JÖNKÖPING UNIVERSITY
School of Education and Communication

Left Behind Before a Disaster: Local Voices, Global Aid, and the Struggle for Preparedness

A qualitative study of international cooperation in disaster risk preparedness in informal urban settlements in Guatemala City

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Abstract

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This thesis examines the dynamics of international cooperation in disaster risk reduction (DRR) within Guatemala City's informal urban settlements. Despite being one of the most disaster-prone areas, structural, political, and socioeconomic obstacles frequently hinder Guatemala's preparedness efforts. This study examines how disaster preparedness funding reaches vulnerable communities and how much local knowledge, and community engagement are incorporated into DRR strategies using a qualitative methodology that includes semi-structured interviews with representatives from NGOs, UN agencies, government institutions, and community leaders, in addition to field observations. The study maps stakeholder interactions and identifies issues with fund allocation, governance, and access using the Sendai Framework for Disaster Risk Reduction and Actor-Network Theory as analytical lenses. The findings point out a complex aid environment, community engagement strategies in disaster preparedness, and a lack of incorporating local perspectives into decision-making. The impact and inclusivity of DRR initiatives are decreased when stakeholders avoid at-risk communities, even though some exhibit robust partnerships and funding flows.

Denna studie undersöker dynamiken i det internationella samarbetet för katastrofriskreducering (DRR) i Guatemala Citys informella urbana område. Trots att Guatemala är ett av de mest katastrofdrabbade länder, hindrar ofta strukturella, politiska och socioekonomiska Guatemalas beredskapsinsatser. Denna studie undersöker hur finansiering för katastrofberedskap når utsatta samhällen, samt hur mycket lokal kunskap och samhällsengagemang som inkluderas i DRR-strategier. Studien baseras på en kvalitativ metod som inkluderar semistrukturerade intervjuer med representanter från icke-statliga organisationer, FN-organ, statliga institutioner och samhällsledare, utöver fältobservationer. Studien kartlägger aktörernas interaktioner och identifierar problem med biståndsfördelning, styrning och tillgång med hjälp av Sendai Framework for Disaster Risk Reduction och Actor-Network Theory som analytiska verktyg. Resultaten pekar på en komplex biståndsmiljö, strategier för samhällsengagemang i katastrofberedskap och en brist på integrering av lokala perspektiv i beslutsfattandet. DRR strategier genomslagskraft och inkludering minskar när aktörer undviker från riskgrupper, även om vissa uppvisar starka partnerskap och finansieringsflöden.

Key words: Disaster preparedness, DRR, Community engagement, Local Knowledge, International cooperation, Minor Field Study (MFS).

Nyckelord: Katastrofberedskap, DRR, Samhällsengagemang, Lokal kunskap, Internationellt samarbete, Minor Field Study (MFS).

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Abbreviations

ANT	Actor-Network Theory
CBDRR	Community Based Disaster Risk Reduction
COCODE	Consejo Comunitario de Desarrollo
COMUDE	Consejo Municipal de Desarrollo
CONRED	Coordinadora Nacional para la Reducción de Desastres
DRR	Disaster Risk Reduction
LAC	Latin America and Caribbean
LK	Local Knowledge
SEGEPLAN	Secretaría General de Planificación y Programación de la Presidencia
SFDRR	Sendai Framework for Disaster Risk Reduction

1. Introduction

Risks, disasters such as landslides and flooding, and their impacts are growing while the capabilities and resources are insufficient to address them. Over the past 20 years, there has been an increase in the type, number, impact, and recurrence of disasters, leading to more types of risks than ever before. Therefore, a widening gap exists between losses, damage, and the capacities and resources to address, reduce, and prevent them. Climate threats are increasing, ranging from the most extreme to extensive and everyday events, exacerbating risks and disasters. This hinders the achievement of the Sustainable Development Goals 2015–2030 (SDGs) (UNDRR, 2024).

Latin America and the Caribbean (LAC) are the second most disaster-prone regions in the world (UNDRR, 2024), after Asia and the Pacific region, which are the most disaster-prone areas (UNEP, 2025). Between 2000 and 2022, 1,534 disasters affected 190 million people in LAC. These disasters affect the poorest, most vulnerable, and marginalized populations (UNDRR, 2024). This is true in countries like Guatemala, which is highly prone to several natural disasters that significantly affect the Guatemalan population (BGS Press, 2018). Rapid urbanization due to internal displacement from the rural areas in Guatemala has led to many people living in vulnerable informal urban settlements in Guatemala City. These informal urban settlements are frequently affected by landslides, mainly associated with earthquakes and weather-related (Wisner et al., 2003, p. 280).

The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030 is a guide and reference for stakeholders to seek solutions and commit to addressing disaster risks. However, solutions are constrained by insufficient disaster risk reduction (DRR) investment. To reverse this trend, identifying gaps in DRR-dedicated budgets and incorporating DRR strategies must be strengthened to be part of sustainable development investments. Amidst this lies an opportunity to acknowledge and, with the right tools and commitment, protect communities and reduce losses. Addressing these imbalances is necessary to reduce the burden of disasters on people and economies (UNDRR, 2024).

This context highlights the significance of disasters, risks and their impact on human lives, community resilience, and the future of sustainable urban development. There is an urgent need to understand DRR efforts implemented locally, especially gaps in international aid directed at informal urban settlements. In Guatemala City, individuals living in informal housing have heightened vulnerability and the risk of exposure to disasters such as landslides. Exploring how community resilience strategies are developed and implemented to build preparedness and resilience against risks and disasters is essential.

This study investigates stakeholder interaction and international funding for DRR in Guatemala City's urban informal settlements, particularly to what extent which international aid and funding reach communities at risk. It underscores the crucial role of disaster preparedness, community engagement, and local knowledge (LK) in reducing vulnerabilities in a disaster-prone area. The study examines how far stakeholders integrate community engagement and LK in disaster preparedness initiatives. The study identifies gaps and opportunities in internationally funding DRR initiatives at community level.

2. Background

This section will give a background about the Guatemalan context, followed by a short introduction on urban risk and vulnerability, to finally give a short description about the DRR's stages.

2.1 The context of Guatemala

The Republic of Guatemala is in the most northern part of the Central American isthmus. It shares borders with Mexico to the West and North, with Belize to the East and the Gulf of Honduras, the Southeast with El Salvador and Honduras, and the South with the Pacific Ocean (WorldBank, n.d.). According to its last census, the Republic of Guatemala has a population of 16,346,950 people, where approximately 3,000,000 people live in the Department of Guatemala (Instituto Nacional de Estadística, 2018, 2020).

Due to its unique geographical location, Guatemala is prone to several natural hazards, such as earthquakes, volcanic eruptions, tsunamis, landslides, floods, droughts, ground collapse, hurricanes, and tropical storms. Thus, these natural hazards have a significant impact on the people living in the country, affecting their livelihoods, economic growth, and lives (BGS Press, 2018). In 2024, the WorldRiskIndex categorized Guatemala as ranked 44 globally. According to the most recent Humanitarian Needs Overview, approximately 75 % of Guatemala's population resides in regions vulnerable to extreme weather events (Global Communities, 2024). Its vulnerability is exacerbated by other significant factors such as increased urbanization, rapid population growth, highly vulnerable physical infrastructure, and limited capacity to cope with natural disaster risks (WorldBank, n. d.).



Figure 1. Guatemala in Central America. (Andersson et al., 2025)

These contributing factors have historically shaped the country's disaster vulnerability. A notable example of this is the major earthquake of 1976. During this event, people living in informal urban settlements and Mayan Indigenous people living in poor settlements in Guatemala City had the highest mortality rate. In contrast, the middle-class homes that were better protected and were in safer sites suffered less damage and had a faster and better recovery. Thus, until today, Guatemala City's poor have been trapped in a vicious cycle, where limited access to social and self-protection measures has left them highly vulnerable to future disasters (Wisner et al., 2003, p. 9). In that sense, people living in informal settlements face the highest mortality rate (Miles et al., 2012).

As mentioned above, a large part of the population is concentrated in the department of Guatemala, which is the largest concentration of inhabitants, reflecting 20,2 % of the population. The Department of Guatemala is divided into 17 municipalities, including Guatemala City. The most significant density of people is located within Guatemala City, where 57 informal settlements have been identified, several of them located in medium- and high-risk areas (TECHO-Guatemala, 2021).

2.2 Urban vulnerability

Rapid urbanization and demographic growth in cities of the Global South have been characterized by being the place of the urban and migrating poor. Due to the rapid economic growth and the rise of the industrial and service sectors, people moving to cities from rural areas primarily depend on low-paying jobs and live on minimum wages that are insufficient to support a large family. These socioeconomic factors frequently lead to the need to cut housing costs; thus, in these informal settlements, a common approach to reducing housing expenses involves critically minimizing or eliminating the costs related to acquiring land and securing building permits, resulting in unplanned, unauthorized, and vulnerable settlements. (Miles et al., 2012).

In this manner, informal settlements can be defined as inhabited areas that lack essential services and urban infrastructure, where residents typically have no legal claim to the land or their residence. These settlements often develop without adherence to planning or building regulations and are frequently situated in environmentally hazardous locations. Among these, slums represent the most marginalized and deprived form of informal settlements. They are marked by widespread poverty, decently packed and deteriorating housing, the constant risk of eviction, and violence (UN-Habitat, 2015, p. 1, as cited in TECHO-Guatemala, 2021; Miles et al., 2012). In a disaster, they may experience disruptions to basic services, damage or loss of

homes, diminished or lost livelihoods, increased food insecurity, and a quick rise in malnutrition (Baker, 2012).

2.2.1 Informal settlements in Guatemala City

As mentioned above, the 1976 earthquake had great consequences for the urban poor and their socioeconomic status within the city boundaries, exuberating their vulnerability throughout the years. The consequences of the earthquake were followed by years of civil war and genocide during the second half of the 20th century of Mayan communities living in the countryside. Those fleeing the civil war and genocide from the rural areas sought refuge and economic opportunities in the Metropolitan area of Guatemala City. Depicted by the lack of opportunities, people coming into the city faced lack of housing opportunities and housing policies, resulting in a large population living in informal urban settlement surrounding the city (Wisner et al., 2003, p. 280). These settlements are often constructed quickly as part of land invasion of government and private own land. Informal settlements insufficient adequate utilities and infrastructure, such as electricity and paved roads (see Figure 2) (Miles et al., 2012). In Guatemala City, landslides are common and mainly associated with earthquakes and weather-related events, such as hurricanes and tropical storms (Wisner et al., 2003, p. 280). The city's geomorphology presents a cemented soil characteristic that enhances landslide risks (Sitar & Clough, 1983).

Research on DRR has shown that the extent to which natural hazards develop into disasters, is contingent upon the interactivity between nature and humans. Although natural hazards are highly probable, not all communities face the same challenges and are equally at risk of damage. Consequently, it has been determined that disasters are a function of both 'Hazards' and 'Vulnerability' (Disaster Risk (R)= Hazard (H) x Vulnerability (V)/ Coping Capacity (C)). Vulnerability encompasses a range of interrelated social, economic, environmental, human, and physical factors. In all its dimensions, poverty is the most significant factor contributing to high vulnerability to natural hazards, regardless of geographic location (Shaw & DasGupta, 2017, pp. 13–14).



Figure 2. Picture of informal urban settlement in Guatemala City. Source: authors

2.3 Stages of disaster risk reduction

DRR aims to reduce vulnerabilities and disaster risks, prevent human loss, and increase communities' resilience. Within DRR, Disaster management is a process that includes cyclical and overlapping stages. Overall, disaster management consists of four phases: preparedness, response, recovery, and mitigation (Tay et al., 2022).

According to Tay et al. (2022), DRR stages can be described as follows: *Preparedness* refers to activities before a disaster occurs, aiming to avoid possible consequences and prepare all relevant organizations and communities by learning from the past. Common preparedness activities include developing information

and communication systems, collaboration and coordination among organizations and individuals, planning physical networks, training and practicing relief services, and storing essential supplies and equipment.

The *response* stage involves activities implemented immediately after a disaster. Relief efforts are implemented to rescue and deliver basic supplies to the highest possible number of beneficiaries. This stage also includes restoring essential services and infrastructure as soon as possible. A significant part of the response phase also includes assessing the disaster situation, coordinating and collaborating among organizations and actors to achieve successful relief efforts.

Furthermore, *recovery* encompasses operations such as reconstruction and rehabilitation carried out in the aftermath of a disaster. The goal of this stage is to restore the area to its former state, addressing issues from a long-term perspective. Finally, *mitigation* involves activities undertaken before and after a disaster to reduce its impact. This can include adapting strategies, procedures, mechanisms, measures, regulations, and policies with the aim of decreasing social vulnerability.



Figure 3. Traditional disaster management cycle (adapted from Sawalha, 2020).

3. Aim and research questions

The aim of this research is to investigate and analyze the extent to which international aid and funding reach communities at risk in Guatemala City. We examine the roles and interactions of non-governmental organizations (NGOs), government institutions, aid agencies, community leaders, and UN organizations in reducing disaster risks. Additionally, the study addresses on how local knowledge and community engagement is involved in disaster preparedness efforts in decreasing vulnerability. By analyzing these interconnected aspects, the study aims to identify challenges and opportunities of internationally funded disaster risk reduction initiatives at community level.

3.1 Research Questions

1. To what extent do international aid and funding for DRR reach communities at-risk for disasters in Guatemala City?
2. How do stakeholders contribute to reducing risks in the implementation of community-based disaster preparedness strategies?
3. How do stakeholders integrate local knowledge and community engagement into disaster preparedness efforts?

4. Previous research

This section will provide insightful previous research done within the field of DRR and CBDRR, relevant aspects, concepts, and interactions that serve as a baseline for the study in question.

4.1 International cooperation in DRR

International cooperation is crucial for developing countries to reduce disaster risk and losses, particularly in funding, resources, and expertise. Gaborit (2022, p. 257) discusses disaster adaptation, which has yet to be prioritized in international funding and aid. Extreme disasters with high human casualties and heavy material damage lead to international attention and international emergency responses. Climate adaptation programs are currently limited in effectiveness, and investments to achieve this are insufficient. Due to decreased capacities, infrastructure, funding, and access to expertise, Global South countries are not as advanced and comprehensive in their resilience program against disasters compared to Global North countries.

Previous research has analyzed the effect of the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR), which was created to prevent new disasters and reduce existing disaster risks. Cabral-Ramírez et al. (2025, pp. 72, 77–78) analyzes the implementation of the SFDRR in Latin America and the Caribbean (LAC) and the progress and lessons learned from the framework. Inequality and vulnerability are hindering the effectiveness of DRR efforts. The vulnerability in urban areas, informal settlements, and socioeconomic are limiting and challenging the governance of DRR in the LAC region. SFDRR offers a systematic approach to DRR but also uncovers gaps, such as integrating local knowledge and involving diverse stakeholders. SFDRR highlights the significance of partnerships, which must adapt to the evolving nature of risks.

Additionally, resource allocation, visibility, and transparent reporting systems are important for the success of DRR initiatives. Moreover, the analysis considers the progress and interplay of SFDRR alongside the sustainable development goals in LAC. A successful implementation requires a comprehensive understanding of disaster risk and development, innovative governance, science-informed decision-making processes, cross-cutting capacity, trans-sectoral alliances, and commitment by all relevant stakeholders. The frameworks need to be integrated and coherent into national development planning to ensure and demonstrate progress for the benefit of society and in compliance with the goals (Lucatello & Alcántara-Ayala, 2023 pp. 206–207, 210; Cabral-Ramírez et al., 2025, p. 80).

Research indicated that while international cooperation is crucial for reducing vulnerability and building resilience, its effectiveness also depends on integrating top-down, bottom-up approach. Mulder (2023, p. 1) discusses, through a qualitative case study analysis of an aid project in Ethiopia, externally driven localization and the requirement of top-down, bottom-up aid. International organizations and national governments work with local actors to deliver local, community-based, participatory aid jointly. However, this is sometimes hierarchical, as external actors take the lead in project design while local actors implement it. Mulder (2023, pp. 16–17) highlights how top-down approaches persist in aid even though there is a need for a reform of greater localization and community participation. There is a global aid hierarchy, meaning that most efforts are to prove legitimacy and focus on satisfying the donors, government agencies, and leading aid organizations. The bottom-up strategies conflict with the top-down implementation of a project since there is legitimacy pressure and hierarchy.

4.2 Role of NGOs, Government Institutions, and International Agencies

The United Nations highlights the importance of stakeholder partnerships and cooperation in reducing risk and vulnerability. However, forming these partnerships comes with challenges, such as requiring strong commitment and a significant investment of time and resources from all stakeholders. While financial mechanisms are already in place across multiple countries to address disaster risks, response efforts, and recovery strategies, there is a greater need to enhance regional disaster preparedness through strengthened collaboration (Pereira-Rodriguez et al., 2021). Thus, international agencies and governments are crucial in organizing and funding DRR initiatives in Global South nations affected by climate-related disasters. In this matter, countries need to search for strategies to enhance multi-country cooperation in areas that foster initiatives for disaster preparedness.

In addition, a need for a multi-stakeholder approach has been highlighted in the implementation of DRR initiatives, projects, and programs. There is a growing need for multi-stakeholder involvement, cooperation, dialogue, local engagement, and renewed international attention. Hence, these aspects are crucial to bringing the transformative change needed to achieve local resilience and generate sufficient trust in climate disaster response (Gaborit, 2022, pp. 268, 270). Moreover, the SFDRR reflects on the significance of multi-sectoral and multi-stakeholder approaches compromising several stakeholders, such as intergovernmental organizations, civil society, the private sector, Indigenous people, youth, persons with disability, and marginalized groups. However, a current gap in stakeholder engagement, resource allocation, and governance limits the effectiveness of DRR despite the efforts to integrate SFDRR into national policies. There is a growing interest in coordinating approaches between international agencies, national governments, and community-based organizations to address DRR in the LAC region (Cabral-Ramírez et al., 2025, p. 73; Seddiky et al., 2020).

