





## INTRODUCTION

The World Bank ranks Guatemala ninth in the world for its vulnerability to the effects of climate change.<sup>[1]</sup> Climate change is fueling extreme weather events that threaten human health and well-being in diverse ways, including through extreme heat, smoke from wildfires, contaminated floodwaters, and loss of access to shelter, food, infrastructure, and livelihoods.<sup>[2]</sup> For many rural Indigenous communities in Guatemala, the consequences of a changing climate are not a future concern, but a present reality. Extreme weather events have become more frequent and dangerous in parts of the country. Many rural Indigenous communities live in regions that are highly vulnerable to these types of extreme weather-related emergencies.

The Building community-based emergency response strategies action research project (2023-2026) aims to understand how Indigenous communities in Alta Verapaz and Quiché are affected by extreme weather events, how they respond to these emergencies, and the quality of support they receive through the government's emergency response system.<sup>[3]</sup> The purpose of the project is to help strengthen community-informed emergency response capacity, including fostering more effective collaboration with the government's emergency response system.

Through participatory action research, the project is learning that these communities repeatedly face extreme weather emergencies every year, especially floods and landslides caused by heavy rains. However, they receive little or no government support to prepare for, respond to, and recover from these crises. This leaves affected communities to rely primarily on their own ingenuity and resources during emergencies, sometimes with minor additional support from private actors. These findings are consistent with complementary data collected through a national-level policy analysis of key aspects of the country's

emergency response system. The results demonstrate that Guatemala’s national emergency response system is well designed on paper, however, it is weak in practice. It is particularly ineffective at the local level, resulting in minimal capacity to respond to the needs of communities affected by increasingly frequent weather-driven emergencies. There is an urgent need for the Government of Guatemala, with the input of affected communities and civil society organizations, to take action to address these serious problems.

## RESEARCH OVERVIEW

### Focus of the study

This three-year project combines community-based participatory action research with national policy research. The research team includes members from CEGSS/REDC-SALUD and Laboratorio de Datos GT in Guatemala, in collaboration with researchers from York University in Canada and American University in the United States.

During the first half of the project, CEGSS/REDC-SALUD, including eight Indigenous Front-line Health Defenders who served as community researchers, collaborated with 16 rural Q’eqchi’-speaking Indigenous communities (1,992 families, approximately 9,960 individuals) in five municipalities of Alta Verapaz. Together they conducted a participatory mapping and community diagnostic process to investigate how communities are coping with extreme weather emergencies. Members from their two university partners also collaborated in this process. To complement the community data and better understand the structural factors affecting emergency response, Laboratorio de Datos GT conducted an institutional mapping of the National Emergency Response System (CONRED), as well as an analysis of the central government’s budget expenditures from 2015-2023 and municipal spending between 2020-2022. Preliminary findings and recommendations based on the first year of the project are presented here.



## RESULTS

### Participatory mapping and community-engaged analysis component

**Context.** All the partner communities report experiencing floods, landslides, or both every year, while some communities now experience flooding two to three times during the rainy season. Intense heat has also become a serious problem.

Almost all of the communities are located in areas that are difficult to access, including four in areas designated by the government as “high risk” zones. At least one community is located in an area that the government has declared uninhabitable. Road conditions are poor. Several communities are located near rivers and other waterways that are prone to flooding. In some cases, the arrival of large-scale agro-industry, especially palm plantations, has diverted waterways or eroded the soil, making surrounding communities even more vulnerable to flooding and landslides.

**Emergency planning and mitigation.** The results indicate that none of the 16 communities have received effective support from CONRED technical staff to prepare for emergencies.

Although a small number of the communities have worked with CONRED technical staff or other non-governmental institutions in the past to develop formal emergency plans, little or no guidance or material resources have been provided to support implementation. In a few cases, training workshops were held and/or emergency committees were established. However, once the workshops were completed or the committees formalized, there was no follow-up by CONRED or the municipal government to promote sustainable action.



Many communities have clear proposals on how to minimize the impact of chronic extreme weather events, especially flooding. For example, some want to build flood walls or reinforce embankments to help protect their communities from flooding. However, they lack the financial resources and technical guidance to implement such mitigation strategies.

