

www.ifrc.org
Saving lives,
changing minds.

Peru: Floods in the Lower Amazon Jungle

Early Action Protocol summary

 International Federation
of Red Cross and Red Crescent Societies

EAP approved **October 2019**

Population to be assisted **5,000 people**

EAP timeframe **5 years**

EAP number **EAP2019PE02**

Budget **CHF 248,546**

Early action timeframe **2 months**

The IFRC Disaster Relief Emergency Fund (DREF) has approved a total allocation of CHF 248,546 from its Forecast-based Action (FbA) mechanism for the Peru Early Action Protocol (EAP) **Floods in the Lower Amazon Jungle**. The approved amount consists of an immediate allocation of CHF 92,892 for readiness and pre-positioning and CHF 155,654 automatically allocated to implement early actions once the defined triggers are met.

The FbA by the DREF is a Forecast-based Financing funding mechanism managed by the DREF. Allocations for the FbA by the DREF are made from a separate financial component of the DREF (MDR00004) and do not affect the reserves of the DREF appeal code MDR00001. Unearmarked contributions to the FbA by the DREF are encouraged to guarantee enough funding is available for the Early Action Protocols being developed.

SUMMARY OF THE EARLY ACTION PROTOCOL

Floods are the main hydro-meteorological threat that regions in the Peruvian Amazon face. Recurring floods usually begin in December and can extend to April in years with extreme flooding of the Amazon River and/or its tributaries.

In order to reduce the impact of these extreme flood events on the population, the Peruvian Red Cross (PRC) has developed this Early Action Protocol (EAP) following the Forecast-based Financing (FbF) approach. The EAP foresees timely and effective implementation of early actions as soon as weather forecasts combined with other risk data indicate a high probability of an extreme flooding event that will severely affect people, their assets and/or their livelihoods.

Floods affect the access to safe water, hygiene conditions and livelihoods of populations residing in low-lying areas. In extreme scenarios, flooding even affects housing and forces families to relocate temporarily.

Access to farming and fishing areas is crucial for these families, as they depend on these activities for their livelihoods. Families' limited ability to diversify their livelihoods makes them vulnerable to extreme hydro-meteorological phenomena. Likewise, water service and access to safe water are seriously affected by this type of phenomenon, as well.

In terms of people's health, extreme floods increase the incidence of acute diarrheal diseases (ADD), arboviroses (dengue, zika and chikungunya), malaria, and water-borne diseases such as typhoid fever, salmonellosis, enterocolitis and shigellosis. The main risk groups for these illnesses are children under the age of five, the elderly, pregnant women and people with chronic (diabetes and high blood pressure) and infectious (tuberculosis) diseases. In order to reduce



Early flood preparedness actions in, Community of San Juan, Iquitos, Loreto (near the Amazon River).
Source: Peruvian Red Cross

these impacts, the EAP foresees early actions in the livelihoods and basic needs, water, sanitation and hygiene and health care sectors.

This EAP is focused on the floods in the lower Amazon that tend to occur in the eastern regions of Peru during the summer months (between December and March). At the moment the EAP covers the Loreto region but work is being done to get accurate data from other measuring stations that would allow the triggering in Ucayali and Madre de Dios as well. The early actions will be activated based on a sub-seasonal weather forecast (45 days) and a short-term forecast (10 days), which will give the Peruvian Red Cross a window of time in which to act before the start of an extreme climate event. Actions have been selected considering this lead time. The climate forecasts come from Peru's National Meteorological and Hydrological Services (SENAMHI) with which the PRC team continuously works to improve the estimated lead time to activate the EAP.

