



CASE STUDY

PLAN INTERNATIONAL NICARAGUA

Creating an opportunity for influencing government resilience practice

This case study shows how early warning systems (EWS) can be leveraged as an entry point for influencing government adoption of resilience practice.

Authors: Plan International Nicaragua – Felix Rugama (felix.rugama@plan-international.org), Martha Emilia Alvarez (martha.alvarez@plan-international.org); ISET-International – Kanmani Venkateswaran, Karen MacClune, Rachel Norton, Atalie Pestalozzi; Plan International – Stu Solomon, Manuel von der Mühlen

Key Alliance terminology

Zurich Flood Resilience Alliance (Alliance):

The Alliance is a multi-sector collaboration between the humanitarian sector, academia, and the private sector focusing on shifting from the traditional emphasis on post-event recovery to pre-event resilience. We are nine years into an eleven-year program that has been delivered in two Phases (Phase I from 2013-2018; Phase II from 2018-2024).

Flood Resilience Measurement for Communities (FRMC):

Created by the Alliance in 2013, the FRMC is a framework and associated web-based data tool/app which conceptualizes flood resilience as a function of social, human, natural, physical, and financial capitals. The FRMC is implemented at the beginning of Alliance work to assess resilience strengths and gaps. This information is used to shape community programs and advocacy.

The win

By leveraging the success of its community-based EWS approach in Nicaragua, Plan International Nicaragua (Plan) influenced:

- National government institutions — namely the Nicaraguan Institute of Territorial Studies (INETER) and the Department of Civil Defense — to take up its EWS approach. INETER has proposed implementing the intervention in four additional communities in the Municipality of El Viejo.
- The scaling of EWS, including modern weather stations, on the Northern Caribbean Coast through a USD 65,000 European Commission Humanitarian and Aid Office project. Plan and INETER are jointly implementing this project.

These projects will enable communities to access timely flood forecasts and improve their ability to reduce potential loss and damage.



Training session for members of the Local Committee for Disaster Prevention and Control (COLOPRED) in Kilaca, Chinandega, Nicaragua, May 2022 © Manuel Ulloa, Civil Defense

How the win was achieved

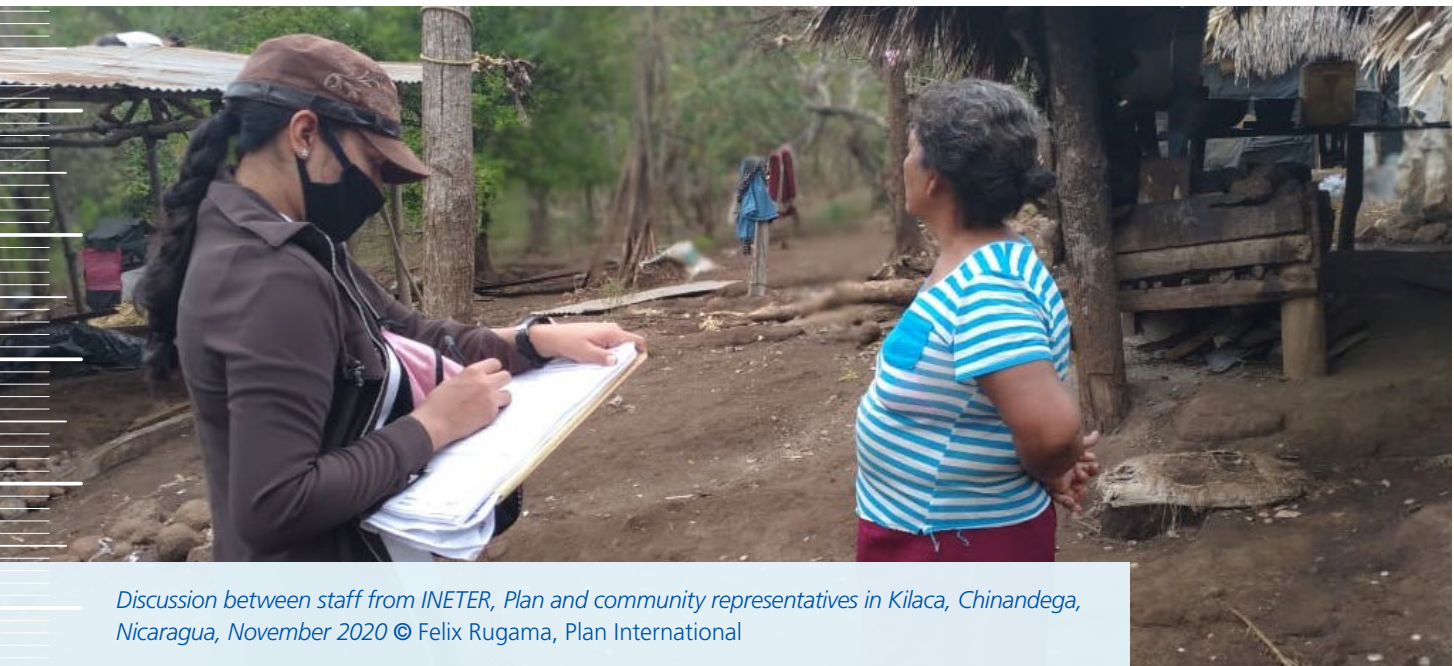
Generating buy-in to a community program