**Emergency response: evacuation and communication.** Communities report minimal or, in most cases, no support from the state during extreme weather emergencies. In some cases, officials request photos of the damage or arrive to document it, but these interventions rarely translate into material assistance. Difficulties in evacuating affected people during heavy rains were a recurring and urgent problem identified by communities. The rains often cause flooding and landslides, making road access difficult or impossible. One community reported that its road access was blocked for two weeks. Communities often lack vehicles equipped to navigate the difficult terrain. Communities near rivers are forced to flee by water. However, almost all lack access to safe boats and life jackets. In some cases, they have built makeshift boats, but these are insecure. Difficulties in accessing communications during extreme weather events were also noted in all communities. The community with the two-week road blockage also had no telephone or internet signal, making it impossible for them to communicate with the outside world during the emergency.



**Emergency response: shelter, emergency supplies.** Communities report that during weather-related crises, they receive little or no essential supplies from the government. They lack access to nearby shelters and often have to build makeshift alternatives with whatever materials are available. Difficulties in accessing clean water, and emergency food and health supplies were also repeatedly identified during the mapping sessions. Overall, access to the government’s emergency response system remains opaque. Several communities expressed distrust of the system due to the lack of tangible support.

**Recovery and the social determinants of health.** In recent years, many communities have been in a state of chronic emergency, unable to fully recover from one extreme weather event before being hit by another. Yet communities report receiving little or no material and technical assistance to recover from the damage they have suffered. Heavy rains and flooding damage or destroy homes. Some community members continue to live in improvised houses after tropical storms Eta and Iota in 2020. Crops are destroyed, agricultural land damaged and livestock lost, affecting longer-term food security and economic livelihoods. Schools are damaged and not always repaired. Waste from overflowing rivers and damaged latrines contaminates community water supplies and agricultural land. Community members report a range of health problems as a result of these crises. They also note the absence or shortage of health staff, and damaged health facilities that have not been repaired. Communities in high-risk areas reported additional difficulties in being included in various state-supported development initiatives, as there are legal prohibitions on investing public funds in areas classified by CONRED as ‘at risk’. This creates a vicious cycle of geographic degradation and increased risk for communities.



The data from these 16 communities also demonstrate the impressive strategies that communities have in place to respond collectively, relying on their own capabilities, knowledge and skills, to survive these life-threatening events. Some have attempted to advocate with their local authorities, but most have had minimal or no success.<sup>4</sup> The magnitude of the problems reported by these 16 communities demonstrates the need for a statewide emergency response system that can effectively address their needs.

## NATIONAL POLICY AND DATA ANALYSIS COMPONENT

Laboratorio de Datos conducted an institutional mapping of Guatemala's Emergency Response System, the Coordinadora Nacional para la Prevención de Desastres, or CONRED, as it was designed by law and as it is currently defined in the latest 2023 policy update by the Guatemalan government. The different roles and responsibilities of each institution and level were also examined, along with an analysis of the relevant national budget expenditures from 2015 to 2023.

The findings indicate that the institutional design of the Guatemalan Emergency Response System is very well defined, with an official mandate and responsibilities that are very appropriate. In practice, however, the system's implementation bears no resemblance to this robust design and intervention strategy. On the contrary, there is ample evidence that the system's capacities have diminished over time. Moreover, the report concludes that the closer the system is to the actual communities, the weaker it becomes, to the point where its presence is barely perceptible.

These results above are consistent with information from a budget analysis Laboratorio de Datos conducted as part of the institutional mapping process. From 2015 to 2023, the resources allocated to CONRED have steadily decreased. The poor financial situation is exacerbated by reduced budget execution capacity, which hinders the appropriate and timely use of scarce resources. The study also found that most of the allocated funds are used for institutional operating expenses.

A second study analyzes municipal budget expenditures for the period 2020-2022. Although this covers half of the pandemic period, as well as the severe flooding caused by tropical storms in Alta Verapaz, available municipal resources were not fully utilized to help vulnerable communities cope with the emergency. In addition, when researchers compared the expenditures of the relevant ministries highlighted in the institutional mapping process with municipal expenditures, they found troubling areas of overlap.

