www.ifrc.org
Saving lives, changing minds.

Zambia: Floods
Early Action Protocol summary

International Federation of Red Cross and Red Crescent Societies

EAP approved: **8 October 2020**
Population to be assisted: **1,000 HHs**
EAP timeframe: **5 Years**
Budget: **249,955 CHF**
Early action timeframe: **7 days**
EAP number: **EAP2020ZM01**

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 61,280 for readiness and pre-positioning and CHF 98,161 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 probablity 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.

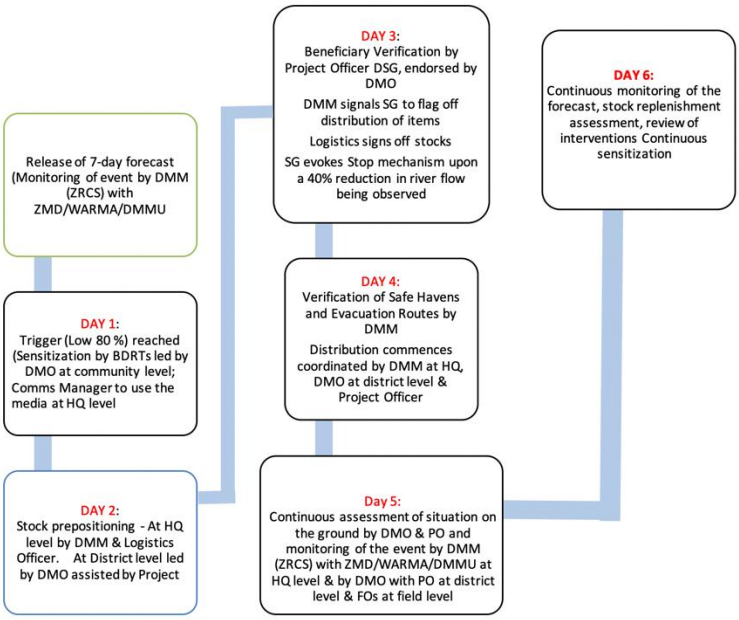
In terms of the target hazard and chosen early actions, the NS is not new to the issues as the relatively high frequency of occurrence entails repeated interaction and experience with the threats under consideration. The NS has, in addition to Emergency Appeals, implemented DREFs before covering both 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.

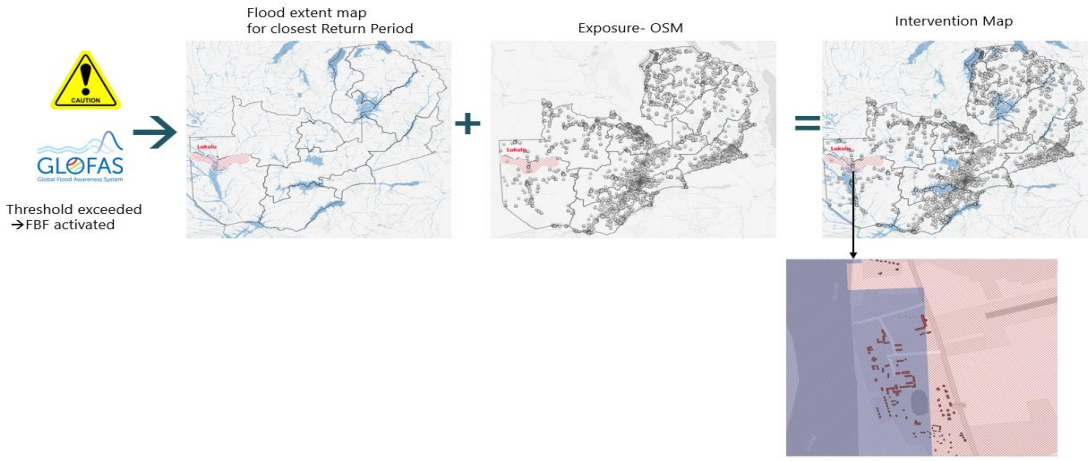
The activation process will start with the message issued by DMMU that the trigger has been reached. The trigger will be monitored by DMMU at the National Emergency Operations centre and updates shared with the EWS Subcommittee. Although it is envisaged that the DMMU will host the FbF system, the NLRC 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:
    - Population figures in the forecasted flood area
    - Crops and livestock figures in the forecasted flood area
    - Position of ZRCS and DMMU branches
    - Position of water points
    - 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.

