

EARLY ACTION PROTOCOL SUMMARY

Honduras | Drought

January 2023



In 2014, the IFRC in support of Honduras Red Cross, launched an Emergency Appeal to address drought conditions in the dry corridor in Honduras. This picture shows drought affected maize fields in the municipality of Pespire, department of Choluteca. Photo credit: Honduran Red Cross

EAP №:
EAP2023HN02

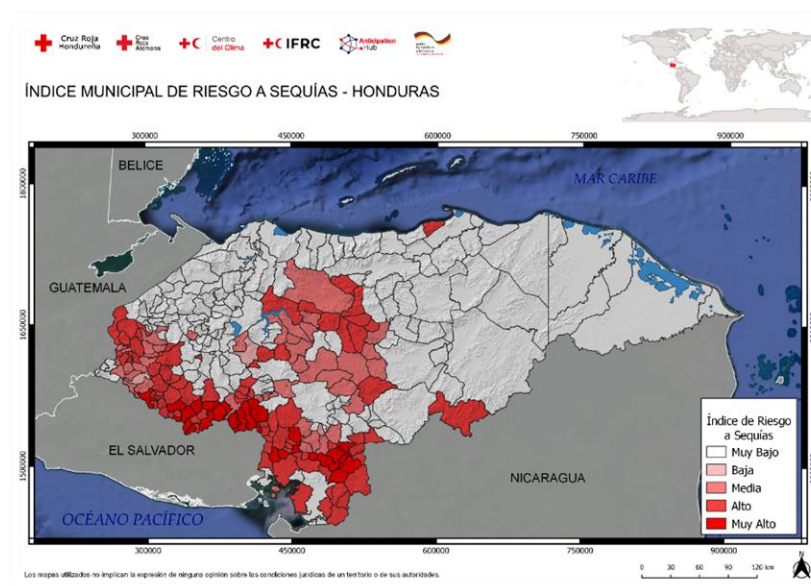
EAP timeframe:
5 Years

EAP approved:
17/01/2023

Early action timeframe:
3 Months

Budget: 481,147 CHF
To assist: 10,300 people

SUMMARY OF THE EARLY ACTION PROTOCOL



The IFRC Disaster Response Emergency Fund (DREF) has approved a total allocation of CHF 481,147 from its Anticipatory Pillar, for the Honduran Red Cross.

Honduras is a country exposed to hazards such as floods, droughts, slope movements, among others. Historically, the threat that has caused the greatest impacts in the country is flooding, for which Honduran Red Cross (HRC) already has an Early Action Protocol (EAP) for floods associated with tropical storms ready to be activated. However, the threat of drought has a very important impact on vulnerable communities.

This map shows the risk index of the country's municipalities, with a distribution of the risk index ranging from very low (white) to very high-risk municipalities (red).

It has been identified that historically, the most severe droughts in the Honduran territory have occurred during the positive phase of the *El Niño* phenomenon, with the episodes of drought that occurred when the Oceanic Niño Index (ONI) reached magnitudes above 2.0 standing out.

Table 1 below shows some historical impacts of droughts in Honduras. Those events whose intensity was presented as severe drought (years coinciding with severe El Niño) were analyzed. It addresses the territorial extension affected, number of people affected, losses in different livelihoods.

Table 1. Impacts of drought in Honduras

Date	Climate Parameters Indicators	Regions by Department Affected	Number of people affected	Affected Sectors and Livelihoods	Most Severe Impacts
1982 - 1983	SEVERE: Low rainfall (800-1,200 mm/year) Evaporation high potential, average greater than 200 mm/month ENSO index 2.2	Choluteca, Cortes, Francisco Morazán, Sta. Bárbara, Comayagua, Olancho, El Paraíso (Desinventar)		Corn, beans, rice and bananas (Desinventar)	
1997 - 1998	SEVERE: Low rainfall (800-1,200 mm /year) Evaporation high potential, average greater than 200 mm/month ENSO index 2.4	Choluteca, Valle, Francisco Morazán, El Paraíso, Comayagua (EMDAT) Choluteca, Valle, La Paz, Intibucá and Lempira (OXFAM 1997)		World Vision 95% of basic grains from the first planting season corn losses of approximately 60% for the second season. (OXFAM-1997) maize, beans, banana, maicillo, sorghum, coffee, sugar cane and melon (cidbimena.desastres.hn)	102,080 hectares of forest affected 825 fires (cidbimena.desastres.hn) 95% of bean harvests, 30% of rice harvests and up to 50% of corn harvests (UNESCO and CAZALAC 2018)

