



# Southern Africa locust outbreak

## September 2020



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## Key messages

- At least four Southern African countries (Botswana, Namibia, Zambia and Zimbabwe) are facing serious outbreaks of African Migratory Locust (AML), threatening the winter crops and the main planting season due to start in October.
- Seven million people who are still recovering from the impact of the 2019 drought, may experience further food insecurity and following crop damage from the AML (*Note: this is separate to the Desert Locust emergency in Eastern Africa*).
- The Food and Agriculture Organization of the United Nations (FAO) is working closely with the Southern African Development Community (SADC) and the International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) to support the affected countries to respond to the locust outbreaks. It should be noted though, that IRLCO-CSA primarily focuses on the control of a different locust pest: the Red Locust.

- Awareness of the situation is low due to the absence of dedicated national locust units and, consequently, a lack of regular monitoring and reporting.
- FAO promotes preventive strategies for locust management, which rely on early warning and early reactions. Delaying the response would prove more costly financially, environmentally, socially and economically.
- The build-up and spread of the pest could exacerbate the impacts of COVID-19 and threaten the next planting season.
- Urgent actions are needed to identify locust hotspots and ensure the pest is controlled in them.
- The capacity of countries to monitor the spread of the pest through regular surveillance and mapping should be enhanced in order to increase their ability to take timely and anticipatory action to prevent the pest from causing serious damage to crops and pastures.
- The impacts of COVID-19 and restrictions on movement are hampering effective monitoring of the evolution of the pest populations.
- The 2020/21 *la Niña* event could accelerate the multiplication of the AML in the affected areas and increase the threat it poses to crops, grazing and livelihoods.

## Introduction

In several Southern African countries, AML outbreaks threaten food and nutrition security. This is in a region that is simultaneously grappling with the effects of the COVID-19 pandemic and reeling from the impacts of devastating climatic shocks, affecting the food and nutrition security of a record 44.2 million people, according to this year's SADC RVAA report. Dense AML hopper bands and mobile swarms are affecting localities in Botswana, Namibia, Zambia and Zimbabwe, threatening winter crops, pastures during the upcoming main planting season. These locust outbreaks are not part of the Desert Locust upsurge that is currently affecting East Africa.

On 30 June 2020, FAO, SADC, and IRLCO-CSA concluded that the locust situation is a region-wide emergency that requires an urgent response. The build-up and spread of the pest could exacerbate the impacts of COVID-19 and threaten the next planting season due to start in October.

last serious AML outbreak in the region occurred in 2002 and lasted for four years.

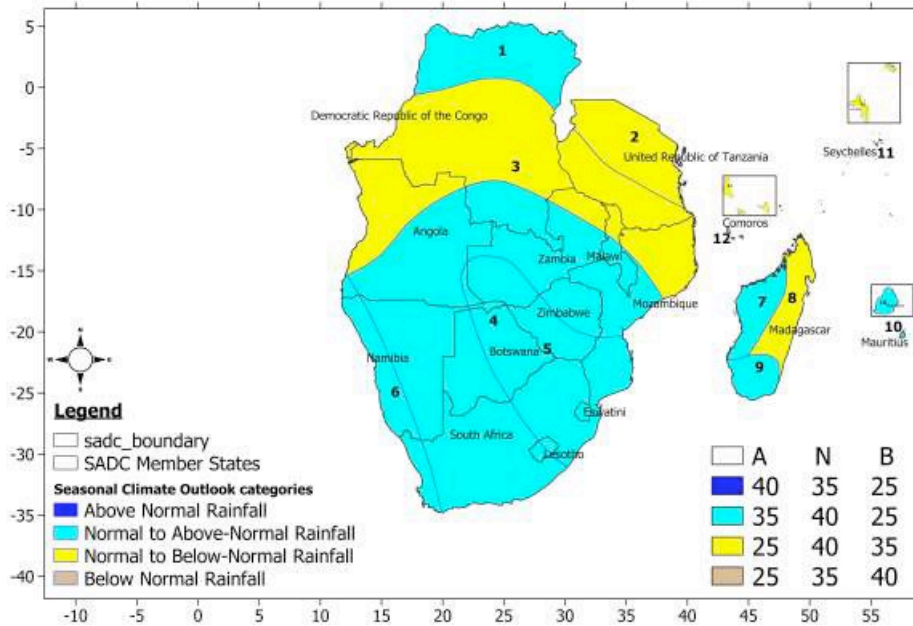
The locust outbreaks could worsen the already fragile food and nutrition security situations of vulnerable households in the aforementioned countries.

The AML hotspot areas are expected to receive above-average rainfall in the 2020/21 season because of the forecasted *la Niña* event; this could potentially accelerate locust multiplication and increase the threat to crops, grazing and livelihoods.

