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Mozambique/Africa: To coordinate early actions for preparation and response to cyclones in Mozambique

 International Federation
of Red Cross and Red Crescent Societies

EAP APPROVED March
2019

Population to be assisted 1500 HH

EAP timeframe 5 Years

EAP NUMBER
EAP2019MZ01

Budget: 249,390 Swiss francs

Early action timeframe 1 Month

The IFRC's Programme and Operations Division has approved the EAP for the **Mozambique Red Cross on Cyclones** with a timeframe of five years and a budget of CHF 249,390, consisting of CHF 145,906 for readiness and pre-positioning and CHF 103,484 for early action.

The EAP shall be funded from the IFRC's Forecast based Action by the DREF where allocations shall be drawn on annual basis to cover readiness costs, a one-off pre-positioning cost the first year followed by a one-off sum to implement early actions upon a forecast reaching the trigger.

SUMMARY OF THE EARLY ACTION PROTOCOL

Mozambique is the third most-vulnerable country to extreme weather events in Africa and the tenth in the world (PDRR, 2017). Mozambique's excessive vulnerability is associated with its geographic location, as its coastline (2700km) borders one of the most active cyclonic zones in the southwest Indian Ocean. Tropical storms and cyclones occur frequently during the October to March rainy/cyclone season and CVM has ample experience engaging in preparedness, mitigation, and response activities related to these hazards. In the period 1984 to 2017 at least 13 cyclones with wind speeds above 120 km/h reached the Mozambican coast.

Mozambique is also one of the poorest countries in the world and is at the bottom of the table in terms of the Global Development Indexes such as the Gross Domestic Product (GDP) per capita (position 221 out of 228 countries) and the Human Development Index (position 181 in a universe of 188 countries), placing the population in a situation of great vulnerability (CIA 2018, UNDP 2018).

Due in part to general levels of poverty, the majority of the population lives in precarious housing. According to National Statics (2007), constructions in Mozambique are classified as Conventional, Huts (*Palhotas*), Mixed and Improvised housing. Approximately 90% of the Mozambican population live in huts (a house where the building material is essentially of natural and vegetable origin, i.e. adobe, grass, bamboo, straw, etc.), contributing to their vulnerability.



The Early Action Protocol (EAP) for Cyclones was developed in partnership with the German Red Cross (GRC), and with technical consultations from the National Institute of Disaster Management INGC), the

National Meteorological Institute (INAM), and the National Directorate of Water Resources Management (DNGRH). The actions anticipated in this EAP were defined based on extensive research and consultation with stakeholders at the national, provincial, district and community level in zones at high risk of Cyclones. The selection of actions was also guided by the following criteria: whether the action is allowed within the Disaster Risk Management System in Mozambique; CVM's ability to execute the action (including presence of volunteers); the capacity of the community and the CLGRC to support the CVM in its implementation; evidence that the action contributes to the reduction of impacts; the shelf life of NFIs required; and whether the action can benefit communities even if the event does not occur.

The EAP can in principle be used nationwide, however, activation is anticipated to be concentrated in coastal districts in northern and central Mozambique. Taking into consideration the physical context, logistics, and the capacity of the NS, an activation will at a maximum involve three districts and target 1500 households (7500 people).

The available lead time in relation to cyclones in Mozambique is 72 hours. All actions presented in the EAP are to take place during these three days of preparation time. Meteorological forecasts are provided by the National Institute of Meteorology (INAM), based on forecasts from the Indian Ocean Regional Intervention Platform (PIROI).

The actions included in this EAP prioritize reinforcing individual houses (built with local material), reinforcing first-level primary schools built with local material (which teach 1st to 5th grade), and preventing endemic diseases, in particular reducing the incidence of diarrhea and cholera after storms, which add to the vulnerability of the communities. It is hoped and expected that the EAP will become an important component of national and local contingency plans for the Government and the CVM.

