

# OUTBREAKS IN EAST AFRICA

## Desert Locusts and COVID-19

Countries in East Africa are currently battling two large-scale disasters simultaneously: the worst desert locust outbreak in decades and the COVID-19 pandemic. These two crises have many parallels: they are transnational issues that do not adhere to borders; left uncontained each has the capacity to spread exponentially; it is difficult to estimate the extent of each crisis; and both have the potential to cause devastating impacts for the population. Together, the two crises pose significant risks to the public health and wellbeing of the population in East Africa, by impacting the economy, affecting livelihoods, and further worsening the food security situation. Simultaneously, current seasonal rains in East Africa are likely to bring moderate to heavy rainfall to the region, triggering floods that may deepen existing needs and complicate ongoing responses to both crises (FEWS NET 05/05/2020).

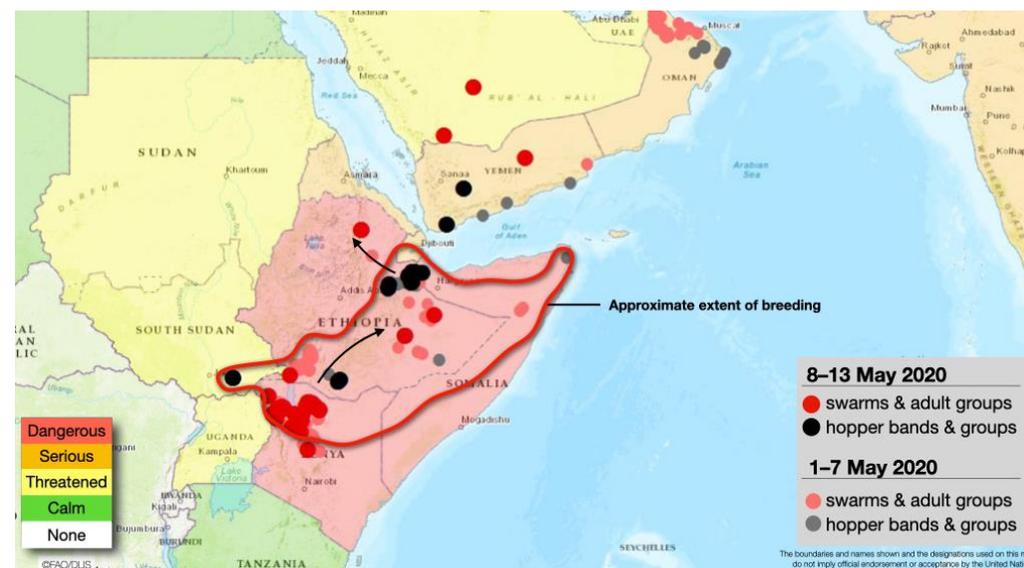
The combination of the COVID-19 pandemic and the locust outbreak are challenging the capacity of countries to respond to these emergencies and address pre-existing crises and vulnerabilities. This report explores how government measures taken to contain the spread of COVID-19 may hinder the response to the ongoing desert locust outbreak in East Africa. The analysis also examines the secondary impacts of the COVID-19 pandemic in tandem with those of the desert locust outbreak. The focus is primarily on the three countries most heavily impacted by locust infestations to date: Somalia, Kenya, and Ethiopia (UN 9/04/2020).

### Contents

<i>Government Measures in response to COVID-19</i> .....	2
<i>ACAPS Government Measures Dataset</i> .....	2
<i>Desert Locust Outbreak</i> .....	3
<i>Restrictions on Locust Response</i> .....	3
<i>Increased Levels of Food Insecurity</i> .....	4
<i>Reduced Access to Livelihoods</i> .....	5

### COVID-19 Outbreak in East Africa

An outbreak of respiratory disease caused by a novel coronavirus (abbreviated 'COVID-19') was first reported in China in December 2019 (CDC 19/04/2020). The outbreak was declared a pandemic by the World Health Organization (WHO) on 11 March 2020 (WHO 11/03/2020). On 13 March, the first cases of COVID-19 were reported in East Africa: in Sudan, Kenya, and Ethiopia (GARDA 13/03/2020a; GARDA 13/03/2020b; GARDA 13/03/2020c). Somalia followed on 16 March and Uganda on 22 March. (GARDA 22/03/2020; GARDA 16/03/2020). As of 13 May, Somalia has 1,170 confirmed cases and 52 deaths, Kenya has 715 confirmed cases and 36 deaths, and Ethiopia has 261 confirmed cases and 5 deaths (WHO 13/05/2020). The number of reported cases is likely to be higher in all three countries, as issues with testing may result in undetected infections. Kenya and Somalia face challenges such as lack of resources, minimal testing capacities, and low population turnouts for tests (VOA 04/05/2020; Aljazeera 28/04/2020). Although Ethiopia is aiming to conduct 4,000 tests daily, there remains a gap in understanding the full outbreak picture in the country with a population of 99 million (CGTN Africa 24/04/2020).



