



Food and Agriculture
Organization of the
United Nations

The Sudan

Impact of Early Warning Early Action

Protecting agropastoralist livelihoods ahead of drought



Impact of Early Warning Early Action in the Sudan

From early warning to early action

Climate-driven hazards are increasing in intensity and frequency, with weather-related crises now occurring nearly five times as often as 40 years ago. At the same time, needs are expanding and resources are limited. New tools and ways of thinking and acting are essential to reduce the impact of these disasters as effectively as possible.

The Food and Agriculture Organization of the United Nations (FAO) is developing innovative early warning systems to anticipate risks and intervene at the right time. The right time is often early – before a crisis becomes a humanitarian disaster. FAO's approach is shifting from a reactive mind-set to one focused on mitigation and prevention.

When the state of Kassala in eastern Sudan experienced a dry spell in 2017 and 2018, FAO took steps early to protect the livelihoods of vulnerable agropastoralists. This study analyses the outcomes of FAO's Early Warning Early Action (EWEA) approach in the Sudan. They complement and reinforce earlier findings in Ethiopia, Kenya, and Somalia which demonstrated that early actions have a significant return on investment and are an effective way to address drought in Africa's agropastoralist regions.

Challenges facing the Sudan

The Sudan is one of the driest countries in Africa, with erratic rainfall on which most agricultural production depends. What are known as extreme years, where rainfall is either heavy or below-average, are becoming more common than average years. It makes life very difficult and unpredictable for the 70 percent of rural people who rely on traditional rainfed agriculture for their food and income.

Below-average rainfall means less pasture grows and less fodder can be put aside for the lean seasons, which come earlier than in average years. As a result, livestock are significantly at risk.

Kassala is one of the Sudan's most vulnerable states, home to around 1.8 million people. Agropastoralists who practice non-mechanized traditional rainfed agriculture and small-scale herding are the most vulnerable, as they rely heavily on short growing seasons depending on seasonal rains. Most grow sorghum and millet – some of the few crops which can grow in the clay soil – raising cows, sheep and goats and selling firewood, grass and charcoal in rural markets. They are not equipped to cope with climate shocks.

The warning signs

The EWEA pilot system for the Sudan was designed to monitor the risk of drought and dry spells in Kassala as well as the state of North Darfur. The success of such systems in countries where early warning data can be scarce relies on building strong partnerships with local and national agencies so that knowledge gaps are filled in order to have a good overall picture of the situation.

With backing from the European Union, FAO supported the creation of a Food Security Technical Secretariat which provided vital information on the food security of households as well as the body conditions of livestock and their movements, animal and plant diseases and the availability of water. This enables unusual patterns and increasing household vulnerability to be picked up early.

From August 2017, EWEA monitoring started to raise the alarm about worrying signs in Kassala. Two indicators – unusual livestock movement and extended dry spells – rose above key thresholds. Then, the statistics from September and October went even higher and the price of sorghum rose above the annual average.

The first early action was quickly rolled out in October – a rapid assessment enabled FAO to understand how people would be affected and which specific interventions would help agropastoralists the most in the face of the steadily intensifying dry spell. The assessment confirmed pasture was increasingly limited, water supplies were running low and below-average sorghum was harvested.



“I used travel to the market to buy expensive fodder, which wasn’t enough for my animals. But, with the support from FAO my animals are healthy and producing milk. I sell some of this, as well as ghee and yogurt at the market or to my neighbours.”

Amna Mahmoud Mohammed from Tulkouk, Kassala State

Early action instead of reaction

With the assessment results in hand, FAO tailored its early actions to focus on protecting the livestock assets, particularly households who owned between 3 and 12 small animals. In Hameshkoreb, Tulkouk and Aroma localities, 5 000 vulnerable families were targeted.

