimental to natural resources and Indigenous communities in rural areas which already suffer from climate impacts. On another level, Colombia hosts the largest number of refugees and migrants from neighbouring Venezuela (2.8 million out of the 7.7 million displaced worldwide).⁶ It also acts as a transit country for migrants arriving from South America, the Caribbean and other parts of the world, many of whom come to Colombia to cross the Darién Gap towards Central America to reach North America.

The country, like many in the Greater Caribbean region, is vulnerable to a combination of both slow onset and disaster events. These events exacerbate existing issues such as armed violence, land degradation, and systemic vulnerabilities, worsening living conditions and driving migration and displacement, especially among Indigenous populations, while also driving secondary displacement among IDPs.

⁶ Venezuelan Migrants Drive USD 5,291M Boost to Colombia's Economy: IOM Study," International Organization for Migration (IOM), April 25, 2024, <https://www.iom.int/news/venezuelan-migrants-drive-usd-5291m-boost-colombias-economy-iom-study>

In 2015, approximately 2.2 million people in Colombia lived in areas under five metres of elevation, exposing them to the long term consequences of sea level rise (SLR).⁷ Both the mountainous central regions and coastal areas of the country face significant climate risks, enduring floods, landslides, leading to loss of homes and destruction of basic infrastructure. The department of Atlántico, Barranquilla, the largest low-lying coastal city, is heavily reliant on trade and tourism. As it is also highly sensitive to climate variations, facing severe flooding risks, the livelihoods of local populations are threatened.

This is inclusive of large numbers of Venezuelans who migrated to the area to escape violence and political instability. Similarly, Santa Lucia, an inland rural area, grapples with frequent flooding and the severe impacts of phenomena tied to El Niño, prompting both temporary and permanent migration among members of a population reliant on livestock, fishing and agriculture.

Colombia faces various climate challenges, from sea level rises and heavy rains, to flooding and landslides, drought and extreme temperatures, contributing to patterns of displacement and migration. In 2022, heavy rain and flooding caused about 281,000 internal movements (IDMC), with nearly 39,000 out of 41,000 still displaced by the end of the year due to floods and storms, marking the highest disaster-driven displacement in over a decade.⁸

The Centre for International Earth Science Information Network (CIESIN) estimates a 68.4% increase in migration odds with each month of exceptionally dry conditions (when rainfall does not exceed 1mm).⁹ The most significant recent climate event was the 2020 hurricanes Eta and Iota which, according to IOM, impacted approximately 300,000 individuals across 13 departments, notably Norte de Santander, La Guajira, Choco, Bolivar, as well as the Archipelago of Sandres and Providencia.¹⁰ As a result of climate impacts compounded by other factors, an estimated 800,000 persons are currently reliant upon humanitarian assistance in Colombia.¹¹

Certain mobility risks, however, are specific to particular groups and geographies. For instance, Indigenous communities in Providencia Island experienced “disaster capitalism” post-displacement, a process whereby land previously occupied by displaced communities is appropriated by private tourism.¹² Conversely, poor urban communities in informal coastal settlements like Cartagena face higher risks of SLR and landslides from heavy rains.¹³ Conflict IDPs are especially vulnerable to both slow and rapid onset events, compounding risk factors and driving further mobility.

Broader patterns of internal migration in Colombia are also influenced by violence (mostly from the armed conflicts), driving people to move between different areas of the country. This can lead to instances of secondary migration, often driven by family reunification. In Colombia, mobility dynamics are therefore shaped by the intersection of climate risks, armed conflict and associated land degradation, previous displacement, as well as systemic vulnerabilities experienced by certain segments of the population, creating a cycle where these factors exacerbate each other.

7 Centre for International Earth Science Information Network (2023), GCCMI Desk Review.

8 Climate Refugees. “Colombia Moves Closer to Legally Recognizing Internal Climate Displacement.” 2023.

9 Centre for International Earth Science Information Network (2023), GCCMI Desk Review

10 Centre for International Earth Science Information Network (2023), GCCMI Desk Review

11 Climate Refugees (2023), Colombia Moves Closer to Legally Recognizing Internal Climate Displacement.

12 Centre for International Earth Science Information Network (2023), GCCMI Desk Review

13 Centre for International Earth Science Information Network (2023), GCCMI Desk Review



Image 3. Fishermen in Dique Canal, Santa Lucia, Atlántico, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.

Respondent profile: socioeconomic and migration characteristics

Respondents	404 Survey Respondents
Age	18-86 years old, Average age 43 Years, 36% Youth (18-34)
Gender	76% Women, 23% Men
Household Composition	Average 4 members, 77% respondent households have children, and 65% are married or in Civil Union.
Decision Making	51% heads of households, 78% of men and 43% of women are breadwinners, 76% overall make decisions for their households
Education Level	61% secondary education or higher, 7% No schooling
Housing	70% live in concrete housing and 24% wooden housing
Employment	59% self-employed/informal sector; 5% formal employment; 24% unemployed with seasonal jobs most common
Occupation	26% in Santa Lucia and 5% in Barranquilla rely directly on agriculture, fishing or herding
Remittances	7% received money from people based elsewhere in Colombia; 1% from people abroad.
Government Pensions	24% in Santa Lucia, 9% Barranquilla



Image 4. Shopkeeper survey respondent in Santa Lucia, Barranquilla, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.

Migration profile

The majority of respondents (74%) have a history of migration, with a larger portion of women being migrants as compared to men.

Over half of the households have lived in the area for less than 10 years, like due to the high resettlement numbers of Venezuelan migrants in Barranquilla. This trend is evident in the survey findings, where a significant portion are recent arrivals- 95% have lived elsewhere and 76% have moved within the past 9 years. Additionally, one third of respondents report knowing someone close (household, family or friend) who has moved permanently, 27% know someone who moved temporarily, and 42% reported no close connections having moved.

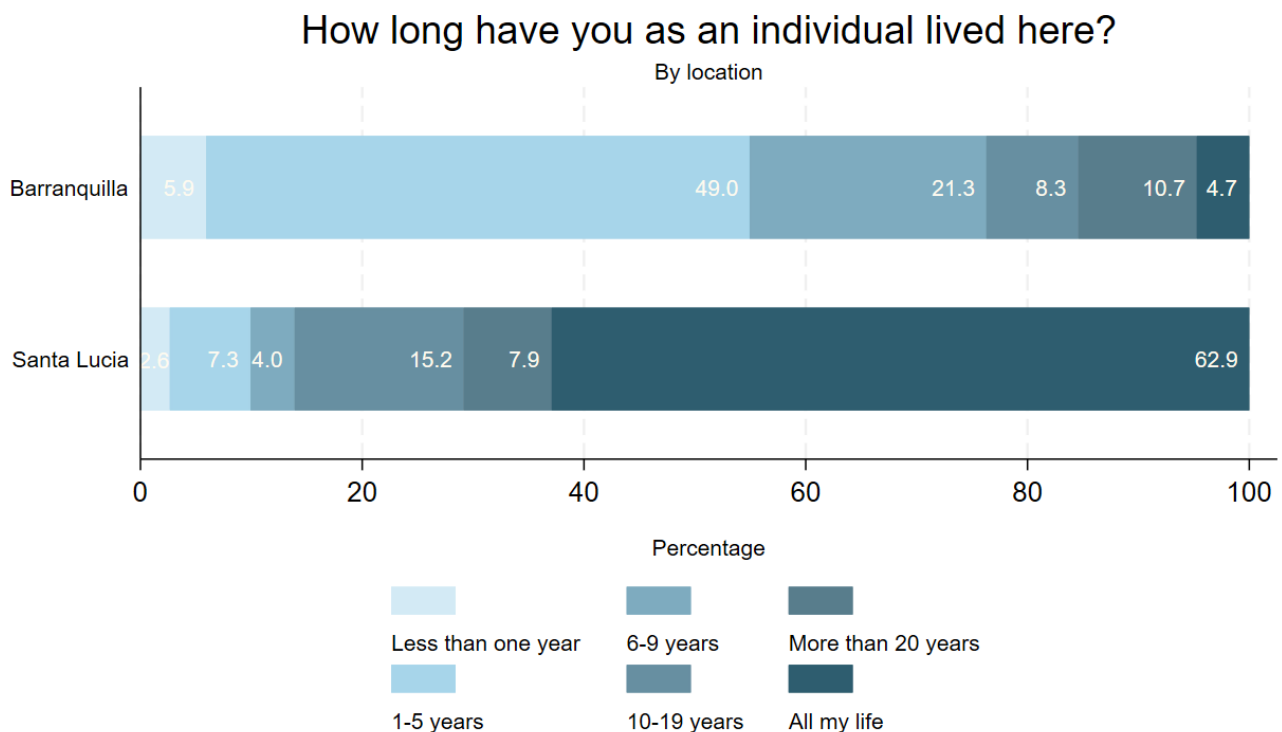


Figure 2. Duration migrants have lived in sampled areas

This high proportion of people having migrated or knowing someone who has experienced migration is reflective of the administration of Barranquilla's recognised policy of openness to migrants.