At the start of the Alliance program, the opportunity to influence government resilience practice was not immediately apparent. Plan's engagement with the government in their community program created new pathways for influencing uptake of resilience practice. Plan has operated in Nicaragua for over 20 years and over that time has established credibility and trust through long-term engagement with influential stakeholders. Though Plan's reputation is primarily based on its expertise working on gender and child protection issues, Plan's longstanding presence in the country, backed by the Alliance's global reputation on floods, facilitated its entry into discussions with INETER and Civil Defense on flood resilience.

Once Plan had identified the government institutions involved in disaster risk management at national and local levels, Plan introduced its work

and shared the Alliance's resilience framework and programming approach. In parallel to conducting FRMC baselines, Plan worked to generate commitments from municipal actors — such as the Mayor's office, the municipal offices of the Ministry of Education, and the Civil Association of Firefighters — to jointly plan and implement activities on the basis of what was learned in baselines. Plan also established collaboration agreements with INETER, the institution in charge of generating, registering, and disseminating weather and climate information, and Civil Defense of the Nicaraguan Army, an institution in charge of emergency response. These agreements were expedited by Plan's over 15-year relationship with Civil Defense, which works closely with INETER.

Plan then shared the FRMC baseline data with municipal and national government actors to build a shared understanding of the context and community resilience strengths and gaps. Sharing this information increased government trust in Plan to provide them with the information and tools they need. INETER included community flood



Discussion between staff from INETER, Plan and community representatives in Kilaca, Chinandega, Nicaragua, November 2020 © Felix Rugama, Plan International

resilience into its annual action plan based on the FRMC data and knowledge.

Engaging government in joint planning

After gaining government support to the program, Plan conducted joint planning with municipal and national government actors. The FRMC data collection and socialization process made it evident that financial resources are a major constraint to reducing the impact of floods. Therefore, strategies

for the uptake of flood resilience practices need to be aligned with the government's existing goals and resources.

FRMC data showed a gap in community access to and use of early warnings. Improving community-based EWS turned out to be an important pathway for influencing government to take up and invest in better resilience practices as EWS save lives. In addition, setting up EWS that produce scientifically accurate and usable information requires



Discussion between staff from INETER, Plan and community representatives in Kilaca, Chinandega, Nicaragua, November 2020 © Felix Rugama, Plan International

strengthening relationships and creating linkages from the community through national levels. Ultimately, Plan co-designed a community-based EWS model with government and community representatives to ensure that the system would generate the data needed to support decision-making at all levels and continue to do so beyond the project period.

