EARLY ACTION PROTOCOL SUMMARY

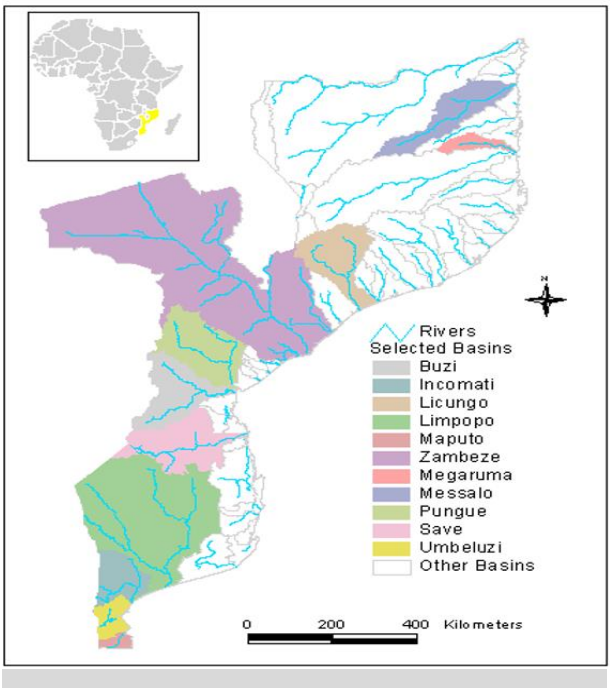
Mozambique | Floods EAP

6 February 2024

EAP №: **EAP2023MZ04**	Operation №: **MDRMZ022**	EAP approved: **18 December 2023**	EAP timeframe: **5 years**
Trigger date:	Early action lead time: **3 days**		Early action timeframe: **3 days**

Budget: 549,929 CHF
To assist: 10,000 people

SUMMARY OF THE EARLY ACTION PROTOCOL



The IFRC Disaster Response Emergency Fund (DREF) has approved a total of **CHF 549,929** for the implementation of the Mozambique Red Cross Flood EAP. The approved amount consists of an allocation of **CHF 357,352** for readiness and prepositioning and **CHF 192,578** allocated to implement early actions once the defined triggers are met.

Allocations are made from the Anticipatory Pillar of the DREF, under the DREF appeal code MDR00001. Unearmarked contributions to the DREF are encouraged to guarantee enough funding is available for the Early Action Protocols being developed.

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), the National Directorate of Water Resources Management (DNGRH) and by REPRESA project through GloFAS, with whom the FbF team has developed longstanding collaboration 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.

The target population are those communities living along the flood plains particularly in the provinces of Gaza, Sofala and Zambezia.

OPERATIONAL STRATEGY

1. Who will implement the EAP - The National Society

The Mozambique Red Cross (CVM) was established in 1981 and is a premier humanitarian organization in Mozambique. With its large network of volunteers, CVM is well known and has a good reputation locally through its vicinity to local communities as well as to governmental institutions, and through its experience in community. CVM is well situated to promote the implementation of DRR measures and their integration in local development plans with its representation in all 11 provincial capitals and in 133 districts (84% of all districts) and has a staff of approximately 167 and some 6,500 volunteers. In the coastal districts most prone to floods, the total number of volunteers is around 910.The training and preparedness of the volunteers differ considerably from district to district. For this reason, capacity building and training forms an important part of the readiness activities included in the EAP.

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

The EAP for Floods in Mozambique was developed in coordination with the National Institute for Disaster Risk Management and Reduction (INGD) – the leading actor in disaster management in Mozambique, the National Meteorological Institute (INAM) – provider of meteorological information, and the National Directorate for Water Resource Management (DNGRH) - provider of hydrological information. These stakeholders have been involved from the Central, Provincial, District and local levels. The EAP will be implemented by the Mozambique Red Cross (CVM) in agreement with the partners involved in its drafting, each of which will play a fundamental role, from communication and coordination to the execution of the actions ensuring its activation. The actions here in presented were discussed and analysed within the scope of the contingency plan currently approved by Mozambican authorities (yearly Contingency Plan developed by the INGD), to assist and address possible existing gaps for early actions.