The operational strategy – How the EAP will be implemented

1) Who will implement the EAP – The National Society

The Peruvian Red Cross has two provincial branches in the Loreto region (Nauta and Maynas branches), with a total of 30 registered volunteers each. In the context of an EAP activation, the volunteers of the branches concerned will be supported by members of the National Intervention Team (NIT). In terms of the National Society's NIT capacities, there are approximately 20 NIT volunteers for water, sanitation and hygiene promotion and 18 general NIT volunteers. All NIT volunteers have been trained in FbF, and a general call will be made in April of each year to identify which NITs will be available for deployment to the target areas. Additionally, in the event of activation operations can be supported by volunteers from other branches in the country. The branches in Maynas and Nauta will be prepared to provide humanitarian assistance in their respective areas. The PRC branch in Maynas in Iquitos, Loreto, will make available its warehouse as well as its volunteers, vehicle and communication materials, as well as its experience with preparedness and response in the region. Furthermore, branches have qualified NITs and volunteers available for deployment, and in some cases vehicles and communications materials as well. In the event the EAP is activated, branch volunteers will be able to lead the operations with support from volunteers from other provinces in the country. To ensure an effective NIT deployment, it is essential that the person in charge of the NITs' deployment, the DRM coordinator, the volunteer coordinator and PRC's executive director be involved in the process from the outset.

In the last years, PRC, with support from the German Red Cross (GRC) and the IFRC, has provided support during the Amazon floods in Loreto in 2012 and 2015, and in Ucayali in 2011, either via a DREF or using bilateral funds. PRC is familiar with the situations faced by communities during extreme floods and with the needs of vulnerable populations. The PRC has the necessary experience to assist in these areas of difficult reach. Between 2015 and 2017, the PRC's FbF team has also implemented EAPs following the FbF methodology in the Loreto region, where two drills were held. On both occasions, the PRC demonstrated its capacity to implement the early actions within the lead time offered by the EAP.

Through the implementation of this EAP and its intervention protocol, the PRC will strengthen its capacity for timely implementation of early actions, thus reducing the potential impact for communities with more risk. The PRC is an institution in permanent development. By applying the FbF methodology and with the support of the German Red Cross (GRC) and the financing of the Federal Ministry of Foreign Affairs of Germany (FFO), the PRC will also be improving its institutional capacity for early action, preparedness and response to extreme floods.

Partner National Society support

The PRC will implement the EAP. GRC, IFRC and the Red Cross and Red Crescent Climate Centre (RCCC) will provide technical assistance and support to PRC in terms of activation, linkages with hydro-meteorological services, monitoring and evaluation, and EAP reviews. IFRC will help ensure that there is an operational financial mechanism that allows PRC to access funds within 24 hours of the EAP's activation. Training (or refreshers) on WASH, CVA, PGI, PMER and CEA topics will be organized by the project coordinator and early action technicians during the readiness phase and at the beginning of the activation.

Overview of non-RCRC actors in country

The EAP has been designed to be implemented by PRC in conjunction with other organizations such as the National Institute of Civil Defence (INDECI), the National Emergencies Operation Centre (COER), municipalities, community leaders and other regional Health offices/directorates. All the actors that participate in this EAP play a fundamental role during the coordination and activation of the forecast-based preparedness mechanism. Thus, this EAP should be part of government agency and National Society contingency plans at the national, regional and province level.

SENAMHI: Each climatological forecast will come from SENAMHI. The forecast may be provided in numerical data or in analytical reports. PRC will coordinate with SENAMHI to obtain the best estimated lead time for activation, better temporal resolution, and forecast confirmation. PRC's FbF team will maintain regular contact with the regional SENAMHI office in Loreto, and this EAP will be activated based on its forecasts.

CENEPRED: The EAP uses data obtained from the National Centre for Estimation, Prevention and Reduction of Disaster Risk (CENEPRED) through the digital risk platform 510, which contains the key information regarding risk (vulnerabilities, exposure, historical impact, responsiveness, etc.). This tool is useful both for the systematization of risk information and for rapid decision making.