2002 - 2003	Dry period of 9 months, a water emergency was declared due to low rainfall	-	220,000 people	35% of the surface dedicated to the cultivation of basic grains was affected	The impact of the forest fires affecting 1.8 million people with drinking water rationing, which produced the development of pests (vectors) and respiratory and dermatological diseases.
2014	SEVERE: Low rainfall (800-1,200 mm/year) High potential evaporation, average greater than 200 mm/month. ENSO index 2.6	El Paraíso, Francisco Morazán, south central Comayagua, Choluteca, Valle; the entire southern sector of the departments of La Paz, Intibucá, Lempira, Copán and Ocotepeque, Olancho, Yoro and Santa Bárbara (GWP 2014) Lempira, Olancho, Fco. Morazán (FEWSNET 2014)	76,712 smallholder families affected: 37,131 corn producers, 14,075 bean producers, 25,506 sorghums producers (GWP 2014)	Corn, beans and sorghum, African palm, and sugar cane.	4,221,301 quintals of corn and 229,346 quintals of beans. 4,600 hectares of forest affected (GWP 2014)
2015	SEVERE: Low rainfall (800-1,200 mm/year) Evaporation high potential, average greater than 200 mm/month. ENSO Index 2.6	Choluteca, Comayagua, Copán, El Paraíso, Fco. Morazán, Intibucá, La Paz, Lempira, Ocotepeque, Olancho, Valle, Yoro	161,403 families 2,023,000 people (WFP 2015)	Corn, beans, sorghum, African palm, and sugar cane.	Losses: 96% in corn, 87% in beans, and a 19% decrease in the amount of sorghum (WFP 2015)
2018 - 2019					

The severity of drought events that occur in the Honduran territory varies according to the region, however, the risk of drought is constant in the departments of Choluteca, Valle, Lempira, Francisco Morazán, Comayagua, Yoro, La Paz, El Paraíso and Intibucá, and the historical analysis of the main recorded droughts provides evidence of the repeated exposure of the population living in the Honduran dry corridor. This population normally lives in the southern, western and some parts of the central and eastern regions, where exposure to El Niño is immediate. These regions are characterized by being mountainous and dry.

The EAP targets the subsistence farming population living in the Honduran dry corridor and will identify those families belonging to vulnerable groups and with high poverty rates.

OPERATIONAL STRATEGY

1. Who will implement the EAP - The National Society

The EAP for the HRC is a tool to guide the timely and effective implementation of anticipatory actions based on specific hydro-meteorological forecasts that predict events that, if they do materialize and appropriate actions are not in place, have a high probability of generating a humanitarian crisis. These crises could be avoided or minimized through joint and timely action by the Government of Honduras, communities at risk, stakeholders and the HRC.

This document has been designed with the technical support of the German Red Cross and the IFRC Climate Centre and will be implemented by HRC. All those involved in this plan have a key role during the preparation and activation of the Forecast-Based Financing (FbF) mechanism. A list of institutions and their functions is presented in table 2 below.

The Early Action Protocol presented in this plan focuses on extreme droughts associated with the El Niño phenomenon in Honduras and is triggered by a forecast provided by the Standing Committee on Contingencies (COPECO by its Spanish acronym) through the Centre for Atmospheric, Oceanographic and Seismic Studies (CENAOS by its Spanish acronym) who generates the forecasts for Honduran territory. This EAP explains the logic behind the prioritization of early actions and provides step-by-step instructions for the selected actions to be implemented in a particular manner and order upon activation. The EAP clearly defines who takes what action, when, where and with what funds.

Table 2. List of organisations linked to the National Society.

