Forecast based Financing (FbF)
**FORECAST-BASED FINANCING**

The project uses an innovative strategy to prepare for extreme weather events

**Traditional intervention:**
To respond and send funds once a disaster has occurred.

**Early actions based on forecasts:**
To respond before a potential event using hydrometeorological forecasts.

**WHY USE THIS STRATEGY?**

Early warnings from forecasts provide an opportunity for actors, such as governments and the Red Cross Red Crescent, to implement effective and timely preparedness. This is done before a disaster.

Forecasts provide relevant information including the location, intensity, probability and duration of an extreme event.

The cost of future humanitarian interventions is reduced by such actions that protect lives and livelihoods.

**KEY TERMS**

**Early actions:** Actions implemented before the potential impact of an extreme event, with the aim of reducing this impact and increasing resilience.

**Early warning:** Scientific information about what is happening and what might occur.

**Trigger:** A forecast that launches action, when a predetermined probability and danger level is exceeded.

**Danger level:** The magnitude of an extreme event that causes impacts. The danger level will depend on vulnerability of people, exposure of a region, and the willingness to act. It should be updated regularly as the region changes over time.

**Forecast:** A statement of expected meteorological and environmental conditions for a time and place.

**Standard operating procedure (SOP)**
Guidelines for who takes action, when, where, and with what funds. The guidelines are triggered by a forecast reaching pre-defined levels of probability and danger.
**WHAT ARE THE KEY ASPECTS OF THE PROJECT?**

1. Understand risk scenarios
   - Scenarios are designed to analyse the risk, including historical impact data and level of vulnerability.

2. Identify available forecasts
   - Selection of national and international forecasts.
   - Taking into consideration the probability, intensity and lead time to the occurrence of an event.

3. Formulate early actions
   - Such as:
     - Awareness raising for hygiene or safe drinking water
     - Strengthening of houses

4. Identify danger levels
   - Define the threshold for a specific hazard.
   - Identify the critical characteristics, analysing vulnerability and the historical impact in the area of intervention.
   - Consider institutional capacity to act.

5. Create a standard operating procedure (SOP) or early action guidelines
   - This includes:
     - Responsibilities.
     - Which forecast will trigger which action.
     - Where to act.
     - What funds are to be made available.

6. Validate SOP with key actors
   - Meteorological services.
   - Local governments.
   - National systems to manage disaster risk.
   - Run a simulation of the SOP.

**HOW DOES IT WORK?**

1. Monitoring hydrometeorological forecasts
   - YES: The danger level is exceeded. Early actions are to be implemented (according to the SOP).
   - No: The danger level is not exceeded. No early actions are to be implemented.
EL NIÑO EVENT

WHY USE FORECASTS IN LAMBAYEQUE AND PIURA?

- The level of preparedness in communities remains low.

GENERAL PREPAREDNESS AT THE BEGINNING OF THE SEASON

- **40 volunteers** trained from Peruvian Red Cross branches
- **18 vulnerability and capability assessments** conducted
- **2000 families** attended awareness sessions on community health
- **18 early warning committees** established
- SOP confirmed by key actors.

FORECAST:

**THREE MONTHS lead time**
If the forecast exceeds the danger level

The following early actions will be implemented with low or medium probability:
- **2000 families** will receive awareness raising sessions on water and hygiene
- **18 community brigades** will be constituted, equipped and trained.

In case of an extreme weather forecast event with high impact

The following early actions will be implemented:
- **Build 1000 shelters**
- **Build 1000 latrines**
- **Provide assistance to store seeds and food items.**

**ONE MONTH lead time**
If the forecast exceeds the danger level

The following early actions will be implemented with medium probability forecast:
- Distribute 18 first aid kits
- Preposition 2000 buckets and chlorine tablets
- Preposition six 15 litre water tanks each
- Preposition 1000 hygiene kits
- Fumigate 18 communities
- Reinforcing 300 houses.

**SEVEN DAYS lead time**
If the forecast exceeds the danger level
The following early actions will be implemented:
- Distribute 1000 buckets, chlorine tablets and hygiene kits (for one family for a month).
### FLOODS

#### WHY USE FORECASTS IN LORETO?
- In 2012 and 2015 floods seriously affected sanitation and supplies of safe water. In 2012, nearly 230,000 people were affected and a large number were displaced.
- Despite the high frequency of floods, the level of preparedness in communities remains low.

#### WHERE IS THE PROJECT LOCATED?
- Loreto
- 1400 families approx.
- 07 communities

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#### GENERAL PREPAREDNESS AT THE BEGINNING OF THE SEASON
- **25** volunteers trained from local Peruvian Red Cross branch
- **6** vulnerability and capability assessments conducted
- **6** community risk maps created
- **6** community sanitary campaigns
- **SOP** confirmed by key actors

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#### FORECAST:

**ONE MONTH lead time**

If the forecast exceeds the danger level

The following early actions will be implemented:

- **6** awareness campaigns on hygiene and community health
- **CL** Activate 2 chlorine production installations
- Install **water** collection system at critical points
- Build **five** temporary platforms for water bladders (in case of forecast of extreme weather with a high impact).

**NINE DAYS lead time**

If the forecast exceeds the danger level

The following early actions will be implemented:

- Distribute **biodegradable** trash bags
- Distribute **chlorine tablets** and **liquid chlorine** manufactured by Peruvian Red Cross branches
- Distribute 20 litre **buckets** and 140 litre **containers** for water (depending on size of community)
- Distribute **hygiene kits** for displaced people
- Coordinate **water** distribution.

If this forecast is activated first, the ‘one-month’ actions are also conducted

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**TWO DAYS lead time**

If the forecast exceeds the danger level

The following early actions will be implemented:

- Inform brigades and community leaders about **evacuation alert**.

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**SNOWFALL AND COLDWAVES**

**WHY USE FORECASTS IN PUNO?**

- Coldwaves have a severe impact on livelihoods and health especially amongst children and elderly people.
- Despite their frequency, preparedness in communities remains low.

**WHERE IS THE PROJECT LOCATED?**

**GENERAL PREPAREDNESS AT THE BEGINNING OF THE SEASON**

- 888 families
- 04 districts
- 25 volunteers trained from local Peruvian Red Cross branch
- Community brigades trained in early warning and first aid procedures
- 20 vulnerability and capability assessments conducted
- 444 warmup kits prepositioned
- 444 livestock kits prepositioned
- 1 first-aid kit per community.

**FORECAST**

**FIVE DAYS lead time**

If the forecast exceeds the danger level, the following early actions will be implemented:

- Disseminate forecast, activate standard operating procedures and communal early warning system
- Distribute 444 warmup kits
- Distribute 444 livestock kits.
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