1.1 National Meteorological Institute (INAM)

INAM was established by decree 30/89 of 10th October 1989 as the public institution of scientific technical character that makes seasonal climatic forecasting, responsible for the collection and provision of meteorological data, production and dissemination of the monthly meteorological bulletins. Based on the meteorological bulletins provided by INAM, the FbF mechanism will be automatically activated once they reflect the defined cyclone trigger level. The monitoring of the trigger is undertaken by the indicated FbF focal points in INAM's Forecasting Department.

1.2 National Institute for Disaster Management (INGD)

INGD is the institution in Mozambique with a mandate to coordinate disaster management activities. Only INGD can declare a state of emergency. The Technical Committee on Disaster Management (CTGD) of which CVM is a member, discusses the forecasts received and based on the decision, CVM can decide to activate (see section 9.4 below for further details). In this EAP, INGD will be responsible for approving an activation and coordinating the communication lines, from the National, Provincial, District and Community level in order to ensure solid coordination of the early action operation, as well as alignment with further short-term preparedness measures and the handover to the first response phase. In addition, INGD is involved in the preparation, activation and monitoring activities of the EAP, ranging from the readiness to the early action's phases of the Protocol.

1.3 National Directorate for Water Resource Management (DNGRH)

In Mozambique, DNGRH is responsible for the overall implementation of the early warning system for flooding in river basins. The entire flood warning process in Mozambique initiates with the seasonal, consensus-based climate outlooks produced during the Southern African Regional Climate Outlook Forum (SARCOF), which occur annually before the start of the rainy season. This is followed by an analysis of the predominant conditions that influence the rainfall patterns, indicating the expected precipitation scenario in the rainy season. The role of DNGRH in relation to an EAP activation is secondary. However, DNGRH will play an important role in relation to its implementation, by combining current forecasts and historical analysis of the different peak floods frequently linked to cyclone impact (ex. Cyclone Idai 2019 and Cyclone Eloise 2021).

1.4 Mozambique Red Cross (CVM)

CVM will be responsible for ensuring the effective implementation of FbF involving all of its personnel from headquarters to the Provinces and Districts, including a network of volunteers spread throughout the country. The Red Cross and Red Crescent Climate Centre (RCCC), 510 Initiative of the Netherlands Red Cross Society, German Red Cross (GRC) and the International Federation of Red Cross and Red Crescent Societies (IFRC) will be responsible for providing financial and technical assistance to ensure access to funds through the anticipatory financing mechanism Forecast-based Action by the Disaster Relief and Emergency Fund (FbA by DREF) in the interval between early action notification/forecast and cyclone occurrence.

1.5 Humanitarian Country Team (HCT)

The HCT has a coordinating role among all humanitarian actors in Mozambique, it will therefore hold a key role as advisor in updating the EAP and for the continuous promotion of the FbF mechanism.

1.6 Eduardo Mondlane University (UEM)

UEM is a national public institution, the oldest of higher education in Mozambique. It was founded on August 21, 1962, by Decree-Law no. 44530, to produce and disseminate scientific knowledge and promote innovation through research, extension and outreach activities, while imparting humanistic values onto generations to face contemporary development challenges of the society. UEM supported CVM with the scoping study on drought anticipatory actions. As a consortium member of the Academic Alliance on Anticipatory Actions (4As), UEM is expected to support with further research and monitoring and evaluation with drought early actions.

1.7 REPRESA

REPRESA is funded by the International Development and Research Centre (IDRC) and the UK's Foreign, Commonwealth and Development Office (FCDO) under the Climate Adaptation and Resilience (CLARE) Initiative. Resilience and Preparedness to tropical cyclones across Southern Africa) project was

launched in Mozambique, initial meeting of the REPRESA Research Project was Oct 4-5, 2023, Maputo Mozambique.