The primary factors driving their migration were economic reasons (65%), followed by violence (27%) and family reasons (20%). Natural disasters and extreme weather or environmental changes accounted for 11% and 2%, respectively, suggesting that disasters are a more significant cause of displacement than slow-onset climate changes in the areas surveyed.

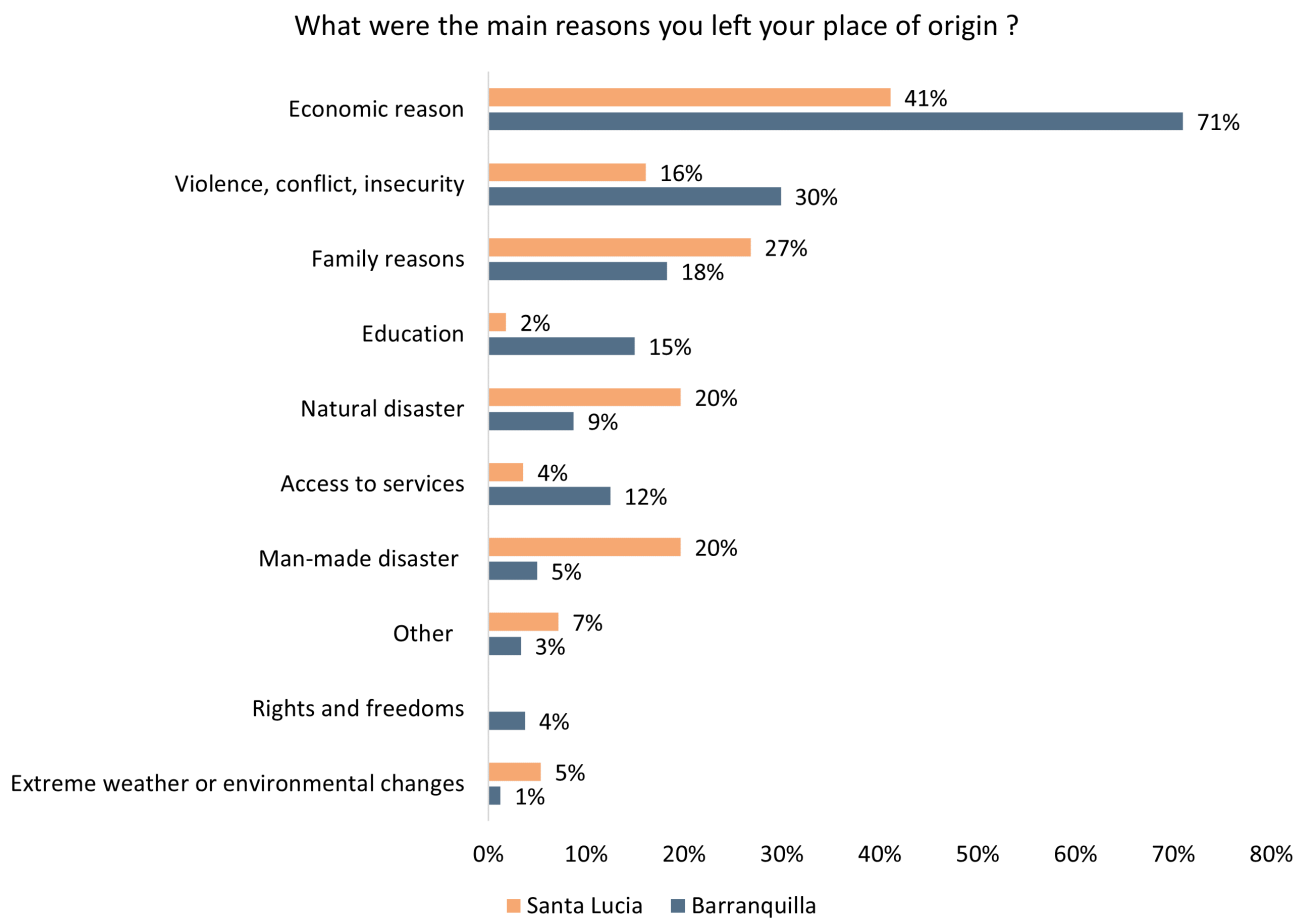


Figure 3. Past decisions: reasons for leaving community of origin

Household profile

A key objective of this study was to assess whether people feel prepared to move if necessary. Over half of respondents (58%) consider moving but feel unable to. Women especially desire to migrate but cite socio-economic constraints as a barrier.

This is likely linked to the unstable economic conditions, as three out of four respondents report having unpredictable income, with those in Santa Lucia feeling this more acutely than those in Barranquilla.

The communities surveyed report high levels of economic instability, with 77% of respondents finding it difficult to get by in terms of access to water, sewage, electricity and livelihoods (see Figure 4 for location- specific variables).

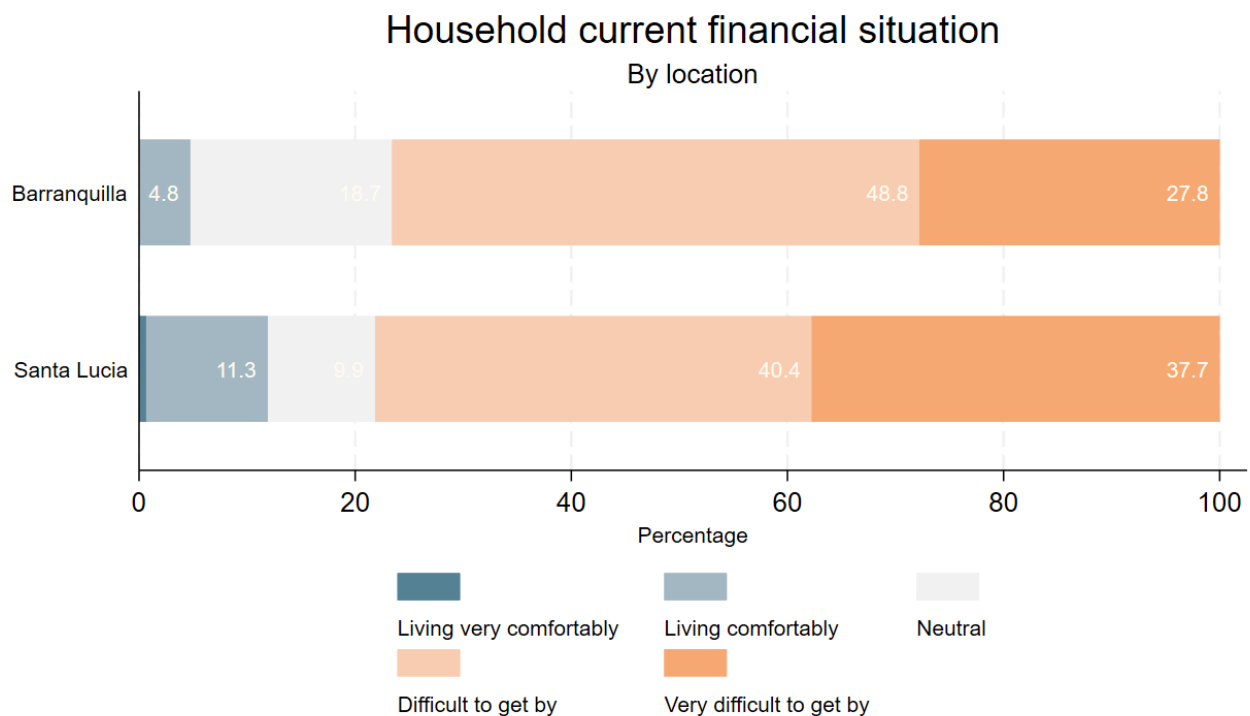


Figure 4. Financial situation

A significant majority of respondents report income instability. Of those surveyed, 75% of respondents describe their incomes as either ‘always unstable and unpredictable’ or ‘mostly unstable and unpredictable’ (Figure 5). Notably, non-migrants report slightly more job security compared to migrants, but paradoxically, a higher percentage (82%) of non-migrants also report unstable incomes, compared to 73% of migrants.

