

MAKING TIME FOR LEARNING

Good Practices from
Trócaire's Disaster Risk
Reduction and Humanitarian
Work in Guatemala

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Guatemala is in constant movement. Its tectonic plates, weather patterns, expanding dry areas and migration trends make it a volatile and shifting context. One could easily get lost, rushing from one disaster to the next.

However, Trócaire's humanitarian and disaster risk reduction team has developed a strong culture of learning and knowledge exchange with its partners and collaborators, allowing it to better prepare for natural disasters and reduce risks.

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The myriad of natural threats that Guatemala faces are exacerbated by climate change and a number of structural issues: extreme poverty, gender inequalities, abuses by extractive industries, human rights violations and power imbalances inherited from the country's colonial past but strengthened, rather than weakened, by time.

For the past few years, Trócaire's humanitarian and disaster risk reduction (DRR) team in Guatemala has worked on different fronts to reduce communities' vulnerabilities and strengthen their ability to bounce back from shocks. This has included everything from responding and preparing for droughts, to developing means of monitoring river levels to decrease the negative impacts of floods; from assisting migrants in transit, to promoting earthquake-resistant construction practices.

This case study documents three examples of Trócaire's work in Guatemala where learning, partnership and collaboration were brought together and fostered to achieve better quality results for the communities we serve. As these examples will show, this focus on learning supports our advocacy, humanitarian and development work, while also helping raise our profile and influence nationally. This case study captures some of the key ingredients and good practices used in Guatemala to foster this culture of learning so that they may be replicated by others.

As these examples will show, by maintaining an open and flexible approach, it is possible to establish win-win scenarios with a multitude of stakeholders (partners, programme participants, academics, professionals and governmental institutions) at different levels (local, municipal, national), all at the benefit of the communities we serve.

GOOD PRACTICES FOR ESTABLISHING A LEARNING CULTURE

Creating learning is a long process that requires vision, motivation and proactivity. While each context is different, and faces its own set of unique challenges, our DRR and humanitarian programme in Guatemala does provide a number of good practices that others can adopt to build a stronger learning culture. These are illustrated in the examples to the right.

- Work with partners who have a strong presence in local communities and have a **deep understanding** of communities' needs and capacities, beyond specific project focus areas.
- Promote **flexible projects** to be able to adapt to changing contexts and seize opportunities.
- Build and nurture good **relationships** with partners, academics, representatives from government institutions and professional associations.
- Create links between actors to promote **collaboration** beyond Trócaire's programmes and without Trócaire's facilitation.
- **Strengthen the capacities** of partners, so that they can create and maintain these linkages.
- Use **simple technology** to facilitate unhindered communication between actors, including the community.
- Use projects to gather **reputable, scientific evidence** that can serve for advocacy activities.
- **Work with academics** to help facilitate experimentation and innovation.
- **Support policy makers** in the development of policies, guidance and tools that they can later disseminate or bring to scale on their own.
- Identify means of actively involving communities in innovative projects to **build ownership**.

LOCALLY EMBEDDED EARLY WARNING SYSTEMS IN SAN MARCOS

The CONRED System

The *National Coordinator for Disaster Risk Reduction* (CONRED) is a government institution that holds responsibility for DRR at the national-level. It is the top tier of the DRR system in Guatemala with the subsequent tiers being the *Municipal Coordinators for Disaster Risk Reduction* (COMREDs) at the municipal-level and the *Local Coordinators for Disaster Risk Reduction* (COLRED) at the community-level. CONRED sets out standards that should be followed by COMREDs and COLREDs to become certified associations, while also providing some support and training. However, COMREDs and COLREDs are independent, which can complicate coordination. Establishing certified COMREDs and COLREDs can take years, requiring a lot of time and dedication from communities.

While setting up COLREDs in communities is important, having a strong COMRED ensures that municipal authorities are prepared, have the necessary tools and skills to fulfil their responsibilities in disaster risk reduction, and that communities can receive support for preparedness and response. Additionally, the processes of COLRED and COMRED accreditation are accompanied by CONRED delegates, who can provide additional resources.

