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Zambia: Floods

Early Action Protocol summary



EAP approved: **8 October 2020**

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

EAP timeframe: **5 Years**

EAP number: **EAP2020ZM01**

Budget: **249,955 CHF**

Early action timeframe: **7 days**

The IFRC Disaster Relief Emergency Fund (DREF) has approved a total allocation of CHF 249,955 from its Forecast based Action (FbA) mechanism for the Zambia Red Cross Society. The approved amount consists of an immediate allocation of CHF 163,815 for readiness and pre-positioning and CHF 86,140 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

Zambia is largely a climate sensitive country characterized by her susceptibility to climate impacts evidenced mainly through natural events, particularly floods and prolonged dry spells/drought coupled with pest infestation alongside anthropogenic hazards such as population movement and human and livestock health issues reflected in disease outbreaks, compounding the food insecurity concern. There has been a steady increase in both frequency and intensity over the years mainly attributed to climate variability. A review of existing literature, primary data collection and risk assessment including an analysis of common hazards in Zambia based on historical impact data, vulnerability and exposure indicators that was conducted in some parts of North Western Province show growing trends in this trajectory. Results of the assessment indicated that Zambia is a country with a high exposure to floods and high vulnerability.

Hazard

Even though Zambia is faced with various hazards, floods pose the biggest threat to people's livelihoods. Among the climate sensitive livelihood means threatened by these hazards include agriculture, encompassing both livestock and crop production, energy as the Zambian economy runs on hydro-generated power which also relies on rainfall performance as water levels in the main reservoirs fluctuate seasonally. Floods further inhibit local mobility, including access to basic services such as markets, health, education and other functional elements.

EAP Development

Zambia Red Cross Society (ZRCS) is the primary implementer of this EAP with support from the Netherlands Red Cross, Red Cross Red Crescent Climate Centre (RCCC), 510 data team of the Netherlands Red Cross and International Federation of Red Cross and Red Crescent Societies (IFRC). Other stakeholders involved in the development of the EAP included The Disaster Management and Mitigation Unit (DDMU), Water Resources Management Authority (WARMA), Zambia Meteorological Department (ZMD), The Forecast based Financing Technical Working Group and Other line ministries, INGOs and UN agencies. 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 flooding. The selection of actions was also guided by the following criteria: ZRCS mandate and capacity to implement; Evidence of the ability of the early action to address the anticipated impact; Accessibility to the communities; Partnership/agreement with DMMU to implement the early actions; Time taken to implement the early action & Financial resources required. The overall basis for selection of actions was informed by multi-stakeholder consultations which were premised on the 2018/2019 weather forecast by the Zambia Meteorological Department.

Geographical scope

The scope of this EAP will be countrywide, targeting 31 districts that are at high and very high risk of flooding as shown below:
Very High Risk: - Namwala, Itezhi Tezhi, Monze, Mazabuka, Gwembe, Sinazongwe, Luangwa, Petauke, Nyimba, and Katete, : Mambwe and Chama. And:

High Risk: - Chavuma, Zambezi, Mufumbwe, Mumbwa, Kabwe, Mkushi, Serenje, Senanga, Shangombo, Sesheke, : Kazungula, Choma and Siavonga, Lusaka and Kafue, Milenge, Samfya, Lundazi and Muchinga: Chinsali. The early actions will be activated where the forecast indicates a high probability of occurrence.

Target Population

This EAP will focus on several large perennial rivers. The major rivers in Zambia are the Zambezi, Chambeshi and Kafue. Floodplains are the areas adjacent to rivers that are most prone to seasonal flooding and where the most extreme riverine flood events are expected to happen. Based on past impact analysis, the elements most exposed to floods are the population, infrastructure, crops and livestock. The population at most risk of floods includes people living close to riverbanks, low lying areas such as plains, houses constructed with temporary materials e.g. reeds, poles, mud and grass. This exposure information is combined with the vulnerability analysis done to target the most vulnerable populations to floods.

Impacts addressed

Shelter: displacement of people

WASH/Health: water borne disease outbreaks, e.g. cholera due to destruction of sanitation facilities and contamination of water points and or increased malaria incidences due to increased exposure to mosquito attacks.