This instability reflects broader concerns about job security among respondents. The discrepancy between job security and income stems from the survey question, “Do you feel secure you can keep doing this work for as long as you are willing and able?”, meant to gauge self-assessed stability and capacity. While many respondents expressed confidence in their ability to continue their work, there are widespread concerns about the long-term sustainability of their income sources. This is particularly true for those working in informal sectors, such as recycling in Barranquilla’s informal settlements or in fishing and agriculture in Santa Lucia. These sectors are highly vulnerable to external factors like fluctuating demand, production challenges, government infrastructure interventions, and climate impacts, contributing to the pervasive sense of income instability despite perceived job security.

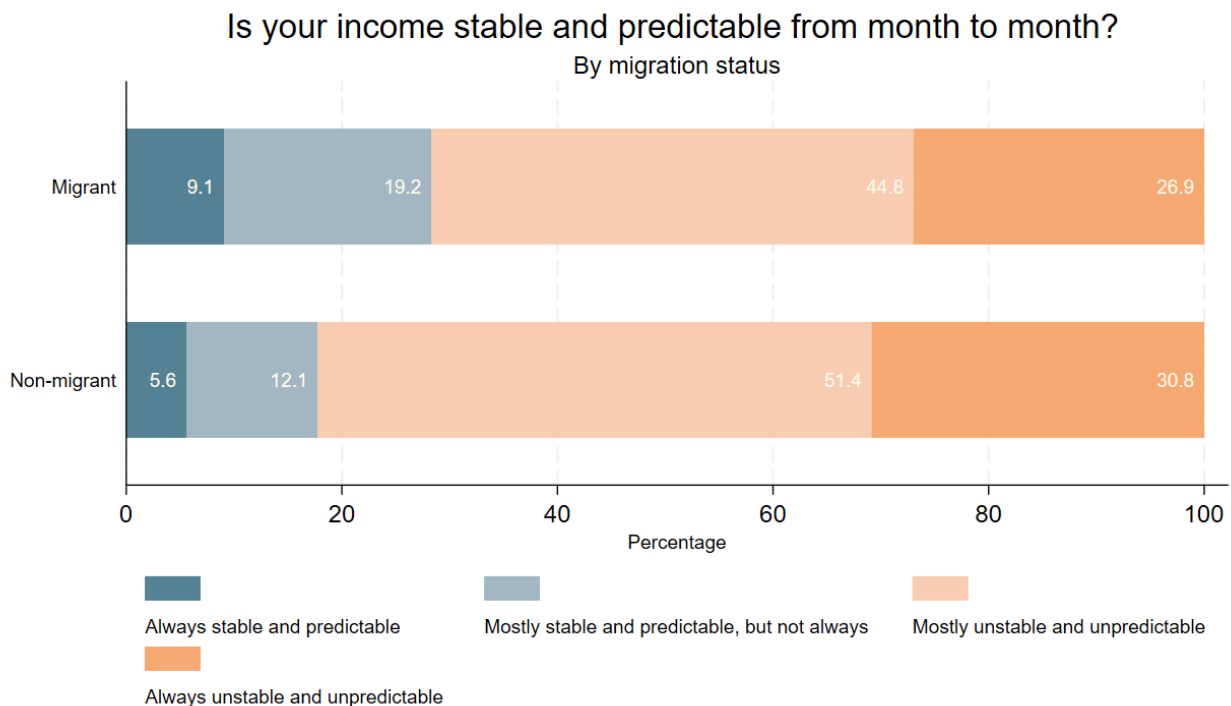


Figure 5: Household income stability and predictability (migrant v non-migrant)

Access to essential resources also varies between regions. In Barranquilla, particularly in informal settlements like La Loma and Ciudadela de Paz where many Venezuelan migrants live, communities have less access to education and water grids compared to those surveyed in Santa Lucia. **This circumstance of water insecurity is fueled by drought.** The lack of formal registration in these settlements therefore prevents residents from accessing crucial services. Even in the rural town of Santa Lucia, residents feel the services are inadequate. As one respondent noted:

*"Provision of health service. Here there is no good attention of any kind, not dental care, not a health post, not for emergencies, not for anything. That's serious here."*¹⁴

Perceptions of neglect by local authorities significantly heightened vulnerability in these communities. One respondent stated, *"and in the end, they say we are a subnormal (substandard) neighbourhood and that's why there is no help."*¹⁵ Overall 54% of respondents feel their home is insufficient for their needs citing that their homes are small, overcrowded and in poor structural conditions with broken ceilings, missing floors and deteriorated walls. With regards to housing ownership arrangements, half of the respondents reported living in their own homes while another 37% reported living in a rental home. A higher percentage of non-migrant respondents live with their entire family and own their homes (Figure 6).

¹⁴ FGD10

¹⁵ FGD9

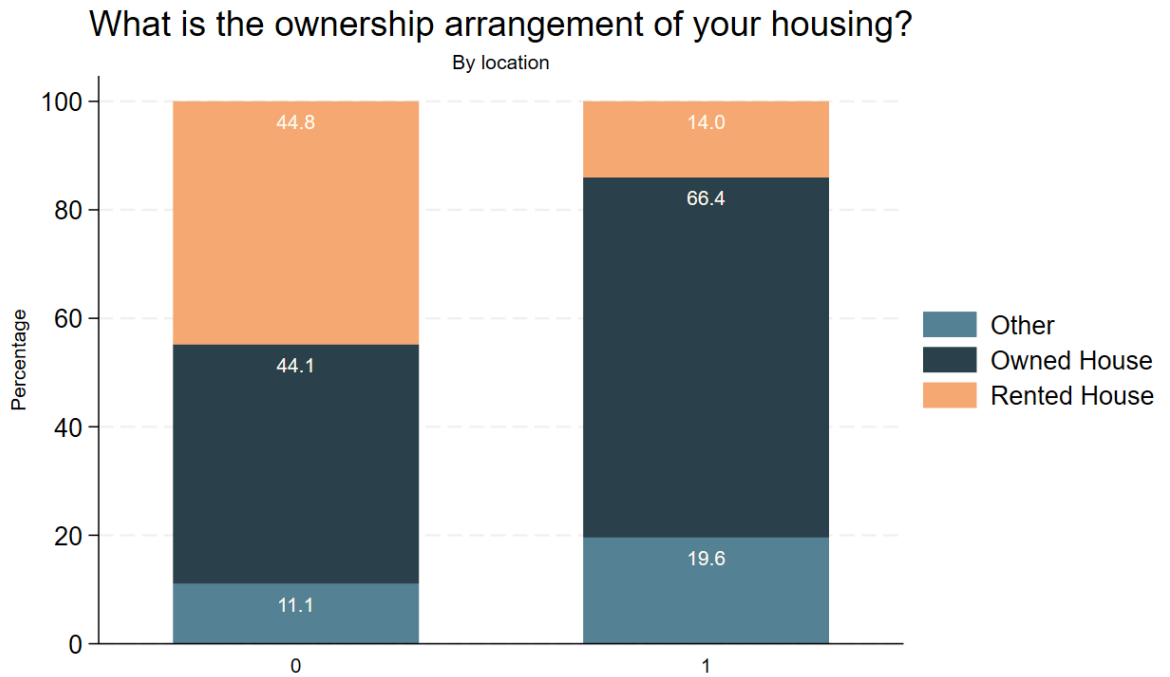


Figure 6: Housing ownership arrangement (migrant v non-migrant)

Informal settlements face heightened vulnerability. The challenging living conditions particularly in informal urban settlements, exacerbated by government neglect and lack of basic services, make these areas particularly vulnerable to the effects of climate change, according to respondents who feel more exposed to both slow and rapid onset climate impacts. The acknowledgement of vulnerability shows how many residents experience and foresee the impacts of climate change.

The majority of respondents (59%) feel informed about the impacts of climate change in their region, while about one third (29%) feel uninformed, with the media being the most common source of information, and local community organisations being perceived as the most comprehensive source. This sense of being informed is crucial as it influences their perception of preparedness and ability to adapt or respond. The perceived neglect and lack of support from authorities contribute to a sense of vulnerability, making it harder for communities to feel equipped to handle the challenges posed by climate change.



Image 5. La Loma- informal settlement in Barranquilla, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.



Climate-related Challenges & Impacts

Climate Challenges and Vulnerabilities

Among the 404 respondents surveyed in the two research locations of Barranquilla and Santa Lucia, 65% reported frequent environmental disasters.

Drought was the most common weather event (85%), followed by flooding (83%) and tropical cyclones (74%).

Respondents in Santa Lucia more frequently reported effects on fish stock and produce quality, indicating direct impacts on the food supply chains. The descriptions of the 2010 floods in Santa Lucia warrant it as a total event, displacing most residents, many of whom temporarily moved to Barranquilla, or a closeby city called Soledad.¹⁶ While most eventually returned, a few families chose to remain in Barranquilla.

