

FROM TEGUCIGALPA TO LA CEIBA

Localising Early Warning Systems in Honduras

Key insights from the development of locally owned Early Warning Systems (EWS) in Honduras *with support from Ireland's Civil Society Partnership (ICSP) Programme*

INTRODUCTION

Across the world, governments and development partners are investing heavily in Early Warning Systems (EWS). Forecasting technology, hazard modelling and monitoring networks continue to improve, providing increasingly sophisticated information about floods, storms and other climate-related hazards.

Yet better information does not automatically lead to better outcomes.

Many systems struggle because responsibilities are fragmented, institutions operate in isolation, and communities do not trust or understand the information they receive. As a result, the challenge is often not generating warnings but ensuring that warnings trigger timely and effective action.

A second challenge is sustainability. While many EWS are established through externally funded projects, far fewer become embedded within local institutions and continue to function, adapt and expand after project support ends. **Technology can be installed relatively quickly however building the relationships, governance arrangements and local capacity needed to sustain a system is much harder.**

EWS: a set of capacities needed to generate and disseminate timely and meaningful warning information, in order to enable individuals, communities, and organisations threatened by a threat to prepare and act appropriately and with sufficient time in advance to reduce the possibility of loss or damage (UNDRR,2009)

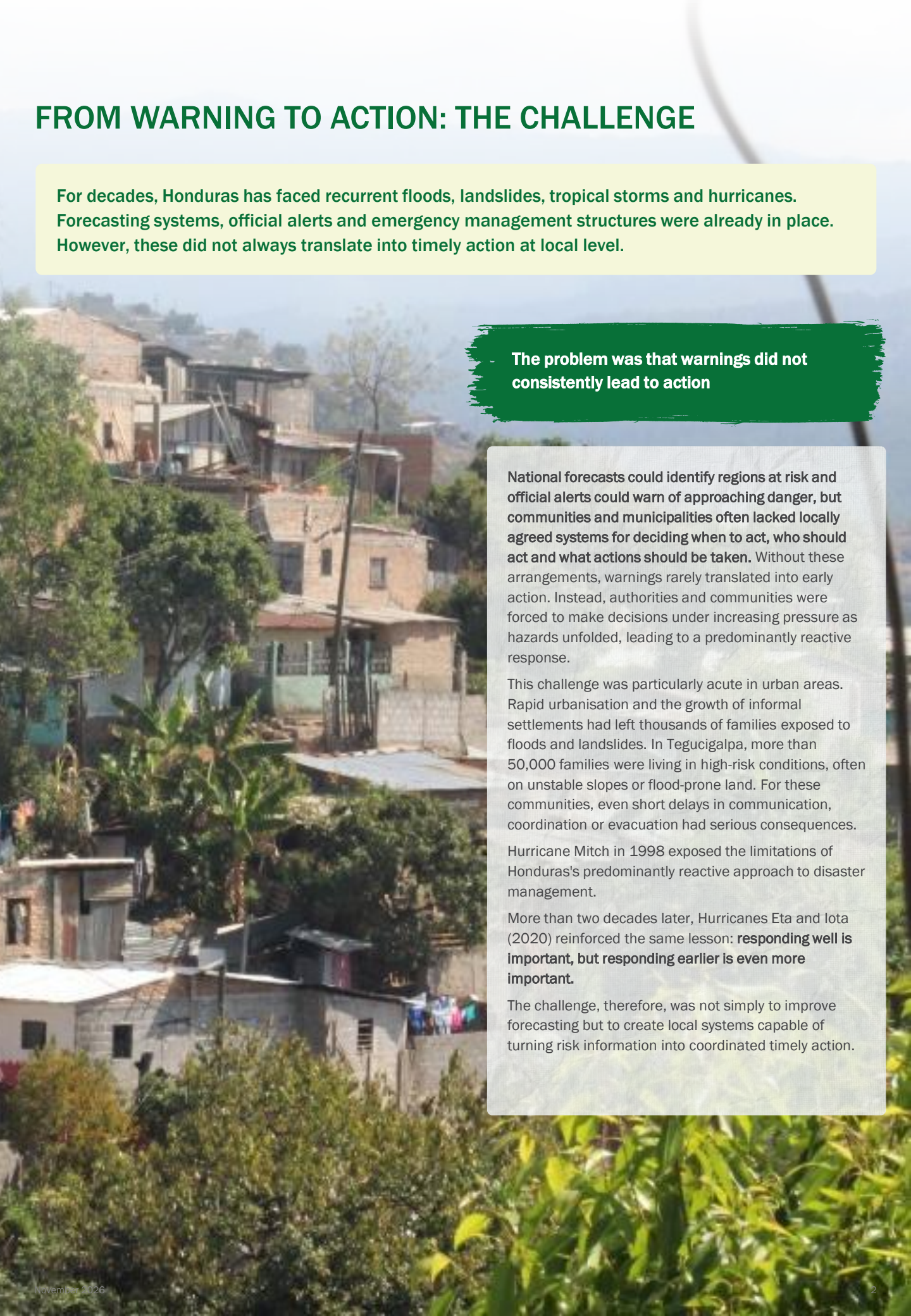
For more than two decades, GOAL has worked with communities, municipalities and national authorities in Honduras to address these challenges**. Rather than focusing solely on technology, GOAL has invested in strengthening the people, institutions and partnerships needed to understand risk, coordinate action and manage disasters collectively**. By building systems that are locally owned and embedded in public institutions, GOAL helps communities reduce losses and lessen the need for humanitarian assistance before disasters occur.