Living near riverbanks or along the Pacific coast is dangerous, especially during the rainy season. Floods happen annually, yet they are hard to predict. The consequences can be devastating for families. Early warning systems (EWSs) can provide live-saving information and increase people's resilience to severe flooding.

With our local partner Pastoral Social de San Marcos (PSSM), a local Caritas member, Trócaire has worked to better prepare for and respond to surges in the river levels. PSSM works closely with communities in San Marcos to strengthen disaster risk reduction mechanisms at the municipal and community levels.

EWSs are not new to Guatemala. Yet, they have not always been sustainable. To design an approach that would be appropriate for the Naranjo River Basin and relevant for communities, Trócaire and partners teamed up with academics and a cross-section of organisations involved in emergency preparedness and response in the region.

What was done

When starting DRR work with a new community, PSSM first conducts a needs analysis with community members to identify threats and vulnerabilities, but also strengths specific to the community. Community leaders and volunteers are then brought together to set up a COLRED (see box below to understand the CONRED system). PSSM provides support to COLREDs at all steps through to getting officially accredited. This involves providing specialised trainings, workshops, and promoting ownership of the group's roles and responsibilities. PSSM also makes sure that women are equally represented and participate in the COLRED, and people with disabilities can play a role.

Through this process of collaboration and support, the COLREDs, municipality and PSSM identified the need for an early warning system. Families living near the waterways in lower

river basin where very vulnerable to flooding. To do this, it was clear that a new player would be needed. Trócaire and PSSM approached researchers at the Galileo University, who had experience designing, testing and setting up EWSs. Their expertise would be key in establishing an EWS in the Naranjo River, with monitoring stations at key points in the river basin.

What we achieved

After months of research and collaboration with communities, municipalities, academics, CONRED members and PSSM staff, the system was ready. It consists of four monitoring stations at different levels along the river basin. These monitoring stations are equipped with sensors to detect when water levels reach a certain point, which triggers an alert. This is complemented by solar-powered video cameras that provide real-time imagery, thus allowing the visual verification of data transmitted by the monitoring stations.

The alerts are monitored at two-levels: first on the ground by a community volunteer, and second at the level of the municipality where data

is compiled, visualised and tracked by a member of the COMRED. In the case of a technical issue, both these levels have a direct line of communication through to the technicians from the Universidad de Galileo.

In the case of a worrying rise in water levels, the municipality is empowered to independently launch an evacuation notice. This decision does not need to be approved by the CONRED at the national-level. This system can give the vulnerable communities of La Blanca and Ocos up to 3 hours warning to evacuate. Having an Early Warning System on the Naranjo River Basin has provided different actors with timely, live-saving information. Over the course of 2018 and 2019, three major floods occurred. In all three cases, these were detected in advance and evacuation notices were launched. Though damages to homes and livelihoods were sustained, no lives were lost.

Moreover, through this process a reference manual for the establishment and implementation of early warning systems was produced. This has been adopted by the CONRED as a key reference document for the setup of EWSs in Guatemala.

Simple Tech

Results through Community Engagement

River flow sensors, solar batteries and monitors showing real-time data are not the only technological elements that make up an efficient EWS in the San Marcos area. Other interesting features that do not require any advanced training are WhatsApp groups.

As part of the EWSs project, a WhatsApp group was established to enable constant communication among those involved, including representatives from three municipalities, CONRED, PSSM, Trócaire and Galileo University. Through this group, members can share information and ask questions about the functioning of the systems, the state of the river or any other relevant issues.

“[Technology] allows for communication on different subjects and has created a dynamic interaction in the group” *Byron Perez – Member of COMRED in La Blanca*

For example, there have been instances where members of the COMRED have had questions or technical issues while operating the monitors, and they have used the WhatsApp group to obtain support directly from people in the Galileo University, rather than having to go through PSSM.

This has proven to be a useful tool for creating synergies, solve problems and reinforce the relationships that have been built through the initiative.