Zimbabwe is among the countries included in FAO's component of the Global COVID-19 Humanitarian Response Plan. Even still, it is already facing a grave food and nutrition security situation with 4.3 million people (45 percent of the rural population) in the Integrated Food Security Phase Classification (IPC) phases 3 and 4 (IPC 2020). Serious economic challenges including hyperinflation compound this. In addition, southern and western Zambia are areas of food and nutrition security concern, in part because the country's response capacity is impaired by the diversion of resources to the fight against COVID-19 and high debt obligations.

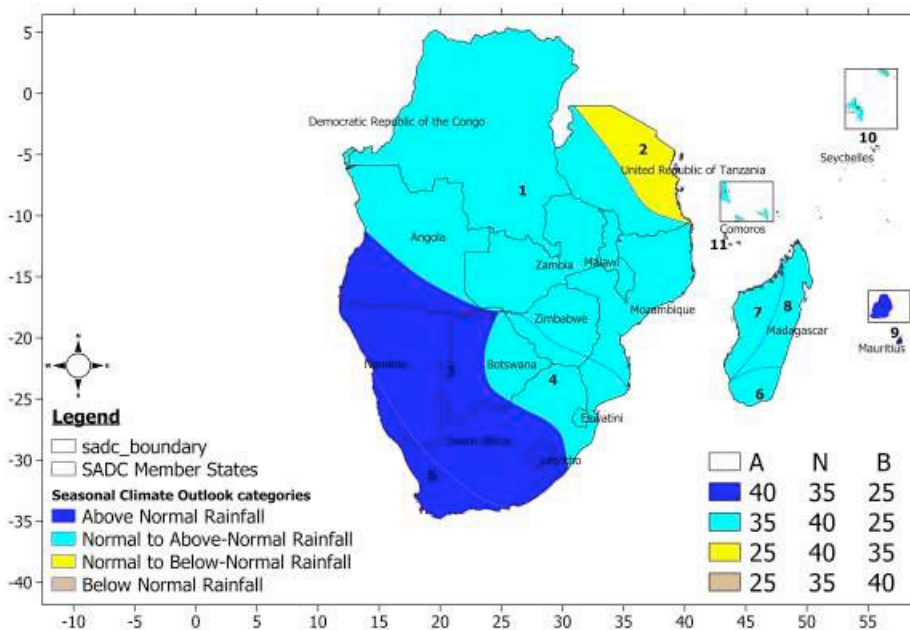
The AML must be controlled before the onset of the main planting season to avoid its spread, serious implications on food and nutrition security and the multiplier effect it would have on vulnerable communities and households in the affected countries.

Figure 1: SARCOF 24 rainfall forecast for October -December 2020



Source: Statement from the 24th virtual Southern Africa Regional Climate Outlook Forum (SARCOF-24)

Figure 2: SARCOF 24 rainfall forecast for December 2020-February 2021



Source: Statement from the 24th virtual Southern Africa Regional Climate Outlook Forum (SARCOF-24)

## Botswana

In Botswana, concentrations of AML were noted in February 2020 and crop damage caused by AML was reported at three sites in North-West, Chobe and Ghanzi districts. By 29 June, swarms had spread to some 48 new sites. An estimated 21,728 ha comprising 730 ha of crops and 20,998 ha of grassland and pasture was affected. Some vulnerable smallholder farmers lost their entire crop to the pest.

In response, the Government of Botswana mounted sustained control operations from February 2020 into late June 2020, primarily using vehicle-mounted sprayers and knapsacks. These operations outstretched government capacity, and the military was requested to provide backup support.

Through its response, the government managed to control the swarms in only 1 887.81 ha (10 percent of the affected area). Given that the success of these control measures was partial, the AML are still active in the swamps. This implies that the pest is multiplying in 90 percent of the sites where it was not controlled. The AML could therefore spread to other areas creating new hotspots, including Botswana's breadbasket, Pandamatenga, where most of the country's sorghum staple is grown.

An FAO mission to the affected areas confirmed the presence of hopper bands and swarms, and extensive damage to crops, particularly maize and sorghum.

## Namibia

AML outbreaks were first reported in February 2020 in Kavango and Zambezi regions and these continued into June. Locust swarms are reported to have spread to seven regions in the central and northern parts of the country.

AML outbreaks are currently reported in the Zambezi region and government teams are mounting response campaigns. The government responded by deploying five vehicle-mounted and knapsack spraying teams, although its locust response capacity is low, and the pest has only been partially controlled.