Food Security: crop losses and damage due to water logging.

Forecast to be used

An inventory of forecasts based on input from the Zambia Meteorology Department and WARMA was developed to assess the various forecast products that could be used for activating early action within the FbF system. The FbF system will focus on riverine floods and forecast of rainfall alone does not indicate riverine flood. For a good indication of this, there is need for a hydrological model for the river. However, ZMD and WARMA do not run flood forecasting models. The alternative to use GloFAS was agreed upon by the TWG. Therefore, GLOFAS, the Global Flood Awareness System, jointly developed by the European Commission and the European Centre for Medium-Range Weather Forecasts will be used. As such, the TWG agreed to use river water levels provided by WARMA and GloFAS for activating early action. It should be stressed that GLOFAS does not predict flash floods or pluvial floods, and its scope is limited to riverine flood from major rivers.

Lead times

Early actions were selected on the basis of their relevance to addressing feared impacts as well as the feasibility of carrying them out within the 7-day lead time. The trigger is activated if the daily issued GLOFAS forecast reports a water discharge that exceeds the threshold corresponding to a 10y return period flood (see table Annex 4) in one or more GLOFAS stations. The EAP will be triggered with a lead time of 7 and 3 days.

Assumptions

We assume damage to grassland is a proxy for damage to livestock. If we want to quantitatively identify the flood years, we can define a discharge threshold value that would have identified the extreme floods peaks in the historical period. Then we can use this threshold to forecast future flood impact, assuming the flood events will not change significantly in the future.

The operational strategy – How the EAP will be implemented

1) Who will implement the EAP – The National Society

Zambia Red Cross Society will implement this flood EAP. The NS has adequate capacity to undertake the prioritised activities. Further, the financial support the NS has been receiving from the only PNS (NLRC) has provided the much-needed financial buoyance to facilitate effective implementation. In terms of human resource capacity, the NLRC supported Response Preparedness (RP II) project has registered notable capacity enhancement up to branch level in the pilot districts, the capacity the NS can easily replicate in the rest of the districts. The recently conducted Training of Trainers National Response Team training that had representation from all the ten provinces is just one cornerstone that will supplement capacity building efforts already underway.

In addition, the NS has been running a IFRC funded Drought Response Emergency Appeal that has not only furthered response capacities but also helped to increase staffing levels. The IFRC also launched an ongoing C-19 Emergency Appeal that has further strengthened NS capacity by attracting additional personnel that cushioning the staff gaps in the main key departments of DM and Health and Care.

Additionally, continued branch development efforts through the existing projects' interventions in selected districts contributes to local level capacity.

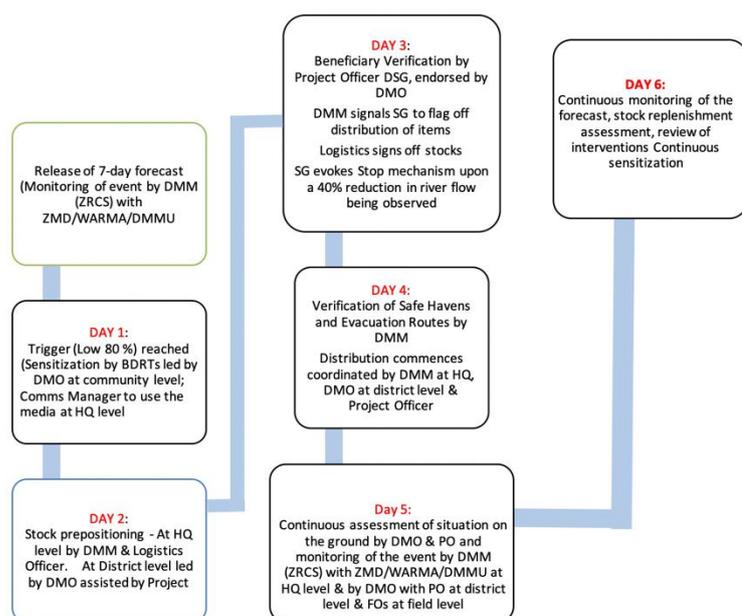
In terms of the target hazard and chosen early actions, the NS is not new to the issues as the relatively high frequency of occurrence entails repeated interaction and experience with the threats under consideration. The NS has, in addition to Emergency Appeals, implemented DREFs before covering both man-made hazards (population movement) and biological hazard (epidemic/cholera).

