

Red Cross Red Crescent examples on Early Warning Early Action

June 2019

Over the years, the Red Cross Red Crescent National Societies have recognised the need to take early action given the improvements in early warning systems and information. The examples below illustrate the various early actions national societies undertook to prevent/mitigate and respond to weather related hazards.

Bangladesh

Bangladesh is one of the most disaster-prone countries in the world. Flooding and tropical cyclones affect thousands of people every year. With support from the German Red Cross, Bangladesh Red Crescent Society distributed cash grants and non-food items such as containers to protect documents and belongings and chlorine tablets to secure access to drinking water in preparation for floods. An Early Action Protocol for floods and cyclones was developed. In July/August 2017, the Bangladesh Red Cross Society acted early and provided assistance to the affected people in Bogra district. For more information, click [here](#).

Mongolia

Mongolia Red Cross with support from the British Red Cross is implementing [Forecast based Financing \(FbF\)](#), focusing on the hazard *Dzud*, which is a term in the Mongolian language referring to extreme winters in which large-scale death of livestock occur. Large-scale livestock death during Dzud is also heavily affected by the seasonal conditions of the summer before the winter. Unfavourable conditions (usually dry) for preparing hay and fattening of animals going into the winter season strongly increases vulnerability to cold and snow. The loss of cattle causes poverty among the herders.

The actions selected to best enable herders to prevent the deaths of their livestock was an unconditional cash transfer (delivered via bank accounts) of USD 100 (approximate 1 month income for a lower-income herder household) and the distribution of animal care kits, valued at approximately USD 65-70. These include mineral blocks, imitation tears, hoof ointment, and fish oil. These supplies do not require veterinary training to administer and are well-known and used by herders.

Mongolia triggered for the first time in November 2017 with the release of the Dzud Risk Map. The map used for the trigger for the first year of the program was a pre-existing product developed jointly by the Government of Mongolia's meteorological service and Nagoya University in Japan. The Dzud Risk Map considers 16 different indicators to anticipate the risk of livestock death. As such, it is considered an impact-based forecast. This is the first time we have been able to use an impact-based product for FbF, which will become the norm for future early action protocols for other countries as part of phase 2. The indicators of the dzud risk map include: snowfall and temperature forecast, livestock populations numbers (from government statistics) to assess carrying capacity, rainfall observations from summer

and vegetation images to estimate hay availability and ability of animals to be in a good body condition going into the winter season. The map produces a geographic map of Mongolia which colour-coded areas showing areas of heightening risk of livestock death. Red is the highest risk and was selected as the threshold for triggering action. An analysis of the early action is ongoing.

Mozambique

Mozambique's vulnerability towards climate related hazards is one of the highest in the world. Majority of the population is poor and live along the over 2,700 km coastline. The country suffers from common hazards such as recurrent floods, tropical cyclones, sea level rise and storm surges. During extreme events, there is massive water pollution and outbreaks of waterborne diseases. With support from the German Red Cross and the Climate Centre, the Mozambique Red Cross identified early actions for specific communities and distributed non-food items such as water purification tablets, soap, jerry cans and mosquitoes nets. A summary of the actions taken can be found [here](#).

Peru /Ecuador

Peru is prone to various hazards, due to its complex topography, Peru hosts a wide variety of climates, ranging from the hottest and driest of the Pacific coast to the temperate in the Andean valleys, the cold in the highlands and the warm and humid ones in the Amazon. This leads to different natural hazards that put the population at risk. Floods are frequent, especially in the highlands and in the rainforest. In addition, the El Niño phenomenon leads to particularly damaging and damaging weather patterns. In addition, heavy rains cause flooding in coastal regions normally without rain. At the same time, the highlands can suffer from overwhelming droughts.

The Peruvian Red Cross, supported by the German Red Cross and the Climate Centre, has drawn up a comprehensive program of early actions with the objective of reducing the impacts of slow-onset floods in the Amazon rainforest, heavy rains in the El Niño context and extreme cold waves in the highlands. For heavy rains and floods, early actions include training in first aid, providing safe drinking water and hygiene kits, as well as strengthening and protecting homes.

The Peruvian Red Cross is the first national society to have its EAP for the cold wave and snowfall in the world approved by the IFRC, the first actions identified to activate actions and roles and responsibilities of the various actors involved. The triggers were developed based on the [FbF Trigger methodology](#). The proposed early actions will include health promotion, warm clothing distribution kits for children under 5 years old, pregnant women, the elderly, distribution of tarpaulins to improve the isolation of houses and distribution of veterinary kits for alpacas.

Uganda

The Forecast based Financing approach is piloted in north-eastern Uganda as part of the Integrated Climate Change Adaptation project. FbF was introduced as to strengthen the flood early warning system to reduce the impact of devastating floods that often ravage the area. This model uses the Global Flood Awareness System a product of the European Commission and the European Centre for Medium-Range Weather Forecasts (ECMWF) to forecast floods. Earlier on, the Red Cross Red Crescent Climate Centre organized a consultative workshop attended by the URCS staff, some NGO representatives and technical experts from Uganda National Meteorology Authority (UNMA) to set thresholds and deliberate on early actions for the different lead times. These actions were compiled into standard operating procedures (SOPs), tested and refined with other local stakeholders.

