



Needs assessment in Esmeraldas. September 2026. Source: ERC

Appeal: MDREC032	DREF Allocated: CHF 90,800	Hazard: Pluvial/Flash Flood	Country: Ecuador
Population at risk (if available): 1,253,859	Operation Start Date: 12-10-2026	Operation End Date: 30-11-2026	
Event Onset: Sudden	Forecasted day of event (or peak): 2026-11-05	Operation Timeframe: 45 days	
Targeted Regions: Esmeraldas, Guayas, Los Rios, Santo Domingo de Los Tsachilas			

Scenario analysis

When and where is the hazard expected to happen?

Ecuador progressively escalated its alert levels in response to the evolving El Niño threat, moving from Yellow Alert in May to Orange Alert in July, followed by the declaration of a nationwide Red Alert on 29 August and the issuance of Executive Decree No. 485 on 31 August 2026.

Since then, localized rainfall-related emergencies have been managed through existing local and national capacities. The CN-ERFEN Technical Executive Report No. 010-2026, issued on 1 October, confirms that El Niño remains active and continues to strengthen. As of 23 September, sea-surface temperature anomalies reached +4.7°C in the Niño 1+2 region and +3.1°C in Niño 3.4, reaching the maximum values established for both thermal components of Ecuador's El Niño Index. The report also notes that international forecasts maintain a strengthening scenario during the last quarter of 2026.

The current event presents similarities with the 1997–1998 El Niño in terms of ocean heat accumulation, thermal structure and deepening of the thermocline. However, CN-ERFEN cautions that these oceanic similarities do not imply that atmospheric behaviour, rainfall or impacts will necessarily reach the same magnitude, as these will depend on the evolution of ocean-atmosphere coupling and regional weather conditions.

Evidence of a stronger atmospheric response was already observed during September. According to INAMHI, rainfall exceeded normal September levels across much of the coastal region. Guayaquil recorded its wettest September since records began in 1961, exceeding the September rainfall observed during the 1982 and 1997 El Niño events. In La Concordia, 149.5 mm of rainfall was recorded within 24 hours on 14 September, the highest value registered there for that month. Increased rainfall and river levels resulted in 49 overflows, while 131 rainfall-related events affected 13,303 people across the coastal region. While these impacts remained largely localized and were managed through existing capacities during September, conditions continued to deteriorate during early October.

According to the National Secretariat for Risk Management (SNGR), 267 rainfall-related events were recorded nationally between 29 August and 7 October, of which 101 remained active. Esmeraldas accounted for the highest number of ongoing emergencies, followed by Los Ríos and Guayas. On 8 October, authorities declared a 90-day Level III emergency in Esmeraldas due to the cumulative impacts of flooding and landslides, with 14,493 people reported as affected across six cantons.

Although current impacts remain concentrated in specific locations, particularly in Esmeraldas, forecasts indicate that the expected evolution of El Niño conditions and the onset of the rainy season may result in more widespread and recurrent impacts across multiple coastal provinces in the coming months. The operation therefore seeks to complement ongoing response efforts with anticipatory measures aimed at reducing the humanitarian consequences of further forecast escalation.

The INAMHI climate prediction for October 2026, as presented in the latest CN-ERFEN analysis, forecasts above-normal rainfall and above-normal maximum and minimum temperatures across the coastal region. Atmospheric conditions are expected to remain favourable for enhanced rainfall activity, particularly across the northern and central coastal areas. The associated hydrological outlook indicates a high probability of river rises and overflows in several coastal river basins that have already shown sensitivity to increased rainfall during September. Recent INAMHI meteorological warnings forecast daily rainfall accumulations of between 42 and 100 mm and highlight the potential for river rises, flooding and landslides in areas already exposed to hydrometeorological hazards.

Taken together, the activation of this Imminent DREF is based on the convergence of three factors: (i) the nationwide Red Alert maintained by the Government of Ecuador (SNGR-238-2026), (ii) confirmation through CN-ERFEN Technical Executive Report No. 010-2026 that El Niño remains active and strengthening, and (iii) INAMHI forecasts indicating above-normal rainfall conditions and increased hydrological risk across the coastal region.

