



Climate  
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Cold waves



Floods



Strong rains

● Lima

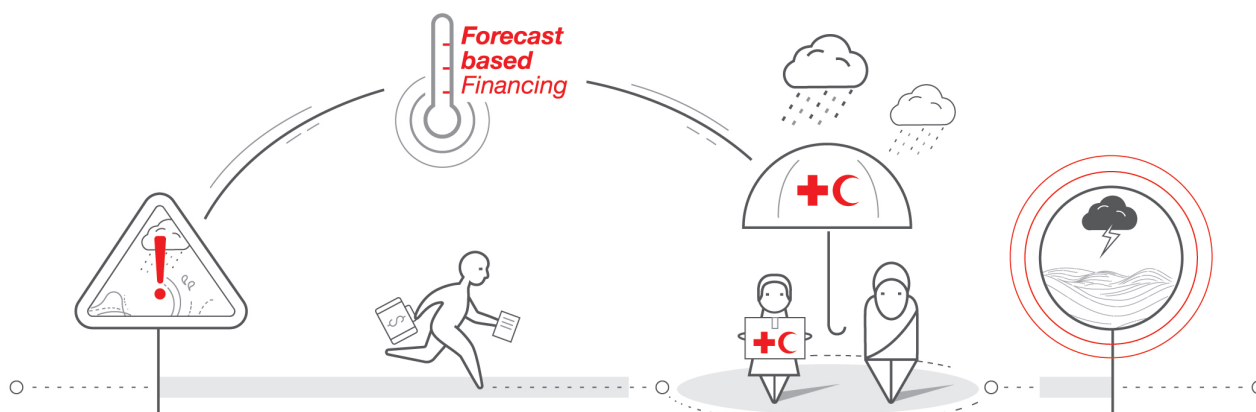
Forecast-based Financing

# Peru

Peru spans three different climate zones, including the arid South American coast, the high Andes, and parts of the Amazon rainforest. This diversity in geography and climates has led to a rich cultural diversity, but it also leads to very different levels of risk to natural hazards. In the Andes, extreme cold waves and snowfall threaten alpaca farmers. Meanwhile, in coastal areas, extreme rainfall washes away houses during El Niño years, and villages located along the Amazon River and its tributaries are under constant threat of extreme river flooding. The Forecast-based Financing (FbF) project assists vulnerable population groups to cope with these threats.

## The concept of FbF

Anticipation instead of reaction: with **Forecast-based Financing (FbF)**, the International Red Cross and Red Crescent Movement is reshaping the future of the humanitarian system. Based on forecast information and risk analysis, FbF releases humanitarian funding for pre-agreed activities, referred to as **early actions**. These predefined measures aim to minimise the **impacts of extreme weather events and save human lives**. For early actions to be performed quickly and efficiently before disaster strikes, **funds are allocated automatically** when a **trigger** is reached, based on weather and climate forecasts. This is defined in the **Early Action Protocol (EAP)**. A **dedicated financing mechanism** is key for taking fast and effective action before disaster strikes: **Forecast-based Action by the DREF**.



## The FbF project in Peru

The **German Red Cross (GRC)** and the **Peruvian Red Cross (PRC)** have been working on establishing FbF in Peru since 2015, with the support of the **Red Cross Red Crescent Climate Centre (RCCC)** and the **German Federal Foreign Office**. The project has developed and tested EAPs for extreme cold waves and snowfall, as well as for rainfall and river floods; it has trained a significant number of PRC staff and volunteers on the development and implementation of EAPs, and it has established important networks and cooperation with government, hydro-meteorological services, UN agencies and NGOs to promote early action in the country. Peru is one of the first countries in the world to implement FbF, and PRC now plays a leading role in the development of the FbF methodology.

## Partners in Peru

FbF and the EAPs in Peru are jointly developed and implemented by the following stakeholders:

- The **PRC** is the main implementing organisation and receives technical support from the **GRC**, the **RCCC** as well as by the Netherlands Red Cross **510 Initiative**.
- **SENAMHI** (hydrometeorological forecasts) and **ENFEN** (El Niño forecasts) provide operational forecasts and data, and have been involved in the trigger

development.

- **Community leaders** and **health promoters** help disseminate FbF early actions.
- The project works closely with governmental bodies, including the National Centre for Disaster Risk Estimation, Prevention and Reduction (**CENEPRED**); the National and Regional Emergency Operations Centres (**COEN** and **COER**); the Civil Defence Institute (**INDECI**); the National Water Authority (**ANA**); the Regional Health Directorate (**DIRESA**); the Regional Health Management (**GERESA**); the Regional Agricultural Directorate (**DRA**); the Provincial Agrarian Agency; and **Provincial** and **District Municipalities**.
- Activations of EAPs are funded through the **International Federation of Red Cross and Red Crescent Societies' FbA by the DREF**. The IFRC will further provide guidance and support for procurement, Planning Monitoring Evaluation and Reporting (PMER), and finance.