COENs and COERs: The COERs will be involved, and contacted before each season in order to align regional-level protocols with existing flood contingency plans. Each activation of the EAP will be communicated immediately to the COEN and COER in the corresponding region. In turn, these entities will coordinate actions with Civil Defence focal points at the provincial and municipal levels in order to provide the necessary support to the communities. These activities will be linked to the strategies and plans of the regional government (GORE), including its contingency plan for extreme floods.

INDECI: The FbF project will work jointly with INDECI to improve early warning systems in the country and to facilitate early actions. The FbF and INDECI will seek to reduce alert/warning times by using appropriate technologies and applications for the issuance of messages. Field diagnostics and post-disaster assessments (e.g. damage and needs assessments (DANAs)) are essential to response actions and shall be shared.

ANA: The National Water Authority (ANA) is the governing body and highest technical regulatory authority within the National Water Resource Management System, which in turn is part of the National Environmental Management System. It is responsible for managing and monitoring natural water resources and leads the National Water Resource Management System. The FbF project will coordinate its actions in a joint manner to enhance actions.

DHN: The Hydrography and Navigation Directorate is the entity responsible for the collection of field data for the production of nautical charts for maritime, river and lake areas. Specific tasks by this technical department include hydrographic and topographic surveys, which are used by the FbF project to monitor river levels.

DIRESA – GERESA: The Regional Health Directorate (DIRESA) and the Regional Health Department (GERESA) play an important role in identifying relevant early actions for the regions, especially in defining how to complement existing strategies and actions of other regional authorities. PRC will prepare and validate community awareness materials, key messages and PRC actions in coordination with DIRESA/GERESA. All health-related actions will be coordinated at this level.

Provincial and District Municipalities: The Provincial and District Municipalities, through their Civil Defence focal points, play a crucial role. Considering that the forecast and risk analysis will identify the areas to be most impacted up to the district level, the municipalities' Civil Defence focal points together with the PRC FbF regional coordinator will identify the vulnerable communities to be targeted. Eventually, there will be additional support from the district municipality for transport, communications or implementation.

Community leaders and health promoters: Community leaders will convene the population as well as the health and agricultural promoters to organize and coordinate awareness-raising activities, community trainings and distributions. In addition, the leaders will identify the permanent residents of the community for distributions and will act as liaisons with the health promoters for community empowerment and transfer, focusing on health promotion and prevention, disease prevention, early diagnosis, proper referral, and care for the sick.

2) How will the EAP be activated - The Trigger

The EAP will be activated once forecasts combined with risk data indicate a certain threshold for flooding will be exceeded at SENAMHI stations located in the Ucayali, Napo, Marañón and Amazon rivers. Flood forecasting in the Peruvian Amazon is directly related to the rains in the Andean basin headwaters. Therefore, it is possible to have forecasts with longer delivery times compared to other threats.

The forecasts that will be used will have two different lead times: a 45-day sub-seasonal forecast and a ten-day forecast. The sub-seasonal forecast will be worked on with GloFAS Seasonal, which is a global probabilistic model based on the

seasonal ECMWF model. The 30-day GloFAS will be used for the ten-day forecast, which is a probabilistic global hydrological model (51 member-ensemble) that is corrected with observed data. This model is operational and executed by the SENAMHI-Loreto office.

Trigger 1

Trigger 1 will happen when GloFAS 45-day ensemble averaged forecasts exceed the threshold corresponding to the 80th percentile, with a 75 percent probability.

Trigger 2

Trigger 2 will happen when GloFAS 10-day ensemble averaged forecasts exceed the ten-year return period threshold, with a probability of 60 percent. Based on forecast confirmations, there is a 28 percent chance of a false alarm or acting in vain in ten-day forecasts.

Stop-Mechanism:

This EAP has a stop-mechanism for both triggering forecasts. For a sub-seasonal forecast (GloFAS 45 days): if there is *no* confirmation of the forecast 30 days after activating the sub-seasonal forecast, all actions described in the plan should be stopped. If the forecast *does* confirm that the thresholds will be exceeded, activities described in the plan should continue as indicated.