While above-normal rainfall conditions are forecast during October, both INAMHI and CN-ERFEN indicate that the impacts associated with the ongoing El Niño event are expected to intensify as the rainy season develops. According to INAMHI, rainfall along the Ecuadorian coast is expected to increase in both frequency and intensity during November and December 2026, while CN-ERFEN anticipates the greatest impacts of the event between November 2026 and March 2027. The transition from anomalous rainfall conditions observed in September and forecast for October toward the onset of the rainy season is therefore expected to increase the likelihood of more widespread flooding, river overflows and landslides across the coastal region. Based on these forecasts, the operation considers early November 2026 as the most likely date for the first significant escalation of humanitarian impacts.

The operation therefore prioritizes Esmeraldas, Guayas, Los Ríos and Santo Domingo de los Tsáchilas, where the area of above-normal rainfall forecast by INAMHI overlaps with recent hydrological activity, flood- and landslide-prone areas and a high concentration of exposed communities. Guayas and Los Ríos contain extensive low-lying areas and interconnected river systems susceptible to progressive



flooding; Esmeraldas has recorded the highest recent population impacts along the coast; and Santo Domingo de los Tsáchilas, including La Concordia, is exposed to rapid river rises, flash flooding and rainfall-triggered landslides. Approximately 1.25 million people are exposed to varying levels of flooding and landslide risk across the four provinces.

The progression from exceptionally high rainfall and localized impacts observed during September, combined with forecasts of above-normal rainfall during October and expectations of more frequent and intense rainfall from November onwards, increases the likelihood of more frequent and severe flooding, river overflows and landslides in the coming weeks while anticipatory measures can still be implemented before impacts become more widespread.

Explain the underlying vulnerabilities and risks the hazard poses for at-risk communities?

The targeted provinces present a combination of high hazard exposure, physical vulnerability, and socioeconomic vulnerabilities that are expected to amplify humanitarian impacts. Large numbers of households are located in flood-prone areas and are constructed using highly susceptible materials such as cane and wood. Examples include more than 34,800 vulnerable houses in Guayaquil, nearly 10,000 in Durán, over 13,400 in Babahoyo, more than 15,400 in Quinindé, and approximately 11,000 vulnerable dwellings in Santo Domingo and La Concordia.

Communities in rural and hard-to-reach areas face additional risks due to limited accessibility and the potential disruption of transport routes, bridges, and critical infrastructure. Flooding and landslides could isolate communities and significantly hinder access to health services, water systems, markets, and humanitarian assistance. Existing insecurity and violence in some areas may further constrain safe access and increase protection risks, including gender-based violence.

Expected humanitarian impacts include:

- * Flooding of homes and community infrastructure.
- * Damage or loss of household assets and livelihoods.
- * Temporary displacement of families.
- * Interruption of transportation and isolation of communities.
- * Damage to water and sanitation systems, reducing access to safe drinking water.
- * Increased incidence of waterborne, vector-borne, respiratory, and skin diseases.
- * Increased protection concerns for vulnerable groups, including women, children, older persons, and persons with disabilities.

Historical experience demonstrates the scale of impacts that El Niño events can generate in Ecuador. During the 1997-1998 El Niño event, approximately 18 water utility companies and 80 water supply systems were severely affected nationwide, while 34 hospitals, 12 health centres, and 45 health sub-centres sustained damages. Similar impacts on water, health, housing, and community infrastructure are anticipated if forecast conditions materialize.