As of 2026, GOAL has operationalised EWS systems in Tegucigalpa and the Sula Valley and is completing implementation in La Ceiba and the Dry Corridor. Once fully operational, these four systems will provide coverage for approximately 3 million people representing more than a quarter of the national population. GOAL has also supported peer-to-peer learning across Central America, sharing lessons on community-centred EWS design and implementation with partners in Colombia and Guatemala.

The scale achieved today is the result of a model that has evolved over many years through practical implementation and learning. This paper documents that journey, examining how the approach evolved in Tegucigalpa before being adapted across multiple hazards and geographic contexts including the Irish Aid-supported La Ceiba EWS system funded through the current ICSP programme.

FROM WARNING TO ACTION: THE CHALLENGE

For decades, Honduras has faced recurrent floods, landslides, tropical storms and hurricanes. Forecasting systems, official alerts and emergency management structures were already in place. However, these did not always translate into timely action at local level.



The problem was that warnings did not consistently lead to action

National forecasts could identify regions at risk and official alerts could warn of approaching danger, but communities and municipalities often lacked locally agreed systems for deciding when to act, who should act and what actions should be taken. Without these arrangements, warnings rarely translated into early action. Instead, authorities and communities were forced to make decisions under increasing pressure as hazards unfolded, leading to a predominantly reactive response.

This challenge was particularly acute in urban areas. Rapid urbanisation and the growth of informal settlements had left thousands of families exposed to floods and landslides. In Tegucigalpa, more than 50,000 families were living in high-risk conditions, often on unstable slopes or flood-prone land. For these communities, even short delays in communication, coordination or evacuation had serious consequences.

Hurricane Mitch in 1998 exposed the limitations of Honduras's predominantly reactive approach to disaster management.

More than two decades later, Hurricanes Eta and Iota (2020) reinforced the same lesson: **responding well is important, but responding earlier is even more important.**

The challenge, therefore, was not simply to improve forecasting but to create local systems capable of turning risk information into coordinated timely action.

GOAL'S RESPONSE



Urban programming and risk mapping as an entry point

GOAL's work on Early Warning Systems (EWS) in Honduras did not begin with technology.

It evolved from more than two decades of urban programming and risk analysis in some of the country's most vulnerable neighbourhoods and reflected a broader shift from emergency response towards resilience building.