For GloFAS ten-day forecasts: if there is *no* confirmation of the forecast three days after the first alert, all actions described in the plan should be stopped. If the forecast *does* confirm that the thresholds will be exceeded, activities described in the plan should continue as indicated.

3) How will the EAP reduce the impact on the population – The early actions

The activation mechanism, explained in the infographics below, determines the intervention zone at district level. The activation mechanism involves superimposing the risk map on a 25-year return period map, which is the map that activates the threshold. The result (output) is the intervention map, with a breakdown to the district level. This will inform coordination with COERs and municipal authorities to determine the target communities.

The example in the infographics below uses the return period map mentioned above and identifies the districts of Parinari, Tapiche and Puinahua.

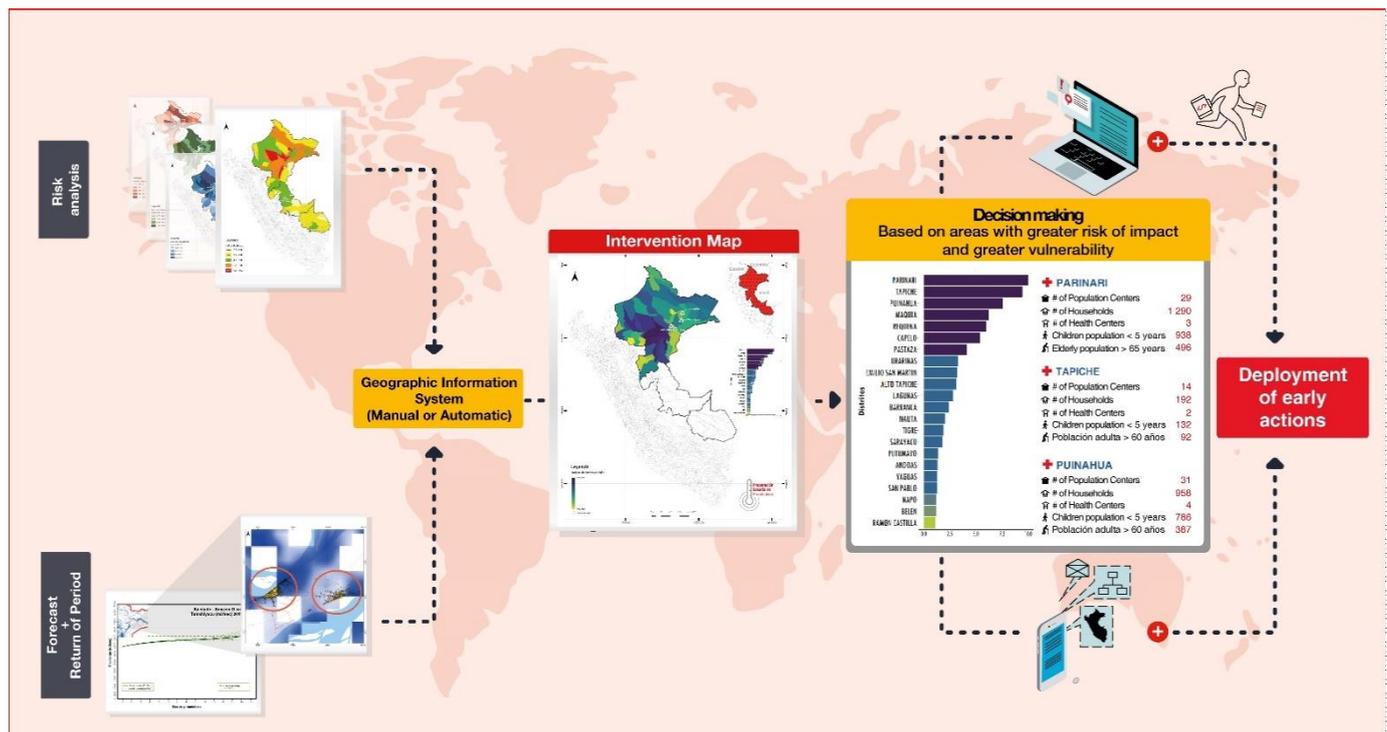
The assistance provided through the FbF comes earlier than the traditional response. This added value will also define the actions. FbF provides support that populations at high risk can use before and during the event itself to protect their families, health and livelihoods, while 'traditional' response systems provide humanitarian early recovery support.