## Zambia

Following reports of an AML outbreak in Kazungula district in Zambia's Southern Province in May 2020, IRLCO-CSA carried out an aerial survey and took control measures, which included ground spraying on an estimated 4 000 ha infested with low-to-medium density swarms in the Simalaha plains and hopper bands in other areas. While the operation suppressed swarms and reduced the imminent threat to crops, limited resources meant that spraying could not be extended to other infested areas in Sesheke and Mwandi districts.

While the presence of the AML continued to be reported throughout July 2020 in Kazungula, Mwandi and Sesheke districts in Southern Province, new reports were received in the same month from Kalabo, Sikongo and Lukulu districts in Western Province. A ground survey team from IRLCO-CSA and the Ministry of Agriculture estimated that close to 33 000 ha was infested with varying densities of AML

hoppers in Kalabo district alone; locust infestations had spread over large areas and spot spraying was undertaken on the densest populations.

A survey was carried out in Sikongo and Lukulu districts, although this was limited owing to the inaccessibility of these areas. However, estimates from local agricultural extension officers suggest that vast areas are infested with locusts. Thus, comprehensive aerial surveys and control operations are urgently required in all the affected areas in southern and western provinces to avoid the further spread of the pest before the start of the planting season. An area totalling 300 000 ha is occupied by the AML in southern and western provinces, including the Kafue Flats, and as such would need to be surveyed, while an estimated 8 000 ha would require control measures.

While the food security situation in Zambia has generally remained adequate following the 2019/2020 rainy season, the southern and western districts (namely Kazungula, Sesheke, Mwanzi and Mulobezi) and an estimated 57 700 households have experienced dry spells, which has negatively affected yields. Severe flooding has also hit Western Province (Kalabo, Sikongo and Lukulu districts) and an estimated 55 000 households, adversely affecting food production. Any further build up in locust populations in these areas will pose serious threats to dry season irrigated crops and devastate pastures for livestock on which the incomes of many households depend.

The outbreak threatens traditional maize production under residual moisture regimes of the Barotse Plains, as well as the main planting season due to start in two months' time.

## Zimbabwe

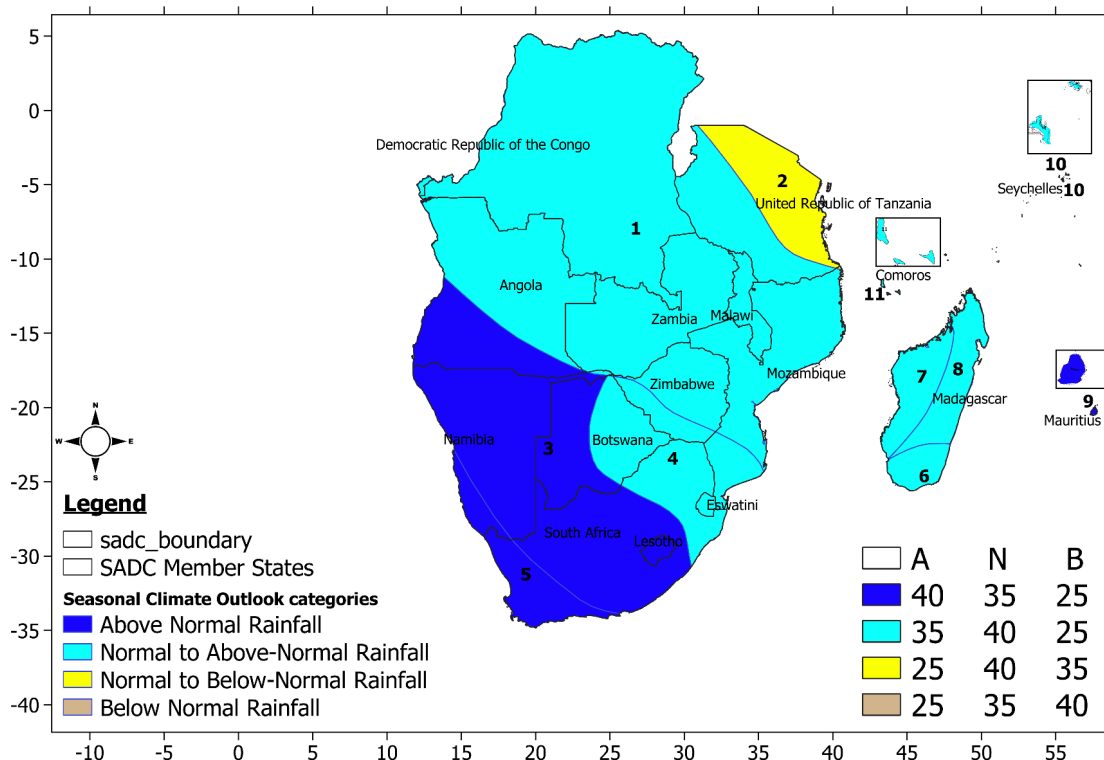
AML swarms were reported in Chiredzi and Mwenezi districts in Zimbabwe in June 2020. These areas are marginal rainfall zones where crop yields are often inadequate to feed households until the next harvest. The source of these AML swarms is unclear, but it is likely that breeding took place undetected in wildlife conservation areas. If so, it is expected that the remaining population in these areas will continue breeding, giving rise to more swarms.