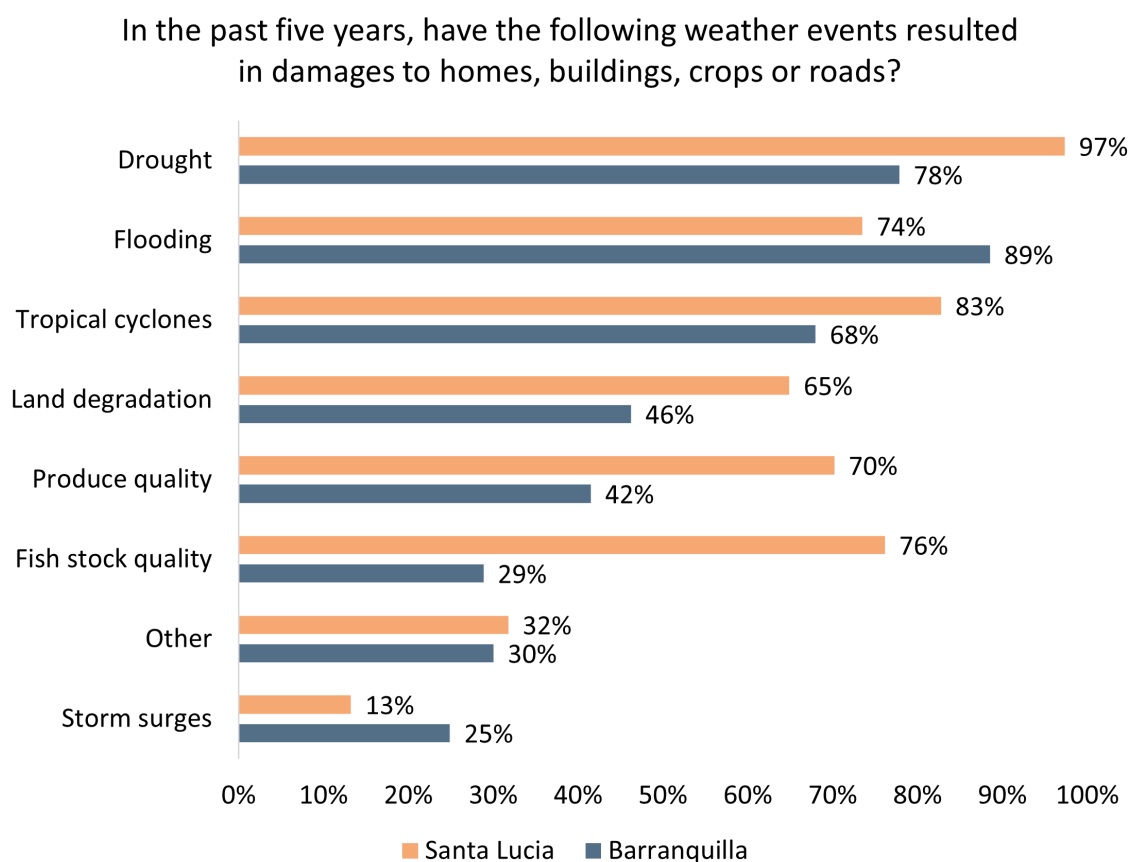


Figure 7. Weather events or phenomena resulting in damages, as reported by respondents.

Extreme weather events in Colombia threaten habitability, with respondents highlighting extreme heat, winds, and drought as the most significant issues.¹⁷

Flooding, exacerbated by inadequate drainage systems in urban areas was a common concern, particularly in high humidity areas.¹⁸ Extreme heat, especially in small, poorly ventilated housing units in informal settlements, was seen as a long-term problem compared to shorter-term impact mostly tied to strong winds.¹⁹

Climate-related impacts

Climate change significantly impacts daily life in Colombia. As in many country contexts surveyed, participants in Ciudadela de Paz describe increasingly unpredictable weather patterns, noting that while it used to be possible to predict rainfall due to relatively stable patterns, this is no longer the case.²⁰ This unpredictability has created a nexus of conditions that heighten exposure to climate impacts. For instance, heavy rains and flooding, coupled with inadequate infrastructure (sewage and drainage systems) leads to deterioration of housing infrastructure, frequent power outages and stagnant flood waters, which increase the presence of mosquitoes and the risk of illness.²¹

¹⁷ FGD8, FGD9

¹⁸ FGD9, FGD10

¹⁹ FGD9

²⁰ FGD9

²¹ FGD8

Overall, **84% of households in Colombia have been directly affected by climate change impacts**. Health is the most affected element for households, as indicated by 77% of the respondents, followed by emotional well-being and stress (70%) and livelihoods (47%). Health problems hinder individuals' ability to work and their children's ability to attend school.²² Respondents have noted an increased prevalence of illness among children, particularly in informal urban settlements, where access to emergency services and adequate health care is often obstructed by flooding and landslides.

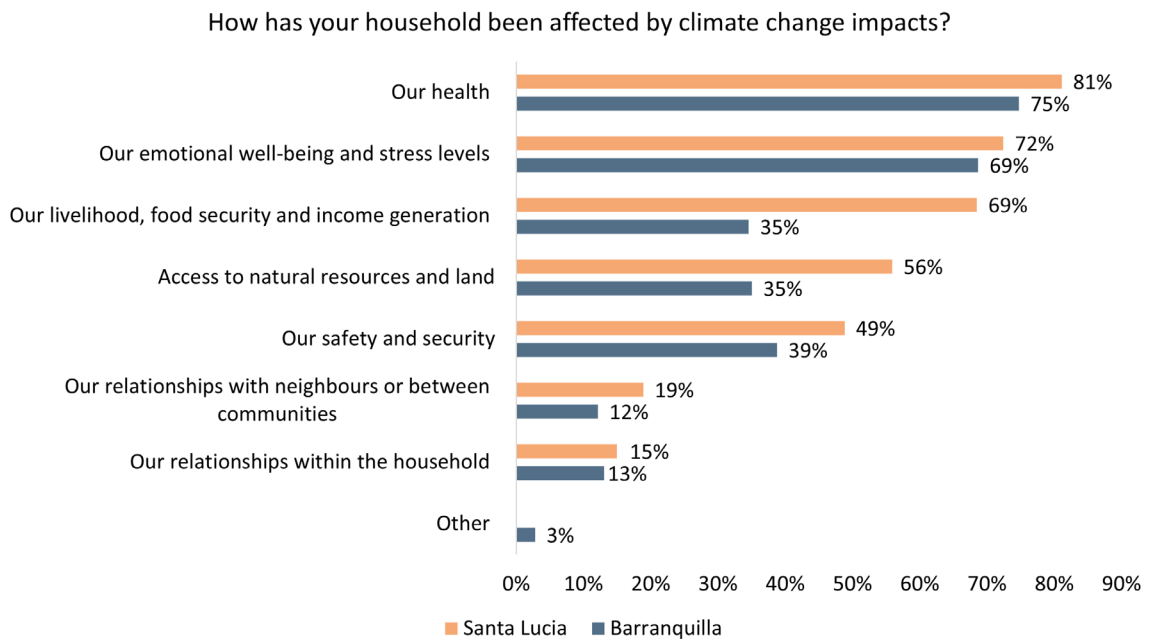


Figure 8. Weather events or phenomena resulting in damages

Another particularly vulnerable group to these climate events is the elderly. They also face significant health risks tied to slow and rapid onset events, particularly those living in small, informal housing units with limited ventilation. High levels of humidity and extreme heat exacerbate these conditions, along with frequent flooding due to poor drainage systems.²³ The vulnerability of these populations is worsened by the general perceived neglect of informal settlements by local authorities.

In addition to physical health impacts, **respondents have also emphasised the mental health toll of climate events**. One participant shared:

*"When we face situations like rain and floods, the loss of belongings, I see... we could say that mental health is very important there, because when we lose everything, we lose... now what do I do? How do I do it? I don't know... We end up getting sick, our blood pressure rises, we lose everything... What do we do? Where do we go? So, desperation sets in, right? Who will take care of us? Who helps us."*²⁴

In this sense, events induced by climate change highlight and exacerbate the vulnerabilities communities are already facing and intersect with concerns tied to health, financial security, physical security, and the ability to plan for the future.

²² FGD8,9

²³ FGD9,10

²⁴ FGD9

Climate change and climate disasters significantly impact livelihoods, especially for those dependent on farming, fishing and pastoralism. These sectors are highly susceptible to heavy rains, flooding, droughts, and high temperatures. Respondents from Santa Lucia reported that excessive heat, combined with El Niño phenomenon, has caused their fields and crops to catch fire and their livestock to die, destroying their sources of income. Heavy rains flood lands, damaging crops and preventing livestock from grazing. A respondent from Santa Lucia mentioned that:

“in 2010, as a result of the flooding, the vegetation layer of the entire southern Atlántico was lost, a large part of that vegetation sank and that generated an environmental impact on the municipality and the territory.”²⁵

These recurring extreme weather conditions discourage people from maintaining agricultural IGAs due to the frequent loss of crops and the increased cost of surviving produce.

