Forecast based Action by the DREF
Forecast based early action triggered in Mozambique

EAP2019MZ01

Tropical Storm Chalane - Track & Intervention District
27 December 2020

Families to be assisted: 1,500
Budget in CHF: 249,390

The initial timeframe of this early action operation has been extended by one month to March 31, 2021. The extension has been agreed so that the National Society can complete the post monitoring activities after the event as well as the lessons learned. Since the activation of the EAP the National Society had to respond to a second cyclone (Eloise) which had delayed some of these learning activities.

General overview

The Mozambique Red Cross Society (Cruz Vermelha de Moçambique, CVM) activated its Early Action Protocol for Cyclones, due to Severe Tropical Storm “Chalane”, formed in the Southwestern Indian Ocean basin and crossed Madagascar as a severe tropical storm, entering in the Mozambican Channel on 28 December 2020, moving westward towards Zambézia and Sofala coastal provinces. System Chalane was forecasted to intensify and make landfall with highest intensity in Beira city and surrounding coastal districts.
While the forecasts indicated Chalane to maintain a severity falling under the category of ‘Severe Tropical Cyclone’ at landfall, the national hydro-meteorological services (Instituto Nacional de Meteorologia, INAM) projects gusts of wind between 125 and 165 km/h. The most severe sustained winds forecasted at 92 km/h to 111 km/h are limited to a diameter of 100 km around the cyclone eye and will impact, mostly, the districts of Buzi, Dondo and Muanza of the Province of Sofala, as well as the provincial capital Beira.

At 72 hours prior to the landfall of Severe Tropical Storm Chalane on the 30 December 2020, the EAP trigger had not been formally reached based on the latest forecast of the World Meteorological Organization Regional Specialized Meteorological Centre (RSMC) for the South-West Indian Ocean, Meteo-France on La Réunion. Based on consensus between the tripartite stakeholders, CVM, IFRC and German Red Cross, under endorsement of the national hydro-meteorological institute (INAM), as well as under technical guidance of RCRC scientific reference centres, a joint decision to activation was made based on the following rationale:

1. The weather conditions in the Mozambique Channel were very favorable for a cyclone to significantly increase in strength in a short time, due to high temperatures and high humidity (no storms have passed recently). Subsequently, La Nina phenomenon contributes to these circumstances to being favorable.
2. The models that were guiding us then did not accurately capture that potential of significant increase.
3. Based on an impact analysis recently conducted by 510 – NLRC for Mozambique indicate that with windspeeds of 72 km/h already 30% of vulnerable housing structures will be destroyed in these communities. Meaning, that even with a lower threshold it would not be ‘acting in vain’.
4. A further factor favoring an activation below the formal trigger defined in the EAP was that we would be activating in a context of already further compromised livelihoods and severe socio-economic impact of the Covid-19 pandemic, meaning heightened levels of vulnerability and increased impact of Chalane on vulnerable communities.

A joint impact analysis was carried out based on the projected cyclone track, paired with local knowledge on historic impact of severe winds and heavy rainfall in the most at risk districts, as well as an operational assessment and feasibility of deployment of staff and NFIs for each of the most exposed districts. Based on this analysis, the decision was made to focus the early action intervention in the district of Buzi, Sofala province. The main arguments for the selection of Buzi district are: Most severe projected impact due to highest sustained wind speed at landfall, active pool of RC volunteers to support the operation, increased levels of vulnerability due to ongoing recovery from the impact of Cyclone Idai, the existence of capacitated local disaster management committees (CLGRC) and access routes in feasible distance to the CVM warehouse in the district of Caia, Sofala province.
## Sectors of intervention

### Shelter

**Actions**
- Distribution of shelter reinforcement kits in selected communities and educational leaflets.
- Demonstration of how to reinforce houses.
- Strengthening of individual houses.
- Demonstration of how to reinforce schools.
- Distribution of school reinforcement material to the school council.
- Reinforcing the school roofs;

### Water, sanitation and hygiene

**Actions**
- Demonstration of how to purify water (using chlorine) and individual hygiene practices.
- Distribution of chlorine, buckets, and educational leaflets in the selected communities.

### Disaster Risk Reduction

**Actions**
- Selecting districts for intervention, based on 72-hour lead time forecast information and pre-established community selection criteria

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### Reference documents

For a more comprehensive description of activities see the Early Action Protocol summary ([Mozambique - Tropical Storm Chalane](#)).

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### For further information, specifically related to this operation please contact:

**In the Mozambique National Society (CVM)**
- **Secretary General**
  Maria Cristina Uamusse, cristina.uamusse@redcross.org.mz
- **Operational coordination**
  Ilídio Nhatuve, Program Director, ilidio.nhatuve@redcross.org.mz; +258 841617000

**In the IFRC**
- **IFRC Regional Office:**
  Phoebe Shikuku, DRR & FbF Advisor, phoebe.shikuku@ifrc.org
- **IFRC Country Cluster Support Team:**
  Jurg Willbrink, DRR & FbF Adviser, jurg.WILBRINK@ifrc.org
- **IFRC Country Office:**
  Gorkhmaz Huseynov, Head of Country office, Gorkhmaz.HUSEYNOV@ifrc.org

**In IFRC Geneva**
- **Programme and Operations focal point:**
  Nazira Lacayo, Senior Officer DREF/FBA, nazira.lacayo@ifrc.org