Lastly, the NLRC country office is present to offer the required technical support to the NS in its operational dimensions, alongside the IFRC and ICRC routine technical support.

2) How will the EAP be activated - The Trigger

The trigger is activated if the daily issued GLOFAS forecast reports a water discharge that exceeds the threshold corresponding to a 10y return period flood in one or more GLOFAS stations. The EAP will be triggered with a lead time of 7 and 3 days.

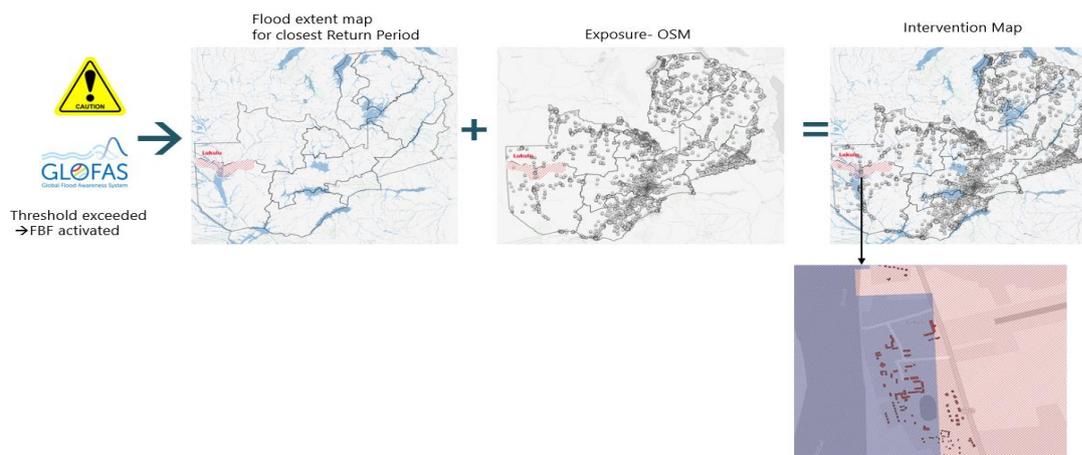
The activation process will start with the message issued by DMMU that the trigger has been reached. The trigger will be monitored by DMMU at the National Emergency Operations centre and updates shared with the EWS Subcommittee. Although it is envisaged that the DMMU will host the FbF system, the NLRC is currently the host as hosting arrangements with DMMU are being concluded. The following table depicts the full staged activation process during the 7-day lead time.



The GloFAS forecast will be monitored by DMMU and ZRCS and if the water levels start receding by the 3rd day, the activities that were activated in response to the trigger level being reached will be put on hold as the monitoring of the situation continues. The stop mechanism will be activated when a reduction of at least 40% in river flow is observed.

The intervention map is generated by the IBF system. The TWG agreed on the following content for the intervention map:

- The extent of the upcoming flood (flood extent)
- A base map with major towns, roads, main cities and administrative districts
- The position of the GLOFAS station and a visual marker for the triggered station
- A vulnerability map based on the indicators in 4.4. Vulnerability Analysis provided information on exposure as:
 - o Population figures in the forecasted flood area
 - o Crops and livestock figures in the forecasted flood area
 - o Position of ZRCS and DMMU branches
 - o Position of water points
 - o Position of health sites



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

The early actions are organised according to the chosen sectors for which the NS has requisite capacity to implement. These are:

SHELTER | Impacts: *Displacement of people*

1. Community sensitization and dissemination of forecast information, early warning and early action messages to communities.
2. Assess the status of evacuation routes and safe havens to be used as evacuation centres in elevated areas such as schools, clinics, places of worship.
3. Pre-position and distribution of non-food items (NFIs)
4. Mobilization of communities to divert flood water by digging trenches/embankments
5. Procure and distribute waterproof plastic bags for safe keeping of key documents