Extreme floods are hydro-meteorological events that cause significant impact on the Peruvian Amazon. Some years, these events may be exceptional, as in 2012 and 2015, reaching extreme levels never before recorded. Large river overflows flooded hundreds of hectares in rural and peri-urban areas, which resulted in infrastructure losses, arboviroses outbreaks, water-borne diseases and damage to housing. In addition, entire communities were isolated, losing large extensions of cultivated land and with it, the livelihoods of the population.

Vulnerability and exposure are primarily associated with poverty rates. Based on the hazard being addressed through this EAP, housing indicators, such as the type of walls, are also closely related to the impact of flooding. In terms of health, an increase in acute diarrheal diseases (ADDs), vector-borne diseases (malaria, dengue, chikungunya, zika), and contaminated waters are issues usually seen in flood-related disasters.

The actions were selected based on PRC's humanitarian experience, interviews with experts, analysis of impact and statistical information, focus groups in high-risk areas and community surveys. The final decision regarding the actions selected was made by PRC and later validated with the DDI and the COER. It also took into account that the response capacity of PRC branches in rural areas is lower than in peri-urban areas, and that the cost and time involved in implementing operations in rural areas is higher, mainly because transport by boat is required.

Activation mechanism for extreme flooding



Early actions were defined based on an analysis of past floods and their impact on the population. Traditional response actions and possible early actions by the government and other organizations, as well as lessons learned from humanitarian aid operations conducted in the past, were also analysed. Evidence on specific issues was collected and studied, particularly diseases and possible epidemiologies related to diarrhoea, cholera and dengue/malaria. This information was used to verify the shortlist of actions with sub-national actors (COER, DIRESA, RC branches) and potential beneficiaries (via focus groups and interviews).

The following early actions have been selected for this EAP:

WASH

Based on its humanitarian experience and humanitarian needs, PRC decided to use a 45-day trigger to sensitize the population (at least 1000 families) in critical areas, both rural and peri-urban, through PHAST in emergencies.

With 10-day forecasts, 600 filters will be distributed in rural areas, taking distance and remoteness into account as well as the risk of isolation and the challenges involved in implementing a CVA. Mega V will be used for this distribution, which will be carried out in coordination with the district government in a setting that is safe for both volunteers and INDECI technicians.

The team will set up five water points with 10,000-liter bladders at locations coordinated with district governments of Belen and Punchana, should an intervention be required in these localities.

Water quality will be monitored and awareness raising will be reinforced in areas indicated in the intervention map.

The WASH early action technician and his team will carry out the awareness raising regarding PHAST and CBHFA already since the first trigger at 45 days.

CBHFA: A disease and injury prevention and health promotion approach will be used, as the goal is to have healthier and safer communities and volunteers that are prepared.

PHAST: The Participatory Hygiene and Sanitation Transformation (PHAST) methodology supports EAP actions by increasing awareness regarding hygiene and water care in communities. These can examine existing hygiene-related behaviours and understand how diseases are transmitted and how it can be prevented at the family level.

The WASH team will have an early action technician, three NIT members and at least 12 permanent volunteers (on rotation). This team will be active for at least two months, and may continue during the response operation if required.

CVA

Unconditional cash assistance will be provided in order to help address the basic needs of the families that will be affected financially by the floods, specifically due to the increase in food and transportation prices, the damage to housing, crop loss and the costs related to their temporary relocation. Said basic needs were identified through the feasibility study conducted to implement a CVA in Loreto in 2018.

