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Mozambique: Floods

Early Action Protocol summary

 International Federation
of Red Cross and Red Crescent Societies

EAP approved: **November 2020**

Population to be assisted: **1,000 HHs**

EAP timeframe: **5 Years**

EAP number: **EAP2020MZ02**

Budget: **249,327 CHF**

Early action timeframe: **3 days / 72 hours**

The IFRC Disaster Relief Emergency Fund (DREF) has approved a total allocation of CHF 249,327 from its Forecast based Action (FbA) mechanism for the Mozambique Red Cross Society. The approved amount consists of an immediate allocation of CHF 137, 089 for readiness and pre-positioning and CHF 112, 238 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

Context

The high vulnerability to flooding in Mozambique is associated with its geographical location, downstream of nine major river basins on the south-eastern African continent. Floods, tropical cyclones, droughts and epidemics are phenomena that occur with some regularity in the country. Cyclical floods of different sizes occur annually in Mozambique. During the period 1980-2019, the country experienced at least 28 floods (INGC), causing considerable damage to several river basins in Mozambique. The floods in Mozambique have been caused by two factors: Depressions and tropical cyclones, as well as prolonged rains during the rainy season which increase the levels of the river basins and subsequent discharges downstream.

Hazard

Floods are a phenomenon that happen regularly in the country. In the last 20 years Mozambique has launched a total of 8 DREFs to meet basic needs caused by the impact of flooding. A total of approximately one million people were affected in this period, and the Mozambique Red Cross has always been at the forefront responding to these calamities by helping the most disadvantaged and affected by the impact of these extreme events.

EAP Development

This EAP is focused on floods, which might occur anywhere in Mozambique from October to April (the rainy/cyclone season). The actions proposed will be activated on the basis of hydro-meteorological warnings indicating that the trigger level (water level correspondent to discharge of five-year return period at the river basin reference station) will be reached within 72 hours (3 days), which is the lead time within which the CVM can act in advance before a flood event reaches the districts and communities potentially at risk. All actions included in the EAP are based on this preparation time window. The hydro-meteorological forecast will be provided by the National Institute of Meteorology (INAM) and the National Directorate of Water Resources Management (DNGRH), with whom the FbF team has developed longstanding collaborations at the technical level, focusing on the provision of data, as well as providing forecasts in a timely manner. This EAP seeks to achieve two objectives: first to ensure that the selected early actions are evidence-based and that they are effective in reducing the prioritized humanitarian impact of floods in Mozambique. Actions are proposed on the basis of sound risk information (Chapter 3), and reliable climate information that events of a certain magnitude are linked to high levels of impact. Secondly, the protocol describes how CVM selected and will organize the actions.

Geographical Scope

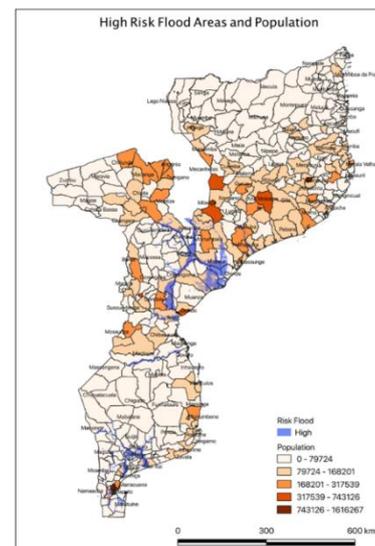
The present EAP covers four Mozambican hydrographic basins: Limpopo, Buzi, Zambezi and Licungo with special focus on the at-risk districts downstream, in total 12: Gaza Province; Chokwe, Guija, Chibuti, Limpopo, Sofala Province; Buzi, Caia, Marromeu. Zambezia Province: Mocuba, Namacurra, Maganja da Costa, Mopeia and Luabo.

Target population

The target population are those communities living along the flood plains particularly in the provinces of Gaza, Sofala and Zambezia. For floods, the main factors determining exposure are related to where communities prefer to locate the shelter (along rivers, floodplain, as well as along the coast). Not surprisingly, geographic location is a key factor contributing to exposure. As water is essential to people's livelihoods and economic activities—including agriculture, rearing livestock, fishing etc – more than 70% of the Mozambican population is concentrated along one of the countries many rivers.

The map illustrates the population density of Mozambique in relation to the main floodplains in general and in particular of the provinces of Gaza, Sofala and Zambezia hosting the four basins considered in this EAP.