The operational strategy – How the EAP will be implemented

1) Who will implement the EAP – The National Society

This Protocol was prepared and will be implemented by the Mozambique Red Cross (CVM) in partnership with the German Red Cross (GRC) and in collaboration with the National Institute of Disaster Management (INGC), the National Meteorological Institute (INAM), the National Directorate of Water Resources Management (DNGRH) and the Humanitarian Coordination Team (HCT). All the above-mentioned Mozambican organizations play a key role during the preparation and possible activation of the Protocol and in the operation of the forecast-based funding mechanism.

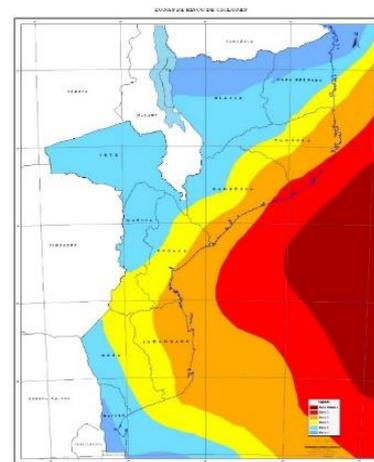
CVM has representation in all 11 provincial capitals and in 133 districts (84% of all districts), and has a staff of approximately 170 and some 5500 volunteers. In the coastal districts most prone to cyclones, the total number of volunteers is around 880. The training and preparedness of the volunteers 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.

The FbF project team (GRC funded project delegates and CVM project staff) is integrated into the CVM Programme Department. Upon termination of the GRC funded FbF pilot phase II project (2020.04.30) national staff responsibilities will continue as part of the CVM Programme Department.

2) How will the EAP be activated - The Trigger

In the Mozambican disaster management system INAM sends out cyclone alerts (based on information from PIROI and others). Based on the level of the alert, INGC calls a meeting of the Technical Committee for Disaster Management (CTGC), of which CVM is a member. If the CTGC decides to send out a disaster alert, CVM (and others) can start acting, i.e. only following the official announcement of an alert by the CTGC can CVM activate the EAP.

Based on an analysis of historical data and the documented impact of previous tropical storms/cyclones in Mozambique over a 30-year period, the threshold for activation was decided as expected **windspeeds of 120km/h or above at landfall.**



Frequency of cyclones based on landfall area

A summary overview of tropical systems affecting Mozambique from 1984 to 2018 and their impacts is presented in the below table.

Cyclones Name	Wind speed (Km / h)	Wind speed at landfall	Category	Year	Impact					
					Affected	Deaths	Destroyed houses	Health	Schools (rooms)	Farms/ (Hectares)
Desmond †	83	>80	TD	2018/2019	43134	2	881	NA	10	NA
Dineo	140	139	3	2016/2017	550959	7	33,712	72	1.692	29000
Haruna	148	<20	NA	2013/2014	38176	40	5230	5	562	NA
Irina	-	28	NA	2011/2012	NA	NA	NA	NA	NA	NA
Dando	75	74	1	2011/2012	66946	3**	2403**	12	466	160
Jokwe	183	157	3	2007/2008	200000	13	40339	15	944	68522
Favio	200	167	4	2006/2007	160000	9	NA	918	264	11500
Delfina	-	83	1	2002/2003	82100	14	4570	NA	6	599
Japhet	192	130	3	2002/2003	100000	17	25000	7	500	NA
Hudah	167	120	3	1999/2000	11000	* 750	390 000	NA	NA	19283
Glória / Eline	42/192	46/185	TD / 4		650000					
Lisette	125	93	2	1996/97	80000	87	17000	1	5	NA
Bonita	125	93	2	1995/96	200000	11	400	NA	NA	170000
Nadia	133	102	2	1993/94	90000	204	146839	NA	NA	NA
Filao	142	133	3	1987/88	90000	100	36349**	NA	NA	NA
Domoína	92	81	1	1983/84	350000	109	NA	NA	NA	NA

Activation of the EAP is based on the Forecast information distributed at least 72 hours before landfall. At this point the margin of error is approximately 240 km. Taking this as well as the capacity of CVM into consideration, an EAP activation will include activities in a maximum of three districts. The definition of the specific communities within the districts expected to experience impacts will depend on the identification of particularly vulnerable communities during the readiness phase (up-dated yearly).