WASH / HEALTH | Impacts: *Water borne disease outbreaks e.g. cholera due to destruction of sanitation facilities and contamination of water points and or increased malaria incidences due to increased exposure to mosquito attacks.*

1. Dissemination of early warning and early action messages to communities on proper hygiene and sanitation
2. Pre-position and distribution of WASH items
3. Distribute materials on proper IEC hygiene, and sanitation.
4. Assess the pre-identified potential water sources and sanitation facilities at the evacuation centrer

FOOD SECURITY | Impacts: *Crop losses and damage due to water logging*

1. Community sensitization and dissemination of early warning information on the early harvesting of flood threatened crops; (e.g. cassava, sweet potatoes, maize and beans) and on proper food storage and preservation in anticipation of floods;
2. Pre-positioning and distribution of food storage bags.

Pre-positioning activities		Timeframe (semester)									
AP005	Procurement and stocking of 1000 family tents										
AP005	Procurement of sleeping mats for 1000 families 2 per HH										
AP005	Procurement of Blankets for 1000 families 2 per HH										
AP005	Procurement of 80 rolls of 100mtr plastic sheets for 1000 families										
Early action activities		Timeframe (semester)									
AP005	Procurement waterproof plastic bags for safe keeping of key documents (certificates, vaccination cards)										
AP005	Distribution of NFIs to household and follow up (Tents, ITNs WASH Materials etc)										
AP010	Communities, reinforces/digs trenches Embankment to divert water, unclog trenches										
AP005	Transportation of NFIs from the regional warehouses to the districts for distribution										
AP030	Quick assessment of the safe havens - relocation sites and improve the sanitation facilities in the evacuation sites beneficiary Pre-selection/identification										



Water, sanitation and hygiene

People targeted: 6000 people / 1000 families

Male: 3000

Female:3000

Requirements (CHF) 30,902

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 1000 households, a total of 6000 people, living in prioritized, living in wetlands and close to river banks in rural communities.

Programme standards/benchmarks: Sphere project

P&B Output Code	WASH Outcome 1: Vulnerable people have increased access to appropriate and sustainable water, sanitation and hygiene services	# households provided with safe water services that meet agreed standards according to specific operational and programmatic context									
	WASH Output 1.1: Communities are provided with improved access to safe water.	# of People reached with Hygiene promotion activities									
	Activities planned	Timeframe (semester)									
	Readiness activities	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul/Aug	Sep/Oct
AP001	Conduct training for RC volunteers on hygiene promotion										
	Pre-positioning activities	Timeframe (semester)									
AP026	Procurement and preposition jerry cans for 1000 HH 2 per HH										
AP026	Procurement and preposition water purification liquid chlorine 750mls *3/HHS										
AP030	Procurement and stock tablets of soap (230g) 8/HHS										
AP030	Procurement of PPE's for 60 volunteers, gloves, hand sanitizers etc										
	Early action activities	Timeframe (semester)									
AP005	Transportation of NFIs from the regional warehouses to the districts for distribution										
AP010	Community sensitization on Early warning on proper hygiene by 60 volunteers targeting the 1000HH (Public system address, radio announcement, door to door, IEC, CEA)										



Disaster Risk Reduction

People targeted: 6000 people / 1000 families

Male:3000

Female:3000

Requirements (CHF) 74,848

Budget

To implement the Early Action Protocol (EAP) **249,955** 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	61,280		13,568	74,848
AOF2	Shelter		79,442	25,921	105,363
AOF3	Livelihoods and Basic Needs			16,562	16,562
AOF5	Water, Sanitation and Hygiene		18,718	12,184	30,902
SFI3	Influence others as leading strategic partners	4,375		17,905	22,280
	TOTAL	65.655	98,160	86,140	249,955

**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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For Performance and Accountability support (planning, monitoring, evaluation and reporting enquiries)

- IFRC Name, title, email, phone

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**.