REPRESA is aimed at addressing the growing risk of tropical cyclones in Southern Africa, including Madagascar. The project brings together leading research organisations, meteorological services, and other stakeholders from both the Global North and South. It will gain new understanding of the flood risks associated with tropical cyclones, improve early warning systems and their uptake within communities, strengthen humanitarian operations and inform climate adaptation options in the region. The initial meeting of the REPRESA project gathered national, regional, and international experts to discuss and plan the project's activities. CVM does not have capacity to monitor the GloFAS forecast. For this EAP this will be covered by the REPRESA project for the next 3 years to set up automated email monitoring as the REPRESA team have done for other National Societies. Climate centre will review the latest version of the GloFAS model once the data becomes available to do so and will provide updates as to whether this updated version has sufficient skill to be utilized for the Limpopo and Zambezi rivers. CVM will engage with REPRESA team during online and physical workshops and trainings.

2. The International Federation of Red Cross and Red Crescent Societies (IFRC)

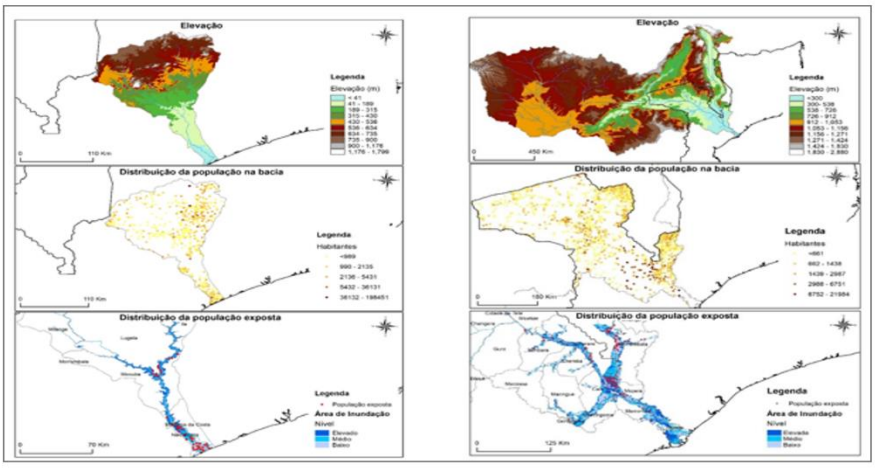
Aside from its global strategic role in FbA, the IFRC generally supports the preparation of an EAP activation via coordination and capacity building, such as support to cash preparedness (i.e., Framework Agreement preparation). The IFRC coordinates the FbA by the DREF to ensure that funds are available for potential activation. During the implementation of the EAP, the IFRC will provide support and guidance for the procurement, financial and PMER processes.

3. How the EAP will be activated – The Trigger

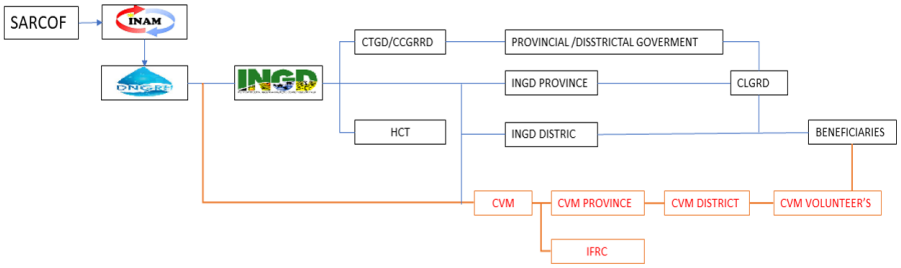
Based on historical observations and expert knowledge consulted as part of the EAP development process, informing early actions by water levels associated with a five-year return period discharge measured at the upstream gauge station grants CVM with around 72 hours lead time to target at-risk and vulnerable 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 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.