Intervention Sectors

Overall objective: To reduce the impact of floods on individual households in communities living in flood plains and to assist in preventing consequent waterborne sicknesses due to destruction and/or pollution of water sources and preventing the loss of important documents and goods.

Priority Sectors

Shelter
People targeted: 6000 people/ 1000 families
Male: 3000
Female:3000
Requirements (CHF): 105,363

Needs analysis: Most of the people in some parts of North Western, Western, Central, Eastern and Southern provinces are exposed to flooding, flash floods and its associated risks. The majority of the people are settled along wetlands and within 500 meters from the main rivers. In addition, the houses are constructed with poor quality materials making them very susceptible to destruction when flooding occurs. Furthermore, lack of access to early warning information and interpreting this information among those at risk and agencies mandated to act upon this information has exacerbated the situation.

Population to be assisted: Maximum 1000 households, a total of 6000 people, living in prioritized, living in wetlands and close to riverbanks in rural communities.
Programme standards/benchmarks: Guidelines and recommendation provided by national and international shelter experts.

P&B 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.**	Proportion of targeted people with safe and adequate shelter and settlements									
	Shelter Output 1.1: Short, medium and long-term shelter and settlement assistance is provided to affected households	# households provided with emergency shelter and settlement assistance									
	Activities planned	**Timeframe (semester)**									
	Readiness activities	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul/Aug	Sep/Oct
AP001	Participatory identification and mapping of relocation sites in priority districts (annually)										
AP001	Training of 60 volunteers in Camp management, including shelter erection (Annually)										

	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

Risk analysis: Most of the people in some parts of North Western, Western, Central, Eastern and Southern provinces are exposed to flooding, flash floods and its associated risks. The majority of the people are settled along wetlands and within 500 meters from the main rivers. 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.
Population to be assisted: Maximum 1000 households, a total of 6000 people, living in prioritized, living in wetlands and close to riverbanks in rural communities.
Programme standards/benchmarks: Generally guided by the Sphere Standards

P&B Output Code	**DRR Outcome 1: Communities in high risk areas are prepared for and able to respond to disasters**	*Number of community members that have been sensitized and are aware of possible early warning/early actions.*									
	DRR Output 1.1: Communities take active steps to strengthen their preparedness for timely and effective response to disasters.	*Number of volunteers trained in Disaster Risk Reduction and Early warning and early actions*									
	Activities planned	**Timeframe (semester)**									
	Readiness activities	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul/Aug	Sep/Oct
AP001	Community sensitization & awareness meetings on Early warning information in districts and one off										
AP001	Training of 60 volunteers in Disaster Risk Reduction and Early warning, early actions Annually										
AP001	Sensitize communities and disseminate information on Early actions (Food, Health, Food and WASH) annually based on the risk and intervention maps										
	Pre-positioning activities	**Timeframe (semester)**									
	Procurement of Insecticide Treated Nets (2/HH)										
	Early action activities	***Timeframe* (semester)**									
AP010	Community sensitization on Early earning, early crop harvesting, proper food storage and preservation; Proper hygiene by 60 volunteers targeting the 1000HH (Public system address, radio announcement, door to door, IEC, CEA)										
AP005	Distribution of Insecticide Treated Nets (2/HH)										

Livelihoods and basic needs
People targeted: 6000 people / 1000 families
Male: 3000
Female: 3000
Requirements (CHF) 16,562