Based on current exposure estimates provided by the National Technical Working Group 4 on Temporary Shelters and Humanitarian Assistance (MTT4), coordinated by Ecuador's National Secretariat for Risk Management (SNGR), approximately 1.25 million people across the four provinces are exposed to varying degrees of flooding and landslide risk. Of these, 1,202,500 people are exposed to flooding, including 1,065,766 at medium risk and 136,734 at high risk. The remaining 51,359 people are exposed to high or very high landslide risk. The most severe impacts are expected among households living in vulnerable housing conditions, communities located near rivers, and populations in areas with limited access to basic services and emergency support. This anticipatory operation is therefore designed to reduce potential humanitarian consequences before the forecast impacts occur.

Source Name	Source Link
1. ERFEN El Niño Monitoring Report (1 Oct 2026)	https://institutopesca.gob.ec/wp-content/uploads/erfen_20261001.pdf
2. National Institute of Meteorology and Hydrology (INAMHI) Climate Prediction August–October 2026: October precipitation and anomaly maps.	https://servicios.inamhi.gob.ec/clima/



3. National Secretariat for Risk Management (SNGR). El Niño alert declarations.	https://alertasecuador.gob.ec/el_nino/declaratorias-de-niveles-de-alertas-emergencias-y-desastres/
4. Government of Ecuador. Executive Decree No. 485	https://asobanca.org.ec/wp-content/uploads/2026/09/Decreto_Ejecutivo_No._485.pdf
5. El Comercio - "Familias de seis cantones afrontan la emergencia en Esmeraldas por 90 días"	https://www.elcomercio.com/actualidad/ecuador/familias-afrontan-emergencia-en-esmeraldas-lluvias-octubre-2026/
6. Expedientes Ecuador - "Las inundaciones golpean a decenas de comunidades en Esmeraldas y Los Ríos"	https://expedientes.ec/las-inundaciones-golpean-a-decenas-de-comunidades-en-esmeraldas-y-los-rios/
7. INAMHI. Boletín Meteorológico Nro. 78 - Estatus: Advertencia. Predicción y Vigilancia de Condiciones Meteorológicas. Issued 7 October 2026, valid 7-11 October 2026.	https://www.inamhi.gob.ec/pronostico/advertencia.pdf

[Supporting Documentation](#)

Plan

Will surge personnel be deployed? If yes, please provide the role profile needed.

Yes

Subject to IFRC availability, the Ecuadorian Red Cross plans to request the deployment of a WASH Officer to complement existing National Society capacities and provide additional technical support for the implementation of anticipatory and preparedness activities across the prioritized provinces.

The profile should have expertise in emergency WASH programming, water systems assessment, anticipatory action, and preparedness planning. Experience working with community water systems, local authorities, and National Red Cross and Red Crescent Societies would be highly valuable.

The WASH Officer will work alongside National Headquarters and provincial branches staff and volunteers to:

- * Support the coordination of technical assessments of prioritized water systems and WASH capacities.
- * Provide specialized technical guidance for the identification of critical vulnerabilities, maintenance needs, and preventive measures.
- * Accompany provincial teams in the implementation of preparedness and risk reduction activities.
- * Contribute to the development and refinement of the operation's WASH strategy at local, provincial, and national levels.
- * Support refresher sessions and on-the-job mentoring for staff and volunteers involved in WASH preparedness activities.
- * Assist in preparedness planning and readiness actions in the event of a potential transition from anticipatory action to response.

The deployment will help expand the National Society's capacity to undertake simultaneous field assessments across multiple provinces, promote the use of standardized technical approaches, and strengthen coordination with community water boards and local stakeholders while leveraging existing institutional expertise and capacities.

Which of the expected severe humanitarian impacts of the hazard are your actions addressing? Why were these impacts chosen?

The operation prioritizes the humanitarian impacts most likely to result from forecasted flooding, river overflows and landslides associated with the anticipated El Niño event, and that can be meaningfully reduced through anticipatory action.

Geographical areas and activities will be prioritized based on a combined assessment of hazard, exposure, vulnerability and operational



feasibility across the four provinces. This assessment will consider forecasts and alerts issued by the National Institute of Meteorology and Hydrology (INAMHI), official risk and exposure scenarios from the National Secretariat for Risk Management (SNGR), recent disaster impacts, the vulnerability of housing and community water systems, the operational status of early warning systems, access and security conditions, and the capacities and gaps identified by the Ecuadorian Red Cross provincial branches and local authorities.