Source: FAO 13/05/2020

## Government Measures in response to COVID-19

In response to the outbreak, governments around the world began implementing a variety of measures to control and slow the spread of the disease, reducing the likelihood of overwhelming national health systems. Across Somalia, Kenya, and Ethiopia, the earliest government measure was taken on 24 January, when the Government of Ethiopia began screening at Addis Ababa for the virus (AA 24/01/2020). As of 14 of May, according to the ACAPS Government Measures Dataset, 120 government measures across five categories have been implemented in Ethiopia, Kenya, and Somalia.

Across all three countries, the most common government measure taken are movement restrictions, which includes international flight suspension, border closures, visa restrictions, curfews, and domestic travel restrictions. Social distancing measures are the second most frequently implemented, which seek to reduce social contact and ensure physical distance between individuals, through measures such as limiting public gatherings and closure of businesses and public services. Since 24 January, 30 public health measures have been introduced or extended across Ethiopia, Kenya, and Somalia, such as isolation and quarantine policies, health screenings, testing policies, and awareness campaigns. In Kenya and Ethiopia, 18 governance and socioeconomic measures have been introduced or extended, including the activation of emergency administrative structures, military deployment, economic measures, and the declaration of a state of emergency. There are three lockdown measures in place in Kenya, including a country-wide partial lockdown and lockdowns in two refugee camps, Dadaab and Kakuma.

Together, the desert locust outbreak and the COVID-19 pandemic will likely drive humanitarian needs and increase reliance on the provision of humanitarian assistance. However, the ability of humanitarian agencies to provide aid that might dampen the effect of two convergent crises is already being hindered by government measures taken in response to the pandemic (VOA 24/04/2020). Lockdowns, curfews, international flight restrictions, and social distancing measures could all pose issues for international organisations to deliver response to ongoing and emerging needs (UN 24/04/2020).

### ACAPS Government Measures Dataset

Government measures taken in response to the COVID-19 pandemic have been tracked by ACAPS in the #COVID19 Government Measures Dataset (updated 14/05/2020). The Secondary Data Review that populated the dataset was structured around five categories of measures: Movement Restrictions, Social Distancing, Public Health Measures, Governance and Socioeconomic Measures, and Lockdown. Data is available for over 190 countries. Given the speed in which governments are amending or introducing new measures in response to COVID-19, the dataset is likely to have information gaps. Find further information on the taxonomy here.

# of Measures Taken per Category	Total	Ethiopia	Kenya	Somalia
Movement Restrictions	36	3	23	10
Social Distancing	33	18	14	1
Public Health Measures	30	25	19	2
Governance and Socioeconomic	18	10	8	0
Lockdown	3	0	3	0

Humanitarian exemptions to government measures are being made in some circumstances. Governments of affected countries in East Africa have made the locust response a national priority, which may allow teams to continue operations despite lockdown, international flight restrictions, and social distancing requirements (DW 11/05/2020; UN 14/04/2020). However, it is unclear whether more stringent government measures may be enacted in the future. Even where exemptions are made for locust control operations, additional care is required to mitigate the risk of personnel spreading COVID-19 to remote and rural communities, where the majority of these operations are taking place (World Bank 27/04/2020).

If the COVID-19 outbreak spreads rapidly in rural areas, food delivery by international organisations may be hindered to contain the virus (World Bank 27/04/2020; VOA 24/04/2020). Furthermore, government sanctioned exemptions for humanitarian travel and delivery of supplies are often not communicated to local officials, complicating the ongoing work of organisations (VOA 24/04/2020). Despite exemptions, the delivery of humanitarian assistance for the impacts of the locust outbreak, COVID-19 pandemic, and other crises will likely be affected by government measure that restrict operations.