Risk analysis: The flooding occurs on almost an annual basis with varying degrees of intensity affecting the livelihoods of communities in the high-risk areas such as Zambezi, Chavuma, Kabompo, Kazungula, Sesheke, Luangwa, Gwembe and Chirundu. The most notable devastating floods occurred in the period 2006/2007 and 2007/2008 (An Emergency Appeal was launched in February 2008 - MDRZ63001) that displaced over 102,000 households, with 31 related deaths damaging livelihoods and causing significant threats of water borne disease in the provinces of Western, North – Western, Luapula and Northern. A total of 34,000 households were identified as in need of aid in this particular flooding. The 2007/8 floods were reported as the worst floods Zambia had experienced since 1958.
Population to be assisted: Maximum 1000 households, a total of 6000 people, living in prioritized, living in wetlands and close to riverbanks in rural communities.
Programme standards/benchmarks: Guided by Sphere standards

P&B Output Code	**Livelihoods Outcome 1: Communities, especially in disaster and crisis affected areas, restore and strengthen their livelihoods**										
	Livelihoods Output 1.1: Community awareness activities on livelihoods strengthening and protection are carried out with target communities and public actors.	*# of people reached through RCRC programmes for DRR and community resilience*									
	Activities planned	**Timeframe (semester)**									
	Readiness activities	1	2	3	4	5	6	7	8	9	10
	Pre-positioning activities	**Timeframe (semester)**									
	Early action activities	***Timeframe* (semester)**									
	Procurement of food storage bags 50 kgs 9/HH										
	Community sensitization on Early earning, early crop harvesting, proper food storage and preservation; Proper hygiene by 60 volunteers targeting the 1000HH (Public system address, radio anouncement, door to door, IEC, CEA)										

Strategies for Implementation: Influence others as leading strategic partners
Requirements (CHF): 22.280

P&B Output Code											
	SFI Outcome 1: Outcome 1: The National Society and key actors are well prepared to implement the EAP	*Proportion of key actors that are well prepared to implement the EAP.*									
	SFI Output 1.1: NS capacity to support community-based disaster risk reduction, response and preparedness is strengthened.	*Number of Districts with pre-positioned kits for response.*									
	Activities planned	**Timeframe (semester)**									
	Readiness activities	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul/Aug	Sep/Oct
AP	Per diem for 7 HQ staff @K850 per day for 10days to facilitate readiness activities										
	Transport and volunteer allowances for 60 volunteers in districts to facilitate all the readiness activities in various communities										
	Fuel for transport of HQ staff/districts to facilitate various readiness activities at district level and community levels annually										
	Maintenance of warehouse (NHQ/field) once off activity										
	Design, production and dissemination of IEC materials during readiness										
	Administration contribution to HQ @ 10%										
	IFRC Field monitoring missions										
	Pre-positioning activities	**Timeframe (semester)**									
	Early action activities	***Timeframe* (semester)**									
AP058	Conduct evaluation/lessons learned workshop at National level involving districts										
AP058	Coordination meeting with stakeholders including the government and UN Agencies										
AP058	Conduct monitoring visits by 4 HQ staff in priority districts - activated districts										
	Deployment of 3 NDRTs to support branch response structures (Incentives and Transport) for 7 days mission										
	Mobilize and orient 60 volunteers in beneficiary identification, distribution and documentation										

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:

In the Zambia Red Cross Society

- **Secretary General**
  Cosmas Sakala
  cosmas.sakala@redcross.org.zm
  +260 963 724 899

- *Mulambwa Mwanang'ono (Disaster Management Manager)*
  mulambwa1830@gmail.com/ mulambwa.mwanang'ono@redcross.org.zm
  Tel. + 260 970 455600 / +260 977 120346

In the IFRC

- **IFRC Regional Office:** Phoebe W Shikuku, DRR & FbF Advisor, phoebeshikuku@ifrc.org, +254 734 600 314
- **IFRC CCST/CO:** Jurg Wilbrink, DRR & FbF Advisor, jurg.wilbrink@ifrc.org, +27 785092572

In IFRC Geneva

Programme and Operations focal point: Nazira Lacayo, Senior Officer DREF, Forecast-based Action, nazira.lacayo@ifrc.org +41 (0)22 730 4944

-

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

- I**FRC** 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.