Following Hurricane Mitch in 1998, GOAL established a long-term presence in Honduras and began working in the most vulnerable urban neighbourhoods of the Central District of Tegucigalpa. Through this work, GOAL developed extensive experience in urban risk analysis, disaster preparedness, and engagement with communities, local authorities and the private sector.

As floods and landslides continued to threaten Tegucigalpa, GOAL introduced **SIMET-DC**, its first urban EWS system, in 2010. Initially established as a manual community-based landslide warning system, SIMET demonstrated its value to municipal authorities, who subsequently took ownership of the model and financed its expansion into surrounding rural areas to become a singular municipal level EWS. The approach was later upgraded to an automated system and adapted to address flood risks along the Choluteca River. By 2018, these developments had contributed to the consolidation of a broader multi-hazard system covering 1.2 million people across 56 water basins.

In parallel, GOAL's wider urban resilience programming evolved through the *Resilient Neighbourhoods* programme (2013-2022), which built on years of urban risk analysis and community engagement to strengthen preparedness and reduce vulnerability to recurring shocks. While distinct initiatives, both programmes reinforced one another and together contributed to the development of GOAL's broader urban resilience and disaster risk reduction approach.

A 2024 cost-benefit analysis found that GOAL's EWS in Tegucigalpa generated more than US$300,000 annually in quantified benefits through avoided losses to education, housing and livelihoods, demonstrating the strong economic case for investing in early warning systems.

With this foundation in place, GOAL began applying its expertise and knowledge to a broader range of hazards and geographic contexts across Honduras. In the northern economic corridor, GOAL established **SIMPRO-VS,** a regional level EWS system designed to address major flood risks across 20 municipalities in the Sula Valley. The system reduced response times from 65 hours to 16 hours, enabling warnings to be issued and acted upon significantly earlier.

Today, this evolution continues through the development of a drought-focused EWS system in the southern **Dry Corridor,** with an expected reach of approximately 500,000 people, and a flood-focused EWS system in **La Ceiba,** designed to protect an estimated 230,000 people in one of Honduras's most flood-prone coastal municipalities.

In 2018, insights generated through the *Resilient Neighbourhoods* programme informed the development of the 'RINA' approach, a methodology designed to support local authorities in developing Early Warning Systems (EWS) for flood and landslide risks. Around 2022, GOAL partnered with public and private universities to develop a training course on the application of the approach, targeted at local government technical staff as well as architecture and civil engineering students and practitioners. Together, these initiatives strengthened local capacity and created practical pathways for replicating and scaling the approach beyond its original areas of implementation.



THE EARLY WARNING SYSTEM (EWS) MODEL

The experiences gained across urban neighbourhoods, river basins and coastal environments demonstrated that while hazards varied, the underlying requirements for effective early warning remained consistent. Drawing on these lessons, GOAL consolidated its experience into a practical EWS model that could be adapted to different risk contexts while maintaining a common set of principles and components.

Consistent with the UN's Early Warnings for All framework, GOAL's EWS approach is built around four interconnected pillars:

1 **Risk Knowledge**
Building a shared understanding of hazards, vulnerabilities and exposure.

2 **Monitoring and Forecasting**
Combining scientific analysis, automated monitoring and local observation to identify emerging risk.

3 **Warning Dissemination and Communication**
Ensuring warnings are trusted, understood and reach those at risk.

4 **Preparedness and Response Capacity**
Strengthening the people, plans, systems and resources needed to act.

The defining feature of the model, however, is not the pillars themselves but rather the process through which they are built.

GOAL uses a Local Systems Approach to build the system. Communities, municipalities, emergency services and national authorities work together to understand risks, agree what actions should be taken and decide who is responsible for taking them.

The result is not a warning system designed by outsiders and handed over to local people but rather a warning system that local actors help build from the ground up, operate and improve themselves.

GOAL's role in this understanding is therefore temporary. Success is not measured by how much GOAL does. It is measured by whether local institutions and volunteers can run the system on their own.