## Desert Locust Outbreak

Desert locusts are considered to be the world's most dangerous migratory pest, due to their ability to form highly destructive swarms that invade and consume vast quantities of vegetation, ultimately threatening crops, food security, and livelihoods (FAO 2020). An average swarm, consisting of 150 million locusts per square kilometre, can consume the same amount of food in one day as 35,000 people (FAO 09/04/2019). An outbreak of desert locusts has persisted in East Africa since July 2019, and worsened with the wet season beginning in October 2019 (TNH 28/04/2020; UN 09/04/2020; WMO 18/02/2020). The unusually heavy rains facilitated favourable climatic conditions, such as moist soil and green vegetation, that triggered locust breeding and hatching.

While locust outbreaks occur every few years, the magnitude of the current invasion is unprecedented, considered to be the worst outbreak the Horn of Africa has experienced in 25 years (FAO 2020). The annual long rain season from March until May could deliver wet conditions that provide perfect environments for locusts to lay a second, or even third, generation of eggs (TNH 28/04/2020). Breeding and the formation of new swarms is already underway in Ethiopia, Somalia, and Kenya (EWEA 24/04/2020). To date, swarms of desert locust have impacted multiple countries in East Africa, the hardest hit being Somalia, Ethiopia, and Kenya. Djibouti, Eritrea, South Sudan, Sudan, Uganda, Tanzania have also been impacted (AFDB 28/04/2020).

### Locust Generations

In May and June 2020 the second wave of locusts – 20 times larger than the first – is expected to mature and begin feeding on crops and vegetation, at the same time as the main growing and planting season for the region (AFDB 28/04/2020). Not only will this provide ample food for locust swarms – some of which are the size of Moscow – but young seedlings and plants will be destroyed, eliminating the chance for crops to mature (The East African 02/05/2020; Financial Times 24/04/2020). The subsequent impact on food security and livelihoods could be devastating. If the outbreak continues uncontrolled, experts fear another generation triggered by the long rains season, anticipated to emerge in June and July at the peak of harvest time, perhaps 400 times the size of the first (Financial Times 24/04/2020).

### Response and Control

Desert locust response in East Africa is typically coordinated by the Ministry of Agriculture in affected countries, in coordination with regional bodies and specialised international organisations, such as the FAO. There are several methods that can be used to control outbreaks. The most effective is conventional pesticides, sprayed on resting swarms either using aircraft, or from the ground via handheld or vehicle-mounted sprayers. Biopesticides

are another option and unlike some chemical pesticides, do not pose risks to other plant or animal species. None of the chemical pesticides currently used in East Africa pose a risk to crops (FAO 09/04/2020). Surveillance and monitoring of locust swarms, using data collection technology and satellite imagery, also aid the response by determining locust patterns and subsequently informing control operations (AFDB 28/04/2020). There are also traditional methods, such as the burning of tires and the creation of loud noises and vibrations using instruments and other tools (Johanniter 23/03/2020).

Due to the size of the current locust infestation in East Africa, the only way to control the outbreak is through aerial and ground spraying operations (FAO 09/04/2020). In Kenya, aerial and ground spraying equipment have made it possible to treat 5,000 hectares per day, and the use of biopesticides and vehicle mounted sprayers are treating locusts in Somalia (Ventures Africa 24/03/2020). In Ethiopia, approximately 2,405 km<sup>2</sup> have been treated since June 2019 (FAO 30/04/2020). Despite these efforts, the scale of these activities needs to increase in order to reduce the potential impact on crops, food security, and livelihoods of the communities (FAO 30/04/2020; FAO 24/04/2020).

## Restrictions on Locust Response

The magnitude of the current desert locust outbreak requires a rapid scaling up of control operations. If the swarms are not mitigated, future generations would have the capacity to consume between 80% and 100% of farmers' crops (AFDB 28/04/2020; Bloomberg 18/02/2020). However, government measures implemented in response to COVID-19 may constrain the ability to continue and ramp-up of locust control operations.

### Procurement of Equipment and Chemicals

Depending on the locust control activity, specialised equipment may be required. Aerial spraying, for instance, involves the use of aircraft, but the procurement of additional planes for the response has proved challenging due to ongoing flight restrictions (Reliefweb 27/03/2020). The supply of necessary equipment such as motorised sprayers has also been impacted (Crisis Response 20/04/2020). Helicopters coming from South Africa, required for locust surveillance in Somalia, were unable to complete necessary refuelling in countries along the journey, due to various travel restrictions and lockdowns (AFDB 28/04/2020). Globally, international flight restrictions have driven shipping costs up by 300%, further complicating the ability to move necessary goods required to control the locust outbreak (Concern Worldwide 24/04/2020). As of 14 May, international flight restrictions have been imposed by more than 145 countries in worldwide, including Kenya and Somalia.