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.

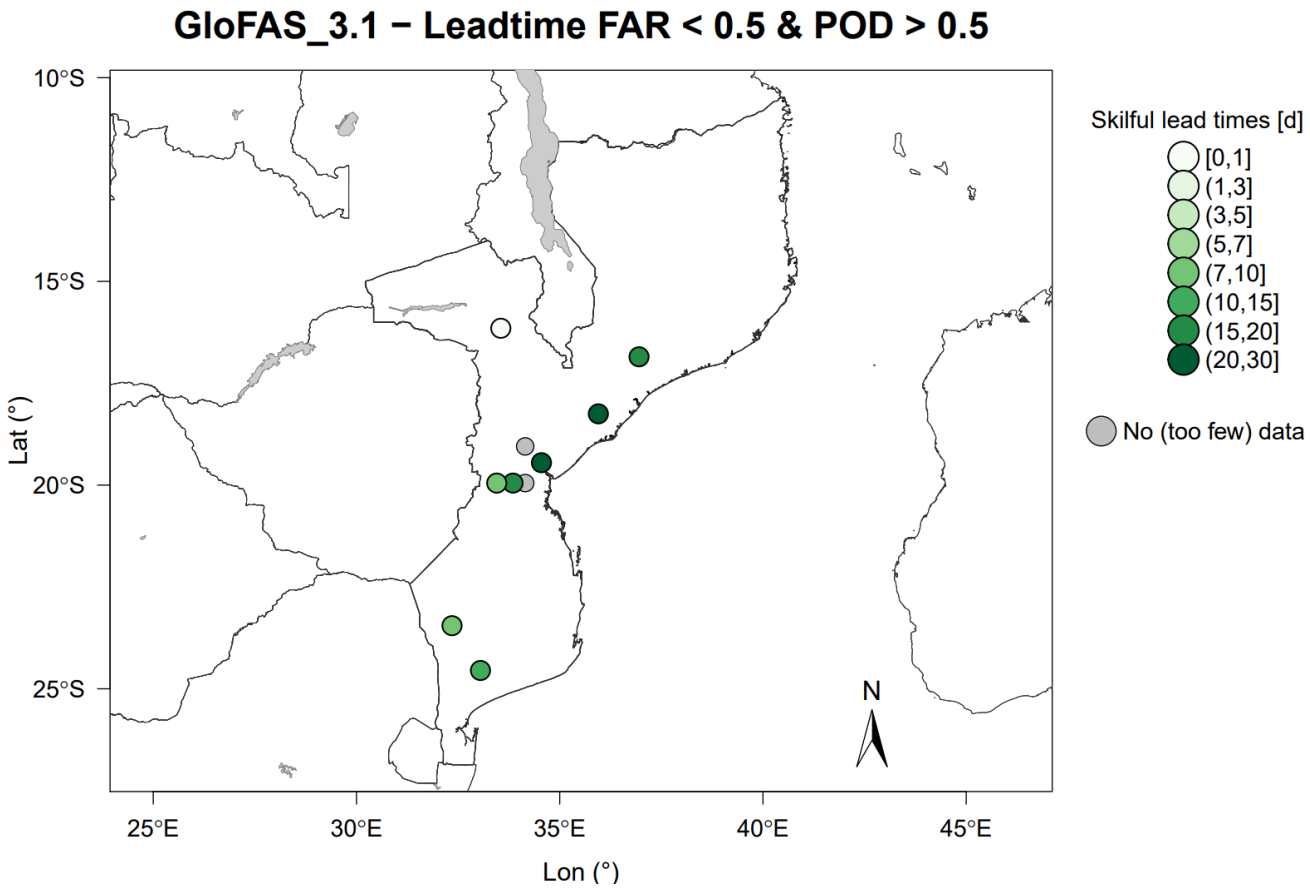


However, this stop mechanism will only take effect if the flood changes its characteristics before communities have been notified of imminent support and/or distributions have begun. The stop mechanism will not come into effect if communities are mobilized, as once families have the expectation of a distribution, this would likely cause friction between local authorities, the CVM and targeted people to retract the support.