GOAL works with COPECO, the National Authority for Risk Management and Contingencies, municipal governments and communities to test and demonstrate locally led approaches to Early Warning. By piloting new models, strengthening local capacities and supporting targeted investments in technology and governance, GOAL helps generate evidence on what works in practice. In a resource-constrained environment, this helps public institutions make informed investment decisions and adopt approaches that have already been tested and proven in practice at municipal and regional level.



THE LA CEIBA EARLY WARNING SYSTEM (EWS) *SUPPORTED BY IRELAND'S CIVIL SOCIETY PARTNERSHIP PROGRAMME (ICSP)*

Over two decades, GOAL developed and refined its EWS approach across multiple hazards and contexts in Honduras. Through the Irish Aid-supported ICSP programme, this approach was adapted and strengthened in La Ceiba, drawing on years of experience, learning and innovation. Now nearing completion, the system has already demonstrated promising results within its first year, underscoring the value of building on proven methodologies and accumulated expertise.

Donor Partner:

Irish Aid (ICSP 2023-2027)

Coverage

26 neighbourhoods

Population Covered

Approximately 230,000 people

La Ceiba was selected by GOAL because of its high exposure to climate-related hazards.

Located on Honduras' northern Caribbean coast, **La Ceiba is one of the wettest cities in Central America** and faces recurrent flooding, tropical storms, hurricanes and landslides. The city is closely linked to the **Cangrejal River**, which is formed by three major rivers flowing from the surrounding mountains. Flood waters can rise quickly, leaving communities with limited time to prepare. For households living along riverbanks or on unstable slopes, delayed warnings can mean the loss of homes, livelihoods and, potentially, lives.

Against this backdrop, GOAL's objective was not simply to improve forecasting but to increase the time available for communities and institutions to act before hazards became disasters. La Ceiba already had important strengths to build on, including disaster management structures, experience in river basin management and strong local knowledge of flood risk.

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Despite these strengths, a baseline assessment conducted by GOAL in La Ceiba identified significant gaps across all four pillars of the EWS.

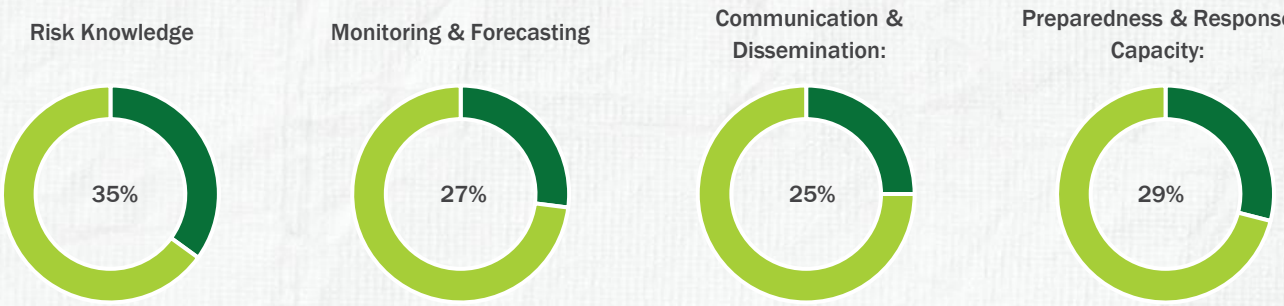


Chart note: *The percentage in each circle represents the baseline level of EWS capacity identified during the assessment. Dark green indicates existing capacity, while light green represents the remaining gap to a fully functional system. Scores across all four pillars ranged from 25% to 35%, highlighting substantial room for improvement*

Notably, communication emerged as the weakest component of the system. While warnings existed, there was no guarantee they would reach those at risk, be understood, or lead to action.

The assessment also highlighted broader governance challenges. Multiple actors were involved in risk management, but coordination arrangements, communication pathways and operational responsibilities were not always clearly defined. As a result, information did not consistently translate into coordinated action due to fragmentation.