A locust outbreak of this size is challenging to control without pesticides, which typically have to be imported (FAO 09/04/2020). The import of necessary pesticides for both aerial and

ground spraying activities has been delayed by the significant reduction in global freight operations and global supply chains caused by international flight restrictions. Further, global supply chains have been disrupted by government measures in pesticide-producing countries across Europe and Asia, limiting the supply for affected countries (Reuters 03/04/2020). In Ethiopia, current stock of pesticides for locust control will only last until June, and in Somalia the country's existing supply will only spray 2,000 square km (DW 11/05/2020).

## Restrictions on Movement of Workers

In addition to aerial spraying operations, ground control can be effective in mitigating locust outbreaks. However, the ability of NGOs to move around and provide assistance has been impacted by COVID-19 government restrictions (TNH 28/04/2020). Social distancing measures may reduce the ability to conduct control operations, such as ground spraying, due to restrictions on leaving the household. Ground control operations also may be hindered by domestic travel restrictions, such as the suspension of rail, road, or air travel across a country. The FAO reported that government restrictions have created challenges for the movement of personnel in Ethiopia (FAO 30/04/2020). Government imposed movement restrictions have limited the ability of agricultural officers in South Wollo to conduct field-based monitoring of the locusts (DW 11/05/2020).

In Kenya, all movement between counties and villages is suspended, and it is not clear if exemptions have been made for locust control activities (GARDA 15/05/2020). Due to a rising number of COVID-19 infections, on 22 April a 21-day restriction for movement into and out of Mandera county, one of first counties in the country to report a locust swarm (VOA 23/04/2020; FAO 29/01/2020). Lockdown protocols further limit individual movement and require populations to only leave their homes for essential purposes. A partial lockdown in Uganda from 30 March to 4 May impeded the ability of agencies to conduct locust control activities (The East African 18/04/2020; ACAPS 05/05/2020). If Somalia, Kenya, or Ethiopia enact lockdowns similar to Uganda, essential control operations could be hampered.

## Training

Effective locust control operations require properly equipped teams of control officers, who are well-trained, to conduct surveillance and ensure that the application of pesticides is occurring in the safest way possible (FAO 09/04/2020). Social distancing measures, such as limiting public gatherings (which restrict the numbers of people who can gather at one time), may impact the ability of training to take place. In Isiolo, Kenya on 23 March, a "masters of trainers" course was set to take place. Due to social distancing restrictions, the course was cancelled, meaning that 30 field operation teams were unable to be trained in locust surveillance (Daily Nation 23/03/2020). Measures to limit public gatherings have also been in place in Ethiopia since 16 March.

## International Staff

As of 14 May, isolation and quarantine policies is the most common public health measure taken by governments in Kenya, Ethiopia, and Somalia. In addition to movement restrictions, quarantine and isolation policies impede the ability of International organisations, such as the FAO, to deploy technical experts to the field in a timely manner (FAO 27/03/2020). Kenya, Ethiopia, and Somalia have implemented 14-day-quarantine policies in place for those entering the country, potentially delaying deployment of personnel. In Ethiopia, FAO flying personnel were delayed in quarantine, and helicopter flight teams arriving from Canada will face quarantine upon entry into the region (TNH 28/04/2020; BBC 25/04/2020). As government restrictions pose issues for international personnel to conduct monitoring and surveillance activities, localised mechanisms are being put in place (UN 14/04/2020). Handheld devices are being used to record and transmit data to centres collecting information on locust swarms (UN New 09/04/2020).

## Increased Levels of Food Insecurity

In Kenya, Somalia, and Ethiopia the latest projections suggest more than 10 million people are experiencing Crisis (IPC Phase 3) level or worse of acute food insecurity (IPC 01/02/2020; IPC 01/01/2020; IPC 01/07/2019). The COVID-19 pandemic and the desert locust outbreak both have the potential to aggravate the food security outcomes. Although the food security impact of the first generation of desert locusts across the region was said to have been limited, it resulted in an additional one million Ethiopians requiring food assistance (FAO 13/04/2020). The next two generations stand to have an even greater impact, emerging during the upcoming planting and harvest season, providing excellent food for the locusts. Farmers in the region are faced with a choice: to delay planting or have their seedlings consumed by the locusts (Financial Times 24/04/2020). Either will have detrimental consequences for food security outcomes.