In Latin America, humanitarian action involves a complex ecosystem of stakeholders operating at various levels, with national governments playing a central role in disaster management and setting criteria for international engagement. Governments collaborate with NGOs, civil protection agencies, and international entities, drawing from a tradition of risk management at national and regional levels (Lucatello & Gómez, 2022). Thus, building these networks of stakeholders is imperative to create resilience against climate-related disasters, in which coordination among various actors is needed. The approach of "the whole society" and "all hazards" against disasters to build resilience and risk reduction inherently demands the involvement of various stakeholder groups, including national, regional, and local governments, as well as civil society and the private sector (Fjäder, 2021, p. 262). Although literature reflects on the importance of cooperation between stakeholders at various levels, there is still a gap in their roles, information, and good practice sharing.

The mapping of the several stakeholders has been portrayed earlier across several contexts and nations. In LAC, the national government plays a crucial role by primarily protecting their populations and meeting the challenges of assisting victims. In other words, they set the agenda and determine when to engage with other stakeholders. Civil protection organizations are crucial in emergency response, risk management, and shaping effective policies. NGOs, including those from the Global South, civil society organizations, and local communities, play a key role in humanitarian efforts by offering their deep understanding of local contexts. International organizations such as the WHO, EU, and the UN provide vital resources and support, though regional and historical factors influence their effectiveness. Meanwhile, regional cooperation mechanisms like Centro de Coordinación para la Prevención de los Desastres en América Central (CEPREDENAC), The Caribbean Disaster Emergency Management Agency (CDMA), and Union of South American Nations (UNASUR) enhance coordination and offer assistance to affected nations. At the grassroots level, local communities engage in dynamic, context-specific humanitarian responses that vary across regions, contributing significantly to disaster preparedness and recovery efforts (Lucatello & Gómez, 2022).

Moreover, Miles et al.'s (2012, p. 377) study on the mapping of stakeholders puts special emphasis on NGOs and government institutions' capacity for DRR in informal settlements in Guatemala's Metropolitan Region, revealing that while there is increasingly interest of investment and knowledge of every stakeholder's role, a small number of residents of informal settlements acknowledges institutions DRR efforts in their area. Thus, there is miscommunication and visibility among stakeholders of DRR initiatives towards vulnerable communities. To assess the existing disconnection among stakeholders, researchers used Actor-Network Theory to identify resource access issues and a greater need for improved communication and coordination among stakeholders.

4.3 Community-Based Disaster Risk Reduction (CBDRR)

Community members experience greater losses because disasters impact them directly. They are the first to face vulnerability during hazardous events. Therefore, communities that do not address their vulnerabilities present significant losses. Conversely, they have the most to win by actively reducing the impact of disasters on their surroundings. These assumptions led to the concept of community-based disaster risk management (CBDRM). However, planning, assessment, and response to disaster risks have, over the past few decades,

focused on top-down strategies, relying primarily on quantitative methods, focusing on assessing hazards, such as floodings, storms, droughts, and so on. Nevertheless, disasters disproportionately affect vulnerable communities, making locally driven disaster preparedness crucial. Developments in the field have emerged, and approaches to DRR have become more community based. Leading to efforts to implement disaster risk management strategies in the development of communities. Moreover, researchers such as Maskey (1989, as cited in Shaw, 2012, p. 3) have emphasized that disaster management should not be perceived as an isolated issue but rather integrated into the socioeconomic activities of local communities. In this manner, CBDRM emphasizes people's vulnerability against hazards and ability to cope with them. Integrating top-down and bottom-up approaches enhances and enriches strategies to tackle challenges and difficulties. For instance, integrating top-down strategies such as hazard mapping with bottom-down CBDRM approaches would enhance coping mechanisms and reduce vulnerabilities (Shaw, 2012, pp. 3–4; Wisner, 2006, p. 316). Over time, community-based approaches have evolved, leading to the development of Community-Based Disaster Risk Reduction (CBDRR), which emphasizes pre-disaster activities aimed at risk reduction within communities (Shaw, 2012, pp. 5–6).

Pandey (2019, p. 109) states that the CBDRR approach is crucial to DRR and management. As mentioned earlier, as communities are the first to face disasters, they have the most at stake and, therefore, are the ones that can more effectively work together to reduce, identify, analyze, treat, monitor, and evaluate disaster risks to reduce vulnerabilities. In other words, the people within the communities are the principal stakeholders in building resilience and sustaining DRR processes (Pandey, 2019, p. 109). In this sense, CBDRR is a way of building community resilience while considering local knowledge, cultural context, and socioeconomic factors instead of focusing solely on technical solutions (Hostettler et al., 2019, p. 1779; Shaw, 2012, p. 5). The inquiry behind integrating community-based strategies into the work of DRR is to foster societal learning, increase stakeholders' trust in outcomes, and strengthen their communities. Additionally, participatory approaches are vital in driving innovation and achieving sustainable change (Hostettler et al., 2019, p. 1779; Vasileiou et al., 2022 pp. 13–14).

Moreover, through a community-based approach, local communities are established, trained, equipped, officially recognized, and integrated into the national disaster management system. Disaster management systems and risk mitigation efforts are informed by risk assessments while also incorporating traditional community knowledge and coping strategies (Hostettler et al., 2019, p. 1780). Thus, researchers in the field of DRR have explored the importance of these aspects of CBDRR and LK. For instance, Trogrlić et al. (2021, pp. 1–3) problematize the importance of integrating LK by external stakeholders while implementing projects related to DRR, emphasizing how external stakeholders fail to successfully implement LK and engage communities in DRR strategies and initiatives. Other studies have focused on the empirical effectivity of CBDRR approaches implemented by external stakeholders, such as the Swiss and Honduran Red Cross interventions. A key finding is that recognizing LK enhances preparedness and fosters community cohesion (Sarabia et al., 2020, pp. 8–9).

There is a widespread consensus that a comprehensive disaster plan should be flexible enough to include LK and practices developed by at-risk communities, especially when local participation is recognized as a critical component (Marianti, 2008, p. 23; Shaw, 2012, pp. 5–7). Furthermore, research has demonstrated how LK and CBDRR initiatives result in being cost-effective and minimizing the need for external assistance, which is relevant to developing countries of the Global South (Trogrlić et al., 2021, pp. 1–3; Shaw, 2012, pp. 5–7; Breton, 2012, p. 306; Gero et al., 2011).

4.4 Research gap and motivation

Despite the fact that previous research has illustrated the importance of cooperation at all levels, there are some gaps in assessing people's experiences in these areas, in what way international funding reaches these communities and how international cooperation impacts at a local level. Specifically little research has been done in Guatemala. This thesis outlines some of the previous research in the field of international cooperation and DRR but also complements the field by investigating interactions of diverse actors at different levels and how the local communities in informal urban settlements engage in disaster preparedness efforts in decreasing vulnerability.

Moreover, although the literature shows the importance of CBDRR and LK, previous studies have primarily focused on community-led efforts, leaving a research gap in analyzing how external stakeholders perceive, adapt, and integrate LK within CBDRR initiatives. Thus, understanding the extent to which external stakeholders, including governmental institutions, non-governmental organizations (NGOs), and international agencies work to integrate and prioritize LK in disaster preparedness efforts.

5. Theoretical framework and analytical tool

The following section will present the theoretical framework and analytical tool for this thesis. In combination with the Sendai Framework for Disaster Risk Reduction and Actor-Network Theory will be used as analytical tools in the results and analysis section.

5.1 Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) is a key agreement in the post-2015 development agenda, aimed at protecting development gains from disaster risks. It seeks to significantly reduce disaster risks and losses in lives, health, and assets. While the State has the primary role in reducing these risks, responsibility is also shared with local governments, the private sector, and other stakeholders. Drawing on lessons from the Hyogo Framework for Action, the SFDRR includes 38 indicators for measuring global progress and sets seven global targets for 2030. It emphasizes priorities for States at all levels, namely local, national, regional, and global, to improve risk assessment, prevention, mitigation, preparedness, and response (United Nations Office for Disaster Risk Reduction, n.d.).

The priorities outlined below and their goals and subgoals will be useful to analyze the collected data by categorizing it under key goals and subgoals. This approach allows for a structured interpretation of how various actors, including international donors, governmental institutions, and local communities, align with or diverge from the strategic aims of the SFDRR. The selected framework will help us delve into the extent to which funding is allocated to disaster preparedness, that reaches communities at risk in Guatemala City, and how well local knowledge and community engagement are integrated into disaster preparedness efforts.

Priority 2 *Strengthening disaster risk governance to manage disaster risk*. This priority stresses the importance of disaster risk governance at the national, regional, and global levels to prevent, mitigate, prepare, respond, recover, and rehabilitate. It highlights collaboration and partnership. Priority 4 *Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction*. Given the rising disaster risks, it is essential to enhance disaster preparedness for response and establish capabilities for an efficient response and recovery at all levels. In order to build back better, the recovery, rehabilitation, and reconstruction phases are critical opportunities, as well as integrating DRR into development measures (United Nations Office for Disaster Risk Reduction, n.d.). These priorities and subgoals are the most relevant for the study since they address stakeholder cooperation issues, stressing the need to integrate local communities' voices and disaster preparedness strategies.

Table 1. SFDRR priorities and goals as key analytical focus

SFDRR priorities	Goals and subgoals as key analytical focus
Priority 2: Strengthening disaster risk governance to manage disaster risk.	**26.** Disaster risk governance at the national, regional and global levels is of great importance for an effective and efficient management of disaster risk. **Clear vision, plans, competence, guidance and coordination within and across sectors, as well as participation of relevant stakeholders, are needed. Strengthening disaster risk governance for prevention**, mitigation, **preparedness**, response, recovery and rehabilitation is therefore necessary **and fosters collaboration and partnership across mechanisms and institutions for the implementation of instruments relevant to disaster risk reduction and sustainable development**. **27.** (f) **To assign, as appropriate, clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-making through relevant legal frameworks, and undertake comprehensive public and community consultations**

	during the development of such laws and regulations to support their implementation. **28.** (b) **To foster collaboration across global and regional mechanisms and institutions for the implementation and coherence of instruments and tools relevant to disaster risk reduction**, such as for climate change, biodiversity, sustainable development, poverty eradication, environment, agriculture, health, food and nutrition and others, as appropriate.
Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction	**32.** The steady growth of disaster risk, including the increase of people and assets exposure, combined with the lessons learned from past disasters, indicates the need to further strengthen disaster preparedness for response, **take action in anticipation of events, integrate disaster risk reduction in response preparedness and ensure that capacities are in place for effective response and recovery at all levels.** **33.** (a) **To prepare or review and periodically update disaster preparedness and contingency policies, plans and programmes with the involvement of the relevant institutions**, considering climate change scenarios and their impact on disaster risk, and **facilitating**, as appropriate, **the participation of all sectors and relevant stakeholders.** **34.** (f) **To support regional cooperation to deal with disaster preparedness, including through common exercises and drills.**

5.2 Actor-Network Theory

Actor-network theory (ANT) is a philosophical approach and sociological methodology that considers every human and non-human entity as an actor. This theory was first coined in the field of science, specifically in Technology and Society (Giddens & Sutton, 2013, p. 851). The purpose of ANT was to trace several heterogeneous networks and interactions among actors that were part of the production of science and technology (Martin, 2000, p. 717). Thus, this premise concerns researchers such as Callon (1991, p. 132), who acknowledges the role of several interactions the social world does with the material one. In his theory development, it is explicit that non-human actors influence the creation of networks and their interactions. Hence, he defines these interactions as "actors define one another in interaction – in the intermediaries that they put into circulation." Callon's research of the French fishing industry is a notable example of the ANT, in which to understand the network between human and non-human relationships, it is imperative to understand not only the human social sphere but also how the non-human actors interact with the environment and affect the network (Giddens & Sutton, 2013, p. 851).

ANT is recognized as the sociology of translation, a theory that examines how power functions in practice. It claims that influential actors should be treated as participants in a network, like any other member (Law, 1992, p. 380). Initially, its origin was limited to interactions in scientific laboratories, leading to the assumption that its configuration could only function in those specific settings; however, Law (1992, p. 380; 1994, pp. 100–104) suggests that the application of the theory lies on the several orders, configurations, and interactions among actors in a network. Thus, it is stated that there is no difference between analyzing and describing the networks formed in various social settings. Considering human and non-human actors, this configuration of non-hierarchy in a network entails that society is a heterogeneous network of actors (Law, 1992, p. 381).

As stated above, it is imperative to highlight that human beings that conform to these heterogeneous networks do not solely create these networks from interactions with each other but through their engagement with a wide range of non-human elements. To this degree, as people have preferences for how they relate and connect, so do materials within these networks (machines, buildings, and texts). All these materials shape how the social world is constructed. Removed from the network, what is understood as social order would make no sense. ANT argues, therefore, that social order is not *natural* but produced through a mix of diverse, interacting elements (Law, 1992, p. 382). Taking into consideration the human and non-human components of social interactions, this allows for a deeper analysis of complex interrelations among various involved actors (Park & Kim, 2025; Michael, 2017, p. 40). This perspective shifts the analytical focus away from formal organizations and towards behaviors and interactions of actors

across both society and the material elements. The reason behind this approach is that to understand the roots of power and structure, the wider arrangement of elements that contribute to their formation must be examined (Martin, 2000, p. 717).

5.2.1 ANT elements and concepts

The development of ANT as a theoretical framework has created certain terminology that serves as part of a toolbox to analyze and understand the networks encountered and described. Thus, this terminology puts a name on the several occurrences and roles that happen within a network. In the case of this thesis, to illustrate and understand donors' various factors that influence their fund allocation behavior, and how these dynamics affect the heterogeneous network.

Within a network, several interactions happen simultaneously that shape the relationship among actors. However, to understand these interactions, it is imperative to understand actors (human and non-human) and intermediaries. In this manner, actors are problematized and become indispensable within the network, creating a link between them. It is, therefore, any entity that effectively defines and makes sense of a world populated by other entities, each with its history, identity, and interrelationships (Callon, 1986, p. 58; 1990, p. 140). Moreover, Callon (1990, p. 135) identifies a series of intermediaries that form interactions:

- Texts
- Technical artifacts/objects
- Human beings
- Money

To this study, texts may refer to laws, rules, and frameworks that govern the field of DRR and international development; technical artifacts may refer to a series of interventions applied by actors within the network, but they also refer to non-human actors, such as geographic position, weather-related events, informal settlements, and security concerns; human beings, that entail knowledge and expertise within the network; finally, money as a means of exchange, it requires something in return. In this sense, intermediaries are also part of a network of roles (Callon, 1990, pp. 135–138).

ANT highlights the products and processes of interactions among actors. A network is formed when actors and their interactions are connected. Translations are the primary product and process of interactions between actors, which develop during negotiations of common interests. In translation processes actors define each other according to their interests and desires. Moreover, translations are triangular and entail the involvement of a translator; hence someone that translates, something that is translated, and a channel in which the translation occurs (Callon, 1990, p. 142–143).

Convergence symbolizes the translation process and decides on an agreement within a network. It refers to the extent to which there is an existent alignment and co-ordination in a network. The higher the alignment and co-ordination within a network, the more its participants collaborate, and the less likely their status as active contributors is questioned. In other words, convergence does not entail that actors do implicitly the same things within the networks; rather it encompasses the degree in which their activities fit together despite their differences (Callon, 1990, p. 148). Aligned actors are those who share an interest in each other's activities and have successful communication generating a shared space (Callon, 1990, p. 145). On the other hand, there could exist disalignment in which actors in the network work by themselves without common goals (Callon, 1990, p. 145).

When there is perfect translation, actors in the network describe themselves, each other, and the intermediary connecting them in the same way (Callon, 1990, p. 145). The alignment and durability can lead to punctualization, and network segments can be seen as black boxes (Miles et al., 2012). The black box refers to complex systems with often overlooked internal workings. As long as the black box functions, the outcome of the endless network and its inner workings go unquestioned (Park & Kim, 2025). In other words, a strongly convergent and irreversibilised network can be treated as a black box, with behavior that is predictable and understood independently of its surrounding context (Callon, 1990, p. 152). Finally,

obligatory points of passage are actors that serve as intermediaries in a network or elements of a network, controlling access to resources and asserting credit for the network's success (Miles et al., 2012; Law and Callon 1992, p. 46, as cited in Martin, 2000, p. 719).

The theory is used to identify interactions and connections between actors in networks. The challenge of using this theory is to investigate actor networks and identify possible interactions and circulations that serve to create a network. The primary connections between actors in the networks are revealed by tracking flows. In other words, analysis using ANT can discover actors that are not interacting but should, actors in control of resources, networks that emphasize intense competition, and inappropriate or weak interactions in the network (Miles et al., 2012).

5.3 Operationalization of theories and analytical tools

ANT and the SFDRR were chosen since they help to reflect on how actors interact with each other and to what extent they live up to the priorities of international frameworks like SFDRR. These analytical tools also contribute to uncovering diverse elements and relationships within DRR. Thus, giving insight on interactions used by different actors in the process of international funding and the integration of local knowledge and community engagement. The SFDRR gives a standard structure of activities, priorities, and recommendations for DRR strategies and how they can be assessed. This framework will help categorize the findings under the key priorities and subgoals, especially Priority 2, *Strengthening Disaster Risk Governance,* and Priority 4, *Enhancing Disaster Preparedness and Building Back Better*.

ANT will be used as an analytical tool to identify the different actors (aid agencies, government institutions, NGOs, community leaders, and UN organizations) involved in funding and aid for DRR for at-risk communities in Guatemala City. This will allow to trace how the actors interact and influence each other. By using both the theory ANT and Sendai framework together, the analysis will identify the possible gaps and possibilities within DRR standards and how the networks of stakeholders operate and collaborate with each other. The combination allows a standardized process and critical assessment of the collected data, allowing for a deeper understanding of the perceived dynamics shaping DRR in Guatemala City.