The current trigger did not provide enough lead-time, so CVM included GloFAS as an alternative trigger for the Buzi and Licungo rivers, where GloFAS has sufficient skill to around 7 days lead-time. Though GloFAS does not have perfect skill, there may be occasions where it allows CVM to act earlier. These forecasts have been evaluated since the original EAP was written.

This EAP will also incorporate GloFAS as an alternative trigger for the Buzi and Licungo rivers, where the model demonstrates sufficient capabilities, providing a lead time of approximately 7 days for Buzi and Licungo. Despite the Limpopo River presenting indications lower than the previous ones, they are still sufficient for use, given its lead time of 3 to 7 days, which is longer compared to the current practice of 3 days. We also acknowledge that GloFAS is not yet perfect. However, in specific situations for these basins, leveraging GloFAS could enable the CVM to take proactive measures, providing a crucial safety margin in our operations.



- If GloFAS indicates, within 7 days lead-time, that there is >50% likelihood of 1 in 5-year flooding for Licungo at Mocuba Ponte
- If GloFAS indicates, within 7 days lead-time, that there is >50% likelihood of 1 in 20-year flooding for Buzi at Estaquinha

4. How the EAP will 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 10,000 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 based on 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.

Early Action Overview
PLANNED OPERATIONS

Shelter, Housing and Settlements

	Female:	**50% (5,000)**	**5,368 CHF**
	Male:	**50% (5,000)**	**AP Code: 005**
Indicator:	Number of people reached with shelter, housing, and settlement interventions in advance of a hazard		
Priority Early Actions:	**1.** Distribution of Synthetic plastic bag for documents		

Health & Care

	Female:	**50% (5,000)**	**119,280 CHF**
	Male:	**50% (5,000)**	**AP Code: 107,108**
Indicator:	Number of people reached with health and care interventions in advance of a hazard		
Readiness Activities:	**1**.Training volunteers in first aid		
Prepositioning Activities:	**1**. Acquisition and pre-positioning of kits (first aid) **2**. Acquisition and pre-positioning of Mosquito nets		
Priority Early Actions:	**1**.Dissemination on how to prevent against waterborne disease **2**.Dissemination messages on community radios **3**.Demonstration on how to use mosquito nets **4**.Distribution of mosquito nets to 2,000 HH **5**.Demonstration on how to use First Aid Kit **6**.Distribution of first aid (kit) to 2,000 HH		

Water, Sanitation and Hygiene

	Female:	**50% (5,000)**	**28,180 CHF**
	Male:	**50% (5,000)**	**AP Code: 110**
Indicator:	Number of people reached with WASH interventions in advance of a hazard		
Prepositioning Activities:	**1.**Acquisition and pre-positioning of wash kit (soap, chlorine/ Certeza, buckets and mugs/cups) **2**.Acquisition of jerrycans		
Priority Early Actions:	**1**. Volunteers, WASH, PGI and CEA refresher training **2**.Dissemination on how to prevent against waterborne disease **3**.Demonstration on how to use Water purifier/Certeza, buckets, Jerrycans and mugs/cups **4**.Distribution of Water purifier/Certeza, buckets, jerrycans and mugs to 2,000 HH		

