

# Preparing for El Niño floods in Peru

## A Zurich flood resilience program case study



*Community members in Castilla, Piura, are aware of the flood risk facing their community if the next El Niño brings a lot of rain.*

**Zurich's flood resilience program in Peru is working to address problems unlike those in most other countries. This is due in part to the unpredictable nature of the El Niño phenomenon and the floods its rains can cause. During recent visits to communities in Peru, we learned about a number of challenges the program faces there and how it is addressing them.**

### Preparing for unpredictable floods

We were struck by lack of flood preparation when we visited places where our flood resilience program is being carried out in Peru's Piura region in the north, and the Rimac river basin near Lima. This reluctance can be explained in part by the unpredictable El Niño phenomenon. When it occurs, it may bring rain that can cause severe floods. But several years can pass with no floods. This seemingly random flood risk makes it harder to motivate communities to increase flood resilience efforts. For example, El Niño brought rains that caused severe flooding in 1982-1983 and again in 1998. But since then, droughts and extreme heat, not floods, have been the main worry for these communities. El Niño is bound to bring floods again. How well the communities cope will depend on what they can do in the interim. Many obstacles must be overcome, as we saw during visits to these communities in December 2014.

### Urban poverty lowers resilience

Besides the unpredictable nature of the floods, even though most of these communities are located in a very urban environment, many are just informal settlements with no official status. As a result, they can't access public water, sanitation, electricity and other amenities. Housing, too, is very basic.

These communities are also battling high rates of crime and drug abuse, and many people lack access to healthcare facilities. They are also home to a number of single mothers who often support many children, and struggle to find steady employment.

Yet we noticed some bright spots, too. Despite hardships, the women are sharp and keep in close touch with each other. Given the right tools and organizational training, we see opportunities for active participation in community programs to make the most of what they have and so build resilience.

### Lack of trust needs to be addressed

One important factor determining the success of our efforts is being able to work closely with local authorities, including mayors and civil defense organizations, and in turn, how well they can mobilize student 'brigades' from local colleges. But while government support for mitigating disaster risks has increased, applying for funds can often be a very complicated process, made more difficult by frequent administrative staff turnover and the fact that contact points constantly change.

The real challenge, though, is people's lack of confidence in the ability of social organizations and elected representatives to lead or manage disaster risk planning. People also feel the agencies that are supposed to provide them with assistance are too distant from them to understand the issues.



*Droughts have caused the Piura river to recede, leaving part of the riverbed dry at Castilla, Piura. But the next flood is certain to come.*

## Tackling the challenges – our approach

During September 2014 we completed initial risk mapping and baseline studies in selected communities, obtaining information that will enable us to evaluate how to raise awareness and motivate action. The next phase involves finding solutions.

Lack of drainage systems and houses that have been built in what used to be drainage areas pose a major problem. “People have built houses where the former drainage used to pass. That drainage system saved our lives in the 1982 El Niño floods,” one resident told us. Especially worrisome is a school for young children built with a foreign donation that was constructed without proper risk assessments, situated on a drainage system.

Besides addressing such concerns, we will evaluate existing early warning systems to see how they can be improved. And we will also look for ways to motivate communities to work together to find some solutions before the next flood strikes.



New, unauthorized settlements in Polvorines outside of Piura.



Zurich flood resilience program in Peru is focusing its work in the Piura area, and in the Rímac river basin just outside the capital Lima.

*“People have built houses where the former drainage used to pass. That drainage system saved our lives in the 1982 El Niño floods.”*

### About the Zurich flood resilience alliance

An increase in severe flooding around the world has focused greater attention on finding practical ways to address flood risk management. In response, Zurich Insurance Group launched a global flood resilience program in 2013. The program aims to advance knowledge, develop robust expertise and design strategies that can be implemented to help communities in developed and developing countries strengthen their resilience to flood risk.

To achieve these objectives, Zurich has entered into a multi-year alliance with the International Federation of Red Cross and Red Crescent Societies, the International Institute for Applied Systems Analysis (IIASA) in Austria, the Wharton Business School’s Risk Management and Decision Processes Center (Wharton) in the U.S. and the international development non-governmental organization Practical Action. The alliance builds on the complementary strengths of these institutions. It brings an interdisciplinary approach to flood research, community-based programs and risk expertise with the aim of creating a comprehensive that will help to promote community flood resilience. It seeks to improve the public dialogue around flood resilience, while measuring the success of our efforts and demonstrating the .benefits of pre-event risk reduction, as opposed to post-event disaster relief.

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