6. Method

This section will explain the methodological approach and analysis process that will be used to analyze and describe the results. Additionally, it will include sections on sampling, limitations, and ethical considerations. This study employs a qualitative method to analyze the roles of NGOs, government institutions, and aid agencies in DRR. The chosen methods to answer the research questions posed in this thesis are semi-structured interviews and observations, allowing for a nuanced understanding of the subject matter.

6.1 Semi-structured interviews

Qualitative methods such as semi-structured interviews and observations seek to understand how people experience and give purpose to their own lives. In this manner, questions asked must be open-ended, allowing the interviewee to share detailed responses. This format enables them to express their thoughts freely, as they are encouraged to share personal accounts of events based on their life experiences or to offer insights from their professional expertise in their field (Bryman et al., 2021, p. 426; Valentine, 2005, p. 111).

For this study, semi-structured interviews offered a dynamic and systematic way of gathering information from experts in the field of Disaster Risk in Guatemala. Moreover, as the themes being studied lack perceptions, experiences, and information from professionals within the field, semi-structured interviews offered a way of getting first-hand information for later being analyzed. On the other side, as there is a clear and delimited focus, a semi-structured interview allows the authors of this study to explore specific issues in greater depth (Bryman et al., 2021, p. 428; Kvale & Brinkmann, 2009, pp. 32–33).

Semi-structured interviews must follow a structure such as working with key questions and themes. Key questions serve as a way of bringing into order the general ideas of the themes proposed in the interview (Valentine, 2005, p. 119; Bryman et al., 2021, p. 428). As mentioned earlier, to gather information about the

various respondents involved in this study, three interview guides were created to suit better the purpose of each stakeholder involved in the preparedness phase of DRR in Guatemala City. Each guide started with general questions before moving into more detailed topics, focusing on three main themes. The goal is to explore official strategies, practices, and the experiences of respondents during the preparedness phase (see Appendix I-IV).

6.2 Interviewing process, recording, and transcription

The interview process was conducted between March and April 2025. Most of the interviews were conducted in people's organizations' offices except for three specific interviews conducted via virtual rooms, such as Zoom and Microsoft Teams. All the interviews were recorded using a recording machine or, in some cases, cellphones, to later be transcribed using an AI transcription tool (Turboscribe). While using AI transcription tools makes the job easier, they are far from perfect doing the job; hence, it was compulsory to listen, read, and correct the parts where the transcription was done incorrectly by the software. The interviews had a time of approximately 45 to 80 minutes to ensure a manageable amount of data. The time of the interviews also made them manageable and easier to transcribe. Moreover, it is worth noting that in some cases, the interviews took a turn to other interesting themes that were not considered during the creation of the interview guide; thus, follow-up questions related to the research questions were made during the interview process.

Most of the interviews were conducted in Spanish (6), as it was the language the participants felt most comfortable with. The rest of the interviews were held in English (4) and Swedish (1). As one of the authors of this thesis has Spanish as their mother tongue, the interviews could be held in this language without problems. Moreover, the transcription was done shortly after the interviews. It is worth to mention, that the transcription of the interviews was corrected and later translated into English by the authors of this work. The job was also divided according to the language knowledge of both authors. During the interview process, one of the interviews was held without recording aid. Instead, notes were taken during the interview, and a transcription was made immediately afterward to ensure that nothing was missed from the interview.

6.3 Observations

To gain a more comprehensive understanding, the study also required on-site observations of informal settlements within the Metropolitan area of Guatemala City. The observation aimed to take field notes of the site and individuals' behavior or activities where the study is conducted (Cresswell & Cresswell, 2018, p. 302) (see Appendix V). The observation took place once on 24th March 2025, for approximately 3 hours. The observation was a participatory observation where the authors observed the community and engaged with Informants A and B. At the same time field notes were written down and pictures were taken of the community to capture the interactions and setting. The observation gives a nuanced illustration of the field studied. While one of the authors had the responsibility of interacting and posing relevant questions to the Informants, the other author had the responsibility to capture pictures, observe interactions, and document the field notes.

Observations served as a complement to the data gathered from semi-structured interviews. Moreover, as there was limited access to informal settlements and community leaders in Guatemala City due to security issues and ethical considerations, a small part of the observation gathered information from community leaders of a medium-risk site northeast of the historical city center. The information gathered from community leaders in this informal settlement was consensual and part of an informal discussion. The questions asked during the interactions with the community leaders were relevant and aligned with the research questions, thereby supporting the development of a more nuanced analysis and application of the theory and analytical tool. The observation enabled a deeper analysis through ANT, revealing how the stakeholders, both human and non-human, interact within the community on the ground. It also provided an understanding of local engagement, financial flow, and stakeholder interaction from the perspective of the residents. Given the informal urban settlements and the residents are the last to receive funding, the observation offers valuable insight into how these interactions and translations are conceptualized through ANT. Moreover, the observation provided valuable insights into how stakeholders engage with SFDRR, as well as the existing gaps. It should be emphasized that these informal discussions during the observation helped design the third interview guide directed at a formal interview with a community leader.

After the complete participatory observation, the authors translated the field notes into a compelling and readable narrative story. As stated above, the combination of methods to gather pertinent information about the research questions posed at the beginning of this study provides a nuanced analysis and understanding within the DRR field, international funding directed towards at-risk communities, and the integration of LK and practices in strategies and preparedness efforts. Although semi-structured interviews provided the factual experiences of representatives of three different sectors, the observation provided an informal yet natural source of information that can later be contrasted with the collected data (Kvale & Brinkmann, 2009, p. 143). Finally, observations and informal conversations during fieldwork often provide more reliable insights into the field place (Kvale & Brinkmann, 2009, p. 128).

6.4 Sample of organizations and respondents

Guatemala was chosen as the case for this thesis due to its high relevance and vulnerability to disasters. After selecting the case for the thesis, a sampling of participants was used for the interviews and observation. Snowball sampling is a technique within purposive sample where an initial small group is selected, and these participants then recommend others who fit the criteria (Bryman, 2021, pp. 378, 383–384). This method helps expand the sample size and facilitates recruiting individuals with specific backgrounds or experiences (Valentine, 2003, p. 117).

The sampling process involved selecting participants relevant to the research questions. An internet search on DRR in Guatemala and recommendations from the Instituto de Cambio Climático helped identify interviewees. Many representatives interviewed are part of the Guatemalan Humanitarian Advisory, this is relevant to note since they are highly qualified in the field of DRR, facilitating generalization for the thesis. Interviewees possess sufficient knowledge and insight, and as interviews progressed, participants referred others for sampling. Possible respondents were contacted via email for interviews. The organization CARE was visited on the spot to request an interview. Moreover, community representatives were contacted through existing networks, and all interviewees remain anonymous in the thesis.

In this study, stakeholders refer to NGOs, UN organizations and government institutions, aid agencies, and community leaders. In total, eleven interviews were successfully conducted. This involved: six organizations (three NGOs and three UN organizations), one government institution, two aid agencies, one community leader, and one consultant (see table 2). Some participants (UNICEF, FAO and OCHA) can be viewed as both aid agencies and organizations. This was considered, and the appropriate interview guide for the organization was selected. Finally, the consultant represents an organization and a government institution. There was also one observation which involved informal dialogues with two community leaders. The observation that took place 24th March 2025, and included informal dialogues with two Informants. In this study they are addressed as Informant A and B.

Table 2. List of participants

ID	Respondent	Role	Date of interview	Language
A	CARE (1)	NGO	12/03/2025	Spanish
B	Albert (1)	Consultant (Exp. In the private sector, NGO, government, and voluntary work)	18/03/2025	Spanish
C	CONRED (7)	Governmental officials	19/03/2025	Spanish
D	Swedish International Development Cooperation Agency (1)	Aid agency	20/03/2025	Swedish
E	IRC (1)	NGO	25/03/2025	English
F	Plan International (2)	NGO	26/03/2025	Spanish
G	UNICEF (2)	UN organization	01/04/2025	English
H	Benjamin (1)	Community leader	02/01/2025	Spanish
I	FAO (1)	UN organization	09/04/2025	Spanish
J	OCHA (1)	UN organization	11/04/2025	English
K	Spanish Agency for International Development Cooperation (1)	Aid agency	14/04/2025	English

6.5 Analysis of data

The next step involves initial coding after data collection, transcription, and translation. Initial coding began with skimming through all transcriptions, followed with a thorough review of the data to facilitate the later coding process. A coding scheme was created during this initial coding, with every code representing a specific color. The coding scheme encompassed open codes that refer to more general ideas and theoretical codes connected to concepts and terms relevant to the study. While coding, the authors let the empirical material guide the coding process and the emergence of new codes. When new codes emerged, a new reading of previous coded material was done (Bryman, 2021, p. 538). Examples of codes were network, agenda setting, institutional framework, local knowledge, and community engagement. The exact process followed for the observation's field notes. It is worth noting that data collection proceeded as scheduled; although data saturation occurred after the fifth interview, new perspectives emerged during the last three interviews.

After coding separately, the authors got together and compared the coding marks of the transcriptions. This extra step was done to achieve inter-reliability between both writers and reach a consensus on the different codes and perspectives in the material. The coding process was systematic and followed a meticulous organization of the found codes (see Appendix VI). This process of organizing the codes, similar to a framework approach of thematic analysis, helped to reorganize the codes more easily into themes and give them names (Bryman, 2021, p. 538). The results also followed a meticulous structural process in which first the results from the interviews and observation are presented as a baseline, to introduce the actor-network mapping and analysis. This division gives a comprehensive background to understand the interactions among stakeholders involved in DRR in Guatemala City. Moreover, these results give a nuanced perspective of how stakeholders interact with each other and how their responses align with SFDRR.

6.6 Limitations

The elaboration of this study presented some limitations that had to be taken into consideration. One of the limitations during the process of this thesis is the sampling method. However, it gave positive results in finding prospective respondents and organizations; it could have had the possible outcome of leaving out some important respondents and organizations that could have shared insightful experiences and

knowledge on the research questions. Another limitation connected to the selection of respondents is that in some cases, potential respondents with valuable work within the city were contacted; however, some did not answer the request emails. The Red Cross, a big actor within the DRR field and with valuable work in the Metropolitan area of Guatemala City, did not responded to the request for participation despite follow-up attempts. This pattern repeated itself in other organizations and aid agencies.

Although the language barrier was bridged by one of the authors of this study, it also poses a limitation. One of the authors did not have the opportunity to be engaged during half of the interviews that were conducted in Spanish. The information was later translated to the other author through reading the translated transcription. Lack of engagement during the interview poses that some information could be missed and corrections and new ideas needed to be filled afterwards.

Finally, the study's form changed during the elaboration of it. First thoughts of the elaboration of the study were scraped principally for ethical considerations of accessing communities at-risk in the surrounding areas of the city. As a result, the focus shifted toward engaging with NGOs, and institutional stakeholders that work closely with these communities. However, this limitation was addressed to some extent by getting access to a community and conducting observation and informal discussions with community leaders. While this adjustment ensured a more ethical approach, it may have also limited the direct representation of community voices in the data. Moreover, other limitations during the study were security concerns and logistical difficulties.

6.7 Ethical considerations

When people are involved in research, four principles should be followed: do no harm, to do good, autonomy, and to uphold justice. The study ensured that all participants are treated equally, and that the selection of this participants is according to their relevance to answer the research questions (Vetenskapsrådet, 2024, p. 58–59). In this manner, this study aimed to do no harm and do good, by researching an area of interest and taking into consideration different stakeholder's experience on international funding and building resilience.

Before each interview, a form of consent (see Appendix VII) was presented, and an opportunity to ask questions before and after the interview. The consent form included the aim and research questions to make sure that the participants are informed about the study and no deception is involved. The consent form also included ethical issues such as information about their volunteered participation, confidentiality and anonymity in data collection, agreement of recording of the interview, and awareness about withdrawal without further explanation. In one situation a participant did not agree to be recorded during the interview. This was considered and the interview was not recorded as requested. The consent form included contact information for the students and tutor for any inquiries. Each interviewee signed the consent form, which was available in English and Spanish.

Moreover, ethical principles include the relationship between the researchers and the participants. Ethical issues also need to be considered and the politics of the research, for instance the power relations and how it can impact the research (Bryman, 2021, p. 107). This thesis considers the perceived power relation that might arise when conducting this study in Guatemala. To minimize the effect of power relations, several factors were considered when conducting the observation. These were active listening, empowerment, inclusion, and identification of what could be perceived as dominance in communication. During the interviewing process, reverse power relations emerged, as the hierarchical structure in Guatemala allowed interviewers to treat us as inferiors.

7. Results/Analysis

In this section, the results and analysis will be outlined. First, this section includes findings from interviews and field observation to address the research question of this study. The section will be followed with stakeholders' network mapping, and an analysis of this mapping and actor interactions will be included. Through ANT translation processes, stakeholders' interactions are discovered. In line with ANT, the mapping captured the interactions between human and non-human elements. Finally, the findings are used

to examine SFDRR's Priority 2 and 4 subgoals. This structure allows for a more comprehensive and illustrative understanding of the stakeholder landscape and the interacting dynamics.

7.1 Governance and agenda settings

The governance and agenda-setting scenario in Guatemala's humanitarian and development sectors is characterized by a strong influence of international donor strategies, national government priorities, and operational constraints at the local level. These relationships shape how regions and projects are prioritized, financed, and executed across DRR several stages, such as preparedness, prevention, and mitigation. This section will aim to answer the following research question:

1. To what extent do international aid and funding for DRR reach communities at-risk for disasters in Guatemala City?

7.1.1 Donor-driven governance, government authorities and agenda setting

Donor agencies and government authorities play a central role in shaping agendas through mechanisms such as fund allocation, geographical preference, and thematic priorities that institutions, NGOs, and other organizations must be governed by. Other mechanisms to set the agenda for non-government institutions and residents encompass strategic frameworks and response plans that are important for the country's development. In this manner, one of the biggest agenda setters, therefore one of the most important stakeholders in DRR and its development in Guatemala, is the government authorities. Non-governmental organizations, an aid agency (AECID), and the UN system organizations revealed that they are reigned by the government thematic focuses in which they are divided into the priorities the government and the aid agencies have come to in an agreement. Thus, this sets the agenda based on the need assessment the government wants to prioritize at the moment, which drives the way in which funds are allocated in different themes and geographical spaces within the country's boundaries. Respondent K (AECID) explains:

> The Spanish cooperation work[s] based in an agreement that is signed between the Guatemalan government and [the] Spanish cooperation, in which also Spanish NGOs participated, in the elaboration of the framework. *Marco Asociación País* [Country Partnership Framework], which could be called like a framework of association for the country. – Respondent K (AECID)

Although this dynamic is repeated across NGOs, the UN system and AECID, the Swedish International Development Cooperation Agency (Sida) follows other type of dynamic in deciding what thematic priorities are going to be focused, and which geographical territories the funds will be allocated. Respondent D (Sida) noted that Sida's funding approach emphasizes cost-effectiveness and supports projects already backed by other international partners, such as UNICEF, this indicates a governance model that values synergy and impact efficiency.

International cooperation and its agenda are also affected by geopolitical and regional interests. Hence, AECID's cooperation is motivated by a commitment to the legacy of the colonial past in Latin America. Although the European priorities are shifting away toward Africa and the Middle East due to migration issues, AECID continues to channel its aid to the LAC region. In order to keep this geopolitical interest and maintain a good parentship with the Central American countries, AECID's decides to allocate some funds in specific thematic priorities already agreed with the government of Guatemala. Their current agenda in the country focuses on child malnutrition, gender-based violence, and human rights. However, Respondent K (AECID) acknowledges that DRR is not a strategic priority, even if it appears an essential element in some funded projects.

On the other side of the spectrum, Sida's cooperation towards Guatemala emphasizes the importance of working with connecting the Guatemalan and the Swedish private sector. This trend reflects a paradigm shift in international cooperation and the exchange of parentships between countries, showing a growing role of public-private collaboration. This shifting in how development work and fund allocation is being directed is being perceived by NGOs working in the sector in Guatemala. Respondent D (Sida) expressed this dynamic as:

> The [Swedish] government is determined in working with private sector […] The embassy's survival depends on working with private sector […] The Swedish-Guatemalan private sector is important for Sweden's interests. – Respondent D (Sida)

However, the view is that the system of international cooperation and funding allocation from aid agencies and agenda setters is perceived to be staggered by a lack of openness and a traditional strategic framework. In this manner, Respondent E (IRC) has expressed how the funding dynamics are changing. Thus, while some aid agencies, such as the EU, are dedicated to providing humanitarian aid and development work projects, they are increasingly interested in gaining benefits, such as how this funding allocation will contribute to their investment portfolio. While interest in DRR strategies is growing, many stakeholders remain hesitant to allocate funds for disaster preparedness initiatives and are cautious about investing in related projects.

7.1.2 Geographic and structural constraints

A strong emphasis is placed on reaching underserved rural regions over urban areas. Although multiple actors recognize the needs of urban risk and vulnerability, several NGOs and aid agencies show a strategic avoidance of working in Guatemala City. In several cases, this logic is due to structural constraints; for instance, Plan International's operating model excludes urban risk-related projects. Simultaneously, other constraints include the general assumption of aid agencies that urban communities are more likely to be reached by the scope of governmental institutions.

In alignment with these challenges, there is often a mismatch between Guatemala's priorities and those of donors. As Respondent G (UNICEF) exemplifies, it is challenging to connect emergency priorities to those of potential donors. This type of governance choice reinforces the capacities of people living in urban areas, which are generally the most needed; however, this may contribute to the neglect of urban communities in high-risk zones in marginalized areas of Guatemala City.