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<sup>4</sup> Originalmente, el equipo del proyecto tenía la intención de entrevistar a actores a nivel municipal como parte de la primera etapa de recopilación de datos. Sin embargo, dadas las elecciones y el consiguiente cambio de personal y funcionarios, este paso se pospuso hasta más adelante en 2024.

## ANALYSIS

Guatemala's national emergency response system is officially based on a comprehensive six-step approach to disaster-management: risk assessment, prevention, mitigation, preparedness, response and recovery. However, evidence from the participatory mapping component shows that, in practice, the implementation of these steps in the 16 municipalities of Alta Verapaz is almost non-existent. The results of the analysis of national policies and budget expenditures help to explain this gap by identifying serious structural deficiencies at several points in the system, particularly at the local level.

A positive outcome of our preliminary findings is that the country's current legal framework for emergency response and the overall sound design of the CONRED system indicate that important foundational elements are already in place. This suggests that much can be done within the existing system to refine and support the variety of processes needed to help the system work more effectively at the local level.



## KEY RECOMMENDATIONS

### Urgent and immediate measures

- In coordination with local communities, pre-position emergency supplies, including emergency shelter materials, drinking water, emergency food supplies, and basic first aid equipment, to make these items easily accessible in times of crisis.
- Provide community authorities with communications equipment (radios, loud-speakers, megaphones) to enable communication during emergencies.
- Provide emergency response training, including evacuation training, to communities and relevant municipal authorities.
- Finance and facilitate the acquisition of boats and life jackets for affected communities located near waterways, with specific training on safe boat evacuation.
- Improve coordination and organization among the different levels of CONRED to manage emergencies more quickly and effectively.
- Develop and implement mechanisms for rapid reconstruction of infrastructure in affected communities.



## KEY RECOMMENDATIONS

### Intermediate and longer-term measures

- Prepare community-driven emergency plans in coordination with CONRED representatives at the municipal and departmental levels. Seek technical assistance to complete this process from civil society groups with existing relationships with local communities, including CEGSS/REDC-SALUD.
- Provide ongoing accompaniment and follow-up to strengthen CONRED committees at the community and municipal levels.
- Relevant government agencies must take responsibility for assisting communities to acquire land and materials for the construction of emergency shelters.
- Provide resources and expertise through relevant government institutions to rapidly build or strengthen infrastructure in and around communities to mitigate damage caused by extreme weather events (e.g., building retaining walls, reinforcing small bridges, addressing poor road conditions).
- Coordinate with key government and civil society actors in the health, education, agriculture and public infrastructure sectors to provide recovery assistance to affected communities, with a particular focus on repairing and re-equipping damaged health facilities, schools, and rehabilitating agricultural land.
- Urgently address the many deficiencies in the capacity of the national emergency response system at the local level. (See Laboratorio de DatosGT's full report, including CONRED's SWOT analysis and Executive Summary of key findings).
- Create a technical roundtable to analyze the budgetary and political possibilities for the purchase of land for communities in high-risk areas.
- Develop proposals, with the full participation of the communities, to find solutions to the different emergencies suffered by the communities.

## **PARTNER COMMUNITIES IN THIS PROJECT**

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### **ALTA VERAPAZ**

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#### **Municipality of San Miguel Tucurú**

1. Caserío Tierra Blanca
2. Aldea Tambayal
3. Caserío Covadonga
4. Caserío Río San José

#### **Chisec Municipality**

5. Camposanto I
6. Las Mercedes I
7. Carreche´ Se´chiin
8. Aldea Sehix

#### **Municipality Panzós**

9. Pueblo Nuevo
10. San Vicente I

#### **Municipality Cobán**

11. Yalicar

#### **Municipality Santa Catalina La Tinta**

12. Caserío K´antiha´
13. Panlá II
14. Barrio Las Palmas
15. Barrio El Centro
16. Barrio Campo Nuevo

## **LIST OF PHOTOGRAPHED COMMUNITIES**

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1. Carreche´ Se´chiin
2. San Vicente I
3. Carreche´ Se´chiin
4. Las Mercedes I
5. Pueblo Nuevo
6. Las Mercedes I
7. Las Mercedes I
8. Pueblo Nuevo
9. Carreche´ Se´chiin
10. Aldea Sehix
11. Camposanto I

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