Actors linked to the EAP		
Level	Organisation	Role
International	• International Federation of the Red Cross (IFRC)	The Red Cross Red Crescent Climate Centre will provide technical and scientific assistance in Disaster Risk Management (DRM), logistics, strategic relationships, early warning/action, monitoring and evaluation, and financial accountability. The RCCC supports the Red Cross Red Crescent Movement in reducing the impacts of climate change and extreme natural events on vulnerable populations.
	• German Red Cross (GRC)	
	• Red Cross Red Crescent Climate Center (RCCC)	
National	• Honduran Red Cross (HRC)	As a humanitarian institution, the HRC has been working for the benefit of the vulnerable population since its foundation in 1937. Through its councils, distributed in 15 departments, the HRC promotes a network of actions aimed at providing a timely and effective response to meet the needs of the population.
	• Standing Committee on Contingencies (COPECO)	COPECO is the Honduras State's institution destined to the strengthening and coordination of the National Risk Management System (SINAGER). The institution will assume its preventive functions and those extended by the SINAGER Law, therefore, it is the institution in charge of declaring and communicating any type of alert and state of emergency in the country, so its participation is fundamental in the activation of the EAP.
	• Centre for Atmospheric, Oceanographic and	CENAOS is the technical unit attached to COPECO in charge of providing meteorological, climatic, oceanographic and seismic information to prevent

	Seismic Studies (CENAOS)	natural disasters and consequently save lives. CENAOS, as the National Meteorological Service of Honduras, is the authority on meteorology.
	• SINAPRED	National Risk Management Coordination System.
	• Working Group on Cash Transfers (CWG)	Inter-agency coordination space for cash transfer issues at the national level.
Local	- Decentralised Government (Municipalities and Municipal Corporation) - Emergency Committees (CODED, CODEM, CODEL, CODECE, CODELES)	For coordination processes, beneficiary identification, inter-institutional support.

2. How the EAP will be activated – The Trigger

Risk Model - Methodology for risk creation and risk mapping

The selection of target municipalities was determined using the INFORM risk index methodology. Three dimensions of risk were considered: 1) Exposure 2) Vulnerability and 3) Lack of Response Capacity. All variables were calculated at the municipal level as this is the administrative level responsible for local risk management.

Prioritized Impact

The prioritized impacts for Honduras in the case of droughts associated with the El Niño phenomenon are as follows:

- Substantial loss of crops and livestock in vulnerable families that are dependent on subsistence agriculture.
- Increase in the price of basic commodities.
- Limited access to safe water among vulnerable families due to scarcity and increased purchase costs.
- Increased incidence of diarrheal diseases due to consumption of unsafe water or inadequate sanitation conditions.

Activator Model

The triggers were constructed and agreed with the technical work team, based on the monitoring of meteorological conditions three months in advance and defining a control mechanism to be evaluated monthly after the start of the EAP.

For the activation declaration, triggers 1 and 2 are required:

Trigger 1

When COPECO/CENAOS issues an alert warning of "El Niño" in area 3.4, for the next 3 months with a 60% probability based on the IRI forecast from the OND quarter (year -1) and except for AMJ and MJJ quarters (Predictability barrier).

Trigger 2

When COPECO/CENAOS issues a climate outlook bulletin where a serious precipitation deficiency is forecast when the accumulated rainfall for the next 3 months is between the 10th and 20th percentile in the dry corridor starting in the (March-May) MAM quarter (year 1) with a probability from greater to 60%.

Stop Mechanism

The stop mechanism will be activated with the update of the quarterly forecast of the climate outlook for the following month.

Interruption mechanism: a shutdown mechanism will be triggered by the update of the quarterly forecast of the next month's climate outlook.

Forecast Selection

In Honduras, COPECO/CENAOS is the official institution in charge of issuing forecasts and informing on hydro-meteorological phenomena, so the forecasts of this institution have been selected for the development of the EAP.

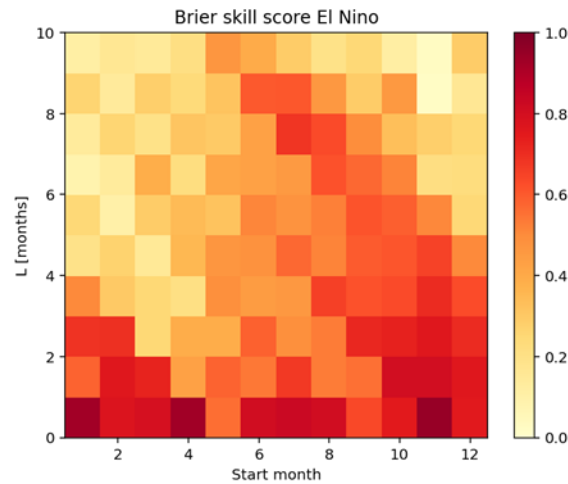
The forecast of the El Niño phenomenon was considered due to the high correlation it has historically had with the decrease in precipitation in the Honduran dry corridor.