Early actions included:

- 30 000 animals vaccinated and dewormed
- 600 tonnes of concentrated animal feed and 30 tonnes of mineral lick distributed
- community awareness on the benefits of reducing their herds enhanced
- food security information and analysis and cooperation with the Food Security Technical Secretariat increased

Working together

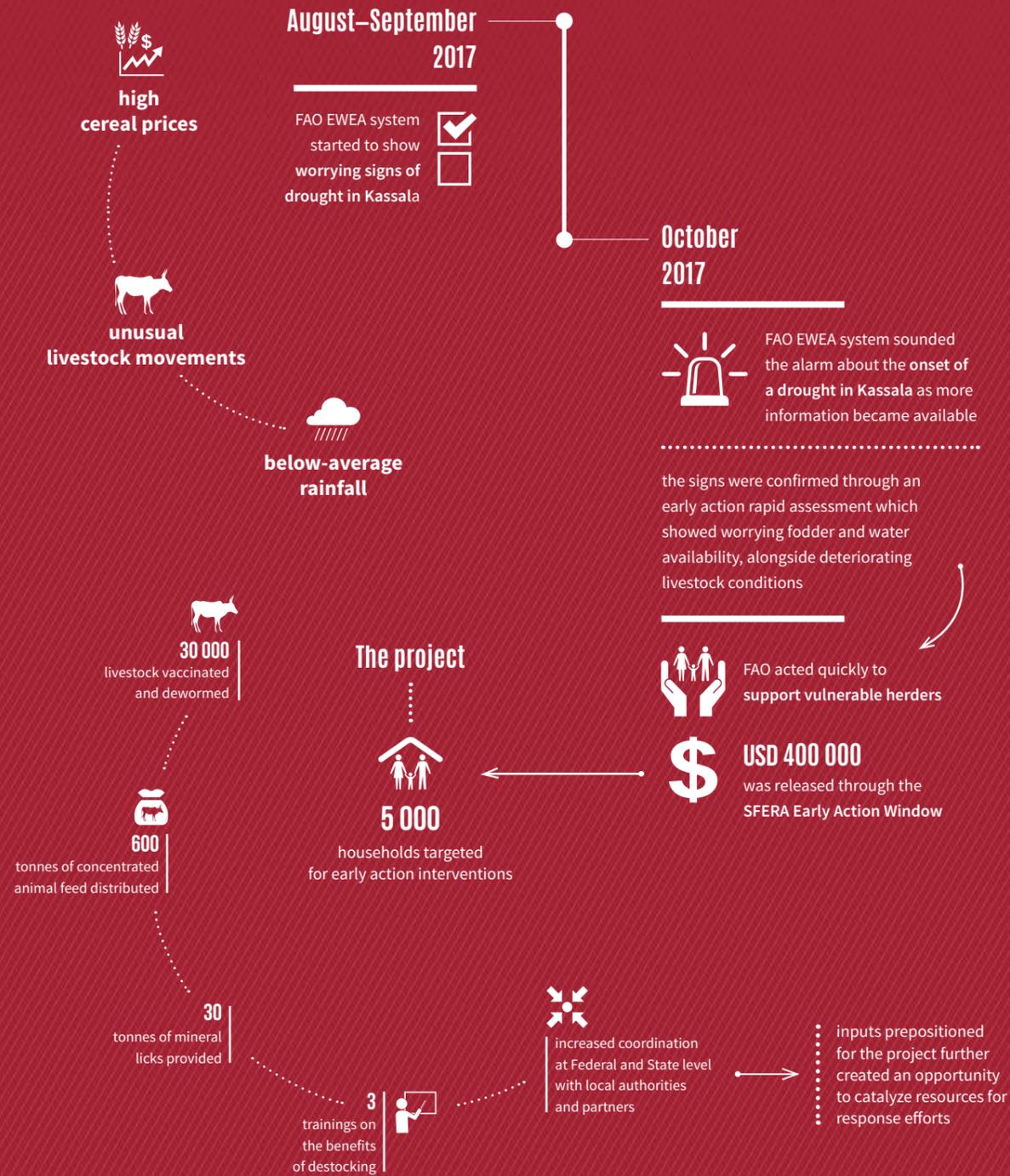
FAO was the first agency in Kassala to intervene to protect livelihoods, after being at the head of those who raised warning flags about the coming crisis. As new data revealed deteriorating and concerning conditions in Kassala, FAO spread its information to key partners of the Food Security and Livelihoods Cluster.