To support Plan's community efforts and to honor the collaboration agreement it signed, INETER agreed to conduct a study on the availability of EWS and the impact of flooding on water and sanitation systems in the four communities where Plan is conducting Alliance programming. Based on the results of the study, Plan and INETER identified and designed activities to: (1) improve access to sanitation in normal and emergency situations and (2) gather real time data about weather in communities. For the latter, they needed modern weather stations in the communities.

Building community-government linkages

Operationalizing community-based EWS was a highly collaborative and inter-linked effort. Plan purchased four modern weather stations (one for each of its four target communities). Though expensive, these stations include climate monitoring sensors that allow for continuous monitoring. The data they produce strengthens the decision-making capacities of community-based groups and local actors such as the Municipal Commission for Disaster Prevention and Response (COMUPRED). The data is also digitally fed into the National Hydrological Information System used by the Hydrometeorological Surveillance Network to monitor hazards that could be devastating, thus providing the national government with data to inform disaster preparedness and response.

Realizing that community voices are important to ensure the functionality and usability of the system and needed to be better incorporated into the work, Plan and the municipal government trained the Local Commission for Disaster Prevention and Response (COLOPRED) — a community-based group — to monitor the weather station data, communicate with the authorities, and coordinate actions related to disaster risk management



The technical team from INETER installing the new communal weather station in Mechapa, Chinandega, Nicaragua © Felix Rugama, Plan International

(e.g., evacuation, fire suppression, first aid). Such trainings have increased the capacity of the communities to communicate more effectively with government. For example, the coordinator of COLOPRED now coordinates directly with the local mayor, the delegate from the Ministry of Health, and the delegate from the Ministry of Education.

Plan has employed a number of tactics to further strengthen linkages between the communities



The technical team from INETER installing the new communal weather station in Mechapa, Chinandega, Nicaragua, November 2020 © Felix Rugama, Plan International

and sub-national and national government institutions (in support of coordinated disaster risk management). To bring communities and government officials together, Plan organized quarterly meetings and exposure visits. These helped to: showcase the successes of the Alliance program and strengthen buy-in to the program, build a shared understanding of community needs and government constraints, encourage collaborative problem solving, and build working relationships between COLOPRED and the government, particularly national authorities. Plan also produced a video titled, “Enhancing community resilience in the face of floods,” which highlights the benefits EWS provide to communities.

INETER’s resulting buy-in to Plan’s EWS approach has resulted in a strong mutual interest and collaboration to replicate the approach. INETER has committed to provide human resources to support replication of the EWS. Moving forward, Plan and INETER will discuss how to ensure continued maintenance and thus sustainability of the modern weather stations and EWS more broadly.

Additional resources

- [Building community-based multi-hazard resilience in Nicaragua.](#)
- [Flood-proof latrines: providing access to safe sanitation everyday.](#)
- [Expanding community resilience in the face of floods \(short version\).](#)
- [Expanding community resilience in the face of floods.](#)

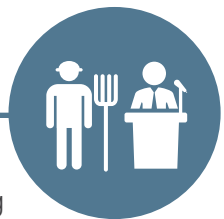
Why Alliance advocacy was successful



ESTABLISHED RELEVANCE

- Identified EWS as a pathway for influence as it supports community resilience and aligns with government priorities.
- Developed an integrated EWS by working with national government, municipal

government and community-based groups to create a system that better meets local- to national-level forecasting and early warning information needs.



BUILT RELATIONSHIPS

- Created pathways for influence by directly engaging government in program assessment and planning focused on community resilience needs and opportunities.
- Formalized partnerships with national institutions (e.g., INETER and Civil Defense) and increased national engagement

around flood resilience by signing collaboration agreements.

- Built community-government relationships by engaging government in community-based trainings and strengthening the capacity of community-based groups to work with government on DRM.



PROVIDED EVIDENCE-BASED KNOWLEDGE

- Strengthened government knowledge of community resilience needs and issues by engaging them in community resilience data gathering and analysis (via the FRMC) and conducting exposure visits and regular program planning meetings.

- Shared information on the benefits of an effective EWS with key stakeholders by developing multimedia knowledge products (i.e., videos).