In the event that the path of the cyclone shifts before materials are distributed, CVM will assess alternative communities and decide if rerouting is logistically feasible. Given the short timeframe and the logistical efforts involved, it may be impossible for CVM to re-route materials to new communities if a cyclone changes track. If re-routing is not an option but the beneficiary communities initially selected are still expected to suffer

cyclone impacts, distributions will continue as planned, even if those communities are not forecast to be hardest hit by the storm.

If the cyclone changes track dramatically (to the point where selected communities are unlikely to suffer any impacts) distribution will be stopped and materials returned to the warehouse for storage. However, this stop mechanism will only take effect if the cyclone changes course before communities have been notified of impending support and/or distributions have begun. The stop mechanism will not take effect if communities have been mobilized, as once families have the expectation of a distribution, it would likely cause friction between local authorities, CVM, and beneficiaries, to retract the support.

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

The main impacts identified as consequence of cyclones are:

Damage to infrastructures; Partial or complete destruction of houses; Increase in waterborne diseases; Loss of key assets and documents; Loss of crops due to strong winds; Loss of agricultural trees; Loss of boats; Damaged schools; and Damaged health centers.

Taking into account 1) the prioritized impacts listed above; 2) the time available between the trigger and the event; and 3) the ability of the Mozambican Red Cross to act in coordination with key partners, it was decided that the activities included in this Protocol should focus on the main impacts identified for which there were feasible actions that aligned with CVM's capacity and mandate: **destruction of houses, destruction of classrooms, and increases in endemic diseases.**

Several discussions and meetings were held with coastal communities and local and international shelter experts on how, in a short span of time, to strengthen the type of houses most common in coastal areas of Mozambique against strong winds. It was clearly identified that strengthening the roof by holding it down and protecting mud walls against the wind and accompanying rain would be the most effective measures. Local communities do, within their means, already try to perform these tasks but often lack the tools and materials needed to do so quickly. Therefore, the EAP proposes supplying essential tools (plyers, hammers, saws, machetes, spades) and basic materials (rope, metal wire, nails, strong plastic and tarpaulins) to the communities. Here the community leadership, assisted by CVM volunteers and local disaster management groups, will identify and protect the individual houses and school buildings considered most essential to minimize the community's vulnerability against the coming cyclone.

The objective of distributing chlorine (*Certeza*) and buckets within communities before the cyclone arrives, is to ensure that people have access to clean water in the days immediately following a cyclone. Most rural, coastal communities depend on open water sources (open wells, lakes or rivers) for their portable water. Following the passing of a tropical storm or cyclone these sources get polluted by various items carried around by the wind and the rain (general dust, debris and animal or human faeces). Due to the remoteness of the communities, external assistance following a cyclone can easily take days if not weeks. Because water purification materials will already be available and stored in a safe place in the community, community members will be able to use and drink treated water, contributing to the reduction of endemic diseases.

This distribution will be accompanied by rapid training and distribution of visual educational materials demonstrating the correct use of *Certeza* to prevent diarrheal diseases. *Certeza* was selected as the method of water purification because of the cost relative to other interventions and because, according to our stakeholder consultations, *Certeza* is the product most commonly distributed in humanitarian situations in Mozambique, and therefore is most likely to be known and used effectively by beneficiaries.

Intervention Sectors

Overall objective: To reduce the impact of tropical storms and cyclones on individual houses and local primary schools in coastal communities and to assist in preventing consequent waterborne sicknesses due to destruction and/or pollution of water sources.

Priority Sectors



Shelter

People targeted: 7500 people/1500 families

Male: 3700

Female: 3800

Requirements (CHF): 53,009

Risk analysis: In Mozambique, the majority of houses in areas at high risk of cyclones are constructed using local materials: mud walls constructed with adobe blocks, light wood or reed constructions plastered with mud, and simple wooden roof frames covered with thatch or corrugated iron sheets. Many primary school buildings are constructed using the same materials. Historical data and stakeholder interviews indicate clearly that the people at the highest risk live in coastal communities in houses made of these local, natural materials. According to Mozambican stakeholders, including community members, the most severe impact of a tropical storm or cyclone is damage to or destruction of individual buildings (roof structures damaged or blown off, mud walls washed down). Providing basic materials and tools that can enable the target communities to strengthen and better protect essential buildings can assist in minimizing cyclone impacts and facilitate faster return to normality in the community.