> Eventually, we have a challenge aligning the priorities in emergency from Guatemala to the priorities of the potential donors. For example, donors want to attend to the children on the move. But it's not a priority for Guatemala. [So], it's a challenge. Or in the post-pandemic case, for example, Guatemala is a priority to attend the children on the move. [But] it's not for the donor. – Respondent G (UNICEF)

Furthermore, this strategy of geographic targeting has increased, in which many agencies now allocate funds with specific location directives. Thus, NGOs compel to follow donor geography rather than their own strategic comfort zones. While this ensures alignment with the perceived needs layout by other agenda setters, it reduces local autonomy in agenda setting and may skew need-based targeting in other areas, such as in Guatemala City. As respondent F (Plan International) noted:

> If you focus only on your comfort zone as an organization, then you will hardly be able to access funds from a donor who has done studies and sees that there is a major need there and the focuses its entire budget there. – Respondent F (Plan International)

This trend in focusing on geographical constraints aligns also with major characteristics in the way some aid agencies are allocating their funds. In this manner, instead of looking at specific geographical places, aid agencies are focusing on zooming out their funds to the whole region. Respondent J (OCHA) expressed that ECHO, one of the biggest aid agencies in the region, had changed its strategy to work more on a regional level rather than working in geographically specific regions. This has had its downturn in which the fund allocation is no longer localized and cannot help those who are most in need. On the other hand, as its focus has shifted from being local to being regional, their agenda is more focused on strengthening the institutional framework rather than implementing projects to increase community's capacities as it has been in the past. Respondent J (OCHA) further explains this shift as follows:

> So, the focus of the funding has been dramatically changing from local to national to regional. My point is that disaster preparedness funding is becoming less and less, unfortunately. Because, number one, in the previous way that they normally do it, maybe the impact, maybe there is no funding for going to the 340 municipalities in Guatemala, so the impact was limited to a few municipalities. But the impact in terms of capacities and effectiveness of the response were huge […] But I can imagine ECHO

> decided to go in that scale maybe because with the same money, they are trying to reach more beneficiaries, but not from local level […] because especially now that the US funding was eliminated from humanitarian response issues. So, there is no money right now for disaster preparedness. – Respondent J (OCHA)

Moreover, the intention of helping in the institutional framework development of the country is a shared interest from other organisms within development work and organizations focusing on DRR strategies. Thus, as mentioned earlier, the strategy that donors such as ECHO follows is replicated by other NGOs and the UN system organizations. In this manner, instead of allocating funding directly to communities to help them develop strategies or infrastructure, the funds are directed to reinforce the capacities the government has to fill the gaps in themes concerning DRR and other priorities layout by the government of Guatemala.

7.2 External and structural barriers

The collected data presents several external and structural barriers worth highlighting when analyzing funding for disaster preparedness in Guatemala City. These barriers, such as aid cuts, lack of prioritization in disaster preparedness, transparency, and corruption, affect the extent to which the funding allocation reaches the at-risk communities in Guatemala City. This section addresses research question:

1. To what extent do international aid and funding for DRR reach communities at-risk for disasters in Guatemala City?

7.2.1 Aid cuts in disaster preparedness

> […] no other donors are investing clearly or aggressively in disaster preparedness. Actually, if you ask me who is investing in disaster preparedness in an evident way, I can say almost nobody. – Respondent J (OCHA)

The collected data indicated a decline in aid. The funding context is changing, which some respondents recognize as worsening. The resources are limited, and the aid is decreasing from how it was funded 20 or 30 years ago. This is pointed out to be devolving and not evolving. The data revealed that USAID cut-offs have greatly impacted other stakeholders' operations and the funding for informal urban settlements. According to Respondent D (Sida), USAID have had 50 percent of aid allocation in Guatemala and the future seems uncertain. In addition, other agencies have also been focusing elsewhere, rather than on America and Central America. The aid cuts have led to several barriers. Respondent J (OCHA) reported that this situation has led to the firing of many staff working on DRR in various organizations, as well as the cancellation of several projects:

> […] 11 organizations have fired around 271 people, staff, people working with DRR, at the headquarters or at the local level, or even smallest organizations, like implementing partners, they totalized around 271 people being fired. And they had to cancel 15 projects for the amount of $18 million. That's what they reported. – Respondent J (OCHA)

Furthermore, the data disclosed that the involvement of disaster preparedness in funding is recent. After the eruption of the Fuego volcano in 2018 in Guatemala, several stakeholders recognized the crucial role of preparedness before a disaster. In recent years, preparedness has become a priority for several stakeholders, both among agenda setters and at non-governmental level. However, some events, like the El Cambray Dos disaster in 2015 in Guatemala City, did not result in the same outcomes as the volcanic eruption, despite its high mortality rate. However, most funds are still dedicated to response and post-disaster recovery. The funding for disaster preparedness is becoming less and less available for organizations. Respondent J (OCHA) pointed out that after 2020, no more funding will be put into urban risks. Respondent A (CARE) emphasized that much needs to be done and built. In this sense, there are never enough resources when there is a scenario to prepare for. Respondent E (IRC) recognized the awareness about preparedness but highlights that preparedness and anticipatory actions are viewed as very dangerous since there is never a guarantee of the outcomes. In addition, Responded J (OCHA) highlighted that there is not any donor that is clearly investing in disaster preparedness. This view is shared with Respondent B (Consultant), which also recognized that investment in response is more acknowledged than in preparedness:

> So, definitely the mobilization of funds for response is much faster because you have visuals of what is going on, there are victims, there are houses destroyed or flooded, etc. So, the funds have the visual, you need them because they were definitely flooded, for example. On the other hand, in terms of preparedness and capacity building, it is a bit more complex, even for the requesting organizations, to demonstrate why that community needs to be prepared for such vulnerability, for example. – Respondent B (Consultant)

According to Respondent C (CONRED) it is pointed out that Guatemala is evolving regarding disaster preparedness, and the approach to risk management has evolved over the past 20 years. The risk management processes are linked to development processes. Every event or emergency leaves a development debt, affecting the most vulnerable populations. Respondent F (Plan International) illustrated that the change in leadership within SECONRED has led to difficulties where the new institutional framework is there to respond to disasters, but overlooks the importance of reducing risk; thus, it is necessary to work on disaster preparedness and mitigation processes. It is also noted by Respondent J (OCHA) that if someone invests in disaster response, it is implicitly investing in disaster preparedness. Disaster response cannot be executed without preparing the response in the first place. Several respondents highlighted an increased awareness and interest in preparedness and not just the response stage of DRR. However, the data collection identified that several stakeholders are still executing more projects in response than preparedness. Respondent I (FAO) recognized the importance of investing in preparedness:

> So there is a lot of interest in that, because they said that if we work, let's say, in anticipatory action and preparedness, you spend a dollar, and if we work in response, you spend 7 dollars each, so they see that better use of resources. – Respondent I (FAO)

7.2.2 Transparency and corruption

Guatemala has undergone eight years of political decline, with a previous governments marked by corruption and lack of transparency. The current administration is considered an improvement but lacks political experience. Respondent D (Sida) pointed out that Sweden is considering working with the government, given its reputation as more capable and reliable. Several respondents recognize the government and their coordination as complex and corrupt. It is also noted that there are barriers that the government faces from one branch of the government to another. This makes coordinating even more difficult, especially in Guatemala. There is a coordination challenge between the municipal governments and the national government as well as the linkage to CONRED, who work in the area of DRR. Respondent E (IRC) points that a project led by a single governmental organization can present challenges; however, for an NGO itself, such circumstances are not as challenging to manage. Transparency and corruption have been noted to play a significant role in funding for disaster preparedness in Guatemala City. This transparency is seen at different levels, both governmental and non-governmental:

> So, this transparency does not exist. So, unfortunately, both the government and the non-governmental organizations, as well as the private entity, they themselves have to collect their data to justify their project. They themselves collect their results during the project and they themselves evaluate themselves post-project. So there is no such neutrality as such. Totally, because that's what I'm telling you, not only here in the urban area, I have seen first hand projects that I'm telling you, you go to the report because in the end many of them publish it for transparency reasons. You go to the final report and you say, wow, what a beautiful [picture], but you go directly to the actual project and you realize that it doesn't really match. In terms of physical and then you start to analyze, for example, the cost of materials. You quoted me 100 dollars for each sheet and you used one dollar sheet, for example. Then you come and say there is no match here, there is no congruence. – Respondent B (Consultant)

Furthermore, Respondent B (Consultant) expressed that in cases where a stakeholder decides to work with the government, funds directed to the government pose a challenge. The government's national policies also are a challenge since they do not comprise a clear policy. Another identified challenge is that there is no continuity within the government. Although a plan is established it is not followed, or it is so vague that almost any aspect could be integrated into the planning. Moreover, there have been cases where government organizations and NGOs keep the aid. Respondent B (Consultant) also pointed out a case where an NGO would come to the community, take a picture, and leave, without helping or giving the aid to the community. Respondent H (Community leader) described cases where stakeholders channel the funds through the

Municipality. In these instances, the Municipality either retained the aid or executed the project without disclosing the source of the funds:

> Municipalities in Guatemala are very subjective. It is mostly an appearance and a political fabric. In other words, I set up a nice workshop, I am giving this, I am giving that. Yes, there is an outlay, even if the amounts are exorbitantly, but they did do something. But they are not covering the real need. It is simply to entertain people and make you see that they are giving you something, but it is mostly to keep you happy to secure your vote for the next time. The NGOs in Guatemala are few that really help and help humanitarily. Most of them always look for projects and see the poor as a resource to exploit in order to enrich the NGO and put them in a favorable condition. But that it really has that social projection of being able to eradicate and help people so that after the crisis people are no longer so vulnerable, but are self-manageable in their processes, that does not exist. There is no before, there is no before, there is no after. It is only the band-aid at the moment. – Respondent H (Community leader)

In addition, due to the factors highlighted under title 7.1.4, the aid reaches only somewhat privileged sectors in the urban area. The official sources do not reflect the real need, and the most vulnerable people in urban areas are not the priority. The national data collection and analysis are not transparent. Respondent B (Consultant) highlighted that a limitation of NGOs is that the official information is complicated to acquire in Guatemala. If acquired, it might be information that does not support or justify the request for these funds. Respondent D (Sida) notes that some data is missing and that the capacity for data collection is low. Hence, it is challenging to prepare for a disaster when there is no transparent data collection.

7.3 Community and local involvement

Community engagement and LK are imperative to implementing projects addressing DRR and disaster preparedness strategies. However, this implementation phase only concerns some agenda setters, such as UN system organizations, specifically UNICEF and FAO, who have had projects within the city, and government institutions like CONRED, the Municipality, and COCODES. Moreover, a stronger emphasis is also placed on NGOs that implement projects at the community level and use LK and community-based strategies to reduce risks. OCHA, an agenda setter, emphasizes the importance of LK and community engagement in project implementation. Additionally, as the ANT network revealed, some stakeholders consider LK and community engagement; however, their inputs in the city are limited or non-existent. This section will handle the following research questions:

2. How do stakeholders contribute to reducing risks in the implementation of community-based disaster preparedness strategies?
3. How do stakeholders integrate local knowledge and community engagement into disaster preparedness efforts?

7.3.1 The importance of LK and community engagement in CBDRR

A recurring theme from the respondents across the data collection was identifying residents as primary knowledge holders and decision-makers in DRR and development initiatives. As residents are the primary stakeholders affected by their surroundings and the environment, they are the most affected and knowledgeable about their territory and conditions. Organizations, such as IRC, CONRED, UNICEF, and FAO, consider LK in their implementation phase and adapt it to the context in which they work. This includes adapting interventions to reflect local priorities, integrating traditional risk signals, and ensuring that programs are culturally appropriate and context-specific. In this manner, Respondents I (FAO) and G (UNICEF) illustrate how their organizations adapt to the local context and value residents LK by using culturally specialist focal points and evaluate how residents adapt traditional practices into their context, such as planting a specific type of trees or plants to prevent landslides and soil erosion. Organizations follow these strategies of implementing LK and later implement it into their methodological bank for future projects. However, NGOs and other stakeholders have recently considered LK and cultural aspects in disaster preparedness strategies. Respondent B (Consultant) exemplifies that this is a new development in NGO and government organization work, as several years ago, project implementations were concerned with following a set of criteria rather than contemplating residents as active actors of change. As LK is becoming more recognized, Respondent J (OCHA) illustrates strategies residents use their knowledge to identify weather patterns:

> These local people maybe don't have satellite images. But they have other ways to control, to monitor weather or aspects to interpret or to understand what's going to happen. If they see the ants collecting food, they might say that rainfall is going to start in one week. If they check the birds flying from north to south or south to north, they know what's going to happen. So local knowledge needs to be considered. – Respondent J (OCHA)

In the context of LK, the cosmovision was a recurring theme, which in the Guatemalan context is a crucial part of considering traditional practices and implementing them into DRR strategies. This aligns with cultural frameworks integral to community life and environmental stewardship. Respondents E (IRC), C (CONRED), I (FAO), and G (UNICEF) all stress the importance of aligning interventions with cultural beliefs and practices, especially regarding land use, disaster predictions, and environmental management. However, as Guatemala City is becoming more cosmopolitan, traditional practices are not as strong as in rural areas. Consequently, Respondent B (Consultant) expressed that organizations are trying to implement traditional practices that have succeeded in other regions to reclaim ancestral practices that were in harmony with nature into the city. In this manner, Respondent E (IRC) explains how they integrate traditional practices into their work:

> And so, they have this whole thing called Cosmovisión which is how they protected the environment for centuries, even before the Spaniards got here, and they promote that, and then we try to say, okay, there's media gap here, and we can help you with this. And we finance them, and then we learn from them, and how to adapt to Guatemala, to better respond, and not just kind of imposing on them […] And I like it when they tell us, like, don't bring me your methodology. – Respondent E (IRC)

Community engagement is essential for implementing projects in vulnerable communities while considering LK. Several stakeholders interested in engaging with the community emphasize this project implementation phase. Thus, most stakeholders noted that co-design is a crucial strategy to engage with the community, simultaneously hear their points of view, express their concerns, and share what they are already implementing. According to Respondent E (IRC), co-designing indicated that this is a good strategy to build trust with the community and find gaps to fill within the community's already established capacities. Strategies to co-design highlighted during the data collection were focus group discussions, consultations, and adaptation of tools and delivery to local norms and preferences.

Moreover, the data reflect significant efforts to involve women, youth, and diverse local actors, such as teachers, church leaders, and community organizations. Women often play a critical role in DRR and health initiatives because of their central role in the household and community life. Youth also have an important role in community engagement and uniting the community to drive projects forward. Additionally, community engagement is often voluntary, driven by leaders who are respected, motivated, and willing to learn. The willingness of especially women to be part of DRR initiatives is demonstrated by stakeholder like Respondent I (FAO):

> […] once again, the role of the woman returns, the woman here in the peripheral communities is the one who at the end of the day attends the most [meetings], she is the one who participates the most, she is the one who gets involved [and] is the one who complies the most. The ladies, she arrives, even if she comes with her little boy, with her little girl, so it is really to enhance the role of the woman, so she participates more. And well, also in the area of food security, housing, hygiene and health, it is the woman who is more concerned, one is more involved. – Respondent I (FAO)

Talking about the issue on LK, the observation, informal dialogues with community leaders, and the formal interview with the community leader disclosed that LK is not considered by competent authorities. This observation contradicts with previous findings on considering LK and adapting them to DRR practices and disaster preparedness initiatives at local level. It was expressed during the observation and the informal dialogues with community leaders that the CONRED and other pertinent institutions do not take into consideration their LK in the different stages of DRR regarding the knowledge they have of their settlements. In this manner, Informant A expressed that there is no negotiation table for them to discuss the problems they are facing and the different risks that affect their community. "Our voices are not heard," they stated, "we have no voice nor vote." Moreover, community leaders stressed the non-involvement of

government institutions in investing to reduce risks in their community. To illustrate the situation, an anecdote derived from the observation can be presented, highlighting the apparent lack of involvement of the Municipality in this particular settlement.

> Furthermore, it was shared to us that CONRED hands out pamphlets with information on evacuation, and where to go in case of a disaster. Earlier on these pamphlets used to be informed that the Municipality had responsibility over the community; however, this is not true anymore, the information on the pamphlets do not reflect the Municipality's role or responsibility for the people living there. – Observation 24/03/2025

Moreover, the observation, informal dialogues with community leaders, and the formal interview with the community leader also disclosed organization and community engagement among residents in the settlements. People living in these places come together to implement interventions in disaster preparedness, including own designed projects, gatherings, and raising awareness about their problems to pertinent institutions. This shows the active participation and willingness of residents to develop their environment (see Appendix V).

7.3.2 Preparedness interventions

Preparedness interventions implemented by stakeholders contribute to reducing risks for the community. Several respondents implement a variety of preparedness interventions with training sessions, consultations, or advising residents, to create awareness in risk management, people's vulnerability in their communities, and prevention training. This variety of training courses is implemented directly in the community, as demonstrated by Respondent C (CONRED), which offers a website with courses oriented towards the whole population. These courses cover several topics related to DRR, providing extensive breadth and coverage. Due to the costs involved, these massive courses reach different groups all over Guatemala.