Photo Israel Ochoa Barrios (third from left) is the president of COLRED in his community. He is responsible for monitoring the system from a monitor in his workshop. He also takes daily walks along the river to observe the conditions, keep the sensors clear and make sure they are working properly.

Why this worked

The success of such strategies is highly dependent on the willingness of local authorities and institutions to participate in trainings and embrace their responsibilities to vulnerable communities. While many mayors and institutional representatives might be very collaborative and willing to participate, others may not see DRR as a priority.

PSSM staff, Eluvia Mérida and Ana Reyna, describe their experience with municipalities and CONRED as very positive. People got on-board and worked towards this common goal. In La Blanca, one of the municipalities where PSSM works, they were able to establish an accredited COMRED, whose 54 members include the mayor, representatives from the police, municipal firefighters, etc. With the CONRED delegate in the area, Franz Kiss, PSSM divvied up the modules for the COLRED and COMRED trainings, enabling them to not only cover more ground but also introduce the community to different focal points. Vice versa, involving the CONRED like this, puts vulnerable communities in the eye of governmental institutions, which can provide assistance and resources during emergencies. Without an environment of flexibility, commitment and collaboration, the systems cannot on their own increase people's resilience.

Creating time for knowledge sharing

Every two months, Trocaire brings together its DRR and humanitarian partners.

These meetings are used to provide updates on projects across the country, but more importantly to profile expertise and share learning.

One month a partner may be asked to talk about cash programming, while another month a partner may be given time to discuss a new tool or methodology they have been trialling.

These meetings have helped create a peer-network amongst the local organisations that we support.

EVIDENCE FOR ADVOCACY IN CHAMPERICO

With a long history of industrial-scale agriculture, Champerico near the Pacific coast is regarded as a fertile and economically productive area. What is missing from this picture is the fact that, during the last few decades, climactic changes and decreasing rainfall patterns have caused severe droughts that put people's livelihoods and food security at risk. However, due to the area's reputation, it is not seen as a priority for government or international aid programmes.

ACCSS, our partner in the area, has been working with communities in Champerico for many years. They have put in place projects to build community capacities, increase knowledge of the risks, as well as establish and certify COLREDs and COMREDs.

What we did

To rectify this misconception and better advocate on behalf of communities, Trócaire and ACCSS have worked to gather evidence of the drastic climactic changes that threaten communities in the area, especially the decreasing amount of rainfall throughout the year. To do this, ACCSS selected people living in 15 different communities in the area, who had already taken part in prior DRR activities, provided them with rain gauges and taught them how to keep a record the amount of precipitation. Consolidating these measurements gives ACCSS reliable information of the amount of rain that falls in a given area in a year.

In parallel, ACCSS started working with researchers at the San Carlos University of Quetzaltenango to complement this information with assessments of water levels in nearby wells. Their studies revealed a dramatic decrease in the water levels and quality due to pollution and saltwater intrusion.

The goal is to compile all this evidence and present it to national institutions and external organisations to raise awareness of this new reality in Champerico, and incorporate it as one of the priority areas for aid and support programmes, as is the Dry Corridor.

What we achieved

The process of gathering data and creating evidence is still underway. However, great progress has already been made in creating capacities and strong commitment in communities to fight the stereotype of the region and make sure that it is recognised as a multi-threat area experiencing devastating seasonal drought. Similarly, the university's Faculty of Physics and Earth Sciences continues to support the search for alternative solutions for the population.

ACCSS' activities have resulted in nine COLREDs with the necessary training, skills and certification to respond to different emergencies. These COLREDs have also served key opportunities for women to take-up leadership roles in their communities. Up 60% of COLRED members are women. Also in Champerico, a COMRED has been organised and accredited. It is the only municipality in the department of Retalhuleu to have an accredited COMRED.

Why this worked

These results were achieved thanks to the good relationships with project participants, ACCSS staff, academics, municipal authorities as well as COMRED and CONRED delegates; these relationships were established through numerous initiatives over a period of years. ACCSS's long

history of work and trust building in the area was also key to the success of these initiatives.