Population to be assisted: Maximum 1500 households, a total of 7500 people, living in prioritized, rural coastal communities that are forecast to be severely affected by the event.

Programme standards/benchmarks: Guidelines and recommendation provided by national and international shelter experts and UN-Habitat.

Output Code	Shelter Outcome 1: Communities in disaster and crisis affected areas restore and strengthen their safety, well-being and longer term recovery through shelter and settlement solutions.	Number of families that use the materials to strengthen their houses
	Shelter Output 1.1: Short, medium and long-term shelter and settlement assistance is provided to affected households	Number of kits that successfully reach communities before the impact

	Readiness ¹ phase	Timeframe
AP005	Registration of focus schools	3 months after approval of EAP
AP005	Development of pamphlets	4-5 months after approval of EAP
AP005	Production of training materials	4-5 months after approval of EAP
AP005	Procurement of materials for house reinforcement	Procurement and prepositioning in regional warehouses, 5-7 months after approval of EAP
AP006	Dev. Training with UN-HABITAT	4-6 months after approval of EAP
AP006	Capacity building for local builders	7-9 months after approval of EAP
	Early actions phase ²	Timeframe
AP006	Dissemination of information on expected event	72 hours before forecasted impact or as soon as the CTGC has allowed for activation
AP006	Technical support and guidance to reinforce houses	48 hours before forecasted impact



Health

People targeted: 7500 people/1500 families

Male: 3700

Female: 3800

Requirements (CHF) 674

Risk analysis: During the passing of a tropical storm or cyclone people are exposed to a number of dangers which can cause injuries. In this situation, professional health facilities and assistance might be far away or non-assessible. The existence of trained and equipped First Aid responders in the community will be able to respond to minor injuries and assist pregnant women and other persons in need of particular care.

Population to be assisted: Maximum 1500 households, a total of 7500 people, living in prioritized, rural coastal communities that are forecast to be severely affected by the event.

Programme standards/benchmarks: Guidelines on the provision of First Aid from the Mozambique Red Cross

¹ The readiness phase refers to the timeframe between the EAP having been approved (disbursement of readiness funds) and the forecast being issued, it includes the pre-positioning of stocks

² The early action phase refers to the timeframe between the trigger and event's impact. (lead time)

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 first aid training courses delivered in coastal communities.
	Readiness phase¹	Timeframe
AP022	First Aid training for Volunteers	7-9 months after approval of EAP in coordination with other CVM initiated First Aid training at provincial and district levels
	Early action phase²	Timeframe
AP022	Provide first aid to people in shelters	Before, during and after the impact



Water, sanitation and hygiene

People targeted: 7500 people/1500 families

Male: 3700

Female: 3800

Requirements (CHF): 5,472

Risk analysis: Most rural, coastal communities depend on open water sources (open wells, lakes or rivers) for their portable water. Following the passing of a tropical storm or cyclone these sources get polluted by various items carried around by the wind and the rain (general dust, debris and animal or human faeces). Due to the remoteness of the communities, external assistance following a cyclone can easily take days if not weeks. By distributing chlorine (*Certeza*) and buckets within communities before the cyclone arrives, the objective is to ensure that people have access to clean water in the days immediately following a cyclone.

Population to be assisted: Maximum 1500 households, a total of 7500 people, living in prioritized, rural coastal communities that are forecast to be severely affected by the event.

Programme standards/benchmarks: Sphere Project

Output Code	WASH Outcome 1: Vulnerable people have increased access to appropriate and sustainable water, sanitation and hygiene services	Number of families receiving the water purification kits
	WASH Output 1.1: Communities are provided with improved access to safe water.	Number of water purification kits distributed to each community.
	Readiness phase¹	Timeframe
AP026	Procurement of Water purifier (certeza)	7-10 month after approval of EAP (taking into consideration cyclone season in Mozambique and shelf life of Certeza water purifier.)
AP026	Procurement of 20 l buckets with lid	Procurement and prepositioning in regional warehouses, 5-7 months after approval of EAP. (Activity implemented in coordination with procurement for shelter items)
	Early action phase²	Timeframe
AP026	Distribution of certeza and buckets	Material will be distributed 48 hours before impact together with other materials



Disaster Risk Reduction

People targeted: 7500 people/1500 families

Male: 3700

Female: 3800

Requirements (CHF): 119,103

Risk analysis: The geographical coastal area exposed to tropical storms and cyclones in Mozambique includes five provinces and 20+ districts. In this context there is a need to prioritize and focus relevant readiness activities towards the historically most exposed geographical areas.