The stakeholders come back to follow up with the community and continue strengthening after implementing interventions. Respondent B (Consultant) highlighted their work, which involved approaching the leaders and authorities of the communities to strengthen their capacities with training, prevention systems, monitoring systems, and early warning systems. Respondent B (Consultant) recognizes community preparedness as significant since it avoided much larger spillover effects, illustrating the importance of preparedness initiatives for other communities. Moreover, Respondent F (Plan International) emphasizes the effect of knowledge-sharing, where training a group of people will in time lead to a broader community impact:

> […] today we can train two of you, but suddenly you know 10 more people, so we propose to you to train those 10 more people so that there is a cascade effect, so that we can reach the point that everyone can access the mechanisms for risk management. – Respondent F (Plan International)

Respondent G (UNICEF) outlined that SPARC is a pioneering program of drones used to prepare and respond to emergencies. They are promoting different methodologies and initiatives that can support communities with a high focus on sustainability. Moreover, Respondent I (FAO) highlights the importance of terraces, reforestation, fast-growing species, and improving slopes or landfills before constructing houses. Respondent J (OCHA) reported that the biggest tool for disaster preparedness for OCHA is contingency planning. As well as a small network of rain gauges to measure the amount of rainfall in the communities, measuring the amount of rainfall every day in the communities to understand how much rain provokes landslides. Through these interventions residents learn how to prepare and when evacuation activities are required, without the need of external people to inform the residents. Respondent J (OCHA) illustrates different preparedness activities, such as community theater, movies, or storytelling, which are organized to create awareness about risk reduction:

> We work at the school level by bringing people to tell stories about the importance of DRR actions. I remember one time, a very good lady telling the story of the three pigs that built the house with brick, or with wood, or with plastic. And then the wolf is trying to destroy the houses, but the brick is the one that supports the wolf. So we use innovative ways to bring the messages to the communities by using these alternative ways. Of course, we also work the formal part, in which we organize the community,

> we do the response plan, we connect the response plan at local level with the municipality level. – Respondent J (OCHA)

The winter season is important for community leaders since it is the season when residents must evacuate their homes. During this season, there is flooding or drainage that goes beyond its limits, taking the house with it. Respondent H (Community leader) described that they intervene and use facilities as storage places and shelters from the floods. The community also performs earthquake drills often because Guatemala is a seismic land. However, the national policy plan does not comprise drills for landslides, floods or fires. In the community, there is also an informative workshop by the community leaders on how to recover during a crisis or disaster.

Furthermore, the observation illustrated an insight into how the residents can prepare before a disaster. The community is investing in a project aimed at reducing people from throwing their waste into the slopes and the river. The trash creates two problems: the accumulation of waste increases the risk of landslides, and trash getting into the rivers creates pollution and blocks natural surfaces of the river, causing flooding. The project is about constructing a waste management site where all the neighbors could throw away their waste. Informant A explained that the Father of the church has been a crucial stakeholder in the development of the community, giving people material and non-material resources. In this manner, the church's Father has a project on ecological slopes where specific types of plants can be implemented to bind the soil together and avoid future landslides. In addition, during the rainy season, people are evacuated to shelters nearby, including the catholic church. In these shelters, people get food and accommodation for a couple of days. Shelters are also provided by the Municipality, where the residents can live for a couple of days. However, they must come back to their houses since there is no long-term plan for them to leave these risky areas. Additionally, a wall was built to protect people from an 18 km slope and prevent inhabitants of the settlement from throwing away their garbage.

Most interventions by the stakeholders are not only in preparedness, but also in response and early recovery, which Respondent J (OCHA) observes that these stages are interconnected; stakeholders involved in the response also help reinforce preparedness efforts.

7.3.3 Challenges in CBDRR

The implementation of CBDRR in communities of Guatemala City poses several challenges. There are 360 municipalities in Guatemala and currently there exists only less than half of the communities with a local coordinator structure. Respondent J (OCHA) noted that culture is what sometimes drives the activities of the community. In some cases, ancestral agricultural activities can provoke more risks without local communities' awareness, increasing risk for disasters. Moreover, women's role in disaster preparedness has been essential since they are the ones who are at home; hence, making the decisions. Although the women are the most present in all stages of preparation, when a disaster hits, due to patriarchal norms the men are the ones doing the decision-making. Respondent C (CONRED) observed that many of the cultural values of the communities are being lost nowadays, leading to a few leaders, those of the third age, who have LK about their environment.

Another challenge arises when resources are involved because then interests can change. Respondent C (CONRED) highlighted those internal conflicts that can emerge between community leaders when resources are involved. There might also be challenges when people migrate to other territories due to labor needs or personal conditions, affecting the sustainability of the allocated fund to the community. Furthermore, when a person retires within an organization it can destabilize the organization, as well as there is a need for better coordination, information channel, and communication line. Information does not reach the communities or municipalities in the outskirts of Guatemala City. The people living in the communities might speak an-other language then the stakeholders, leading to difficulties in the communication. Part of the culture, the language, the food, the clothing, are aspects that are neglected. However, as far as possible, they are preserved at the local level, and stakeholders try to attend the communities in a generalized manner. Moreover, the characteristic is that if the stakeholders work in a locality, they give the residents for instance a vest, a helmet, shovels, or tools, but there is lack of project characteristic that guides them to make a development plan for their locality based on their needs.

According to Respondent I (FAO), around 20% of the population is involved in the city in the whole issue of organization, prevention, preparation, in contrast to the rural areas. There are 23 ethnic groups in Guatemala and in the capital city there are people from all over the country, that sometimes have issues with each other. Moreover, Respondent H (Community leader) noted that there is no organization, neither CONRED nor the municipality, which has a strong organization to provide information to vulnerable people.

7.4 Stakeholder interactions and fund allocation in disaster preparedness

An overview of the identified stakeholders, their interactions, and funding allocation is illustrated in Figure 4. The data for Figure 4 is collected from the interviews and the observation. Additionally, codes such as *Network, Agenda Setting,* and *Aid Cuts* and field notes served as a ground for the results of this section. This specifically illustrates the funding within disaster preparedness in Guatemala City's informal urban settlements. Figure 4 presents four significant levels: agenda setters, non-governmental, residents, and the environment. It also highlights the strength of connections and financial flow among stakeholders for disaster preparedness. If there is both a strong connection and strong financial flow, it is marked with a blue arrow. Moreover, Figure 4 also presents various environmental factors that influence disasters in informal urban settlements, as well as the factors impacting the allocation of funds for informal urban settlements. The following section examines research question:

1. To what extent do international aid and funding for DRR reach communities at-risk for disasters in Guatemala City?

Figure 4 gives an overview of the several interactions, translations, and actions that stakeholders have with each other. This mapping allows a nuanced analysis and understanding of the complexities behind financial flows and interactions in DRR for informal urban settlements. The presented arrangement disclosed how some financial flows arrive at these settlements and gave a picture of who is working and who is not in this area. In this manner, several aspects affect the penetration of funding and aid to reach at-risk communities within the city boundaries. However, the empirical material disclosed a key factor that prevents some organizations and donors from entering these sites. Thus, accessibility to informal settlements has been excluded from receiving some aid and funding due to structural, institutional, and socioeconomic barriers. It is worth noting that in this study, actors are referred to as stakeholders.

The application of ANT allows for a deeper reading of the stakeholder dynamics surrounding disaster preparedness and fund allocation in informal urban settlements. ANT conceptualizes both human and non-human elements as actors and not only as participants, constructing them as active entities that shape and influence the formation and disruption of social outcomes. In this way actors and possible interactions are investigated through ANT, creating a network of relationships and activities.

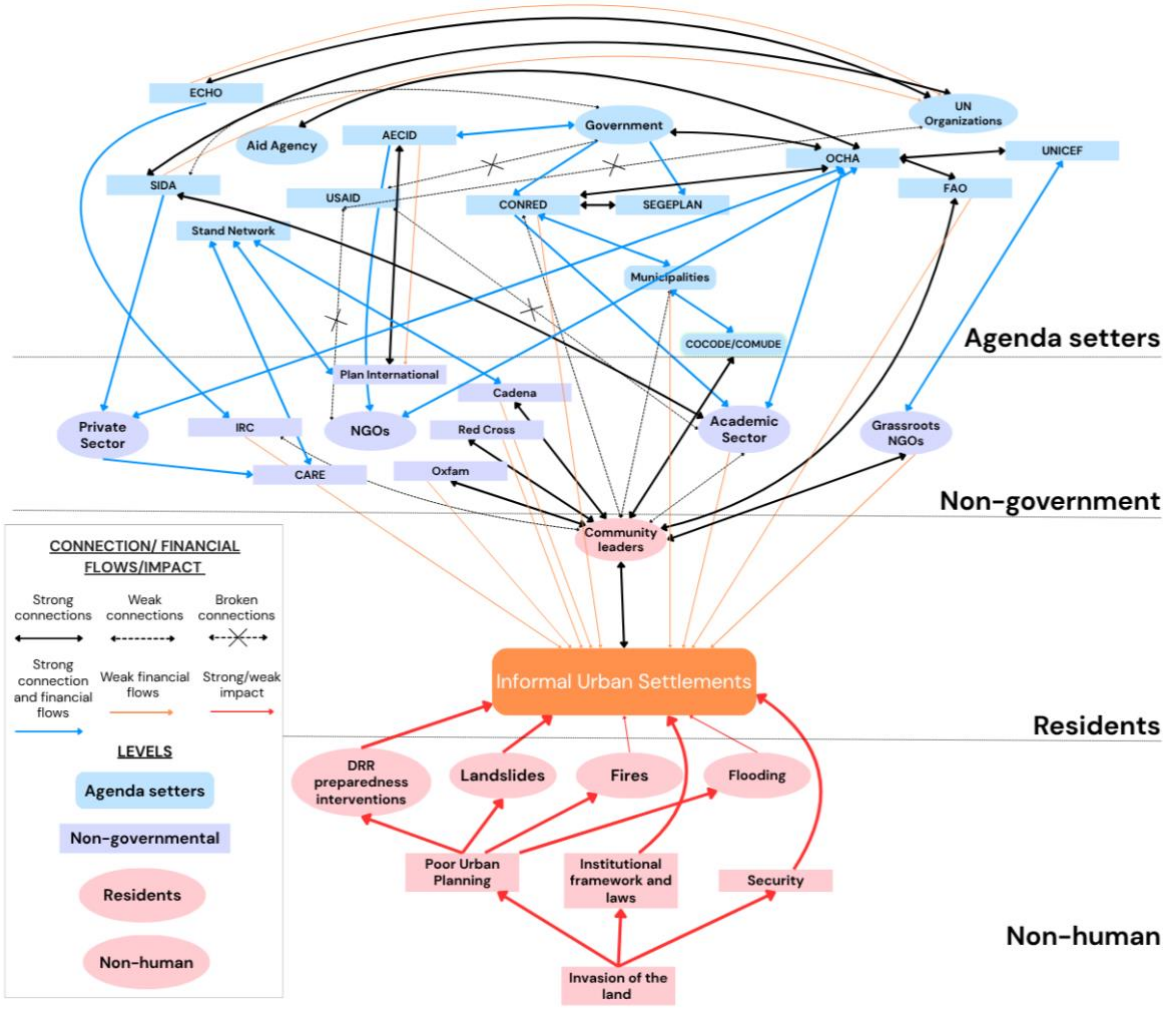


Figure 4. Stakeholders' interactions network in financial flows of disaster preparedness in informal urban settlements in Guatemala City.

7.4.1 Translations, convergence, and disalignments

In ANT networks are perceived as dynamic relationships and processes, consisting of social interactions, illustrating several factors that influence the donation and fund allocation. As mentioned earlier, actors a problematized and become important elements within the network, making sense of the world in which the network is situated. Figure 4 outlines the network of actors named as agenda setters, non-governmental, and residents; and non-human actors as informal settlements. Thus, in this sense, a network is created among the several stakeholders that conform to it when they interact with each other. The identified stakeholders at the agenda setter level are aid agencies, government institutions, and UN organizations. In this manner, these stakeholders are the ones who impose the agenda and allocate funds. Aid agencies such as Sida and AECID have strong connections in allocating funds for Guatemala. Moreover, in matters of agenda setting, the government plays an important role, as all other stakeholders must adapt to its focus and regulations. The stakeholders at the non-government level consist of different NGOs, grassroots NGOs, the private sector, and the academic sector. Non-human actors compromise geographical position, law regulations, the institutional framework, poor urban planning, and weather-related disasters.

All the actors within this network, in the landscape of fund allocation for DRR initiatives in marginalized areas of Guatemala City have established translations that clarify the intricate and complex dynamics of allocating funds in informal urban settlements. Within this network it can be observed that translations tend to be uneven and sometimes fragile. While some actors have strong convergences between each other, their network varies in boundaries in which either their network reaches far or not enough. An example in which

intermediaries affect translation within the network compromises donors' alignments in DRR funding together with government-determined priorities via bilateral agreements. Thus, laws, agreements and frameworks for change imposed by the government are followed and translated by certain donors like AECID as political agreements towards fund allocation. This type of translation in which both actors have a shared space of communication, creates strong alignments leading to a strong convergence within the network between these stakeholders. In which both share identities, ideals, and common interests, either in the form of exchange of relationships, information, or money. Strong convergences lead to punctualization and black boxes, creating network segments in which actors share a common understanding of themselves, one another, and the intermediaries that link them. In this context, the Guatemalan government together with government agencies such as CONRED, SEGEPLAN, municipalities, and COCODE/COMUDE are seen as black boxes where strong convergent and irreversibilised translations has formed their network. Their translations between each other within their own black box is stable from the surrounding network. However, this black box is challenged by external non-human actors and actors at the agenda setters' level, governing the way management of the government agencies work. Weather-related events translating with the government affect how they will set their priorities, and what bilateral agreements need to be signed with other agenda setters within the network.

Although this dynamic between the government of Guatemala and AECID is worth highlighting, it is not representative of the intrinsic landscape the actor-network entails. Donors such as Sida exhibit partial or evolving translations, as negotiations with the government remain limited and their alignment with national priorities are still forming. This demonstrates how disalignment between actors are translated into the network, where actors like Sida do not define nor translate with Guatemalan government as equals. The disalignment between both stakeholders is concerned with lack of continuity, corruption, and transparency issues. Thus, disalignment between both actors represents a stronger translation between Sida, the private sector and UN organizations like OCHA and UNICEF, creating a similar black box described earlier.

7.4.2 Financial flows and network fragmentation

The segment of networks at the agenda setters' level, with weak alignments between each other, creates a scenario in which fund allocation is stalled or stagnated in reaching at-risk communities in Guatemala City. Thus, as not all intermediaries are considered by the stakeholders within the network, the boundaries of the network tend to be short in scope. In this manner, Sida does not formally follow the agenda the Guatemalan government sets; instead, it relies on what other cooperation organizations are funding and simultaneously observes and implements the UN system projects. Hence, frameworks and agreements indirectly influence the interactions and translations Sida engages in. On the other side of the network are the UN system organizations that engage with the government and the aid agencies. The translations between the UN system organizations and the other actors within the network at the agenda-setting levels show a strong alignment, and therefore, convergence is achieved. Although the UN organizations have, to some extent, influence in setting the agenda, they are part of their own black box within the network; hence, cooperation at this level for these organizations presents a more substantial alignment with aid agencies rather than the government.

As mentioned earlier, these translations are affected by the intermediaries within the network, in this case, money, texts, and other non-human actors. In ANT, these intermediaries are not passive tools but active mediators that define, distort, and direct translations between actors. These intermediaries mold the network's structure by enabling or constraining interactions, often reinforcing power asymmetries. Network segments, and weaker translations, are affected by a series of reasons observed in the data collected and the field observation. Priorities in form of frameworks, and agreements imposed by the Guatemalan government affects how fund allocation will cascade to following levels in the network. Thus, other black boxes inside the network (aid agencies and UN system organizations) decide either to comply with these requirements or find other points of passages and translations that better suit their interests and identities. Financial flows act as both a connector and a gatekeeper. For instance, bilateral agreements, as those that AECID and the Guatemalan government have, translate donor priorities into implementation of projects in certain areas, but only for actors who align with those terms. Sometimes these black boxes created by these intermediaries are strong enough to go unchallenged by some actors; hence, affecting the way actors within the network decide how to act.

In addition to identifying the different connections between the stakeholders, the data collection observed strong and weak financial flows between the stakeholders. This was evident in the respondents' description of their connection and fund allocation during the data collection. It is the stakeholders at the level of agenda setters that decide who they want to fund and why. The stakeholders at the non-government level receive funding from the agenda setters and are required to follow the determined agendas when allocating funds. These financial flows are mostly strong. Each of the stakeholders also has their focus regarding areas and places. NGOs such as Care and Plan International do not have financial flows to the informal urban settlements since these organizations do not prioritize urban areas. The residents are the final level that receives the funds allocated from the above levels. Final financial flows were observed to be weak from the data collection.

Although there are relatively functional translations among actors at the agenda setters' level, there are holes that are worth mentioning because of their strong implication in affecting the fund allocation landscape in Guatemala. The withdraw of USAID from Guatemala has had critical effects in the way donors behave and where they decide to prioritize their fund allocation. USAID's withdrawal exposed the fragility of the actor network configuration and their dependence on specific non-human intermediaries, like money. As a once dominant actor in this network, USAID's absence created cracks that reconfigured power dynamics and altered funding pathways. These examples are visible in the way Sida prefers to have a stronger alignment and convergence with the private sector. From an ANT perspective, USAID's exit was more than a logistical challenge; it presented a test of the network's capacity. The breakdown of punctualized translations exposed the real nature of those connections that had been taken for granted.

In ANT obligatory points of passage are actors that serve as intermediaries in a network. As agenda setters present a crucial role within the network they have close contact with actors at the non-governmental level. Actors at the non-governmental level and community leaders from the residents' level are translated into the network as an obligatory point of passage. These organizations are essential obligatory points of passage that allow directing funds towards informal urban settlements in the city. However, as stronger convergence and black boxes at the agenda setter level, these points of passage are affected by decisions, frameworks, and agreements decided at higher levels of the network. Translations are then affected; thus, non-governmental actors decide to align their interests and identity towards those agenda setters imposed. In this manner, organizations such as Plan International and CARE choose to match the requirements of agenda setters. Although this is a reality within the network, where actors at subsequent levels try to create translation with agenda setters, non-governmental actors have their own interests and agendas that they impose on other actors. This is evident, where actors like IRC, while aligning with agenda setters to secure funding and legitimacy, also bring their own institutional priorities, thematic focus areas, and geographic mandates into the network. Moreover, while ANT promotes symmetry among human and non-humans there is an imbalance in the network where power flows in multiple directions within the network. While NGOs respond to agenda-setters, they also define the terms in which they engage with residents, sometimes reinforcing the exclusion of the most at-risk groups.