The specific anticipatory actions planned under this operation are not currently being addressed by other local actors. However, they will complement the ongoing disaster risk management and emergency preparedness efforts of the SNGR and local Decentralized Autonomous Governments (GADs), with whom the Ecuadorian Red Cross will coordinate to ensure alignment with existing interventions and avoid duplication of efforts.

The primary concern is the potential damage to homes and loss of essential household assets, particularly among families living in flood-prone areas and in housing constructed with highly vulnerable materials such as cane and wood. To help reduce these losses, the operation will support household-level flood protection measures and risk communication activities that enable families to take timely protective actions before the anticipated impact.

Flooding is also expected to affect community water systems and access to safe water, through damage to infrastructure, contamination of water sources and service interruptions. To address this risk, the operation will conduct preventive assessments of priority water systems, support immediate protection and maintenance measures, and work with community water boards and local actors to strengthen system preparedness.

Disruptions to water and sanitation services, combined with flood conditions, may contribute to an increase in waterborne, vector-borne, respiratory and skin diseases. The operation will therefore complement WASH activities with community health promotion, hygiene awareness and risk communication measures aimed at reducing public health risks before and during the anticipated impact period.

Finally, flooding and landslides may lead to the temporary isolation of communities and reduced access to essential services, including healthcare and humanitarian assistance. To mitigate these consequences, the operation will strengthen community preparedness, support local contingency measures and reinforce community early warning, coordination and readiness mechanisms.

Across all actions, a Protection, Gender and Inclusion approach will be applied to ensure that the specific needs of children, older persons, persons with disabilities, pregnant women and other at-risk groups are considered throughout the operation.

[National Society developed contingency plans, or recently carried out PER assessment Document](#)

Proposed Actions

	Sector	Activities	Budget (CHF)
 Early Actions	Shelter	* Support households in prioritized high-risk communities to construct temporary flood protection barriers through the provision of materials and technical guidance. * Train National Society staff and volunteers in community-based flood protection techniques to support implementation and community preparedness. * Conduct a review of CVA operational readiness, including procedures, roles, and tools.	CHF 68,500



	Health (public)	* Conduct community preparedness and health promotion sessions in prioritized communities and temporary shelters. * Implement a social media and community outreach campaign on priority health risks, MHPSS, voluntary blood donation, disaster risk reduction, and preparedness measures associated with El Niño. * Train National Society volunteers in MHPSS, community-based disease surveillance, and dengue preparedness to support community outreach and early warning efforts.	
	WASH	* Community water, sanitation and hygiene awareness sessions conducted in prioritized communities, integrated within the health risk communication strategy. * Rapid functional assessments of prioritized water systems conducted, including temporary protection of exposed infrastructure and preventive maintenance or replacement of critical system components. * Ecuadorian Red Cross volunteers and Water Board community members trained on rapid identification of water system failures and practical measures to restore water production and service continuity.	
	DRR	* Conduct rapid assessments and maintenance of six community early warning systems in flood-prone areas, including repairs and upgrades where required. * Strengthen the operational readiness of community early warning systems through testing, maintenance, and provision of critical equipment.	
	NS Strengthening	* Distribute personal protective equipment (PPE) to volunteers supporting anticipatory actions in prioritized areas. * Conduct refresher training on operational safety and security management for staff and volunteers involved in the operation. * Mobilize technical personnel to support the implementation, monitoring, and evaluation of anticipatory actions.	
 Early Response	Shelter	* Deploy and distribute pre-positioned shelter kits to support the immediate shelter needs of affected communities.	CHF 6,500

Sub-total	CHF 75,000
Surge Deployment (if applicable)	CHF 10,000
Indirect Cost	CHF 5,800
Total	CHF 90,800

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[Click here for the reference](#)