Respondents in Santa Lucia also reported that crop demand has decreased after the climate disaster causing remaining produce to go to waste and reducing potential income. One respondent reflected:

“If we produce yuca and there’s no one to buy it, we lose it and there’s no source of income. What happens then? We lose it and there’s no source of income. I mean, when our crops go to waste, when we start producing and there’s no one to buy, and those who buy, buy them at low prices, well, there’s already a lack of motivation for the producer, for us as farmers to produce food.”²⁶

The fisheries sector has also suffered. Droughts and excessive heat threaten the viability of fish breeding, making it increasingly difficult for fishermen to earn a livelihood. Fish in swamps and other bodies of water are depleting, forcing fishermen to migrate to other regions. The impact of these climate disasters is exacerbated by existing structural and infrastructure issues. For instance, fishermen have reported a lack of effort by different local authorities to maintain swamps, and farmers have noted that the impact of droughts on livestock is worsened by poor water grids and lack of water provision in certain municipalities.

These impacts threaten food systems directly and are experienced by the respondents first hand who recognise that, *“there’s more hunger, don’t you see that cassava... there’s no cassava, no corn, nothing. There’s no milk, just a little.”²⁷* These challenges contribute to food insecurity in the region, as reduced agricultural and fishing yields directly affect the availability and affordability of food.

Climate events threaten children’s health and education access. Heavy rains and landslides damage infrastructure, and flood or block roads, making it difficult for children to get to school. A respondent in Barranquilla recounted how flooding threatened her child’s education, noting that she would have to *“buy a canoe to cross the stream”* in order to bring her child to school.²⁸ This highlights the physical obstacles to movement and the broader impact of climate change on educational opportunities for children in affected areas.

25 FGD10

26 FGD11

27 FGD11

28 FGD11



Image 6. Damaged household in Ciudadela de Paz, informal settlement in Barranquilla, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.

Responses & Adaptations

Adaptations and Strategies

Communities in Colombia have employed diverse adaptation strategies. To cope with climate change, respondents rely heavily on personal networks over government support, especially in areas with limited formal access to services.

Overall, people relied on their personal network to help them respond or adapt to emergencies, rather than turning to the government (normally due to past negative experiences). In times of climate-related emergencies, family members are the most favoured source of support, with 53% of respondents turning to them for help, followed by neighbours (46%) and then local governments (30%). Respondents in Santa Lucia are more inclined to seek assistance from the local government (38%) compared to those in Barranquilla (25%), this being within the context that those surveyed in Barranquilla resided in informal settlements that are often excluded from access to authority or standard administrative procedures.

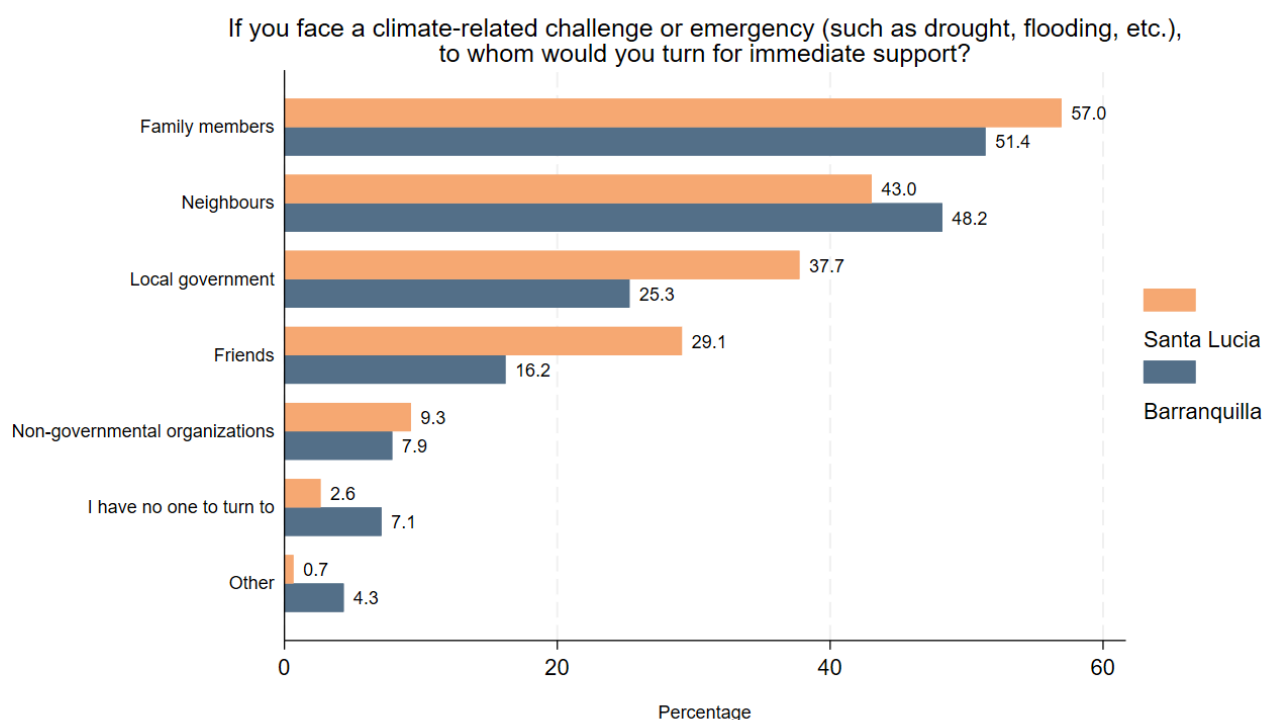


Figure 9. Support mechanisms

More than half (51%) of the respondents agree or strongly agree that their community takes steps to adapt or prepare for the impacts of climate change. This is of course subjective to what each person perceives as a step toward preparing, and whether these steps are recognised as separate actions to regular mitigation and maintenance. Interestingly, those who frequently experience climate-related disasters are more likely to disagree that their communities take steps to prepare and adapt, suggesting that the severity and frequency of these events may outpace adaptation efforts, and reduce preparedness.

Most households have taken steps to adapt to climate change impacts. A majority of households (58%) have implemented specific measures, with respondents in Barranquilla slightly more proactive in these efforts, which is likely due to the fact that they are in more extreme situations of poverty and lack formal access to services. Migrant households are slightly more likely to have taken adaptive steps (60%) compared to non-migrant households (52%).

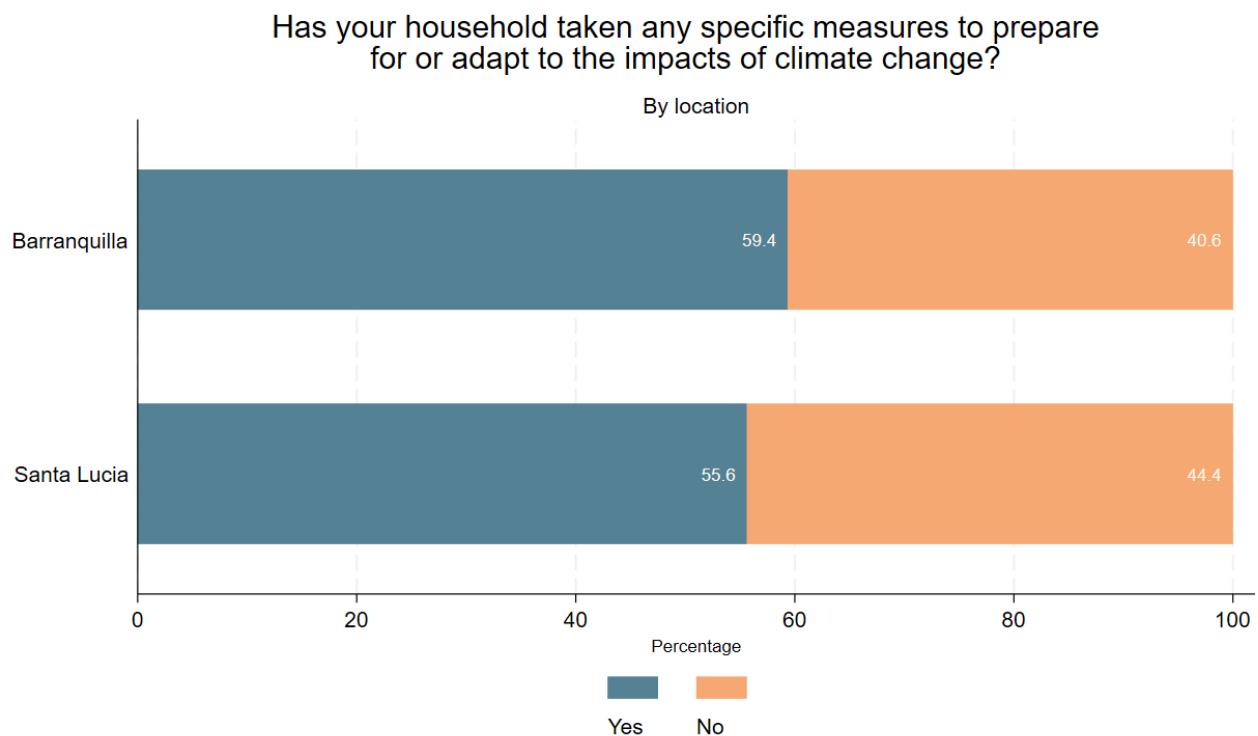


Figure 10. Household-level measures in adaptation and preparedness.