Target impacts



Impact:	Exposed elements:
<i>Increase in waterborne sicknesses and malaria</i>	<i>Poor families who do not have access to clean water, water filters or who do not have mosquito nets</i>
<i>Loss of life</i>	<i>People living near riverbanks</i>
<i>Houses affected or destroyed</i>	<i>Houses and huts near the riverbanks</i>
<i>Loss of personal assets</i>	<i>Poor families without the means to safely keep their documents, money and other assets</i>
<i>Infrastructural damage (roads, bridges, health, education, wells)</i>	<i>Roads, bridges and other infrastructures; Health centres; School classrooms, wells</i>
<i>Loss of agricultural production</i>	<i>Agricultural crops (corn, sorghum, cassava, sunflower); mainly poor families with none or limited storage capacities, Livestock</i>

Forecast

DNGRH and its four designated sub-offices (ARA-Sul, ARA-Centro, ARA-Zambeze and ARA-Norte) are the main government entities responsible for hydrological monitoring of river basins in the country. This is often based on information provided by the National Meteorological Institute (INAM), which is the entity responsible for meteorological forecasts, including precipitation. These forecasts are generated using meteorological information from several global centres, namely the American National Centre for Oceanic and Atmospheric Administration (NOAA) and the European Centre for Medium Range Weather Forecasts (ECMWF). The national bulletin summarises the current situation and water levels for each station for the last three days, provides a 72-hour forecast, and includes a graph of current water levels and water levels during past floods.

The operational strategy – How the EAP will be implemented

1) Who will implement the EAP – The National Society

The present Early Action Protocol (EAP) for Floods, which is part of the Mozambique Red Cross Forecast-based Financing mechanism (FbF) was developed in partnership with the German Red Cross (GRC). It is an instrument that aims to coordinate early actions preparedness and readiness based on hydro-meteorological information that an extreme event is highly likely to affect people and their livelihoods. Basically, the FbF mechanism aims to directly

strengthen the population's ability to act (pro-actively) when likely to be affected by an extreme event. CVM has the adequate capacities to undertake the prioritized activities. With close collaboration between GRC and CVM the pre-positioning, readiness and early action activities are implemented jointly.

Readiness activities will be conducted on a yearly basis during the 5-year life span of the protocol. These activities include the mapping of at-risk communities and their evacuation routes, trainings for volunteers, development of early warning messages and agreements with community radios. Subsequently, there is a simulation exercise planned to make sure all is in place to conduct early actions within the lead time after the trigger is reached.

The GRC has an office in Mozambique and provides hands-on technical support with a dedicated FbF delegate in-country. Furthermore, the GRC has financed the development of this EAP. The IFRC provides technical support to the development of this EAP, and in stakeholder engagement. Furthermore, will support in the readiness activities during technical field monitoring missions.

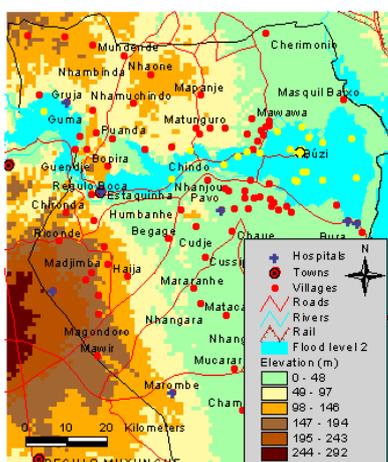
With this EAP, CVM and Mozambique have two EAP protocols through which early actions can be coordinated and early actions funded and implemented:

- EAP on Cyclones; with focus mainly on coastal districts from the north of the Nampula province to the north of Inhambane Province (thereby including Nampula, Zambezia, Sofala and Inhambane provinces).
- EAP on Floods: with focus on riverine districts in Zambezia, Sofala and Gaza provinces.

2) How will the EAP be activated - The Trigger

Based on historical observations and expert knowledge consulted as part of the EAP development process, informing early actions by water levels associated with a five-year return period discharge measured at the upstream gauge station, grants CVM with around 72 hours lead time to target at-risk and vulnerable communities downstream. Due to different characteristics of the Licungo river basin, the time frame between trigger and observed impact is shorter at around 48 hours. Despite the shorter time frame for action, CVM plans the operationalization of timely early actions, as it operates a warehouse in relative proximity to the most exposed and at-risk areas of Licungo flooding, which will allow for an expedited supply chain for the pre-positioned NFIs. In order to grant sufficient lead time to the impact of a five-year return period discharge downstream, the decision was made to trigger action, once the water level at the upstream reference stations has reached a water level associated with the five-year return period discharge, which will be indicated in the hydrological forecasts of the public authority DNGRH.

Flood risk map Buzi District corresponding to a minimum of 5-year return period flood:



If the water level in the river(s) does not reach the expected level or the river changes its course before the beginning of activities (evacuation and distribution of materials), CVM will evaluate alternative communities and/or safe zones and decide if the re-routing is logistically feasible. Given the short period of time and the logistical efforts involved, it may be impossible for CVM to redirect materials to new communities if the flood changes its characteristics. If re-routing is not an option, but the targeted communities initially selected continue to be impacted by the floods, distributions will continue as planned, even if those communities are not expected to be the hardest hit by the event.

If the floods change dramatically (to the extent that selected communities are unlikely to be impacted), the activities and distribution will be stopped, and the materials returned to the warehouse for storage. However, this stop mechanism will only take effect if the flood changes its characteristics before communities have been notified of imminent support and/or distributions have begun. The stop mechanism will not come into effect if communities are mobilized, as once families

have the expectation of a distribution, this would likely cause friction between local authorities, the CVM and targeted people to retract the support.

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

This EAP and the identified early actions are expected to effectively reduce the prioritized impacts of floods in the main river basins in Mozambique benefiting up to 7,500 people in vulnerable communities.