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Demonstration of tarpaulins as snow protection.



Cold waves

## Early Action Protocol: Cold waves and snowfall

In the high Andes, cold waves can bring temperatures below  $-16^{\circ}\text{C}$ , accompanied by massive snowfalls. Such events predominantly occur in June, July and August. If extreme cold and snowfall are forecasted, FbF early actions get triggered in the South-Andean zone.

## How do cold waves affect the population?

Extreme and enduring cold and snowfall critically endanger the population in mountain villages above 3,800 meters, who are predominantly subsistence alpaca farmers. Their families' health is impacted by respiratory and potentially life-threatening illnesses. The snow makes alpacas unable to find food and combined with cold also affects their health. High poverty levels in southern Peru amplify the impacts.



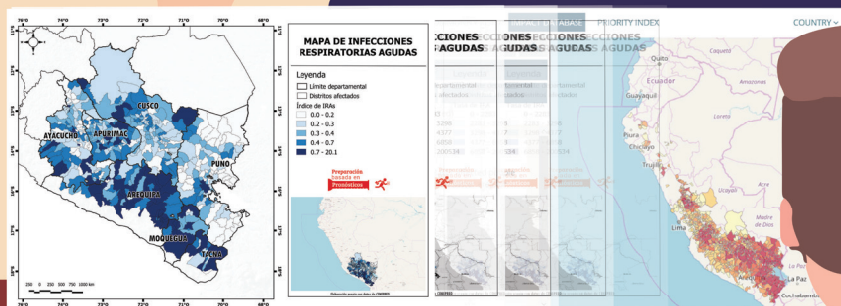
## Cold wave Early Actions

The EAP provides direct coverage of 625 families, including 100 children younger than 5 years, 200 elderly and people with chronic and infectious diseases, and is triggered five days prior to an event.

- **Distribution of veterinary kits** containing antibiotics, vitamins, liver restorative for 50 livestock per household
- **Provision of waterproof tarpaulins**, weather-proof clothing, sunglasses and protective gloves for herders
- **Distribution of warm clothing** to vulnerable groups (jackets, gloves, socks and boots), as well as a waterproof tarpaulin for home insulation
- **Dissemination of early warnings** and health advice via radio and community meetings



In FbF, several information layers will be combined to forecast the place of highest humanitarian impact for a specific extreme weather event.



## DASHBOARD OF THE FBF PROJECT



## Early Action Protocol: River floods

Cities and settlements in the Peruvian Amazon basin are regularly flooded. Flooding may happen between January and May, and is very destructive in some years.

### How do river floods affect the population?

Extreme floods force families to evacuate their houses; they cause outbreaks of water-borne and mosquito-borne diseases; they destroy infrastructure and roads and isolate entire communities; and they ruin agricultural land and livelihoods. Floods nearly always restrict access to safe drinking water.



### River flood Early Actions

Direct coverage will be provided to 1,000 families, seven days prior to a flood.

- **Provision of filters to grant access to safe water** to 600 families
- **Payout of cash assistance** to 400 families in rural communities to cover a month of basic food
- **Promotion of good hygiene practices**, safe water rules, and disease prevention will be provided
- **Exchange and coordination of actions** among all stakeholders



## Early Action Protocol: Extreme rainfall related to El Niño

El Niño is a phenomenon that occurs every two to seven years in the Pacific region. In Peru, strong El Niño events lead to extreme rainfall and flooding at the coast, which is normally dry and arid. FbF aims to mitigate the detrimental effects of extreme rain on the poorest and most vulnerable populations in Peru's North, where the effects are most dramatic between December and April.

### How does intense rainfall affect the population?

Extreme rainfall results in fatalities, destruction of infrastructure, damage to homes, the isolation of communities, a loss of agricultural land, and damages to livelihoods. In addition to the direct flood damage, serious risks stem from water-borne diseases such as diarrhoea and cholera, and malaria. An increase in illnesses caused by poorly tended injuries and impacts on mental health have also been observed.



### El Niño Early Actions

A total of 1,000 families will be supported. Based on a seasonal forecast, the PRC will activate its branches one month ahead to send volunteers and provide tools for community campaigns such as **hygiene promotion, sanitation and drainage**.

- **Installation of safe water equipment** (bladders) five to seven days before the flood
- **Provision of filters** to improve families' access to safe water
- **Distribution of cash and voucher assistance** to the most vulnerable families to cover basic needs



Educational outreach activities and capacity-building are important components of FbF. Here the seasonal calendar, which is closely related to rainfall, is being discussed.

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**Saving lives, changing minds.**  
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