URCS triggered twice; On November 9th, 2015, the threshold set for the Forecast based financing in Uganda was exceeded for the very first time leading to activation of the SOPs. Upon receipt of the forecast, Uganda Red Cross Society conducted a quick beneficiary assessment, procured and transported relief non-food items to 370 households in the villages of Okoboi, Omatai, Apedu and Akulonyo.

Each of the beneficiaries received a 20-litre jerry can to store drinking water, 30 water purifying tablets, a hoe to dig drainage channels/trenches that would keep water away from their houses. In addition, the households received 2 bars of soap, and two food storage bags to safely keep their harvest.

The second activation happened on April 30th 2016. A trigger was released indicating more than 50% chance of experiencing floods in the target areas. As in the previous trigger, the information was affirmed by UNMA officials and their forecasts. Consequently, URCS distributed purification tablets, two jerrycans, five storage-sacks and two bars of soap to over 2000 people within the target area. In addition, URCS partnered with other stakeholders including the Local Government and WATESO a local NGO working on health sector. The Local Government officials mobilised communities while WATESO conducted malaria tests, and sensitized communities about managing water borne diseases including diarrhoea. However, this time round, the flood did not materialize, and as such Red Cross “acted in vain”. Interestingly, community consultations were conducted to obtain people’s perceptions about “acting in vain” revealed that most beneficiaries found it worth taking action. Focus group consultations with men, women, youth and elderly were held with over 200 people.



FbF distribution in Eastern Uganda in November 2015

West Africa

In 2007, the region experienced some of the worst floods ever recorded. More than 800,000 people were affected, around 300 were reported dead, shelter, livelihoods and infrastructure were destroyed. The Meteorology departments across the region had forecasted above normal precipitation but little/no action was taken by the humanitarian agencies. [IFRC documented](#) early warning and early action undertaken by the various national societies in 2008.

In 2008, the Red Cross was better prepared for the floods. In Ghana, the Red Cross mobilised 150 volunteers who conducted door to door campaigns encouraging people to avoid farming along river banks and amongst others, drew up evacuation plans. In addition, the Volta River Authority power company & its counterpart in Burkina Faso agreed a control regime to protect communities along the White and Black Volta rivers. Putting in place early warning early action mechanisms in 2008. contributed to saving lives as only 2 people died compared to the 30 in 2007.

In Togo, the July 2008 heavy rains caused the River Plateaux to overflow sending water into the Zio, Haho and Yoto tributaries. More than 10,000 households were affected. However, this time round, Togo Red Cross (TRCS) had a contingency plan and has trained 30 trainers on disaster management. In addition, TRCS implemented FbF in which a partnership with the Nangbeto hydroelectric dam was forged. They jointly developed the FUNES ('functional estimation') flood-risk prediction model. This is based on a 'self-learning algorithm', enabling it to extend flood risk predictions from two to three hours to two to three days for communities downstream of the dam. It also established a relationship between the TRCS and Nangbeto dam operators, which ensures information is shared daily during high-risk periods of the year. Early actions such as radio spots and live interviews, water purification tablets, preparation of evacuation sites, and protection of vital documents were planned, budgeted and matched with the FUNES five-point scale of risk levels. Standard Operating Procedures were developed with clear roles and responsibilities for all stakeholders involved in taking action. This project was implemented with the support from German Red Cross. For more information on FbF activation, click [here](#).



Togo Red Cross 2017: Early Action Plans activated based on warning information

In Senegal, inundation occurred in Dakar, Saint-Louis and Kaolack regions due to heavy rains in early August 2008. Over 24,000 families were affected. Throughout the rainy season, Senegal RC (SRCS) received information from the African Centre for Meteorological Applications (ACMAD) through the IFRC

and based on this information, the SRCS operations manager would alert the people in the field. Early warnings from the IFRC zone prompted the SRCS to help flood prone households fill sandbags

Zambia

Zambia is prone to various hazards including floods and drought. With support from the Netherlands Red Cross and the Climate Centre, the Zambia Red Cross Society (ZRCS) is working on developing the FbF system with a national scope outlook; meaning that early action will be triggered in any area where there is a high anticipated risk of the disaster event occurring. The experience in Zambia reflects the processes and benefits of government collaboration in the development of the FbF system.

ZRCS spent quite a considerable amount of time and efforts in engaging government on the development of the FbF. This was motivated by the need to have FbF integrated into national Disaster Preparedness systems. ZRCS is working closely with their national Disaster Management and Mitigation Unit (DMMU), meteorology depart and the water resources management authority to ensure government ownership in this process. Through this collaboration, the government has taken on a leadership role on the development of the FbF and has expressed interest to integrate the FbF system into their national Emergency Operations Centre. ZRCS is part of the Technical working group working with government representative from Met offices, hydrology, DMMU working on developing the impact based forecast model and the Early Action Protocol. This work is expected to be completed in 2019.



Zambia Technical Working Group on FbF during Meeting in Nov 2018