GOAL's intervention therefore focused not only on strengthening risk knowledge, monitoring, communication and preparedness, but also on improving coordination between communities, municipalities and national authorities. **Whilst technology was provided by the project (sensors, automatic and manual rain gauges etc.), the most significant transfer was the methodology, governance arrangements and institutional relationships needed to make the system function.** By establishing clearer roles, strengthening communication pathways and linking community structures with formal disaster management systems, the programme helped move La Ceiba from institutional fragmentation towards a more coordinated and locally owned approach to risk management, supporting 26 at risk urban neighbourhoods.

LINKING MECHANISMS

The National Disaster Authority (COPECO) provides forecasting, technical expertise and official alerts.

Risk management specialists (UMGIR) help analyse risk, monitor conditions and support decision-making.

Municipal emergency committees (CODEMs) connect community and municipal response efforts.

Community emergency committees (CODELs) and local observers, monitor local conditions, share warnings and support evacuation and preparedness activities.



A TEST FOR THE SYSTEM: TROPICAL STORM SARA (2024)

Tropical Storm Sara in 2024 provided the first major real-world test of the La Ceiba Early Warning System (EWS). The storm brought exceptional rainfall to northern Honduras, with La Ceiba receiving approximately 375 mm of rain in just 24 hours, equivalent to nearly 15 inches of rainfall in a single day. Widespread flooding affected communities across the region.

As conditions deteriorated, information from national forecasts, monitoring equipment and community observers was combined to create a shared understanding of risk.

Rainfall thresholds were exceeded, monitoring increased and communication pathways were activated. La Ceiba in Atlántida was highly impacted.

The effectiveness of the system was demonstrated not by the absence of flooding, but by the actions it enabled.

Across Atlántida:

1,294
evacuations were reported.

31
shelters were activated.

Multiple evacuation centres
were established in La Ceiba.

Although it is not possible to quantify avoided losses directly, **the evidence demonstrates a functioning chain from monitoring to warning, communication, coordination and protective action.** As one CODEL member explained:

> "The trust between CODEL, the municipality and COPECO made the difference. We all acted at the same time."

What makes La Ceiba particularly notable is the speed at which the system improved. All four EWS pillars more than doubled within a year.

Between 2023 and 2024:

Risk Knowledge increased from
35% to 71%

Monitoring & Forecasting increased from
27% to 64%

Communication & Dissemination increased from
25% to 71%

Preparedness & Response Capacity increased from
29% to 68%

These improvements were not simply changes in assessment scores. They reflected tangible changes in the municipality's ability to understand, monitor and respond to risk.

For an investment of less than US$0.40 per person, La Ceiba strengthened its ability to understand risk, monitor hazards, communicate warnings and coordinate action across the municipality.



KEY LESSONS FROM GOAL HONDURAS

The lessons that follow draw on experience from GOAL's Early Warning System (EWS) work across Honduras including from Tegucigalpa and La Ceiba, both of which currently receive support through the Irish Aid-supported ICSP programme. While some lessons reflect more than a decade of learning from implementation in Tegucigalpa and beyond, they have also been reaffirmed through ongoing experience in La Ceiba and remain relevant across the entire GOAL Honduras EWS network.

Lesson 1

Sustainability Depends on Integration

Early Warning Systems (EWS) rarely operate in isolation. Most exist within wider national and sub-national risk management frameworks that involve government agencies, technical institutions or agencies, communities and development partners. The Honduras experience demonstrates that long-term sustainability depends not only on building local capacity, but also on ensuring that project-supported activities strengthen and align with existing systems. Development partners should therefore view EWS projects not as standalone interventions, but as opportunities to reinforce, test and improve broader national early warning arrangements. Success depends on how effectively local initiatives are integrated into existing governance structures, financing mechanisms and operational processes.