At the community level, various adaptive strategies to flooding have been employed such as protective clothing, raised houses, and fortification of homes. These were discussed in the study's focus group discussions with community members. For instance, in response to flooding, families have devised practical solutions such as wearing bags on their feet and clothing to navigate floodwaters and carrying water bottles for cleaning. Additionally, they raise portions of the house and cover their houses with plastic, sand and cement and fill streets and house entrances to prevent water intrusion. In the face of strong winds causing material damage to mud homes and shelters, families rebuild and move back, **demonstrating their strong attachment to their homes** despite the desire for more robust government intervention.

Communities and governments are adapting to climate impacts through infrastructure and education efforts. Flood-induced economic impacts and the destruction of land and infrastructure have prompted governmental actions, such as the creation of school and health infrastructure to support affected communities. Furthermore, communities have adapted to high temperatures by implementing various cooling strategies to combat the extreme heat. Education initiatives have also provided home construction tools and launched projects that benefit farmers, helping them build more resilient livelihoods. These collective efforts underscore the community's acknowledgement of the need to adapt amidst the challenges posed by climate change, and highlight education as a basic point of entry for support.

Mobility as an adaptation?

The role of migration as a climate adaptation strategy is debated among policymakers and respondents. The majority of respondents in Santa Lucia (60%) and 57% in Barranquilla indicated that the impact of climate change significantly influences their future decision to migrate. Most prominently, following the severe 2010 flooding in Santa Lucia, a substantial portion of the population relocated temporarily to other municipalities like Soledad and Barranquilla, demonstrating a migratory response to climate events.

Some see this as adaptation; others view it as a failure to adapt by leaving home. In Barranquilla, respondents have reported moving temporarily to other urban areas to avoid major disruptions to their livelihoods, illustrating a strategic response to expected harsh weather conditions that would hinder daily routines of earning a livelihood and taking children to school. This temporary movement based on resources was illustrated by a respondent saying:

*"They go to their mother-in-law over there...because that is a normal neighbourhood, with everything. So, they spend the winter there and when summer begins, they come."*²⁹

This type of climate change- driven mobility is relatively common in urban areas, where inhabitants relocate to less impacted parts of the neighbourhood with better drainage and infrastructure.

Conversely, in other cases, mobility is a forceful consequence of climate change rather than a strategic adaptation. The 2010 flooding in Santa Lucia, described by respondents as "a type of total event", led to the displacement of the vast majority of the town. People temporarily relocated to Soledad and Barranquilla before eventually returning. The decision to return to Santa Lucia, despite its high propensity for flooding, highlights the inhabitants' strong ties to home, their land and community as well as the weight of financial considerations. For example, one respondent from Santa Lucia who moved to Bogota recounted:

*"In order to survive, I had to recycle, and little by little, from recycling, I saved up for my ticket and returned to my town. So, it's better to die here from hunger than to die elsewhere."*³⁰

Other respondents talk of a reinforced sense of community upon returning to Santa Lucia after the floods, emphasising the importance of familial and neighbourly connections:

*"There were two positive things about the 2010 flood when we returned to the town, and it was like reconnecting with family, with neighbours, returning to what's yours. And when we left, it was seen as the union among the people of Santa Lucia, among society, everyone helped each other, everyone gave... if you didn't have anything to eat, they gave you."*³¹

29 FGD9

30 FGD11

31 FGD11

The perception of migration as an adaptation strategy is mixed. Some participants recognize both the economic benefits and social drawbacks of climate mobility. One respondent noted:

*"I say it has a double intention. Favourable because we are seeking better opportunities and a better quality of life for our homes. And unfavourable because it would mean leaving behind what we have built here, our homes, our families, our house, our culture, our customs, to migrate to another place where we will find things different from ours."*³²

The limitation of livelihood opportunities can undermines potential for successful reintegration. Additionally, a possible parallel between perceived scale of mobility and framing emerges. While "leaving the neighbourhood" tends to be framed and justified through reference to immediately relevant aspects of lived experience (e.g., drought, flooding, violence, food, and water insecurity), "going to the United States" is framed as moving "for a better future."³³

Moreover, a common pattern of transit and secondary migration was observed.

Various participants, both Venezuelan migrants and internally displaced persons (IDPs), stayed temporarily in several places before eventually arriving in Barranquilla. Participants in Barranquilla's Ciudadela de Paz and La Loma neighbourhoods are mostly Venezuelan migrants, some of whom cited climate events as a factor in their decision to move. Migration from Venezuela was explicitly tied to acute food insecurity, malnutrition, political violence, domestic violence/gender based violence (GBV) and the general economic situation in the country. The lack of access to quality services in Venezuela further drives migration, as one participant explained:

*"I did it to seek a change for my children, because there, school is terrible... if they don't have money to buy a pencil, if they don't have money to eat... And secondly, also the hospital, which is like nothing there, if you don't have resources."*³⁴

Participants explained that the politicisation of services by the current administration in Venezuela exacerbates these issues, forcing many to seek better opportunities in Colombia.

32 FGD11

33 FGD8

34 FGD8

Involuntary and voluntary immobility

While some view mobility as an adaptation strategy, it is not a readily available option for everyone. More than half of the respondents (58%) reported considering moving but lacking the capacity to do so. Socio-economic factors often drive immobility, as illustrated by a respondent who said:

“Many people have moved, but we have been here for almost four years, and since the house is our own, we don’t dare to rent it out or leave it. We have to live like this, with the hardships. Someday the sewer system, the services, will come, and we’ll endure. Because imagine! Paying for the house, for example, my daughter is paying for seven years. She has to pay it, the commitment is already there, and we have to endure it, because what else can we do?”³⁵

This sentiment of immobility, driven by socio-economic factors such as financial constraints tied to lack of housing alternatives, was common among respondents. Furthermore, immobility is more prevalent among family members who belong to particularly vulnerable populations. Women are the most likely to be left behind in migrant households (41%) followed by the elderly (40%) and children (35%), suggesting limited ability or intentions to rely on mobility as a climate adaptation strategy among specific communities, especially older community members.

However, many are able to remain in their homes due to the mobility of close family members. One in four respondents reported that a household member regularly works in other areas to make money. Additionally, a majority of those with family members working elsewhere send remittances as a form of financial support (83%), thus allowing their family to remain in place. Despite economic hardship and climate risks, “staying” is seen as favourable to many, who underline their attachment to place and their “love for their neighbourhood.”

This preference for staying should also be considered within the context of a significant population with previous migration experience, such as Venezuelans, who may not want to engage in secondary migration. For these individuals, voluntary immobility serves as a form of security, allowing them to maintain a sense of stability and connection to their community.



Image 7: Raised house in Santa Lucia, Atlántico, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.

Looking Ahead: Decision- making

Factors Influencing Decision-making

Several factors were found to influence decision making regarding migration and mobility. Economic prospects are often weak, compounded by a lack of social protection which respondents attribute to a corrupt political environment.³⁶

Women face additional pressures, including domestic violence and limited employment opportunities, which force them to leave their homes and migrate. This struggle extends to their children, with early school dropouts and child labour being common due to parents' inability to find stable work.³⁷

The search for work opportunities also drives internal temporary migration of women for domestic work and international migration of men to cities abroad, particularly to the United States, according to respondents in Santa Lucia in particular.³⁸ Participants noted that while climate events also factor into people's willingness to leave their neighbourhoods or urban areas, out migration is also a consequence of poor urban areas presenting little options for sustainable livelihoods.³⁹

36 KII10

37 KII10

38 FGD8, FGD11

39 FGD8

Past negative experiences with migration also play a significant role in decision-making. Many respondents report that these experiences decrease the perception of mobility as a viable adaptation strategy. Similar sentiments were shared by those who had migrated from Venezuela, highlighting the hardships faced and the strong attachment to their place of origin. Despite episodes of flooding reinforcing community and social ties, with participants emphasising how these events brought them closer together, the decision to move is complex.