Risk Reduction, climate adaptation and recovery	**Female:**	**50% (5,000)**	**244,979 CHF**
	Male:	**50% (5,000)**	**AP Code: 103,104, 105**
Indictor:	Number of people reached with risk reduction and/or climate adaptation interventions in advance of a hazard		
Readiness Activities:	**1.** Identification of the communities prone to floods exposed district **2.**Identification of communities with high levels of vulnerability and unsafe access to water in exposed districts **3**. Mapping of vulnerable household **4**. Production of training materials		
Prepositioning Activities:	**1.**Acquisition and pre-positioning megaphones **2.**Acquisition and pre-positioning batteries **3**.Acquisition and pre-positioning whistles **4**.Acquisition and pre-positioning production of pamphlets		
Priority Early Actions:	**1.** Select at least 3 focus districts based on 72-hours forecast information and community selection criteria established **2.** Activation of CVM volunteers to inform communities **3.**Disseminate information on the phenomenon in question to CVM volunteers **4.** Registration of the most vulnerable households **5.** Dissemination messages on community radios **6.** Transport NFI to the community **7.** Post distribution monitoring		

Community Engagement and Accountability	**Female:**	**50% (5,000)**	**12,823 CHF**
	Male:	**50% (5,000)**	**AP Code: 129**
Indicator:	Number of people reached with community engagement and accountability interventions in advance of a hazard		
Readiness Activities:	**1**. Dissemination of the EAP at community level (Provincial) **2**. Development of EWS messag2		
Prepositioning Activities:	**1**. Acquisition and pre-positioning t-shirts **2**.Acquisition and pre-positioning caps **3**.Acquisition and pre-positioning bibs **4.**Acquisition and prepositioning of protection kit (boots and raincoats)		
Priority Early Actions:	**1**. Dissemination of EWS messages		

Enabling approaches

Coordination and Partnerships	**Female**	**50%**	**32,355 CHF**
	Male	**50%**	**AP Code: 049,118**
Readiness Activities:	**1.** Simulation exercise with local authorities and partners **2.**IFRC technical field monitoring		
Priority Early Actions:	**1.** Lesson learned workshop (after activation) **2.**Trigger review workshop **3.**Visibility, stationary, translation for LLW and trigger review **4.**Monitoring & Evaluation		

Secretariat Services

42,371CHF

AP Code: 122

Readiness Activities:

1. IFRC Salary contribution Preparedness Officer
2. IFRC Salary contribution PMER Officer
3. IFRC Salary contribution Logistic Officer
4. Bank charges

National Society Strengthening

64,574 CHF

AP Code: 124,125,126

Readiness Activities:

1. EAP dissemination for CVM staff at HQ - round table
2.Training volunteers on data collection using Kobo
3.EAP dissemination at provincial level
4.Information & Public relation (EAP Translation and printing)

Prepositioning Activities:

1.Transport NFI for pre-positioning

Priority Early Actions:

1.CVM staff coms (film crew)

Budget

IFRC

Early Action Protocol Summary

EAP2023MZ04 - CVM-Mozambique Floods

Operating Budget	Readiness	Pre-Pos Stock	Early Action	TOTAL
Planned Operations	**53,900**	**185,324**	**174,015**	**413,238**
Shelter and Basic Household Items	0	5,368	0	**5,368**
Livelihoods	0	0	0	**0**
Multi-purpose Cash	0	0	0	**0**
Health	2,609	119,280	0	**121,889**
Water, Sanitation & Hygiene	0	26,838	1,342	**28,180**
Protection, Gender and Inclusion	0	0	0	**0**
Education	0	0	0	**0**
Migration	0	0	0	**0**
Risk Red., Climate Adapt. and Recovery	51,290	21,016	172,673	**244,979**
Community Engagement and Accountability	0	12,823	0	**12,823**
Environmental Sustainability	0	0	0	**0**
Enabling Approaches	**118,128**	**0**	**18,563**	**136,691**
Coordination and Partnerships	13,866	0	18,488	**32,355**
Secretariat Services	42,297	0	75	**42,371**
National Society Strengthening	61,965	0	0	**61,965**
TOTAL BUDGET	**172,028**	**185,324**	**192,578**	**549,929**

all amounts in Swiss Francs (CHF)

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