Factors that enabled success

1 Plan for transfer from the beginning , including assets

Plan for institutional ownership from the start. Early Warning Systems (EWS) are most likely to be sustained when they are designed from the outset as a government-owned service rather than a project intervention. This requires working with the responsible authorities to ensure the system is formally embedded within regulations, institutional mandates and operational frameworks, with clear responsibilities for management, oversight and maintenance. As part of this process, a **sustainability assessment** should be undertaken early in the project to determine whether the responsible institutions have the mandate, technical capacity and financial resources needed to operate and maintain the system over the long-term. The assessment should also consider how ongoing costs, including maintenance, replacement of equipment and system upgrades, will be financed, whether through government budgets, partner support or other funding mechanisms. These considerations can help inform decisions on system design and investment before significant assets are procured. Expand only what can be operated and resourced (each region requires a new study).

Formal **asset transfer** is another critical component of sustainable ownership. In Honduras, GOAL facilitates the transfer of all EWS assets, including software and hardware, to the relevant government institutions through a documented handover process. This is particularly important because public institutions are often unable to maintain or invest in assets that have not been formally transferred into government ownership. Without this legal transfer, authorities may be unable to allocate resources for system upkeep, regardless of their commitment to sustaining the service.

2 Invest smartly and communicate self reliance

The experience demonstrates that, when financial resources are limited, technology investments must be guided by long-term sustainability rather than short-term implementation costs. For example, investing in **institution-owned data servers** and infrastructure, rather than relying exclusively on subscription-based platforms with recurring annual fees, can help ensure continued access to information, data integrity, and institutional control beyond the lifetime of a project.

Similarly, prioritising **open-source software** can significantly reduce licensing costs and dependence on external providers. Whilst upfront costs may be high, the overall running costs of the EWS system will be lower, avoiding unnecessary dependencies, vendor lock-in and monopolistic arrangement. Additionally, developing a **Social and Behavioural Change (SBC) strategy** for institutions and communities alike is essential to reinforce the concept that not all EWS is resource heavy and that much of the work can be done on a lower budget.

3 Demonstrate results for dedicated budgets, advocate to withstand political transitions

Institutional ownership alone is not sufficient to sustain an EWS system. Long-term functionality also depends on securing the financial and political commitment required to operate, maintain and strengthen systems over time. The experience in Honduras demonstrates that sustained investment is more likely when governments can see the value and results generated by the system. **Evidence of effectiveness** helps build the case for dedicated budget allocations and supports the transition from donor-funded initiatives to publicly financed services. While development partners may fund the establishment of systems, responsibility for ongoing operation and maintenance should progressively shift to government institutions through inclusion in annual operational plans and institutional budgets. **Achieving this requires engagement with both technical personnel and decision-makers**. Technical teams need the capacity to operate and maintain the system, while senior officials and elected authorities play a critical role in approving budgets and safeguarding institutional commitments. Regular engagement with government leadership is particularly important during political transitions, when priorities may change and existing investments can come under pressure. Continued advocacy, supported by evidence of impact and system performance, helps maintain commitment across changes in leadership and strengthens the likelihood that the EWS system will remain funded and operational over the long-term.



Lesson 2

Scientific Evidence Creates Agreement

Communities, municipalities and technical institutions do not always see risk in the same way. Experience from GOAL Honduras shows that scientific evidence can provide a common foundation for decision-making. Risk maps, monitoring data, rainfall thresholds and hazard analysis help move discussions away from individual opinions and towards a shared understanding of risk. **Across all of GOAL's Early Warning Systems (EWS) technical evidence is a tool for negotiation and consensus building. It helps stakeholders agree where risks are greatest, who are the most vulnerable and what actions should be taken when thresholds are reached.**



Factors that enabled success

1

Build consensus around the problem before designing the solution

Many programmes focus on building consensus around a proposed intervention. **The GOAL Honduras experience suggests that equal attention should be given to building consensus around the nature of the problem itself.** In all of GOALs EWS projects, workshops and participatory risk-mapping exercises brought together communities, municipal authorities and technical institutions to identify flood-prone areas, validate local knowledge and discuss gaps in existing warning and response systems. This helped create a shared understanding of the risks, who was most vulnerable and what needed to change before solutions were designed.