Migrant respondents are more likely than non-migrant respondents to consider moving but often feel unable to do so, likely because of past experience. There is an almost even split among respondents on whether they would move if their neighbours began to leave (45% would move, 46% would not), suggesting that peer decisions are influential but not definitive. However, most respondents (64%) believe they would find better conditions if they were to move, with migrant respondents being more optimistic (70%) compared to host respondents (49%). **This indicates that migration is generally perceived positively, likely explaining high levels of desire to move elsewhere** (Figure 1 and 12).

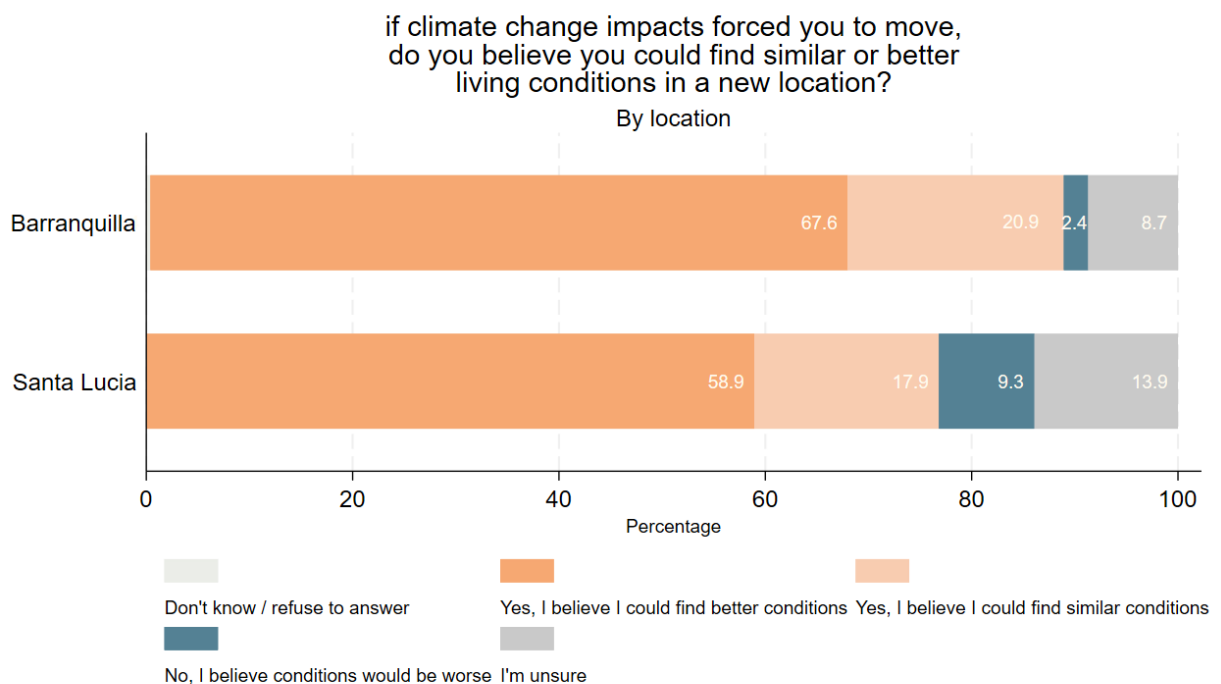


Figure 11. Perceptions of migration outcomes

Climate and mobility decision-making nexus

While climate was a factor in respondents' previous migration decisions, it was still not the major driver. When respondents who had moved were asked if they thought about climate upon moving to their new location, 48% said they did not. Yet, more migrants consider climate change in their potential next move: 3 in 4 respondents reported it plays a role in decision making on future migration, with 13% reporting climate change being the main driver. This likely reflects the nexus of inter linkages between socio-economic and environmental risks migrants have been exposed to in their current areas of residence within the country, leading to increased consideration of climate in mobility decision-making. The anticipation of increased extreme weather events, temperature changes and resource scarcity further drives this consideration.

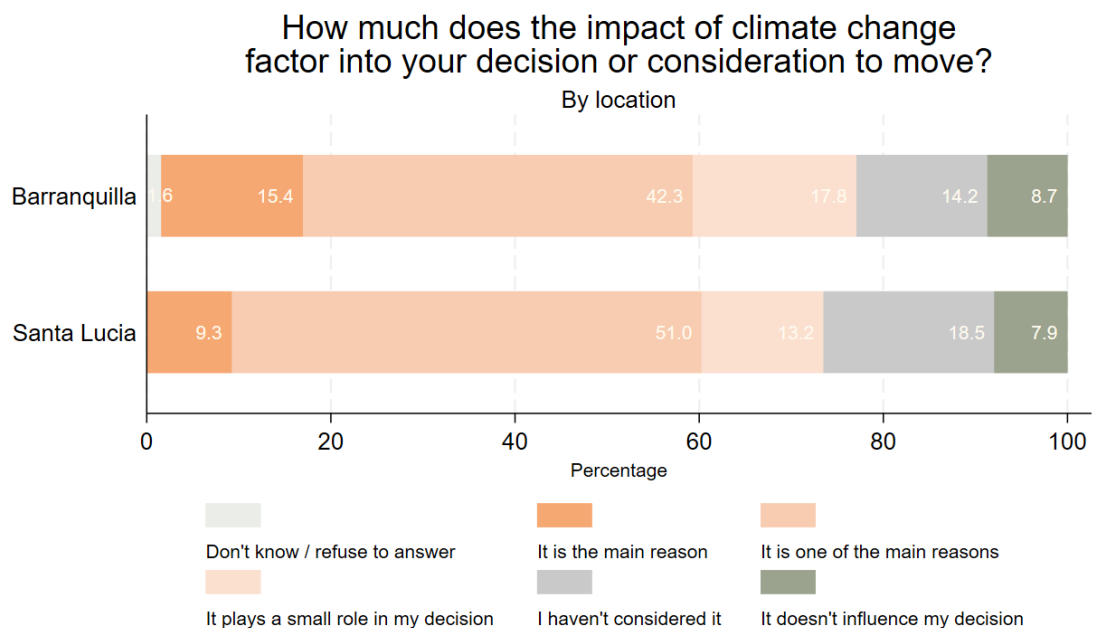


Figure 12. The role of climate change impacts in migration decision-making.

In terms of future migration, the data reveals a complex picture of intentions and capacities among the respondents. While more than half of the respondents (58%) are considering moving due to various pressures (Figure 1), they find themselves unable to due to financial limitations. This is particularly true for women and younger respondents, who are more likely to report considering migration but are unable to, compared to men and older respondents. This highlights the intersection of gender, age, and economic status in shaping mobility decisions.

When considering mobility, it is primarily thought of as local, with nearly half (46%) of respondents considering a move to a different neighbourhood or village in the area when asked their preference. This preference for short-distance relocation underscores a strategy of minimising disruption while seeking better conditions. Interestingly, only a quarter (24%) would move to a different area within the country., and among these more desire permanent solutions, with two thirds expressing preference for permanent relocations. This contrasts sharply with the temporary nature of migration preferences in other countries surveyed, possibly due to the significant presence of Venezuelans with previous migration experience who already endured a large journey of mobility, upheaval and change.