Table 3. Forecasts menu

Forecast	Issuing institution	Timeframe for execution	Source	Skill
ENSO phenomenon	CENAOS CPC/IRI Climate Prediction Centre NOAA	3 months	Seasonal Forecast Bulletin	Brier Skill Score = 0.6 False alarm: 0.3 3 months lead time
Seasonal rainfall forecast Precipitation deficit.	CENAOS	3 months	Seasonal Forecast Bulletin	False Alarm = 0.4 3 months lead time

For the calculation of ENSO forecast skill, the Brier Skill Scores (BSS) metric was used, which measures the relative skill of forecasts compared to climatology. Where: BSS = 1 the forecast has perfect skill compared to climatology; BSS = 0 the forecast has no skill compared to climatology).

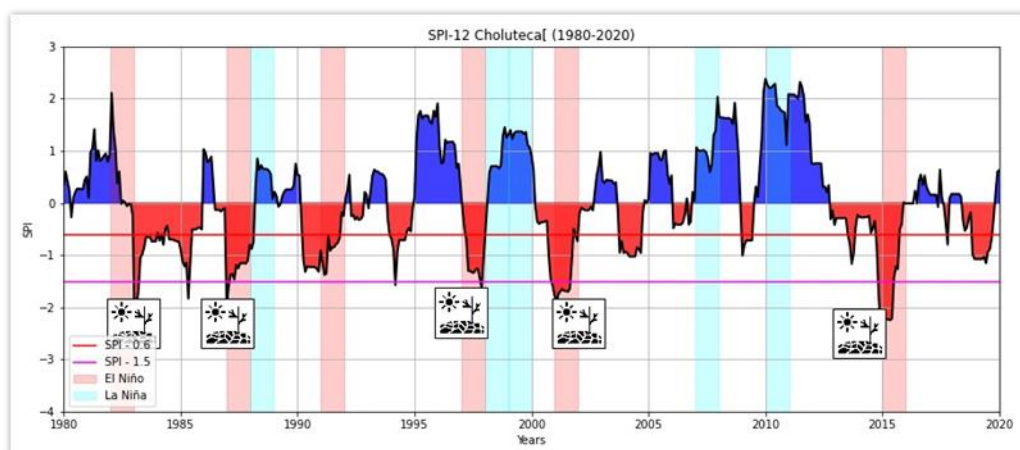
Figure 2. BSS for ENSO using CFSV2



Impact Level Definition and Justification

Two of the criteria for activating the present EAP is the occurrence of the El Niño phenomenon, which historically correlates with precipitation deficits in the Honduran dry corridor, and the second trigger is a severe precipitation deficit, which is associated with a standardized precipitation index (SPI) greater than -1.5, in both cases as represented in Figure 3 below, it is observed that both criteria occurred and are related to the impacts of severe droughts shown in Table 1 that occurred in the years (1982-83, 1997-98, 2014-15) and El Niño years not included in this table, such as 1997 and 2002. These years have had considerable impacts in magnitude of livelihood losses of populations in the dry corridor and this type of severe drought has a frequency of approximately once in every decade.