Intermediaries at the non-governmental level that often control the translations among actors are often texts and money. Money is an imperative intermediary at the non-governmental level as it makes project implementation possible, disaster alleviation, and NGOs' sustainability. Another intermediary that simultaneously is a non-human actor in the network, affecting translations, alignments, and convergence within the network, is the geographical position of informal settlements. As agenda setters' identities, rules, and belief systems affect how actors behave in the network, aid agencies have predetermined that needs in the marginal areas of the city are not of strong interest in allocating funds. Thus, actors at the non-governmental level recognize this requirement, creating a black box resulting in a rule or behavior that is unquestioned by actors within the network. These patterns, frameworks, agreements, and preferences become non-human actors that affect the interactions of all stakeholders in the network. Although these translations and interactions may be a reality today, in the intrinsic fund allocation landscape for DRR, these interactions are dynamic and change over time, creating new networks and black boxes.

7.4.3 Access, security, and mistrust in informal settlements

Moreover, the data collection identified non-human factors that contribute to the presence and connections of stakeholders in urban informal settlements. Due to individuals occupying informal settlements, the government consider the residents illegal. Resulting in poor urban planning and exacerbating the risk of disasters. Furthermore, because of the limited presence of the government, security affects informal urban settlements, which in turn affects the interactions of agenda setters and non-governmental stakeholders.

While DRR is an imperative aspect of the everyday life in Guatemala, there are certain areas that are not covered in some geographical regions due to external physical and socioeconomic barriers. This compromises the informal urban settlements located within the metropolitan area of Guatemala City. In this sense, the access some stakeholders have is limited because of these external barriers. These identified barriers encompass violence and security issues in Guatemalan so called *red zones*. Within the actor-network, these barriers act as non-human actors that shape and constrain the network's configuration and reach. In these areas, access is very limited and the need of an obligatory point of passage living in the area is imperative to access these sites. In ANT terms, violence operates as a non-human actor affecting the network, restricting the ability of many formal institutions and NGOs from entering these settlements. Figure 4 shows the key role of community leaders in allowing this access and coordinating the relationship and financial flows to the residents of the community; these leaders become crucial points of passage within the network, holding an important position enabling NGOs and external agents to enter otherwise inaccessible zones. Respondent B (Consultant) illustrates the difficulties that security pose for these settlements:

> The perspective I have had is that many NGOs do not want to enter these areas where they are really needed, because there is a lot of violence… These are red areas in terms of security, where there are gangs, for example La Salvatrucha, Mara 18. [These are places] where definitely nobody is going to. These are totally red zones. – Respondent B (Consultant)

Yet, translation within the network is not always successful. While some NGOs can successfully access these communities with the help of obligatory passage points to avoid security issues, others fail to align their interest with local actors, resulting in failed translations. However, there are other challenges that decrease the level of accessibility these NGOs may have while implementing projects within the community. From previous experience, residents of communities do not allow access to these NGOs into their communities due to a lack of trust towards international organizations. This observed dynamic disclosed that some organizations contribute to the worsening of access for other stakeholders to enter these vulnerable communities. These actions not only weaken the credibility of NGOs but also disrupt the broader network by black-boxing mistrust among community members. In this manner, Respondent B (Consultant) explains:

> In a community, in fact, they did comment to us that we would not have [allowed us to] entered as an NGO if had not been for the local contact… what they [other NGO] did was to come take a picture as if they were implementing the project and then they would leave. It happened several times to the community members that the NGOs would arrive, take the photos and leave and they would not receive anything. They literally just took the picture[s] and left. – Respondent B (Consultant)

The field observation revealed other translation failures between actors at resident level. In this case there is a translation failure between government institutions such as CONRED and the residents. Despite repeated risk assessments conducted by community members themselves, such as slope monitoring, or building a retaining wall, no substantial engagement or funding follows from formal institutions. As mentioned earlier intermediaries in form of texts, such as laws, and rules hinder in many cases that formal institutions invest in informal settlements, due to their lack of formality in the system. Informant A shared:

> There is not enough help from the competent organisms[…] We organize ourselves, but the Municipality does nothing unless someone dies or infrastructure collapses. – Observation 24/03/2025

The observation disclosed another important non-human actor, and it's the geographical position in which these settlements are located within the city. The geography of the settlement plays an important role as an

actor; thus, shaping and influencing where infrastructure can be built, where waste accumulates and how actors interact (see Appendix V). Informant B explained:

> Seven years ago, a couple of houses fell due to a landslide… We warned the Municipality, but they only acted after part of the structure collapsed. – Observation 24/03/2025

Beyond violence and mistrust, the flow of funding also shapes the actor-network. Not all residents benefit equally from DRR interventions. Informants A and B, and Respondents B (consultant) and H (community leader), expressed that the aid manages to reach these communities but, in several cases, it reaches the most privileged within these settlements. For instance, the observed inequality in municipal support across neighborhoods suggests that the network is not symmetrical; access and visibility are influenced by political favoritism which makes the network uneven in some ways. As observed and described better by Informants A and B:

> Afterward, we asked about the Municipality's involvement in the observation site. It became clear that the Municipality had little to no role in this area. However, an interesting point emerged during our discussion: other settlements within the Barrio San Antonio region received full support from the Municipality. This raises concerns about potential corruption, particularly since a family member of a community leader is employed by the Municipality. – Observation 24/03/2025

Finally, the network is constrained by how organizations perceive and enroll local actors. Often, residents are seen as passive beneficiaries rather than active contributors to DRR initiatives. This perception limits the possibility of building strong durable networks that acknowledge LK and capacities. For the network to become more inclusive and resilient, NGOs must engage in translations that serve both ways, recognizing community members as co-constructors of DRR strategies.

7.5 Analysis using SFDRR

This section analyzes the findings with SFDRR as an analytical tool. It will begin with Priority 2, followed by Priority 4.

7.5.1 Priority 2: Strengthening disaster risk governance to manage disaster risk

SFDRR priority number 2, *Strengthening disaster risk governance to manage disaster risk*, fosters disaster risk governance at all levels and highlights collaboration and partnership; as previously mentioned, Subgoal 26 emphasizes the need for all relevant stakeholders to have a clear vision, plans, competence, guidance, and coordination. The goal is to strengthen disaster risk governance for prevention and preparedness and foster collaboration and partnership across mechanisms and institutions to implement DRR and sustainable development tools. Furthermore, SFDRR's Subgoal 28 (b) fosters collaboration across global and regional mechanisms and institutions for the implementation of instruments and tools relevant to DRR.

The empirical findings of this study reveal a strong influence of international donor strategies, national government priorities, and operational constraints at the local level. There is an interaction between stakeholders at all levels, including agenda setters, non-governmental, and residents. These relationships shape how regions and projects are prioritized, financed, and executed across DRR several stages, such as preparedness, prevention, and mitigation. Hence, there is a need for coordination at all levels for the international fund to reach Guatemala City's urban informal settlements. Consequently, these findings reflect the SFDRR Subgoals number 26 and 28 (b) on the need for all relevant stakeholders to be coordinated and to foster collaboration and partnerships.

Furthermore, the findings disclosed that donor agencies and government authorities play a central role in shaping agendas. Stakeholders are often guided, if not constrained, by the government's thematic focuses and the priorities of the aid agencies. International cooperation and its agenda are also affected by geopolitical and regional interests. While NGOs maintain their focus and have their own agenda for project implementation and execution, they must align with the priorities and plans of the government and aid agencies. Accordingly, these findings correspond with Subgoal 26, which requires stakeholders to have clear vision, guidance, and plans. Which is shown with the different prioritization, agendas, and plans each of

the stakeholders have. However, as this study focuses on the urban environment, the data identified that many stakeholders choose to work in rural areas due to the government's presence in the city, the government's mandate, or international aid agencies prioritization on rural areas.

Although Subgoals 26 promotes integrated governance and coordination, and 28 (b) fosters collaboration across global and regional mechanisms and institutions, the findings reveal that alignment at all levels poses challenges. The issues of transparency and corruption appear to contradict the principles of Subgoals 26 and 28 (b). Transparency and corruption, such as a lack of transparent data, trust in the Guatemalan government and organizations, and challenges in managing the allocated funds, affect how the aid is allocated and at what extent the aid reaches the communities. This also makes coordinating even more difficult between the stakeholders since corruption hinders to build a robust trust system in the translations. Moreover, the access some stakeholders have is limited because of barriers that encompass violence and security issues in some places of Guatemalan City. In these areas, access is very limited and the need of a person already living there is imperative to access the community and coordinate with the residents. In addition, some residents of communities do not allow access to NGOs into their communities due to a lack of trust towards international organizations.

Additionally, as mentioned earlier, SFDRR Priority 2 comprises Subgoal 27 (f) which stresses allocating clear roles and tasks to community representatives within disaster risk management institutions, processes, and decision-making. This is undertaken through comprehensive public and community consultation when developing laws or regulations to support their implementation.

The result of this study indicates that community engagement is significant when implementing projects addressing DRR and disaster preparedness strategies. The data collection identified residents as primary knowledge holders and decision-makers in DRR and development initiatives. The residents are the primary stakeholders who know their territory and conditions since they are affected by their surroundings and the environment. Women, youth and diverse local actors, such as teachers, church leaders, and community organizations are involved in community engagement efforts. Most stakeholders noted that co-design is a crucial strategy to engage with the community, simultaneously hear their points of view, express their concerns, and share what they are already implementing. Thus, this aligns with Subgoal 27 (f), which points out the involvement of community and public representatives. However, the data disclosed that NGOs and other stakeholders have recently considered LK and cultural aspects in disaster preparedness strategies, and that this is new within development work.

From the data collection it is evident that community involvement is limited for some stakeholders. Reach and scope are also hindered by the amount of funding that flows to communities at risk in Guatemala City and the way organizations perceive and interact with residents, not seeing them as active actors who can contribute to the reinforcement of project implementation in disaster preparedness strategies. Hence, these issues reflect a gap and misalignment with Subgoal 27 (f) of allocating clear roles and tasks to community representatives. Community leaders disclosed that competent authorities do not consider LK, and their point of view is not considered. This contradicts previous findings on considering LK and adapting them to DRR practices and disaster preparedness initiatives. However, residents come together to implement interventions in disaster preparedness on their own, illustrating the active participation and willingness of residents to make their environment better. Furthermore, several stakeholders interested in engaging with the community emphasize this during the project implementation phase. However, this implementation phase only concerns some agenda setters since not all the agenda setters work at a local level. A stronger emphasis is placed on NGOs that implement projects at the community level and use community-based strategies to reduce risks. These findings partly align with subgoal 27 (f) since it indicates the engagement of residents during the development of laws and regulations, rather than implementation phase as the findings disclosed.

In conclusion, the analysis of the results of this study and SFDRR Priority 2 clearly shows alignment with the Subgoals 26, 28 (b), and 27 (f). It disclosed stakeholder coordination, collaboration, and inclusion of community leaders and residents in DRR efforts. However, the analysis also revealed several gaps in the alignment of SFDRR Priority 2, such as transparency and corruption, leading to less coordination and collaboration, and limited inclusion of community representatives from some stakeholders. These

challenges the achievement of Priority 2 of SFDRR and strengthening disaster risk governance to manage disaster risks.

7.5.2 Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction

To the analysis on Priority 2 and its consequently subgoals, the rest of this analysis will focus on Priority 4: *enhancing disaster preparedness for effective response and to "build back better" in recovery, rehabilitation and reconstruction*. Thus, through Subgoal 32 strengthening preparedness for effective response it has been observed that Guatemala in general has preparedness structures in place that can help to enhance cooperation among stakeholders. This existing structure has been set on place due to lessons learned from other greater events, such as the eruption of the volcano Fuego in 2018. The results from this happening, strengthening disaster preparedness strategies for faster response. In this manner, Guatemala has recognized the participation of people to act in anticipation events and keep integrating DRR in preparedness for response for ensuring that capacities are in place for future events and effective response. These structures allow for multistakeholder coordination before crises, which is one of the main tasks of the Humanitarian Advisory Team.

The eruption of Fuego shook the country's capabilities in DRR strategies, which consequently fostered new incentives for development within DRR in response preparedness. This aligns with Subgoal 32 where there is an emphasis on institutional readiness for quick and coordinated responses. On the other hand, although this opportunity for increasing development in preparedness strategies for response, other events like El Cambray Dos that happened earlier than the eruption of the volcano did not create such reactive strategies nor initiatives to foster development in preparedness. Although coordination among actors for response preparedness has ensured that capabilities are in place, DRR is not a strategic focus for several international donors. An explicit example of this is the AECID lack of investment in DRR initiatives, treating it only as an operational component. These findings also show a reactive strategy of allocating funds in which most resources go to response rather than preparedness.

While the above findings represent a clear connection and relevance with Subgoal 32, there are also gaps that are worth mentioning. As the eruption of Fuego gives an illustrative image of Guatemala's efforts for change, it also shows a gap in the implementation of SFDRR priorities and goals. Thus, there is a lack of anticipatory action, in which funds are tied to visible crises, and not connected to long-term risk reduction. Although the lesson is learned and competent institutions and organizations are starting to consider new strategies and ways of looking through preparedness issues at different levels, it also shows a lack of willingness to long-term and resilient strategies.

Moreover, there is a correlation between the results and Subgoal 33 (a), in which there is a need for constantly preparing and updating disaster preparedness and contingency policies, plans, and programs with the participation of relevant institutions and stakeholders. Thus, it has been disclosed that planning and policies are being developed with the involvement of relevant stakeholders, such as the UN organizations. Hence, it is a step of strengthening the institutional framework and helping to fill gaps within government institutions.

However, this opportunity of advancement for all involved stakeholders is stagnated by a lack of continuity from the government, in which national plans are abandoned after leadership changes. Additionally, corruption, poor governance, and the exclusion of residents from decision-making, hinders a proper update of these plans, programs and policies, in which they are aimed at reducing risk. In this manner, despite advancement towards Subgoal 33 (a), policy development remains highly centralized, emphasizing top-down strategies which are disconnected from local realities as residents are often not considered in policy development. Many community leaders report that in many cases they are not consulted during program implementation or policy formulation, and there is no formal mechanism, such as an open negotiation table that allows them to influence decisions. In addition, preparedness policies lack specificity and measurable indicators, often being general or focusing too much on response. This reduces accountability and creates a gap between SFDRR and operational effectiveness.

The noticeable shift in donor strategies toward regional cooperation is highlighted in the results. This aligns with Subgoal 34 (f) in which regional cooperation should be supported to deal with disaster preparedness, including common exercises and drills. Organizations like ECHO and OCHA have moved their focus from a localized funding to a broader regional framework, in which they include the Central American region; instead, of allocating their funds into exercises and drills, their focus is directed to strengthening institutional frameworks rather than directly support communities. Although this paradigm shift reflects with harmonizing the region into a block to deal with climate related disasters it lacks a special target to cooperate with stakeholders locally forgetting to context-specific support. Thus, urban areas like Guatemala City, particularly its medium-high-risk marginalized neighborhoods, may be deprioritized under such regional strategies. The lack of interest in localized strategies and programs had been observed in the absence of interest of institutions like CONRED in these settlements. Especially when the rainy season is approaching, and their only preparation strategy is to share pamphlets in the community without actionable guidance or drills. The results of this observation may be a consequence of lack of investment and the zooming out of certain aid donors, such as ECHO.

Furthermore, the analysis did not find evidence of common regional exercises or disaster drills being conducted to support preparedness at a regional level. The focus remains more on frameworks and policy dialogue than on practical, coordinated disaster drills, representing a gap in advancing or achieving SFDRR's Subgoal 34 (f).

Guatemala City's current approach to disaster preparedness aligns with several aspects of the Sendai Framework's Priority 4. Local and international stakeholders are increasingly adopting anticipatory and community-based strategies. However, they still exist challenges that hinder full implementation of Priority 4: disaster preparedness remains underfunded and often deprioritized compared to response efforts. Additionally, there is limited institutional strength and continuity. While regional cooperation is present, it often lacks concrete joint exercises and does not consistently benefit urban communities in need.

8. Discussion

The following section will present the discussion of the results and analysis related to previous research. This discussion will conclude with a reflection on future research regarding disaster preparedness in informal urban settlements, community engagement, and LK.

This study examines the extent to which international aid and funding reaches communities at risk in Guatemala City. Moreover, it focuses on exploring the roles and interactions different stakeholders have in the implementation of local knowledge and community engagement in implementing disaster preparedness efforts at local level. Thus, identifying challenges and opportunities of internationally funded DRR initiatives at community level. This thesis aims to answer three research questions, the first being "To what extent do international aid and funding for DRR reach communities at-risk for disasters in Guatemala City?" subsequently, second and third being "How do stakeholders contribute to reducing risks in the implementation of community-based disaster preparedness strategies?" "How do stakeholders integrate local knowledge and community engagement into disaster preparedness efforts?" Finally, this study is based on empirical data gathered in Guatemala City from interviews and an observation that was analyzed with the help of qualitative thematic analysis.

8.1 Fragmented DRR efforts in Guatemala City

The findings outlined earlier in this study highlight the complex, fragmented, and neglected nature of informal urban settlements in Guatemala City, excluding DRR and preparedness efforts in the city. While various stakeholders, including international donors, NGOs, and institutions, are engaged in DRR activities, their strategies are marked by inconsistent coordination and geographic and structural imbalances. Although there is a well-defined structure followed by the priorities imposed by the government, Guatemala City's neglect was an interesting finding represented in Figure 4. In this manner, the ANT network reveals it was possible to observe a lack of engagement from crucial organizations in delivering development projects and DRR activities within the city's boundaries. These findings align with Cabral-Ramírez et al. (2025) critique of vulnerabilities in urban areas, particularly informal settlements with low socioeconomic conditions, pose

challenges to effective DRR governance. This hinders the aims of SFDRR, specifically priority 2 and subgoal 26, which promote the strengthening of DRR governance.