2

Combine scientific evidence with local knowledge

Technology provides important information, but it does not always capture what is happening at neighbourhood level. In Honduras, **automated monitoring systems were complemented by community observers** who reported local conditions such as rising rivers, blocked drainage systems, landslide indicators and unusual weather patterns. This helped validate technical information and created a more complete picture of evolving risk.

3

Do not underestimate information management

Risk information only creates value when it is translated into decisions. EWS systems generate large volumes of information from forecasts, monitoring equipment, community observers and institutional reports. In Honduras, dedicated systems were needed to analyse, validate and communicate this information so that decision-makers could act on it. **Without clear processes for managing information, even high-quality data can remain unused, delayed or misunderstood**. Managing information therefore became just as important as generating it.

Lesson 3

Transparency Builds Trust, and Trust Saves Lives

GOALs Early Warning Systems (EWS) help close the 'last mile' gap between warning generation and community action. Information only reduces risk when people trust it enough to act. In Honduras, that trust was built through participation, transparency and shared ownership of the warning process. A critical enabling factor was the willingness of institutions to involve communities in risk management and openly share information. Communities were not treated simply as recipients of alerts generated elsewhere. Instead, they played an active role in observing local conditions, validating risk information and operating components of the system. By combining official forecasts with community-generated observations, the systems created a shared understanding of risk that was both technically credible and locally trusted. As a result, warnings were not only received but understood and acted upon. By the time threats arose, communities understood the warning process, trusted the information and knew what actions were expected of them at each alert level, effectively closing the gap between early warning and early action.

Factors that enabled success

1

Invest equally in people as well as technology

Communities are more likely to trust and act on warnings when they have a meaningful role in the EWS system. In Honduras, community leaders and volunteers were organised into Local Emergency Committees (CODELs) and trained in damage assessment, first aid, communication protocols, operation of EWS equipment and monitoring local conditions. This investment in local skills and leadership enabled communities to become active participants in generating and sharing risk information rather than passive recipients of alerts. As a result, when warnings were issued, they were communicated by trusted local actors who understood both the risks and the actions required.

2

Validate thresholds and scenarios with local evidence and knowledge before automating

Technology only works when people are ready to use it. In Honduras, communities first helped test and refine indicators, thresholds and response actions through local observations and manual rainfall monitoring. Thresholds were linked to official Green, Yellow and Red alert levels, each associated with predefined actions for communities, municipalities and emergency responders. This enabled communities to understand how warnings were generated, what different alerts meant and how they should respond. As confidence in the system grew, automation was introduced to strengthen monitoring and alert dissemination. This approach built trust and ownership, creating the foundation for a successful transition from manual to automated early warning.

3

Vary the messaging channels for maximum reach

The combination of official bulletins, local observation and institutional follow-up strengthened system credibility, reduced uncertainty and enabled earlier, more decisive action. In contrast to previous approaches, where information flowed primarily from institutions to communities, the GOAL EWS approach combined multiple information sources and communication channels to support preventive decision-making. The system also incorporated inclusive communication measures, including colour-coded light alerts for people who were deaf or hard of hearing and sirens for people with visual impairments, helping to ensure that warning information was accessible and actionable for all members of the community.

4

Do not overlook inclusion

In Honduras, GOAL ensured that CODELs included Protection Task Forces that identified and mapped people with disabilities, ensuring preparedness measures were inclusive and tailored to their needs. People with disabilities, their families and caregivers received training on how to respond to different alert levels, supported by clear protocols that defined required actions, supported arrangements and evacuation procedures. By strengthening preparedness among both individuals and their support networks, communities were better able to ensure safe and dignified evacuations during emergencies.

CONCLUSION

The GOAL Honduras experience demonstrates that effective Early Warning Systems (EWS) are not built on technology alone. While forecasting, monitoring and communication tools are important, the foundation of an effective system lies in the capacity of communities and institutions to understand risk, share information and act on warnings.

A notable lesson from Honduras is that significant progress can be achieved with relatively modest investment. **Rather than relying on expensive technology from the outset, the approach prioritises building the capacities of communities, emergency committees and government institutions through training, mentoring and practical experience.** This helps establish clear roles, strengthen coordination and build confidence in the actions required before, during and after an alert.