Figure 3. Frequency of severe droughts in the dry corridor - Choluteca Station

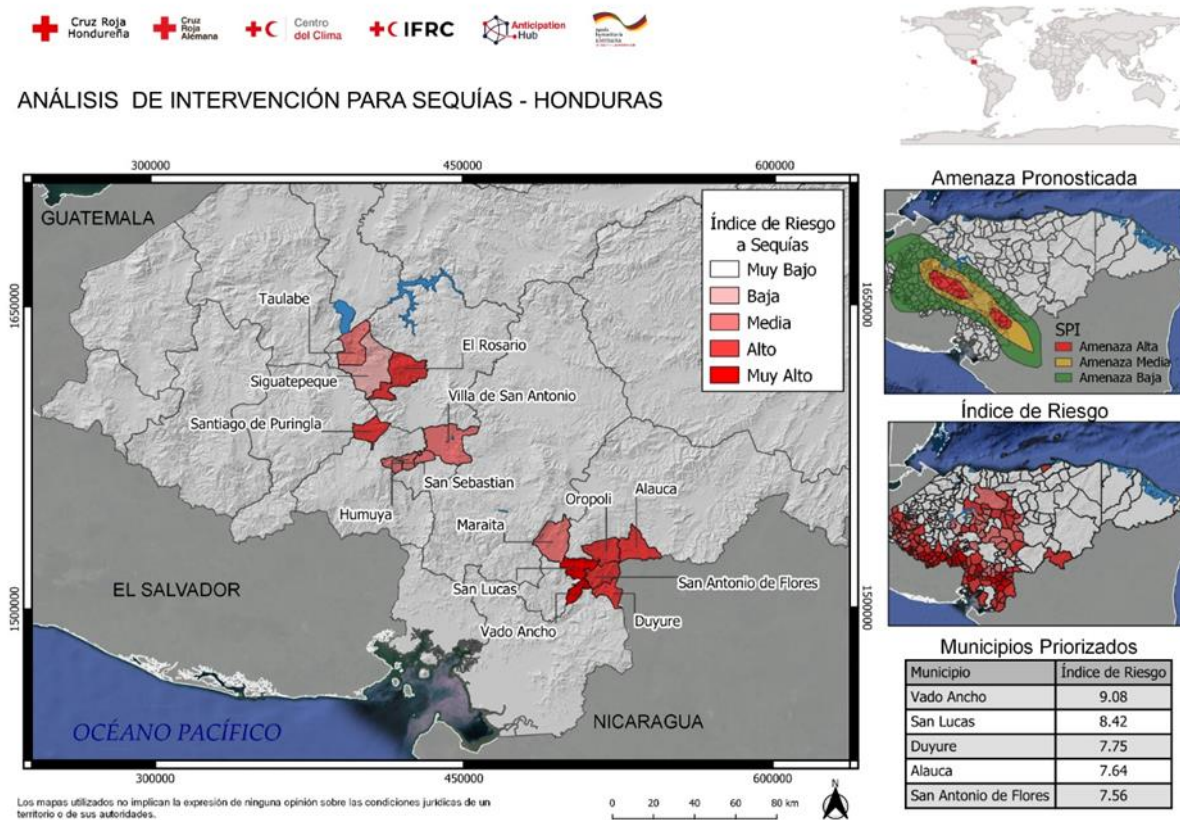


Identification of Intervention Zones

The identification of the intervention zone is based on the elements that define the risk and overlapping the drought forecast, which gives the NS the guideline to select the potentially affected municipalities with the highest risk, which will be prioritized for early actions.

The map below shows an example of an intervention map derived from the forecast associated with the event and the risk map previously drawn up, which defines the areas potentially affected.

Map 2: Drought Intervention Analysis in Honduras



3. How the EAP will reduce the impact on the population – The Early Actions

Early Action Selection Process

The impacts that have been prioritized are based on HRC's operational and administrative capacity. The particular characteristics of the phenomenon are considered, where the time it takes to develop and the problems that are generated throughout the period of extreme drought are analyzed.

Different activities were carried out to select the actions.

1. A visit was made to communities in the departments of La Paz and Valle, where they talked to people involved in agriculture about the different actions that could be carried out in the anticipation framework and from the perspective of the community's inhabitants. They detailed that one of their main problems is the scarcity of water both for irrigation and for consumption.
2. Interviews were conducted with CRH technical personnel who are involved in projects focused on drought issues in the South and Central South of the country with experience in humanitarian assistance and disaster response.
3. Participation in the Central American Regional Workshop on Drought where the other National Societies of the Region (Honduras, Guatemala, Nicaragua, El Salvador, Costa Rica)

who are working on the issue of drought together with their representatives of the meteorological institutes (COPECO) were present (CONRED, IHCIT, Climate Centre) where the actions and their feasibility were discussed, the utility they could have in a context of anticipation was analyzed.

4. An internal workshop of the Risk Management Department was held to finish analyzing the actions and their usefulness in the context of anticipation.
5. The previous experiences that the National Society has had specifically in the 2016 drought appeal were taken as input.

Based on the evidence on which the selection of actions is founded, intervention sectors have been identified where early actions could be implemented to increase community resilience and reduce the impact of extreme drought.

PLANNED OPERATIONS

 Multi-purpose Cash	Female:	936	197,957 CHF
	Male:	864	AP Code: 081
Indicator:	Number of people reached with multi-purpose cash in advance of a hazard		
Readiness Activities:	1. Development of community campaigns to raise awareness about cash transfers and how to use them in early actions (feedback). 2. Focal point Cash and Voucher Assistance (CVA) 3. Market analysis 4. CVA feasibility study update 5. Price and market monitoring		
Prepositioning Activities:	1. Pre-positioning of 400 prepaid cards (cost of plastic plus 3 recharges)		
Priority Early Actions:	1. Distribution of CVA to the community 2. Cost of activation of CVA cards 3. Dissemination of key CVA messages 4. Volunteer per diem for registration and distribution of CVA beneficiaries (20 volunteers plus 5 technical team members for 20 days).		