The disclosure of this mapping delivered a baseline that could be analyzed to assess the necessity of these settlements. Despite evidence that marginalized urban communities face, in many cases, acute disaster risk, Guatemala City is sometimes undermined by donors due to its closeness to pertinent governmental institutions and, therefore, better served by them. This finding during the mapping and after analyzing the empirical material was surprising; thus, it gave an insight into how the agendas are formed and created, making clusters that ignore at-risk communities within the city's boundaries. This finding is interesting in relation to Miles et al.'s (2012) conclusions of an increasing interest in investment in urban DRR for informal settlement in Guatemala's Metropolitan area. However, the results of this study show a decreasing interest of stakeholders, including the governmental institutions, to allocate funds into these settlements, decreasing the extent to which funds and projects are being implemented.

Moreover, the mapping also gave a perspective on which actors are working, what connections should be made, and who is an outsider, thus not reaching at-risk communities. Although the above-presented actor network diagram (Figure 4) represents a simplified version of human and non-human stakeholders at play in Guatemala City, it gave important insights that helped to get a deeper analysis of the current situation. A strong relationship between these findings has been reported in the literature. Fjäder (2021) emphasizes the approach in which the whole society and all hazards against disaster to build resilience. Hence, effective risk reduction requires the participation of multiple stakeholders, such as national, regional, and local governments, civil society, and the private sector. This is sometimes stagnated by a lack of stakeholder coordination and unclear role distribution.

While it is evident the impact of the current U.S. administration in the first quarter of 2025, the USAID cuts have severely affected how donors and NGOs are mobilizing to keep delivering development and DRR-involved projects in Guatemala. Although these results were expected, observing its ongoing aftermaths in the agenda setting, connections, and translations among stakeholders was interesting. These broken connections have a deeper meaning in the study results, creating a new arena in which institutions, NGOs, and donors need to learn how to navigate. This creates new gaps and opportunities that must be considered in DRR as a field of study and the development sector. In terms of ANT, these failed translations reveal important findings that disclose vulnerabilities within the network, providing a new perspective on the fund allocation landscape in Guatemala. It is worth noting that even though neither the discussion nor the results of this study aim to recommend future research on the effects of USAID disappearance on DRR efforts fund allocation, it opens an opportunity for further research into this area. This disruption in partnerships reflects what Pereira-Rodriguez (2021) notes as a central challenge, disclosing that forming partnerships comes with challenges and requires strong commitment and investment from all relevant stakeholders. These challenges can create a gap with the achievement of SFDRR Priority 2 Subgoal 26, which fosters the participation of all relevant stakeholders in managing disaster risks.

Although ANT as a theory served as an analytical lens to illustrate and understand the different dynamics of fund allocation and the perspective of external stakeholders in the integration of LK in their work. It is worth noting that ANT should be taken with cautiousness, as the theory stresses the importance of horizontal hierarchy considering all actors as equally important within the network. However, through the analysis using ANT it was observed that some human and non-human actors have stronger influence affecting translations, and alignment among actors. In this manner, agenda setters and intermediaries such as texts, money, and geographical position bear a stronger influence within the network influencing how actors behave and translate to each other. The field observation gave important insights that added depth to the network mapping; however, in observational studies there is a potential bias from both sides. In this manner, cautious is recommended as responses from informants may be influenced by perceived expectations from the authors. Similarly, the author's own interpretation and positional standpoint can shape how interactions are understood and mapped within the network. Therefore, while ANT helps to unpack the complexity of actor relationships in the integration of LK, it should be complemented with critical reflection and, where necessary, other analytical tools that can better capture issues of power asymmetry.

8.2 Governance and misalignment in fund allocation

The results of this study underscore the role of governance, agenda setters, and external and structural barriers. Although many of the findings were expected, they also provided several unexpected findings. As anticipated, the study demonstrates that donor-government agreements heavily influence international aid. Aid agencies and governments are central agenda setters, imposing possibilities and limitations for non-governmental stakeholders and residents. As expected, the results indicate that since there must be coordination at all levels and between stakeholders, there might appear to be misalignment between aid agencies, government priorities, and non-governmental focus, restricting funding allocation to critical areas. The result highlights that the aid agencies drive targeting geographic places, reducing local perspectives and contradiction between the residents' needs and aid allocation. These conclusions are consistent with the findings of Mulder (2023), who argues that international aid has a global hierarchy to satisfy the aid agencies and government institutions. The author points out the need for a top-down, bottom-up aid approach; however, this is not the reality, as concluded from this study. Moreover, as Lucatello and Gómez (2022) note, national governments play a central role in DRR, setting criteria for international engagement. The government sets the agenda and determines when to engage with other stakeholders, aligning with the conclusion of this study.

In line with expectations, corruption and lack of transparency are significant barriers to how the allocation of funds reaches communities in Guatemala. The results show a contradiction of stakeholder reporting compared with implementation and misuse of funds. Although Cabral-Ramírez et al. (2025) argue that vulnerability in urban areas, informal settlements, and socioeconomic are limiting and challenging the governance of DRR in the LAC region, the findings from this study complement previous research. The results indicate weak institutional coordination among government institutions such as the government, municipal, CONRED, and COCODE/COMUDE. There is also an absence of consistent policy frameworks and a lack of continuity in government planning. These issues limit and challenge the governance of DRR but also contradict the alignment of SFDRR Priority 2 and subgoals 26 and 28 (b) about strengthening disaster risk governance. These results build upon previous work by Cabral-Ramírez et al. (2025) and Lucatello and Alcántara-Ayala (2023), emphasizing that resource allocation, visibility, and transparent reporting systems are important for the success of DRR initiatives. The authors point out that for a successful implementation of SFDRR alongside sustainable development, disaster risk and development must be understood, as well as innovative governance, cross-cutting capacity, trans-sectoral alliances, and commitment by all relevant stakeholders.

While some findings aligned with expectations, others revealed unexpected results, such as strategically avoiding Guatemala City. Urban areas are underprioritized with stakeholder absence, while rural areas have a notable presence in Guatemala. In informal urban areas, aid often does not reach the most vulnerable, with no transparent data reflecting the real needs. In addition, contrary to initial expectations, the study identified a paradigm shift in international aid: from local to regional funding strategies as seen by ECHO and OCHA, emerging private sector influence notes through Sida, increasing view of as an investment by EU, and the aid cuts from USAID. This transition to regional funding strategies from ECHO and OCHA aligns with Pereira-Rodriguez et al. (2021) which emphasize a need to enhance regional disaster preparedness through collaboration. This corresponds to the SFDRR Priority 2 Subgoal 28 (b), which advocates collaboration across global and regional mechanisms and Priority 4 Subgoal 34 (f) which supports regional cooperation. However, as this paradigm shift to regional cooperation is only disclosed in two organizations, it is not possible to make an interpretation about international cooperation in general in comparison to Pereira-Rodriguez et al. (2021) and SFDRR Subgoal 34 (f).

While SFDRR is a valuable global policy framework guiding DRR efforts, its application as an analytical tool for academic research can be limited. The framework presents some limitations worth noting; one of the primary limitations of SFDRR as an analytical lens is its state-centric-organization nature. The framework assumes that national governments are the primary actors in DRR strategies, undermining the roles of non-state stakeholders such as grassroots organizations, communities, and informal networks. Moreover, SFDRR references vulnerability and inclusion but does not explicitly tackle structural issues. However, although using SFDRR has its limitations as an analytical lens, it works as an analytical tool for

policy research to understand the effectiveness and implementation of policies. This adds academic value while combining a framework and a sociological theory to provide a nuanced picture of power dynamics and governance structures.

8.3 The role and limits of CBDRR and LK

The result revealed surprising insight that DRR is not a strategic priority for most donors, and disaster preparedness is not in focus for several stakeholders. Disaster preparedness is acknowledged but underprioritized and newly integrated into stakeholders' plans. Gaborit (2022) notes that climate adaptation programs are limited in effectiveness, and insufficient investments exist to achieve this. Furthermore, unexpectedly, the results indicated that there are aid cuts, which significantly impact on the work on DRR. Funding for long-term reduction and preparedness is significantly less than funding for short-term emergency response since it is more visually and politically urgent. In line with research by Gaborit (2022), international funding and aid have not prioritized disaster adaptation. The author notes that international attention emerges when a disaster hits and there are human losses and material damage, leading to international emergency responses, which is in line with the conclusion of this study.

There is growing recognition among some stakeholders of the importance of CBDRR and the integration of LK. Organizations such as FAO, UNICEF, and IRC emphasize a strong willingness to co-designing projects with the communities they are working with; thus, considering the knowledge, the importance of community leaders have in mobilizing communities, and the crucial role these components have in building resilience and sustainability in DRR activities. This is strongly emphasized by Pandey (2019) who states that residents are the ones that face disasters and, therefore, are the ones that are the key stakeholders to reduce vulnerabilities, building resilience and sustaining DRR processes. Similarly, Hostettler et al. (2019) and Shaw (2012, p. 5) argue that community resilience is not built on only technical solutions, but while considering LK, cultural context, and socioeconomic factors.

However, although relevant, these findings have been contrasted with the experiences of community leaders living inside and outside informal settlements. A note of caution is due here since further representation of community leaders, residents, and observation sites should be considered for future research. In this manner, the results were somehow expected, as organizations and institutions want to present their best outcomes when interviewed. It can be assumed that the results showed a certain tendency of NGOs and institutions to pay lip service. Thus, as mentioned in the literature review, Trogrlić et al. (2021) mentioned recognition of LK and community engagement in the implementation of DRR practices; nevertheless, its implementation by external stakeholders remains limited, and more research should be done in the aspects outlined earlier in the results, such as project co-design. On the other side, some results in the manner of LK integration were interesting and, to some extent, surprising, as a few of the organizations interviewed showed reflections of self-criticism. Moreover, a possible explanation for this self-criticism is an increased willingness to acknowledge LK as a fundamental part of implementing DRR practices. However, further strategies ought to be sought to recognize and live up to the standards of international frameworks and policies.

8.4 Future research

Future research should investigate participatory approaches and examine interventions emphasizing community engagement and local knowledge. Such research could contribute to identifying specific strategies that relate to the successful management and integration of CBDRR. Although women's roles have not been examined in previous research within the DRR field, the findings of this empirical study address the significance of integrating community engagement; particularly, women's role appeared to be important in community engagement within disaster preparedness interventions. These findings have raised many questions that require further investigation, which could provide insights into their responsibility and contribution. Further analysis also needs to be done to evaluate DRR projects and the role of preparedness. This study highlights the crucial role of preparedness in mitigating disaster risks and minimizing the need for external aid; however, it is not in focus for several stakeholders. Moreover, future research should also explore how the study relates to the continuity of DRR policies. Such research could be a comparative study, contributing to examining how the change in governance might affect DRR efforts and the sustainability of informal urban settlements.

9. Conclusion

In conclusion, this study has shown that international funding for DRR in informal urban settlements of Guatemala City remains insufficient and overlooked by several stakeholders. Several factors contribute to this, including institutional disinterest in urban risk, poor governance, corruption, and the prioritization of response activities over preparedness initiatives. While CBDRR strategies are recognized theoretically, their practical application remains uneven among stakeholders. Thus, the integration of LK and the participation of communities is still limited in DRR projects, as residents express disagreements with how external stakeholders feel they consider residents' knowledge and engagement.

This study underscores the need for a systematic shift in conceptualizing and delivering international aid, ensuring that urban vulnerabilities in Guatemala City are not overlooked in national and regional DRR agendas. It also highlights an urgent need to shift how international funding is allocated, changing from rural areas and emergency-focused approaches to address the complexities of urban vulnerability, ensuring that no community is left behind in preparedness efforts to promote sustainable development.

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Appendix I

Interview Guide (governmental institutions and NGOs)
Background

1. Could you tell us a bit about your role within the organization/agency?
2. How long have you been involved in disaster risk reduction initiatives?
3. What does Disaster Risk Reduction mean to you?

International aid and funding effectiveness

4. What role does your organization play in disaster preparedness in Guatemala City?
5. Have you been involved in any internationally-funded projects regarding disaster risk reduction?
6. What factors determine whether a project receives international funding or not from your experience?
7. How does your organization use international funding to support community-based disaster preparedness?
8. How does your organization allocate and distribute international aid to communities? What factors influence this process?
9. Have your organization experienced any challenges in receiving international aid and funding for implementing community-based disaster preparedness?
10. Have you observed any gaps or challenges in how international ad is allocated to at-risk communities?
11. Can you think of a successful project that was funded internationally? What was the aid or fund used for in that project?

Strengths and limitations of community-based disaster risk reduction practices in disaster preparedness

12. Have you or do you use any community-based disaster preparedness strategies, if so, what specific community-based disaster preparedness strategies are in place?
13. Have you observed any strengths in community-based initiatives for disaster preparedness?
14. How do you evaluate the effectiveness of community-based disaster preparedness?
15. Are there any examples of successful community-based disaster preparedness initiatives that you can share?
16. What are the main challenges while implementing community-based projects? And can it be improved?

Local knowledge and community engagement

17. To what extent are local people involved in building resilience?

18. How are cultural aspects taken into consideration within disaster preparedness?

19. How does your organization incorporate local knowledge into their disaster preparedness strategies?

20. What long-term strategies does your organization have to ensure disaster preparedness remains sustainable? What support is needed to enhance sustainability?

21. Do you have anything that you want to add or something that you want to ask us?

Appendix II

Cuestionario (Interview guide in Spanish for governmental institution and NGO)
Introducción

1. ¿Podría hablarnos un poco de su función dentro de la organización/organismo?
2. ¿Desde cuándo participa en iniciativas de reducción del riesgo de catástrofes?
3. ¿Qué significa para usted la reducción del riesgo de catástrofes?

Ayuda internacional y eficacia de la financiación

4. ¿Qué papel desempeña su organización en la preparación ante desastres en Ciudad de Guatemala?
5. ¿Ha participado en algún proyecto financiado internacionalmente relacionado con la reducción de riesgo ante desastres?
6. Según su experiencia, ¿qué factores determinan que un proyecto reciba o no financiación internacional?
7. ¿Cómo utiliza su organización la financiación internacional para apoyar la preparación ante desastres a nivel comunitario?
8. ¿Cómo asigna y distribuye su organización la ayuda internacional a las comunidades? ¿Qué factores influyen en este proceso?
9. ¿Ha experimentado su organización algún problema a la hora de recibir ayuda y financiación internacional para llevar a cabo la preparación ante catástrofes a nivel comunitario?
10. ¿Ha observado brechas o desafíos en la forma en que se asigna la ayuda internacional a las comunidades de riesgo?
11. ¿Se le ocurre algún proyecto que haya tenido éxito y que haya recibido financiación internacional? En dado caso, ¿Para qué se utilizó la ayuda o la financiación en ese proyecto?

Puntos fuertes y limitaciones de las prácticas comunitarias de reducción del riesgo de catástrofes en la preparación ante desastres

12. ¿Ha utilizado o utiliza alguna estrategia comunitaria de preparación ante desastres? En caso afirmativo, ¿qué estrategias comunitarias específicas de preparación ante desastres se aplican?
13. ¿Ha observado algún aspecto positivo en las iniciativas comunitarias de preparación ante las catástrofes?
14. ¿Cómo evalúa la eficacia de la preparación comunitaria ante las catástrofes?
15. ¿Hay ejemplos de iniciativas comunitarias de preparación ante catástrofes que hayan tenido éxito y que pueda compartir?
16. ¿Cuáles son los principales retos a la hora de ejecutar proyectos comunitarios? ¿Existen posibilidades de mejora?

Conocimiento local y participación de la comunidad

17. ¿En qué medida participa la población local en el desarrollo de la resiliencia?
18. ¿De qué manera se tienen en cuenta los aspectos culturales en la preparación ante desastres?
19. ¿Cómo incorpora su organización los conocimientos locales a sus estrategias de preparación ante catástrofes?
20. ¿Qué estrategias a largo plazo tiene su organización para garantizar que la preparación ante catástrofes siga siendo sostenible? ¿Qué apoyo se necesita para mejorar la sostenibilidad?
21. ¿Tiene algo que añadir o algo que preguntarnos?

Appendix III

Interview Guide for aid agencies
Background

1. Could you please briefly describe your role within the aid agency and your involvement within international aid?
2. How long have you been working with international aid and what has been your main focus area?
3. What does Disaster Risk Reduction mean to you and how is your work involved in this in Guatemala City?

General role of aid agency

4. What is the agency's role in disaster preparedness in Guatemala City?

International aid and funding effectiveness

5. How does the agency measure the impact of its aid and disaster preparedness programs in Guatemala City?
6. To what extent does the agency´s international aid reach communities at risk for disaster, for instance in Guatemala City?
7. What mechanism does the agency have to ensure that the aid reaches the most vulnerable communities?
8. How does the agency ensure that international aid supports local disaster preparedness initiatives?
9. How does the agency ensure that aid fosters long-term resilience rather than short-term relief?

Collaboration with local stakeholders

10. How does the agency collaborate with the local government and organizations to allocate the aid or fund?
11. How does the agency coordinate with other international organizations, NGOs, and government institutions in Guatemala to support disaster preparedness?
12. Can you provide examples of successful partnerships?
13. Are there any challenges in choosing who will receive the aid or fund?

Success stories and future strategies

14. Could you think of an example of a successful disaster preparedness project in Guatemala that was funded by the agency?
15. Are there any upcoming initiatives or changes in the agency's approach to funding disaster risk reduction in Guatemala?