That same study indicated that the CVA would be primarily used for food (including water), transport and shelter (including their homes). The study considers distributing CHF 220 to 400 families in peri-urban and rural areas with access to the banking system as essential support during the first month of the extreme flood and before its peak. The targeted families won't be the same ones receiving the water filters because being in the peri-urban areas it is assumed they will have to public water network services.

The analysis found that there are good state-run social protection networks (Juntos, Pensión 65) that have pre-identified the most vulnerable families; however, it is estimated that 30 percent of the population was not included in the analysis.

Therefore, considering the forecast lead time and registration times, the most vulnerable communities will be selected, and 100 per cent of the population in those communities in rural or peri-urban areas with access to the banking system will be covered.

Based on the prioritized impacts, a 10-day forecast will be used to conduct a CVA for 400 families (multipurpose) in rural or peri-urban areas via the delivery of an IFRC VISA debit card in the districts that will be most affected. PRC always prioritizes working in the areas that are most vulnerable and least served by public and private organizations.

The National Society is currently negotiating an agreement with Banco de la Nación as another option to deliver the CVA. The plan can be updated once the agreement has been finalized.

The CVA team will have a CVA early action technician, three NIT members and at least 12 permanent volunteers (on rotation). This team will be active for at least two months and may continue during the response operation if required.

To ensure the timely implementation of early actions, the EAP includes a detailed description of the roles and responsibilities for each day after the activation. It also contains a section on how the EAP's implementation will be monitored and how its impact will be evaluated.

Intervention Sectors

Overall objective: Prevent and protect 1000 vulnerable families from the impact of floods in the Loreto, Madre de Dios and Ucayali (this last two provinces may be covered when the forecast are available in the future) region in the lower Amazon through pre-positioning, preparations and activation of humanitarian actions in areas of livelihoods, and water, sanitation and hygiene.

Priority Sectors



Livelihoods and basic needs

People targeted: 2000 persons

Male: 1000

Female: 1000

Requirements (CHF): 119,282

Risk analysis: Address the basic needs of the families that will be affected financially by the floods, specifically due to the increase in food and transportation prices, the damage to housing, crop loss and the costs related to their temporary relocation.

Population to be assisted: 400 families that are vulnerable to the impact of impact of floods in the Loreto region in the lower Amazon who need to protect their livelihoods.

Programme standards/benchmarks: IFRC Livelihood Regulations and SPHERE Manual.

P&B Output Code	Livelihoods Outcome 1: Communities in flood-affected areas meet their basic food and transportation needs.	<i>400 families are able to meet their basic needs in anticipation and during an extreme flood.</i>									
	Livelihoods and basic needs Output 1.1: The National Society strengthens the livelihoods security of the vulnerable population in anticipation of an extreme flood.	<i>400 CVA deliveries to heads of households 500 informational materials distributed to communities 12 volunteers, NIT and staff member mobilized, on rotation, during implementation</i>									
	Activities planned	Timeframe (semester)									
	Pre-positioning activities	1	2	3	4	5	6	7	8	9	10
		Timeframe (semester)									

AP008	Production of CVA brochures and posters	X										
	Early action activities	Timeframe (semester)										
AP008	Hiring CVA Manager	X	X	X	X	X	X	X	X	X	X	X
AP008	Mobilization of RIT (1) , NIT members (1), volunteers (12), CVA technician - CVA team (trigger 1 -45 days before the event, maximum period 60 days)	X	X	X	X	X	X	X	X	X	X	X
AP008	Distribution of visa cards to implement CVA for flood emergency in the Amazon (trigger 2 – 10 days before the event)	X	X	X	X	X	X	X	X	X	X	X



Water, sanitation and hygiene

People targeted: 3000 personas

Male: 1500

Female: 1500

Requirements (CHF) 47,046

Risk analysis: Floods affect the population's access to safe water and hygiene conditions. In extreme scenarios, housing is also affected and families are forced to relocate temporarily.