With this geographical limitation, and to prepare as well as possible for the possible activation of the EAP, there is a need collect and verify data to help prioritize communities in each of the focus districts in the event of an activation.

Population to be assisted: Maximum 1500 households, a total of 7500 people, living in prioritized, rural coastal communities that are forecast to be severely affected by the event.

Programme standards/benchmarks: Generally guided by the Sphere Standards and the Principles and Good Practice of Humanitarian Donorship

Output Code	DRR Outcome 1: Communities in high risk areas are prepared for and able to respond to disasters		Number of community workgroups created
	DRR Output 1.1: Communities take active steps to strengthen their preparedness for timely and effective response to disasters.		CVM volunteers are able to reach the intervention communities within 48 hours before landfall
	Readiness phase¹		Timeframe
AP001	Mapping and training of Volunteers	3-4 months after approval of EAP	
AP001	Identification of Communities	3-4 months after approval of EAP	
AP001	Creation of work groups in communities	4-6 months after approval of EAP	
AP001	Seminars for local communication	4-6 months after approval of EAP	
AP001	MoUs with Community Radios	4-6 months after approval of EAP	
	Early action phase²		Timeframe
AP001	Implementation of activities in intervention areas	60-12 hours before forecasted impact	

Strategies for Implementation

Requirements (CHF): 71,132

Output Code	SI 1 Outcome 1: National Society capacity building and organizational development objectives are facilitated to ensure that National Societies have the necessary legal, ethical and financial foundations, systems and structures, competences and capacities to plan and perform		The cyclone EAP is updated at least once per year
	SI Output 1.1: NS capacity to support community-based disaster risk reduction, response and preparedness is strengthened..		Protection and visibility kits available in provincial warehouses to cover key staff and volunteers Lessons learned workshop is conducted

	Readiness phase ¹	Timeframe
AP038	Training of volunteers and GLGRCs	Continued returning activity supported by EAP as from May 2020
AP038	Procurement of protection and visibility equipment.	5-7 months after approval of EAP
	Early action phase ²	Timeframe
AP039	Lessons learned workshop	1-3 months after an activation
Output Code	SI 3 Outcome 1: The IFRC secretariat, together with National Societies uses their unique position to influence decisions at local, national and international levels that affect the most vulnerable	Readiness activities are conducted according as planned.
	SI Output 1.1: IFRC produces high-quality research and evaluation that informs advocacy, resource mobilization and programming.	Number of visits to NS to support readiness and coordination.
	Readiness phase ¹	Timeframe
AP055	Monitoring missions	Annual visits to Mozambique to ensure readiness and coordination

Budget & Allocation schedule

To implement the Early Action Protocol (EAP) amounts CHF 249,390 split in readiness, pre-positioning of stock and early action 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	16.703	13.349	89.051	119.103
AOF2	Shelter	9.682	38.579	4.748	53.009
AOF3	Livelihoods and Basic Needs				0
AOF4	Health	674			674
AOF5	Water, Sanitation and Hygiene		5.472		5.472
AOF6	Inclusion, Gender and Protection				0
AOF7	Migration				0
SF11	Strengthen NS Capacities	17.309	18.942	9.685	45.936
SF12	Ensure effective int'l disaster mgmt Influence others as leading strategic	5.325			5.325
SF13	partners	19.338			19.338
SF14	Ensure a strong IFRC	532			532
TOTAL		69.563	76.343	103.484	249.390

Contact information

Reference documents



Click here for:

- [Complete EAP](#)

For further information, specifically related to this operation 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**.