The presence of solitary AML populations has also been noted in and around sugar cane estates in Chiredzi area, where the pest breeds along water canals, leading to hopper bands which have, in previous years, attacked sugar cane. This threatens smallholder sugar cane production, which provides a vital source of income for many households. Around 100 000 ha needs to be surveyed and it is estimated that 3 000 ha may require control measures.

The current locust outbreak will also pose a serious threat to irrigated maize, which is cultivated on a large scale during the dry season to provide a bridging supply of food before the next harvest.

Cattle farmers will also be threatened: locust outbreaks will devastate grazing pastures, endangering a valuable source of income. There is a high risk therefore that if the current outbreak is not contained, the food security situation in the two districts will worsen and push many households further into poverty.

Figure 3: SARCOF seasonal outlook for DJF 2020/21



Source: Statement from the 24th virtual Southern Africa Regional Climate Outlook Forum (SARCOF-24)

## Challenges

FAO has released USD 500 000 to support the four affected countries and IRLCO-CSA. Although this provides a critical starting base for the response, it is insufficient to adequately respond to the outbreak.

- Lack of knowledge of the current locust situation in the region, including the extent and scale of infestations and control requirements;
- Lack of coordination between countries;
- Absence of specialised locust surveillance and response units within national plant protection departments;
- The effects of COVID-19 movement restrictions impact pest monitoring and analysis of affected areas;
- Limited awareness and knowledge of the pest threat;
- Lack of surveillance equipment (such as GPS, precision cameras etc.);
- Inadequate response equipment (such as special sprayers and personal protective equipment);
- Ecological sensitivity of the areas, which limits control options;
- Lack of aerial support services for surveillance and spraying;

- Limited logistical capacity of governments (including a lack of four-wheel drive vehicles suitable for the challenging terrain and a lack of fuel);
- Limited logistical preparedness and response capacity of ILRCSA (which includes a lack of aircraft maintenance, surveillance and spraying equipment);
- Lack of availability of environmentally friendly pesticides/bio-pesticides.

## Recommended course of action

*To effectively and urgently control the AML outbreak, the following activities should be implemented from September 2020 targeting all areas where the AML has been reported. The field activities will be carried out in collaboration with district agriculture officers and community structures.*

- Assistance to provide the relevant logistics equipment, including 4x4 vehicles, fuel, GPS and trained staff, needed to undertake an immediate assessment of the locust situation and requirements for control operations, including scale and appropriate timing;
- Urgent strengthening of the emergency response capacity of the affected countries and regional support institutions to suppress the pest, especially in the breeding hotspots;
- Establish community-based locust monitoring, and early warning and control mechanisms to strengthen the nexus between emergency response and community resilience;
- Strengthen early warning systems through community participation surveillance, mapping and use of IT reporting and communication applications;
- Emergency procurement of monitoring and response equipment, pesticides and/or services (lists of registered locust control pesticides should be prepared for each country);
- Undertake emergency ground spot spraying with environmentally friendly synthetic pesticides;
- Medium- to long-term integrated pest management approach that includes the use of bio pesticides, such as *Metarhizium* when environmental conditions are suitable;
- Strengthen existing inter-country information exchange and coordination mechanisms for an effective collective response led by SADC, FAO and IRLCSA;
- Mobilise materials (aviation fuel, pesticides, motor fuels) and protective gear for field use;
- Conduct aerial surveys in affected areas to ascertain locust population levels and demarcate areas with high density populations for control operations;
- Carry out control ground, vehicle-mounted and aerial spraying operations using environmentally friendly pesticides, including ground spraying near crops;
- Carry out a survey of all potential AML breeding areas and control operations where necessary;
- Conduct a post-control assessment in all sprayed areas, including an evaluation of human health and environmental monitoring activities; and
- Prepare a report on the emergency operations and produce a video of the operations.

## Expected results

1. The current situation will be assessed and the need for control operations will be determined.
2. Locust populations in the hotspots will be controlled through the emergency response without harming human health or the environment.
3. The coordination capacity of SADC countries for the locust response will be strengthened through existing mechanisms.
4. The preparedness capacity of national governments and relevant support institutions, as well as the affected communities, will be strengthened.
5. A regional locust risk communications strategy will be developed and implemented at national and regional levels.