Population to be assisted: 600 families vulnerable to flooding in the lower Amazon in the Loreto region that need access to safe water.

Programme standards/benchmarks: IFRC WASH regulations and SPHERE Manual.

P&B Output Code	WASH Outcome1: Immediate reduction in risk of waterborne and water related diseases in targeted communities	600 families affected by the floods										
	WASH Output 1.1: Daily access to safe water which meets Sphere and WHO standards in terms of quantity and quality is provided to target population	600 water filters delivered to heads of households 12 volunteers, NIT and staff member mobilized, on rotation, during implementation										
	Activities planned	Timeframe (semester)										
		1	2	3	4	5	6	7	8	9	10	
	Pre-positioning activities	Timeframe (semester)										

Budget & Allocation schedule

To implement the Early Action Protocol (EAP) amounts CHF 247,443.27 split by preparedness, pre-positioning of stock and early action as per the summary, by area of intervention, below.

Budget by Area of Intervention

Area of Intervention	READINESS	PRE-POSITION STOCK	EARLY ACTION	EAP Budget CHF
AOF1 Disaster Risk Reduction				0
AOF2 Shelter				0
AOF3 Livelihoods and Basic Needs		250	119,032	119,282
AOF4 Health				0
AOF5 Water, Sanitation and Hygiene		27,612	19,434	47,046
AOF6 Inclusion, Gender and Protection				0
AOF7 Migration				0
SFI1 Strengthen NS Capacities	56,369	3,017	17,189	76,574
SFI2 Ensure effective int'l disaster mgmt	5,645			5,645
SFI3 Influence others as leading strategic part				0
SFI4 Ensure a strong IFRC				0
TOTAL	62,013	30,879	155,654	248,546

Contact information

Reference documents



Click here for:

- EAP Summary

For further information, specifically related to this operation, please contact:

In Peruvian Red Cross

- **President;** María Josefina Garcia Roca, josefina.garcia@cuzroja.org.pe.
- **Operational Coordination:** Kemper Mantilla, Project Coordinator PBP, coordinador.preparacion@cuzroja.org.pe, +51 969 600 008.

In IFRC

- **IFRC Regional Office for the Americas:** Pabel Ángeles, Regional Coordinator for Disasters Management - South America, pabel.angeles@ifrc.org.
- **IFRC Team Support of the Cluster of Andean Countries:** Inés Brill, Cluster Leader for Bolivia, Ecuador and Peru, ines.brill@ifrc.org.

In IFRC in Geneva

- **Focal point of Programs and Operations:** Nazira Lacayo, Senior Officer DREF, Forecast-based Action, nazira.lacayo@ifrc.org, +41 (0)22 730 4944.

For Performance and Accountability support (planning, monitoring, evaluation and reporting queries)

- **Focal point of PMER:** Marie Manrique, Planning, Monitoring, Evaluation and Reporting (PMER) Coordinator - South America, marie.manrique@ifrc.org.

How we work

All IFRC assistance seeks to adhere to the [Code of Conduct for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations \(NGOs\) in Disaster Relief](#) and the [Humanitarian Charter and Minimum Standards in Disaster Response \(Sphere\)](#) in delivering assistance to the most vulnerable.

The IFRC's vision is to inspire, encourage, facilitate and promote at all times all forms of humanitarian activities by National Societies, with a view to preventing and alleviating human suffering, and thereby contributing to the maintenance and promotion of human dignity and peace in the world.

The IFRC's work is guided by Strategy 2020 which puts forward three strategic aims:



Save lives,
protect livelihoods,
and strengthen recovery
from disaster and crises.



Enable **healthy**
and **safe** living.



Promote **social inclusion**
and a culture of
non-violence and **peace**.