The Sudan Early Warning Early Action approach

\$ What was the return on investment?

USD 1 → USD 6.7

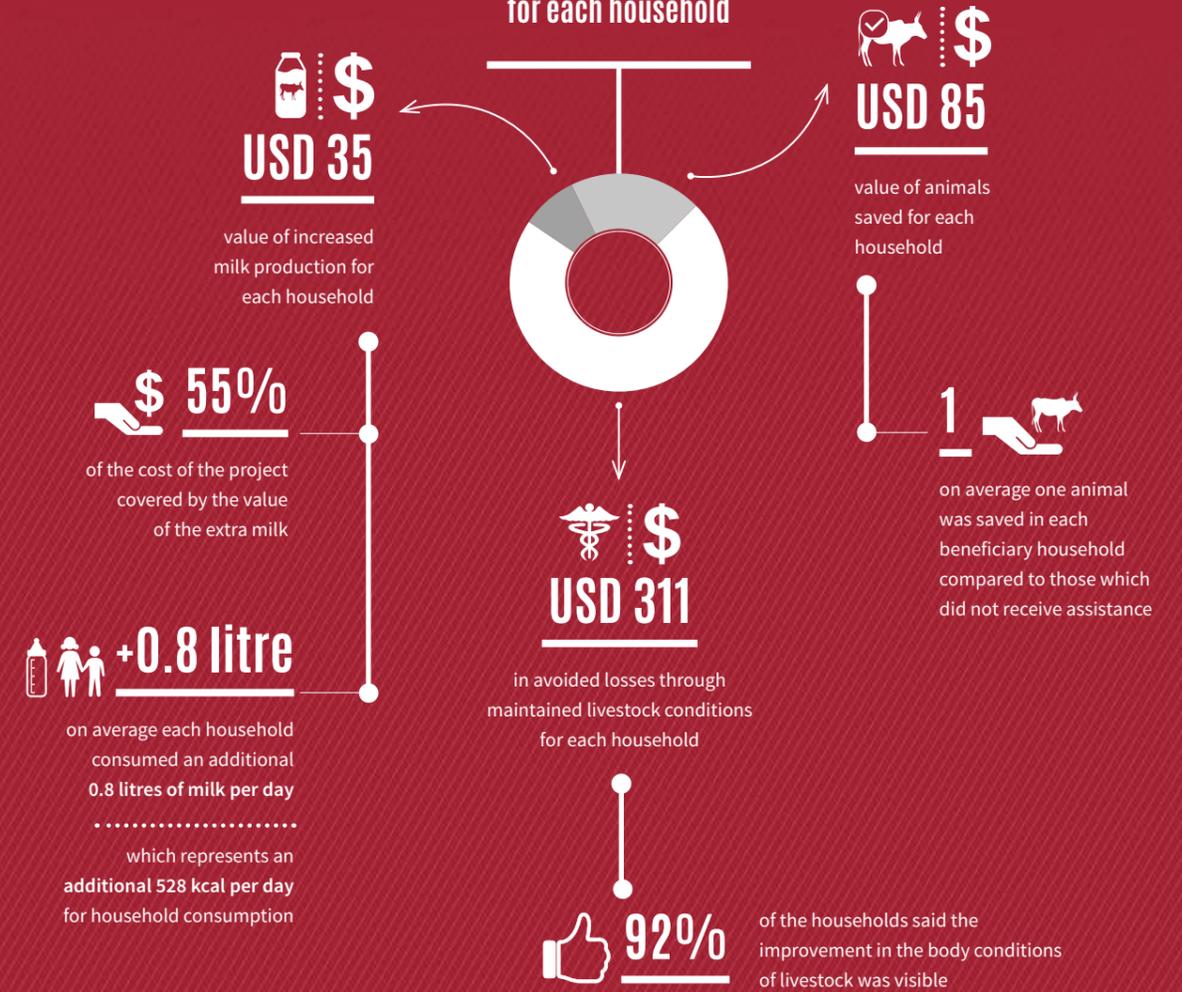
for every USD 1 spent on interventions, households had a return of USD 6.7



Benefits to households

\$ **USD 431**

of avoided damage, losses and added benefits for each household



What were the extra funds used for?

beneficiaries told FAO that they spent their savings and additional income on:





Catalyst effect

In May 2018, the drought hit a peak and additional resources were needed for the response effort. Because FAO had launched anticipatory interventions with seed money through its Early Action Fund, it was possible for what's known as a catalyst effect to begin. The warning had been given that a critical situation was potentially unfolding, and everything needed was already in place – vulnerable communities had been identified, activities had been planned and implementation mechanisms put in place.