Appendix IV

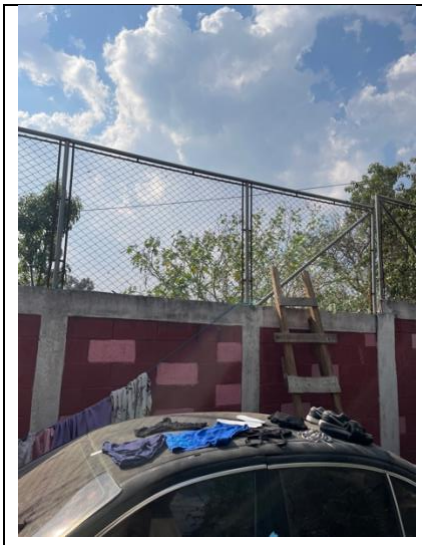
Interview guide with community leaders

1. How long have you lived/worked here?
2. How are you engaged in this community?
3. What is a "risk" to you?
4. How do you perceive and evaluate the risks in your community?
5. In your experience, have any projects/initiatives implemented been funded with international aid in your community? If yes, how does it meet the needs of the community?
6. To what extent do governmental institutions (e.g. the Municipality, CONRED/COLRED) and NGOs work in your community?
7. Is there something/someone that warns you (the community) before a disaster happens?
8. In what way does your community prepare before a disaster hits?
9. Could you share a personal experience when your community organized themselves before a disaster?
10. What challenges does your community face in disaster preparedness?
11. How do governmental institutions (e.g. the Municipality, CONRED/COLRED) and NGOs take into account local knowledge in projects/initiatives?
12. In your experience, how are the governmental institutions (e.g. the Municipality, CONRED/COLRED) and NGOs coordinating with community leaders?
13. After a disaster has hit, how is your community engaged in rebuilding the area and helping the people affected?
14. Do you have anything that you want to add or something that you want to ask us?

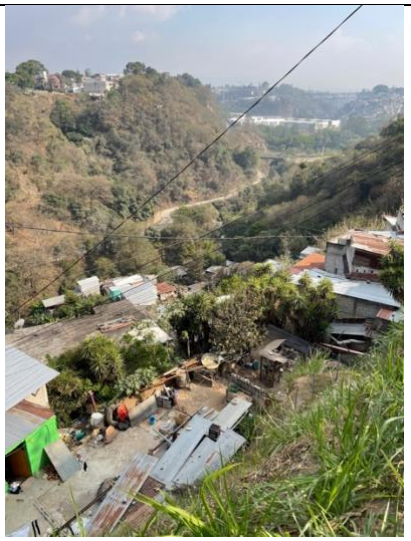
Entrevista con líderes comunitarios

1. ¿Cuánto tiempo lleva viviendo/trabajando aquí?
2. ¿Cuál es su participación en esta comunidad?
3. ¿Qué es un «riesgo» para usted?
4. ¿Cómo percibe y evalúa usted los riesgos en su comunidad?
5. Según tu experiencia, ¿se han llevado a cabo en su comunidad proyectos/iniciativas financiados con ayuda internacional? En caso afirmativo, ¿cómo responde a las necesidades de la comunidad?
6. ¿En qué medida trabajan en su comunidad las instituciones gubernamentales (por ejemplo, la Municipalidad, CONRED/COLRED) y las ONG?
7. ¿Hay algo/alguien que les avise (a la comunidad) antes de que ocurra un desastre?
8. ¿De qué manera se prepara su comunidad antes de que ocurra un desastre?
9. ¿Podrías compartir alguna experiencia personal en la que su comunidad se haya organizado antes de una catástrofe?
10. ¿A qué retos se enfrenta su comunidad en la preparación ante un desastre?
11. Después de una catástrofe, ¿cómo participa su comunidad en la reconstrucción de la zona y en la ayuda a las personas afectadas?
12. Según su experiencia, ¿cómo se coordinan las instituciones gubernamentales (por ejemplo, la Municipalidad, CONRED/COLRED) y las ONG con los líderes comunitarios?
13. ¿Cómo tienen en cuenta las instituciones gubernamentales (por ejemplo, el Ayuntamiento, CONRED/COLRED) y las ONG los conocimientos locales en los proyectos/iniciativas?
14. ¿Tiene algo que quiera añadir o algo que quiera preguntarnos?

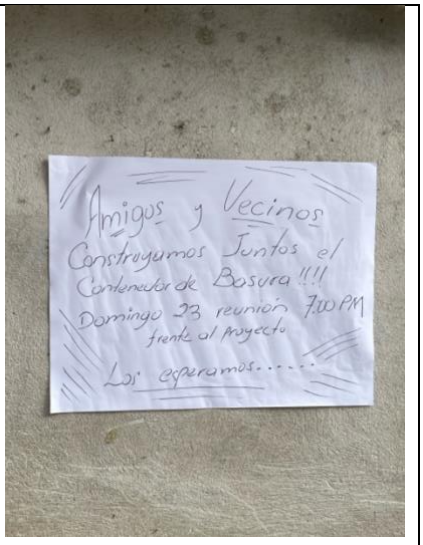
Appendix V



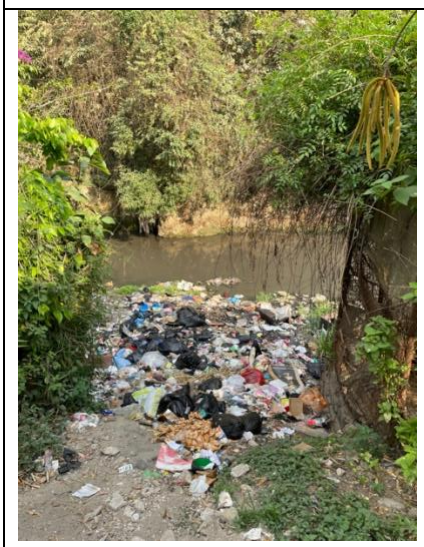
Contention wall installed by the community.



View over the settlement A.



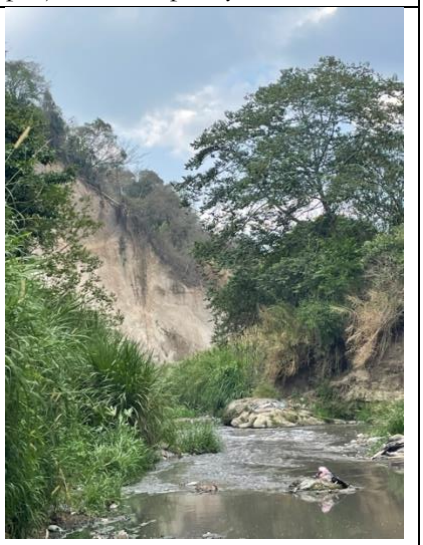
Sign made by community members addressing the waste management problem. "Friends and neighbors, let's build together a waste management center! Meeting Sunday 23rd at 19:00 in front of the project. We expect you there"



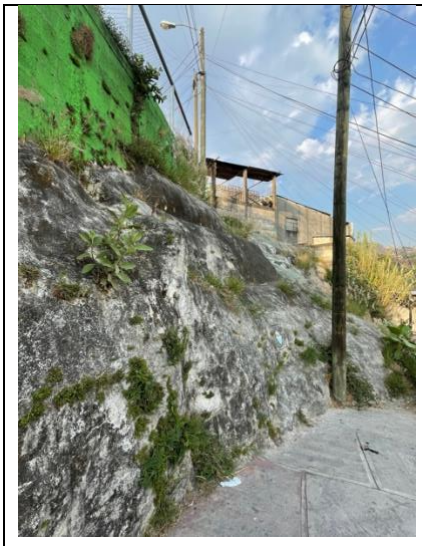
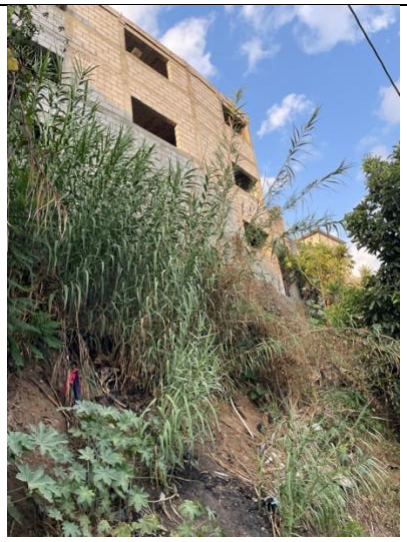
The river basin.



Stairs in the settlement A.



Slopes were there used to be houses in settlement A.

 Retaining wall constructed partly by the Municipality and the community in the settlement A.	 Building constructed in a high-risk area in the settlement B.	 Community project on waste management.

Appendix VI

ID	Code	Response
IRC	Network	**1.** "The IRC strategy for Northern Central America in general has been working more with localgovernment than central government." "While we are integrated into national example, we work in Huehuetenango, and there we work within Masatenango, we work with the local government at a departmental level and then a municipal level. We try **2.** "So what we do is we go into the communities where we work and we generate, whether it's gender-based violence, climate change, child protection, economic recovery state and non-state actors to come together and develop a pathway of what work needs to look like in that area. And basically, for example, in the case of gender-based vio whole variety of people that need to be engaged with the response." **3.** "No. So the humanitarian sector worldwide has something called the AORs, which are the areas of responsibility. UNHCR, which is the agency that is in charge of the clu action, there's a cluster system. And it's led by a UN agency for each thematic area, and then either, usually an INGO, I would love to say a local NGO, but that's not true, a education cluster, and it has all the actors included. And this way, you can coordinate geographic areas, program area interventions, making sure no one is duplicating effo **4.** " We have signed MOUs with the government areas that we coordinate and work with so that we can facilitate and then we also have those MOUs with the leading UN ag them for programming events, and we do belong to the cluster and the technical table that coordinates for Guatemala." **5.** "This project is funded by SIDA, and we are currently starting April 1st our new SIDA project." **6.** "It varies widely, it varies a lot, it goes by donors, so ECHO, which is the European Union's branch for humanitarian assistance. They're two very interesting, so they have right, they don't have a mission in Guatemala, they don't have a mission in Honduras, they only have a mission in Panama, and so what we do with them is, we don't only d communication with them, telling them, this is what's happening, this is what's happening in the communities we work, and they don't just get that from us, they get it from they're getting throughout the year. They're able to really cater to what's happening." **7.** "And some people, like ECHO, they're super clear, and they tell you like, we want to be informed, we want to know, we want to know what you're doing, and then you car **8.** "So we do have all of, these are SOPs, these are standard operating procedures that we have, they're established, we train our staff, we train the partners that we work w share, IRC shares everything, so if you want to take a look at our assessments, we will. Now for these follow-up forecasts, for example, we presented the results about two learn more about the system, how to use it, because the ones they're using, great, they're great, but it takes a very long time to put them in motion, and it's very expensive, a week or whatever. And so they want IRC to train them regionally on the methodology, how to do it, and how to do the community mobilization for response and preparedn
IRC	Agenda s	**1.** "The IRC strategy for Northern Central America in general has been working more with localgovernment than central government." "While we are integrated into national example, we work in Huehuetenango, and there we work within Masatenango, we work with the local government at a departmental level and then a municipal level. We try **2.** "So what we do is we go into the communities where we work and we generate, whether it's gender-based violence, climate change, child protection, economic recovery state and non-state actors to come together and develop a pathway of what work needs to look like in that area. And basically, for example, in the case of gender-based vio whole variety of people that need to be engaged with the response." **3.** "No. So the humanitarian sector worldwide has something called the AORs, which are the areas of responsibility. UNHCR, which is the agency that is in charge of the clu action, there's a cluster system. And it's led by a UN agency for each thematic area, and then either, usually an INGO, I would love to say a local NGO, but that's not true, a education cluster, and it has all the actors included. And this way, you can coordinate geographic areas, program area interventions, making sure no one is duplicating effo **4.** " We have signed MOUs with the government areas that we coordinate and work with so that we can facilitate and then we also have those MOUs with the leading UN ag them for programming events, and we do belong to the cluster and the technical table that coordinates for Guatemala." **5.** "This project is funded by SIDA, and we are currently starting April 1st our new SIDA project." **6.** "It varies widely, it varies a lot, it goes by donors, so ECHO, which is the European Union's branch for humanitarian assistance. They're two very interesting, so they have right, they don't have a mission in Guatemala, they don't have a mission in Honduras, they only have a mission in Panama, and so what we do with them is, we don't only d communication with them, telling them, this is what's happening, this is what's happening in the communities we work, and they don't just get that from us, they get it from they're getting throughout the year. They're able to really cater to what's happening." **7.** "And some people, like ECHO, they're super clear, and they tell you like, we want to be informed, we want to know, we want to know what you're doing, and then you car **8.** "So we do have all of, these are SOPs, these are standard operating procedures that we have, they're established, we train our staff, we train the partners that we work w share, IRC shares everything, so if you want to take a look at our assessments, we will. Now for these follow-up forecasts, for example, we presented the results about two learn more about the system, how to use it, because the ones they're using, great, they're great, but it takes a very long time to put them in motion, and it's very expensive, a week or whatever. And so they want IRC to train them regionally on the methodology, how to do it, and how to do the community mobilization for response and preparedn
IRC	Transpar	**1.** "Guatemala, it's super complex because, so if it's for a department, like if you're going into a municipality into a specific community, it's better to coordinate with them a **2.** "...but government coordinating with itself is very complex. And there are barriers that they face from one branch of our government to the other that makes coordinating **3.**"...but when it's led just by one organization from the government, it can be more challenging. For us, as an NGO, no. For the government, it's more challenging."
IRC	Inst. Frar	1. "The humanitarian sector has brought a lot of accountability and I think coordination, which is not there before. " 2. "We need to create our policy work, our advocacy work, within the networks of the com+C6munities that we're working to serve." 3. "...we work within the system, and then we strengthen it for whatever program area we're working, whether it's disaster response or preparedness or gender-based violen 4. "...we work within the systems to, and we don't bring just the IRC methodologies."

Appendix VII



Consent and Information form: English

Information about the study
Aim
The purpose of this research is to investigate and analyze the extent to which international aid and funding reach communities at risk in Guatemala City. We examine the roles and interactions of non-governmental organizations (NGOs), government institutions, aid agencies, community leaders, and UN organizations in reducing disaster risks. Additionally, the study focuses on how local knowledge and community engagement is involved in disaster preparedness efforts in decreasing vulnerability. By analyzing these interconnected aspects, the study aims to identify challenges and opportunities of internationally funded disaster risk reduction initiatives at community level.

Research Questions

1. To what extent do international aid and funding for DRR reach communities at-risk for disasters in Guatemala City?
2. How do stakeholders contribute to reducing risks in the implementation of community-based disaster preparedness strategies?
3. How do stakeholders integrate local knowledge and community engagement into disaster preparedness efforts?

Consent

I hereby confirm that I have received information about the study and agree to participate. I have been given the opportunity to ask questions about the study.

I have been informed that the data collected about me will be treated confidentially, in such a way that my identity will not be revealed to unauthorized persons.

I have been informed that I have the right to not be recorded during the interview process.
I am aware that my participation is completely voluntary and that I can cancel my participation at any time without further explanation and that the data collected from me will be destroyed.

Place and date

_____

Name and surname

_____

Adress

_____

Phone number

_____

Signature

_____

Contact information
Tutor: Johanna Bergström, Assistant Professor of Global Studies, johanna.bergstrom@ju.se
Students: Michael Rodriguez, Student Global Studies, romi21qt@student.ju.se / Veronica Vallevi Dytlow, Student Global Studies, vave22ts@student.ju.se



Planilla de consentimiento informado

Propósito del estudio
El propósito de esta investigación es investigar y analizar hasta qué punto la ayuda y los fondos internacionales llegan a las comunidades en riesgo en la Ciudad de Guatemala. Examinamos los roles y las interacciones de las organizaciones no gubernamentales (ONG), las instituciones gubernamentales, las agencias internacionales, lideres comunitarios y las organizaciones de las Naciones Unidas en la reducción del riesgo de desastres. Además, el estudio se centra en cómo el conocimiento local y la participación comunitaria se integran en los esfuerzos de preparación ante desastres para disminuir la vulnerabilidad. Al analizar estos aspectos interconectados, el estudio tiene como objetivo identificar los desafíos y las oportunidades de las iniciativas de reducción de riesgos de desastres financiadas internacionalmente a nivel comunitario.

Preguntas de investigación
1. ¿En qué medida la ayuda internacional y la financiación para la RRD llegan a las comunidades en riesgo de desastres en Ciudad de Guatemala?
2. ¿Cómo contribuyen los actores a la reducción de riesgos mediante la implementación de estrategias comunitarias de preparación ante desastres?
3. ¿Cómo integran los actores el conocimiento local y la participación comunitaria en los esfuerzos de preparación ante desastres?

Consentimiento
Por la presente, confirmo que he recibido información sobre el estudio y acepto participar. Se me ha brindado la oportunidad de hacer preguntas sobre el estudio.

Se me ha informado que los datos recopilados sobre mí serán tratados de manera confidencial, de modo que mi identidad no será revelada a personas no autorizadas.

Se me ha informado de que tengo derecho a no ser grabado durante el proceso de entrevista.

Soy consciente de que mi participación es totalmente voluntaria y de que puedo cancelarla en cualquier momento sin más explicaciones y de que los datos que se recojan de mí serán destruidos.

Lugar y fecha

_____

Nombre y apellido

_____

Dirección

_____

Número de teléfono

_____

Firma

_____

Contacto
Tutor: Johanna Bergström, Assistant Professor of Global Studies, johanna.bergstrom@ju.se
Estudiantes: Michael Rodriguez, Student Global Studies, romi21qt@student.ju.se / Veronica Vallevi Dytlow, Student Global Studies, vave22ts@student.ju.se