Prioritized early actions and the risks they address:

1. Preparatory administrative and preparedness activities (verification of established communication systems, training and pre-positioning arrangements (NFIs), identification of safe evacuation routes, pre-agreements with petrol stations and owners of different means of transport in case evacuation is necessary).
2. Awareness messages (radio, TV, megaphone); - to reduce the risk of loss of life caused by water flooding (families become isolated and prone to drowning)
3. Activation of volunteers, communication lines (Provincial Secretary, volunteer focal points, heads of provincial and district committees) –
4. Distribution of mosquito nets and chlorine, buckets and mugs at evacuation centres – to reduce the risk of outbreak of endemic diseases (diarrhoea and cholera) due to the destruction of drinking water sources, drainage networks, etc. and malaria due to stagnant water
5. Distribution of means for protection of documents – to reduce the risk of loss of important documents

The Early Actions are proposed on the basis of sound risk information and reliable climate information that events of a certain magnitude are linked to high levels of impact based on the historical impact analysis.

Intervention Sectors

Overall objective: To reduce the impact of floods on individual households in communities living in flood prone areas and to assist in prevention of loss of life during and after flooding by physical isolation and drowning and the consequent outbreak of endemic diseases due to destruction and/or pollution of water sources and finally, prevention of the loss of important documents and goods.



Health

People targeted: 7,500 people / 1500 HH

Male: 3,750

Female: 3,750

Requirements (CHF) 28,908

Risk analysis: Floods occurring with a 5-year return period or more will have a considerable humanitarian impact, causing the spread of endemic disease like water-borne diarrheal diseases and the increase of Malaria following a flood.

Population to be assisted: Maximum 1500 households, a total of 7500 people, living in prioritized areas, living in flood prone areas and close to riverbanks in rural communities.

Programme standards/benchmarks: Sphere standards

P&B Output Code	Health Outcome 1: Vulnerable people's health and dignity are improved through increased access to appropriate health services.	Number of people reporting they receive assistance from Red Cross Volunteers before, during, and after an event.									
	Health Output 1.1: Communities are supported by NS to effectively respond to health and psychosocial needs during an emergency	Number of mosquito nets delivered in coastal communities.									
	Activities planned	Timeframe (semester)									
	Readiness activities	1	2	3	4	5	6	7	8	9	10
	Pre-positioning activities	Timeframe (semester)									
AP011	Procurement, mosquito nets										
	Early action activities	Timeframe (semester)									



Water, sanitation and hygiene

People targeted: 7500 people / 1500 HH

Male: 3750

Female: 3750

Requirements (CHF) 16,237

Risk analysis: Water borne disease outbreaks e.g. cholera due to contamination of water points and or increased malaria incidences due to increased exposure to mosquito attacks

Population to be assisted: Maximum 1500 households, a total of 7500 people, living in prioritized areas, living in flood prone areas and close to riverbanks in rural communities.

Programme standards/benchmarks: Guided by the Sphere standards

P&B Output Code	WASH Outcome 1: Vulnerable people have increased access to appropriate and sustainable water, sanitation and hygiene services	Number of families receiving WASH products									
	WASH Output 1.1: Communities are provided with improved access to safe water.	Number of WASH products distributed to each community & red cross volunteers trained									
	Activities planned	Timeframe (semester)									
	Readiness activities	1	2	3	4	5	6	7	8	9	10
	Pre-positioning activities	Timeframe (semester)									
AP026	Procurement, Certeza bottles										
AP026	Procurement, buckets w. lid										
AP026	Procurement, cups										
	Early action activities	Timeframe (semester)									

Budget

To implement the Early Action Protocol (EAP) **249,327 CHF** have been allocated split between readiness*, pre-positioning of stock and early action costs as per below summary by area of intervention.

Budget by Area of Intervention					
Area of Intervention		READINESS	PRE-POSITION STOCK	EARLY ACTION	EAP Budget CHF
AOF1	Disaster Risk Reduction	38.564	16.241	93.795	148.599
AOF2	Shelter				0
AOF3	Livelihoods and Basic Needs				0
AOF4	Health		28.908		28.908
AOF5	Water, Sanitation and Hygiene		16.237		16.237
AOF6	Inclusion, Gender and Protection				0
AOF7	Migration				0
SFI1	Strengthen NS Capacities	5.420	18.068	3.212	26.700
SFI2	Ensure effective int'l disaster mgmt	10.439			10.439
SFI3	Influence others as leading strategic partners	3.212		15.231	18.444
SFI4	Ensure a strong IFRC				0
TOTAL		57.635	79.454	112.238	249.327

**The activities for readiness and pre-positioning of stock will be captured in the IFRC Country Operational Plan (COP), reporting on annual basis. In case of an Early Action trigger, the annual readiness funding allocation is terminated with a 12-month notice, allowing the National Society to conclude its 3rd party financial and legal commitments and liabilities under the Early Action Protocol.*

Contact information

Reference documents



Click here for:

- Full EAP

For further information, specifically related to this Early Action Protocol please contact:

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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 (NGO's) in Disaster Relief and the **Humanitarian Charter and Minimum Standards in Humanitarian 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**.