As a result, FAO was granted over USD 1 million by the European Civil Protection and Humanitarian Aid Operations fund and the Sudan Humanitarian Fund to support affected agropastoralists. Early actions coupled with response plans played a catalytic role in rising awareness and mobilizing additional funds.

Return on investment

FAO wanted to know exactly how effective the intervention had been in the Sudan – to understand the impact early actions can have on vulnerable agropastoralists.

In May 2018, FAO staff went door-to-door, collecting data and listening to what agropastoralist families had to say. In order to isolate the impact of FAO's early action intervention, the families chosen had not received any other outside assistance for their livestock.

The overall cost of the livestock interventions was USD 64 per family, who in turn benefitted by USD 431 – this produced a benefit cost ratio of 6.7, meaning that for every USD 1 invested by FAO, households gained USD 6.7. This included the value of animals saved, the avoided drop in their value because of poor condition and the extra milk they produced.

What did agropastoralists say?

“I had been thinking of buying bread to split with my animals to keep them alive,” said Tohaj Musa, an agropastoralist from Tulkok village in Kassala. Tohaj was worried about her livestock and the support they provided to her family of ten. For agropastoralists like Tohaj, losing their herds is like draining their bank accounts. It fuels a dangerous spiral of poverty and batters their dignity and self-esteem.

Support from FAO came just at the right time – importantly, just before the peak of the drought. Tohaj now has seven animals, up from five, as they are healthy enough to breed. “I don’t have to buy milk and travel to the market anymore,” she said.

Why milk matters

Milk and dairy products have massive potential to improve nutrition and in turn, livelihoods. Agropastoralists rely on their livestock as a lifeline and when they were asked what targeted interventions brought them the most benefits, they highlighted those which focused on their animals. Well-nourished animals produce lots of milk full of high-quality protein, fatty acids and micronutrients. They reproduce well, they are more valuable, and they can be used as working animals and transport.

Khalda Mohammed Ibrahim relies on her small herd of goats and sheep to support her family with essential meat and dairy products. These are especially important for her young daughter. Milk is vital for her nutrition – just half a litre a day giving a five-year old child 25 percent of the calories and 65 percent of the protein they need for healthy growth and development.

In past droughts, Khalda has travelled from her village, Aroma, to Kassala market to buy livestock fodder and to sell charcoal. But the journey is long and the goods expensive.

“Life would be so hard if our livestock died, we wouldn’t have food or milk for the children,” she said. “When it is dry, I am afraid they will starve – and then we will too.”

Khalda’s family was among the vulnerable ones which from March 2018 were given feed and nutritional supplements ahead of the peak of the drought, because their animals were their main livelihood. This early action allowed Khalda to keep her livestock not only alive, but healthy, with increased milk production when typically they would be at their weakest.

“With this help our livestock were healthy and happy and made more milk,” Khalda said. “We could feed the children and ourselves and sometimes we provided our neighbours with milk.”





FAO's Early Warning Early Action uses risk analysis and forecasts to trigger interventions before a crisis escalates into a humanitarian emergency.

With the financial support of



Belgium
partner in development

Early Warning Early Action
Food and Agriculture Organization of the United Nations (FAO)

ewea@fao.org
www.fao.org/emergencies/fao-in-action/ewea
[@FAOEmergencies](https://twitter.com/FAOEmergencies)

Cover photo: ©FAO/Ahmedalidreesy Adil



Some rights reserved. This work is available under a CC BY-NC-SA 3.0 IGO licence