Investing in complementary work across stakeholders supported the gathering of strong data that can be used for advocacy. By strengthening the local groups (COLREDs) and giving community members the task of collecting data alongside academic researchers, Trócaire and ACCSS were able to create a sense of ownership and commitment among project participants. For this, the use of simple technology was key. Something as simple as a rain gauge can provide reliable evidence and get the community involved.

As with the prior example of early warning systems, the participation of the academia was of great value for all parties. Their involvement has evolved with time. There has been enough flexibility within their research programmes and Trócaire's projects to allow for new research ideas to be identified and seized.

We hope that all these activities, once utilised for advocacy purposes will result in substantial change: both in how Champerico is perceived nationally and supported internationally.



Photo Representative of COLRED in La Sureña explaining the community's risk map.

CREATING WIN-WIN SITUATIONS WITH ACADEMIA

Over the last three years, Trocaire Guatemala has established partnerships with at least four academic institutions. These relationships have proven beneficial in different ways.

Participating in Trócaire's programmes benefits researchers and students. They can put their knowledge into practice, develop new skills and get to know different realities in their own country. This has been evidenced in Champerico, with the involvement of the University of San Carlos in Quetzaltenango.

At first, researchers from the Faculty of Physics collaborated with ACCSS to obtain and analyse data from 50 wells. However, they developed a good relationship with Trócaire and ACCSS during the process and saw opportunities for students to gain first-hand experience in projects that can have positive impacts on people's lives.

For communities and project participants, working together with academics can be meaningful and motivating. It allows them to share their experiences and knowing that university students and researchers are interested in their stories, communities and well-being boosts their confidence.

Currently, a larger group of researchers is completing a full hydro-geological study of the area to support further evidence-backed advocacy in Champerico, but in this case linked to the exploitative practices by the sugarcane industry.

REDUCING STRUCTURAL VULNERABILITY IN THE FACE OF EARTHQUAKES

Guatemala is situated along the Ring of Fire, earthquakes are frequent; some of which have had devastating consequences. In 2012, an earthquake with a rating of 7.2 on the Richter scale was recorded, leading to loss of human life, damage to water and electricity infrastructure, and the destruction of buildings and homes especially in the west of the country.

Unfortunately, general construction practices do not consider these risks, making many structures extremely vulnerable and hazardous to the people living or working in them. The reasons for this are varied. Firstly, until recently there were no set standards or norms for earthquake-resistant construction in Guatemala. Secondly, although a lot of work is being done across the country on risk management, there are still many areas where the threats are not fully understood or prioritized. Thirdly, the high poverty and inequality levels make it difficult for many people to have access to specialised training or good-quality building materials. Lastly, most municipalities do not have the resources to conduct geological studies or to supervise all construction plans.

What we did

Trócaire has been working on reducing people and structures' vulnerability to seismic events for a long time, along with its partners. They have teamed up with CONRED, universities, professional associations and training centres to improve the resilience of buildings in Guatemala.

The first step was to ensure that partner staff had the necessary knowledge and capacities to support initiatives related to construction standards and practices. To do this, Marvin Ravanales, the DRR and Humanitarian Programme Officer in Trócaire Guatemala, reached out to architects and engineers – that he already knew from past projects – from a group called AGIES (Guatemalan Association for Structural and Seismic Engineering). With AGIES, tailored trainings were developed for our partners.

AGIES worked with ACCSS to train its staff and to develop materials anchored in science. While AGIES had the knowledge and Trócaire's partners had the experience working in capacity building with project participants, they both lacked the reach, means and structure to create

standardised trainings for larger groups. For this reason, they got in touch with INTECAP, a training institute that offers specialised courses in many different regions of Guatemala.

In Guatemala, most individuals cannot afford to hire architects to design and build their houses, and therefore hire local construction workers and masons. Thus targeting these professionals would maximise the impact of the project. Together with INTECAP, they developed a course curriculum on earthquake-resistant construction for local masons and construction workers.