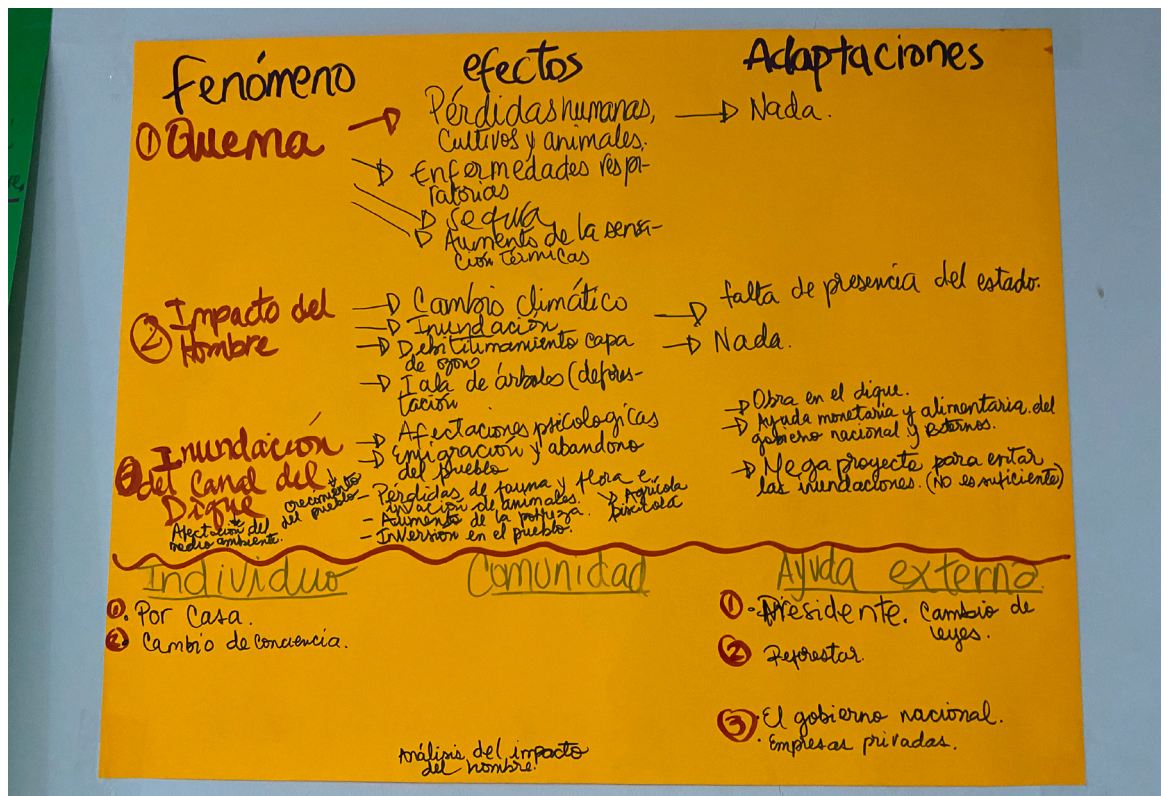


Image 8: Focus group discussion exercises exploring the identified climate events, effects on community, adaptations employed, and proposed implementing actors for solutions. Ciudadela de Paz, Barranquilla, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.

The ability to cope with climatic shocks varies, with almost half (48%) of respondents feeling somewhat or much more likely to cope compared to their community. **This self-assessed ability to cope is higher among host respondents (57%) than migrant (45%), indicating a disparity in adaptive capacity between these groups.** In Santa Lucia, this sense of security in primary livelihood generating activities explains why many made the decision to return after climate-induced displacement, as maintaining their livelihood was not only crucial, but possible.

Overall, the decision to migrate or stay is influenced by a nexus of factors: economic constraints, lack of service grids, violence, food insecurity, and sanitation issues. These are compounded by the direct impacts of climate change— in particular flooding, heat, wind, and related health consequences. Pre-existing social networks (i.e. family in other areas) and prior experiences of migration (e.g. from Venezuela / other parts of Colombia) also play a critical role, providing both support and an informed basis for decision-making.



Image 9. Focus group discussion, La Loma, Barranquilla, Colombia. Photo credit: Nicole Stoumen, Samuel Hall 2024.

Conclusions: Findings on Climate Mobility

Overall in the context of Colombia, climate is proven to be a compounding driver of migration.

The narrative from many households and individuals who participated in the study is one of resilience amidst constraints, where community ties and economic necessity often dictate responses to climate pressures even when the climate risks could cause severe impacts, thus highlighting the complex intersection of socio-economic and environmental factors in shaping mobility decisions.

While not a variable examined in the survey or focus groups, the tone of resilience is significant in the context of a country famous for its peace process trying to reconcile a recent past of ethnic, environmental, and targeted socio-political violence.

Following the recent, unprecedented election of a progressivist government the country is also seeing advancements in legal recognition of forced displacement due to climate change impacts, underscoring that these impacts are felt and recognised throughout the country. These findings underscore the complex relationship tying climate risks, socio-economic factors, and mobility patterns, highlighting the need for integrated approaches to address the multifaceted challenges faced by communities in Colombia.

- **Climate is a compounding driver of migration**— with the majority of respondents acknowledging its impact, the frequency of extreme weather events such as droughts and floods exacerbate existing issues of violence, land degradation and systemic vulnerabilities. These climate impacts particularly affect vulnerable populations like IDPs and Indigenous communities who have already experienced displacement in Colombia and suffer precarious living conditions, making them susceptible to repeated migration.
- **Mobility desires are met with limitations** — while the majority of respondents consider migration they are hindered by financial difficulties, especially women and youth. If people are able to or desire to move, it is most frequently local, driven by both a connection to place and socio-economic factors such as unemployment, inadequate services, and safety.
- **Health and livelihoods severely impacted by climate change** — the majority of respondents indicated that their health has been directly affected by climate change due to the cyclical effect of flooding damaging infrastructure, increasing exposure to diseases through spreading of bacteria, the lack of responsive services and adaptive capacities and resources. Climate events significantly disrupt livelihoods, particularly for those dependent on farming, fishing, and pastoralism. Extreme conditions destroy crops and stock, exacerbated by inadequate support from local authorities. The combination of these risks threatening agricultural livelihoods make many consider moving.
- **Mobility and immobility as an adaptation** — migration or the decision or the inability to migrate is seen as both an adaptation or an increased vulnerability. Communities implement immediate mitigation and adaptation measures to their homes and community structures, while some view migration as a necessary response to severe climate events. For many, mobility is not an option given the extreme economic constraints in the locations of study.
- **Reliance on community is key** — The community's main response to climate change involves a dependence on personal networks and community resources over governmental support, within a culture and context that has developed resilient community leadership structures in the face of civil war, hardship, and government failures.

Acknowledgements

Samuel Hall, in partnership with the Greater Caribbean Climate Mobility Initiative, would first and foremost like to extend our deepest gratitude to the research participants and their families in Colombia, who experience the impacts of climate change firsthand, especially to the community leaders who welcomed us with open arms to meet their communities and invited them to share their stories– without their trust, leadership, and openness this research would not have been possible.

Many thanks in addition to the Colombian team, led by Laura Lopez Muñoz who oversaw a team of 12 local researchers: Donis Antonio Gamez Julio, Nayelis Esther Meléndez Bertel, Gustavo Adolfo Ortiz Murillo, Allyson Britto Quintero, Hilma Rosa Sarmiento De La Hoz, Hirma Margarita Sarmiento De La Hoz, Luis Guillermo Pérez Dominguez, Alexandra Patricia Pérez Dominguez, Camila De La Ossa Gonzalez, Lina María Urueta Madrigal, Dina Luz Herrera Utria, Jorge Antonio Suárez Lemus.. Together they provided invaluable insight into climate and migration patterns in the site communities and made the people-centred and localised approach of this research possible, allowing us to enter intimate settings and have open and meaningful dialogues with affected communities. The local connections of the national researchers also invited the support of local organisations in each country who work at the intersection of migration, climate change, agriculture, disaster response, and policy, including Barranquilla +20, the municipal government of Barranquilla, community leaders in Santa Lucia, the Fishermen’s Association of Santa Lucia, and Venezuelan migrant community leaders in La Loma and Ciudadela de Paz in Barranquilla

Research for this study was led by Hervé Nicolle, Nicole Stoumen, Daniel Provost, Wendy Indira, Mwara Namelok and Shana Pareemamun, with the data and analytics team at Samuel Hall led by Stefanie Barratt, Marta Trigo da Raza, Akville Krisciunaite, Mohammad AlQaruoti, and Sheila Mwathi.

Additional thanks to GCCMI’s Technical Advisory Group the Center for Information and Earth Science Information Network at Columbia University (CISEN). This project was supported by the Global Center for Climate Mobility (GCCM) in close collaboration with the Association of Caribbean States (ACS) and GCCMI core partners: the United Nations Development Programme (UNDP), the UN Office for Disaster Risk Reduction (UNDRR), the UN Framework Convention on Climate Change (UNFCCC), the International Organization for Migration (IOM), and the World Bank.



Image 10: "Together we build a worthy and better future". Community mural in La Loma, informal settlement in Barranquilla. Photo credit: Nicole Stoumen, Samuel Hall 2024.

About Us

Samuel Hall is a social enterprise specialising in research, program evaluation, and data analysis in migration and displacement contexts. Since 2010, we've focused on understanding the disproportionate impacts of climate change on vulnerable communities. Our work across Africa, South, and Central Asia shows that real change often begins at the grassroots level, where local activists, migrants, and displaced people lead constructive dialogues and actions.

The Greater Caribbean Climate Mobility Initiative (GCCMI) is a joint undertaking coordinated by the Global Centre for Climate Mobility and the Association of Caribbean States, bringing together 25 countries, amongst them numerous Small Island Developing States, whose people are most at risk from the impacts of sea level rise and other climate related stressors. The initiative's partners include the World Bank, the UN Development Programme, the UN Office for Disaster Risk Reduction, the UN Framework Convention on Climate Change and the International Organization for Migration (IOM).