In addition to crop and harvest losses from locust swarms, the effects of COVID-19 alone are expected to drive food insecurity for more than 13 million people across East Africa over the next three months (WFP 24/04/2020). Although future food security outcomes are dependent on the eventual extent and severity of both crises, the two crises together can be expected to have an excessive impact on the ability of populations to meet basic food requirements.

## Restricted Access to Food

Movement restrictions, lockdowns, and social distancing measures may also impact market access and product demand (EWEA 24/04/2020; Concern Worldwide 24/04/2020). In urban areas, movement restrictions have led to reduced household incomes, and in turn, decreased product demand (FEWS NET 30/04/2020). As a social distancing measure, the Kenyan government closed produce markets in urban areas on 22 March, disrupting supply of fresh produce that low-income households rely on (The Conversation 20/04/2020; Daily Nation 22/03/2020). Government school closures in Kenya, Somalia, and Ethiopia means more than 4.4 million children across these countries are missing out on school meals, sometimes providing their only nutritional meal (WFP 2020).

## Supply and Demand

The pandemic is disrupting food supply chains, impacting product availability and agricultural production (World Bank 27/04/2020; Concern Worldwide 24/04/2020). Across East Africa, COVID-19 restrictions are creating delays in supply chains, which are expected to cause above-average food staple prices (FEWS NET 03/04/2020). Ongoing border closures, in place as of 14 May in Somalia, Ethiopia, and Kenya, are limiting trade flows and driving further food insecurity (ACAPS 05/05/2020; WFP 24/04/2020; UN 17/04/2020). Vegetable markets in Addis Ababa, Ethiopia, have seen a reduction in trade due to travel bans and social distancing measures that impact restaurant demand for vegetables (IFPRI 13/04/2020). The lack of access to markets and buyers in Ethiopia has result in product losses for farmers, due to the lack of demand for perishable items (IFPRI 13/04/2020).

## Reduced Access to Livelihoods

Movement restrictions have had the effect of decreasing livelihood opportunities for both urban and rural populations, driving unemployment rates (EWEA 24/04/2020). The erosion of livelihoods by both the COVID-19 pandemic and the desert locust outbreak reduces the ability of communities and individuals to absorb further shocks, heightening the risk of poverty (WFP 24/04/2020). For particularly vulnerable communities, such as displaced populations, impacts may be even higher. In Somalia, 520,000 IDPs are expected to require humanitarian assistance as a result of income disruptions stemming from the locust outbreak, floods, and COVID-19 (WFP 24/04/2020).

## Challenges for Urban Households and the Informal Sector

Social distancing measures, such as the closure of food markets, are impacting the informal sector in which hundreds of thousands of people across Somalia, Kenya, and Ethiopia are employed (WFP 24/04/2020). Employees in the informal sector typically have no job security or safety nets, and are less likely to be able to continue work from home (IFPRI 31/03/2020; HRW 19/03/2020). Reduced or suspended public transport networks in urban centres, as seen in Kenya and Ethiopia, will likely create further challenges for urban commuters (VOA 06/04/2020). Closures of schools and childcare facilities in Ethiopia, Kenya, and Somalia may require urban workers, particularly women, to stop employment activities to remain home with children (LSE 23/04/2020).

## Impact on Rural Households and Agricultural Activities

COVID-19 restrictions are leading to reduced access to land, challenges in sourcing fertilisers and other agricultural products, decreased demand of agricultural products, higher product prices, and worker shortages, which will impact farmers, pastoralists, and fishers (FAO 2020). In Ethiopia, border closures have caused shortages on imports from neighbouring countries and China, leading to price increases of fertilisers, insecticides, fungicides, and other inputs have occurred due border closures (IFPRI 13/04/2020). Restrictions on travel in Southern Ethiopia has reduced availability of labour for vegetable production in the Central Rift Valley (IFPRI 13/04/2020). In Somalia, exports of livestock slowed due to COVID-19 restrictions that affected buyers (LSE 05/05/2020).

Simultaneously, the second and third generations of desert locusts are likely to have the biggest impact on the livelihoods of farmers – particularly those without diversified means of income – by destroying their crops and food for livestock (EWEA 24/04/2020). In Northern Kenya, pastoralist have been forced to walk miles due to the destruction of grazing grounds by locusts (African Business 06/03/2020). Even after the eradication of the locusts, there will be

long-term impact on agriculture- based livelihoods due to the loss of crops and seeds (AFDB  
28/04/2020).