In parallel to these processes, masonry manuals and standards for safe construction in earthquake-prone areas were updated and disseminated by AGIES.

What we achieved

Leveraging these alliances led to the adoption of nation-wide voluntary earthquake-resistant construction standards. These are already being used by diversity of actors, such as municipalities and key tourism destinations around the country, but most notably, by the private sector and government for new construction projects

such as schools and hospitals. Moreover, these standards have been incorporated into the engineering and architecture curriculums of all universities in Guatemala.

Masons and construction workers took part in 40 hours of training with INTECAP; giving up their weekends to improve their skills and adopt stronger building practices. For local masons and construction workers, having architects and engineers spend time exchanging with them during the trainings, filled them with pride and showed the importance of their work. Those involved in the design of the trainings (partners, AGIES and INTECAP) invested in understanding local construction practices and in learning the language of construction in different areas of the country, to adapt the contents of the trainings. This success led INTECAP to adopt these trainings into their permanent curricula, and to continue them on their own, without further support from Trócaire.

Why this worked

Trócaire's investment in research resulted in stronger more reputable evidence, guidance and standards. But the key to this initiative's success was the participation and buy-in from a range of actors with complementary skills, know-how and influence.

Trócaire and ACCSS were able to identify and involve actors with soft power and influence such as masons and construction workers, and the professional association of engineers. The involvement of a diversity of actors also contributed a range of complementary skills and knowledge areas. AGIES' technical expertise and reputation heightened the credibility of the construction standard manuals, while CONRED's involvement from the beginning of the project gave more importance to the initiatives and led to more impactful results. Trocaire and AGIES were successful in demonstrating the importance of the standards and how these could contribute to decreasing people's vulnerability to seismic events.

Using a gender-lens

One of the main challenges in Trócaire's DRR and humanitarian programmes is ensuring that special attention is put on women's specific needs and perspectives. Guatemala is no exception.

When working with academics, professionals and representatives from institutions, it is especially difficult to ensure women are participating equally because certain sectors or positions may be male dominated.

For instance, when Trócaire and its partners carried out trainings on earthquake-resistant structures with masons and construction workers, there was not a representative female presence, due to the fact that, in Guatemala (and around the world), most people in the construction sector are men. Additionally, other actors that participated in these activities were mostly men (engineers, architects and researchers).

It is important to find ways to integrate women in all initiatives. Further work and efforts should be put on finding innovative solutions to incorporate women's voices and perspectives into male-dominated areas of work.

For this project, there were different windows of opportunity. Despite their limited presence in the sector, women do play a key role in reducing structural vulnerability. Oftentimes, they are responsible for supervising construction work on their homes. Therefore, more training could be aimed specifically at women so that they will have knowledge about safe structures and are able to demand that safety standards are met.

CREATING A LEARNING CULTURE

“This model works because it enables the transference of knowledge and technology across levels and sectors, to the benefit of vulnerable communities.”

Marvin Ravanales
DRR Programme Officer
Trócaire Guatemala

Photo Participants from the training on earthquake resistant construction methods.

In Guatemala, Trócaire’s DRR and humanitarian programmes have contributed to the creation of strong relationships and flows of information and evidence across actors. Trócaire’s staff prioritised three elements, all of which were crucial in establishing a strong learning culture that is evident in the examples presented in this report.

- **Vision:** staff - particularly the DRR Programme Officer - actively support learning and understand the importance of finding allies who can combine their expertise, resources, experience and spheres of influence to achieve common goals.
- **Trust and flexibility:** senior leadership in Guatemala and headquarters have provided enough trust and flexibility so that the DRR and humanitarian team can constantly adapt strategies to the changing context, test innovative ideas and work like-minded people.
- **Strength and commitment from partners:** by strengthening the capacities of our humanitarian and DRR partners, they have been able to independently take on coordination roles and lead multi-actor initiatives. Our partners’ commitment to continue learning and growing has been crucial in fostering this learning model.