 Water, Sanitation and Hygiene	Female:	4,420	118,956 CHF
	Male:	4,080	AP Code: 110, 111
Indicator:	Number of people reached with Water, Sanitation and Hygiene (WASH) interventions in advance of a hazard		

Readiness Activities:	1. Development of awareness campaigns on the arrival of an extreme drought event and preparedness actions at the family level (water culture, optimal use of water).
Prepositioning Activities:	2. Purchase of equipment for water quality analysis 3. Purchase of domestic water treatment and hygiene promotion kit (1 20-liter bucket with dispenser and 60 sachets of iron sulfate and calcium hypochlorite water purifier will be delivered).
Priority Early Actions:	1. ENI WASH Deployment 2. Pre-positioning of household water purification kit (per diem for motorist, 2 volunteers, truck freight). 3. Fuel for the delivery 4. Purchase of chemical products for water quality analysis

 Risk Reduction, climate adaptation and recovery	Female: 4,420		60,142 CHF
	Male: 4,080		AP Code: 101, 103, 105,106
Indicator:	Number of people reached with risk reduction and/or climate adaptation interventions in advance of a hazard		
Readiness Activities:	1. Anticipation referent (focal point) 2. Simulation/drill		
Priority Early Actions:	1. Deployment of volunteers for kit distribution		

 Community Engagement and Accountability	Female:	5,356	4,219 CHF
	Male:	4,944	AP Code: 129
Indicator:	Number of people reached with community engagement and accountability interventions in advance of a hazard		
Readiness Activities:	1. Exit survey and Post Distribution Monitoring (PDM), interim and at closing.		
Priority Early Actions:	1. Printing of pocket EAP for volunteer staff		

Enabling approaches

 Secretariat Services	Female:		47,228 CHF
	Male:		AP Code: 122

Readiness Activities:	1. FbF Training Trips/Platforms on FbF 2. Monitoring field visits by the IFRC 3. Fuel 4. Office supplies 5. Finance officer 6. Planning, Monitor, Evaluation and Reporting (PMER) Officer 7. Financial expenses 8. Shipping and communications
Priority Early Actions:	1. Monitoring field visits by the IFRC 2. Fuel

 National Society Strengthening	Female:	N/A	52,645 CHF
	Male:	N/A	AP Code: 124,125,126
Readiness Activities:	1. National Society follow-up field visits 2. GIS Technician 3. Monitoring and accountability 4. Socialization of the EAP 5. EAP update workshop 6. Purchase of office supplies 7. Financial expenses 8. Fuel and vehicle maintenance 9. Translation of documents 10. Administrative Assistant 11. Annual technical meetings prior to activation 12. Activate a direct line of communication between focal points and CODELES and branches.		
Priority Early Actions:	1. Warehouse rental for pre-positioning 2. Follow-up of activation activities 3. Internship for logistics activities 4. Lessons learned workshop		

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Reference



See Annex for Budget



Early Action Protocol Summary

EAP2023HN02 - Honduras Red Cross drought

Operating Budget

	Readiness	Pre-Pos Stock	Early Action	TOTAL
Planned Operations	73,035	107,042	201,196	381,274
Shelter and Basic Household Items	0	0	0	0
Livelihoods	0	0	0	0
Multi-purpose Cash	19,383	2,094	176,480	197,957
Health	0	0	0	0
Water, Sanitation & Hygiene	4,284	104,948	9,724	118,956
Protection, Gender and Inclusion	0	0	0	0
Education	0	0	0	0
Migration	0	0	0	0
Risk Red., Climate Adapt. and Recovery	46,263	0	13,879	60,142
Community Engagement and Accountability	3,106	0	1,114	4,219
Environmental Sustainability	0	0	0	0
Enabling Approaches	94,562	0	5,312	99,873
Coordination and Partnerships	0	0	0	0
Secretariat Services	45,857	0	1,371	47,228
National Society Strengthening	48,705	0	3,941	52,645
TOTAL BUDGET	167,597	107,042	206,508	481,147

all amounts in Swiss Francs (CHF)