The experience also highlights the value of a phased approach to investment. In many contexts, manual monitoring systems and community observation networks provide an effective starting point for developing risk awareness, preparedness and response behaviours. Once these foundations are established and institutions demonstrate the capacity to operate and sustain the system, additional investments in automated monitoring equipment and advanced technologies can be introduced more effectively.

As emphasised throughout, the GOAL Honduras model reinforces the importance of people-centred, locally owned systems. Technology can strengthen performance, but it cannot substitute for capable institutions, engaged communities and sustainable ownership arrangements. For governments, donors and practitioners alike, the implication is clear: **investments in equipment should be matched by investments in people**, institutions and long-term sustainability. Building these foundations first can deliver meaningful results at relatively low cost while creating the conditions for more advanced locally owned systems that succeed over time.

What practitioners can do to support community engagement

1

Demonstrate the value of community-generated information

Start by showing how local observations improve situational awareness and complement official forecasts. Governments are often more receptive when participation improves the quality of information rather than being framed as a governance agenda.

2

Create opportunities for joint analysis

Community committees, local organisations and municipal structures can act as bridges between communities and national authorities, gradually building trust and confidence. Clearly defined roles, agreed protocols and shared access to information help strengthen coordination and ensure warnings are translated into timely action. Allowing both communities and local institutions to access the same data is important for joint vision and collaboration.

3

Introduce participation incrementally

Where community engagement is limited, begin with observation, monitoring and feedback mechanisms before moving towards greater involvement in preparedness planning and decision-making.

4

Document and demonstrate results

Nothing changes attitudes faster than evidence. When community participation leads to earlier action, improved communication or better outcomes during an event, document it and use it to build support for deeper engagement.



WAY FORWARD

The GOAL Honduras experience continues to gain momentum. With support from the EU Civil Protection & Humanitarian Aid Operations (ECHO), GOAL is working with Trócaire and other partners to strengthen Early Warning Systems (EWS) across Honduras and Guatemala, while Irish Aid is supporting the application of lessons from Honduras within GOAL programmes in Sierra Leone and Ethiopia. What began as a local effort to reduce disaster risk is now informing practice across multiple countries and regions.

The model is also attracting interest beyond GOAL's own programming. The experience and expertise developed in Honduras have led to engagement with a range of external partners seeking to strengthen early warning systems (EWS), risk communication and anticipatory action. This includes collaboration with private sector and financial sector actors, demonstrating how practical, community-centred approaches to early warning can inform broader multi-actor efforts to manage climate and disaster risk.

Additionally, these experiences are helping to inform the development of **ALERT (Anticipatory, Locally-led, Early Warning for Resilience and Transformation) ,** GOAL's emerging global framework for EWS. By consolidating learning from Honduras and other country programmes, ALERT aims to provide a common framework for implementation across different contexts while maintaining flexibility for local adaptation.

Looking ahead, there are opportunities to further strengthen the model through additional strategic partnerships. Organisations and or partners specialising in risk communication, public engagement and behaviour change can help strengthen the final mile of warning delivery, while climate resilience and adaptation networks offer opportunities to generate evidence, influence policy and scale effective practice across different contexts.

As climate change accelerates, Honduras will continue to face some of the most significant climate and disaster risks in the region. **Yet the GOAL Honduras experience demonstrates that vulnerability is not fixed and that disasters are not simply natural events. They occur when risks are left unmanaged and communities lack the information, capacity and resources to act.** By strengthening early warning and preparedness it is possible to save lives, protect livelihoods and reduce losses even in highly exposed environments.

GOAL's ongoing work through its Early Warning Systems (EWS), Resilient Neighbourhoods and Blue Economy approaches will continue to strengthen Honduras' resilience to climate change, demonstrating that while hazards cannot always be prevented, their impacts can be significantly reduced through collective action, local ownership and early action.



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