Food and Agriculture Organization of the United Nations

Greater Horn of Africa and Yemen

Desert locust crisis appeal

January–December 2020

Rapid response and sustained action

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Contents

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At a glance

Over **42 million** people facing severe acute food insecurity in the ten targeted countries (*Global Report on Food Crises 2020*)

1.7 million ha of land targeted for control in the ten countries (by December 2020)

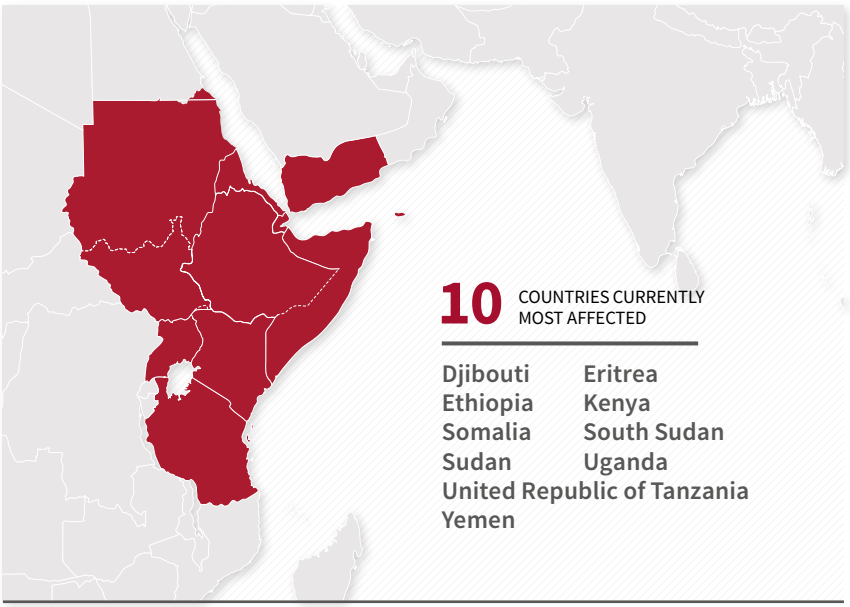
153 000 households targeted for rapid livelihoods protection in nine of the ten countries (activities: June–December 2020)

USD 231.64 million total funding required by FAO for rapid response and anticipatory action in the ten countries from January to December 2020

Five months after the beginning of the desert locust upsurge in the Greater Horn of Africa and Yemen, and four months since the launch of the response plan (24 January 2020) a total of USD 130 million have been mobilized in the region.

As described in the recently published Food and Agriculture Organization of the United Nations (FAO) quarterly report (January to April 2020), a lot has been achieved already, thanks to generous contributions from resource partners and affected governments.

Map 1. Countries currently most affected by desert locust



Source: FAO, 2020. Conforms to United Nations World map, February 2020.

But bringing a desert locust upsurge under control and mitigating its impact on livelihoods and food security requires a prolonged effort and numerous factors could influence the duration and magnitude of the problem, including the widespread presence of COVID-19.

This revised version of the appeal for rapid response and anticipatory action reflects the dynamic nature of the crisis and the better understanding we now have of it, recent developments in the region, and the projected scenario for the remaining months of the year.

With regard to the urgent need to curb the spread of desert locust (component 1), the needs have been adjusted in order to factor in a third generation of the pest (from June onward) and possible further breeding, in the event that climatic conditions are favourable during the last quarter of 2020. The revised funding requirement amounts to USD 121 715 000 (an increase of 72 percent), with USD 72 million currently funded (59 percent) in order to control 1.7 million hectares by the end of the year.

In terms of the livelihoods component, needs have also increased, as the most recent damage assessments and analyses confirmed that the situation drifted from the best to the mid-case scenario. In agreement with government authorities, FAO will complement existing efforts – carried out by governments as well as non-governmental organizations (NGOs) – and will target 153 000 households (approximately 900 000 individuals) between June and the following cropping season, the timing of which depends on the prevailing modal system. To that effect, FAO is appealing for USD 99 765 000 (an increase of 38 percent), USD 40 million of which has already been mobilized (40 percent).

Finally, the coordination component remains unchanged and FAO is appealing for USD 10 160 000, out of which USD 6 630 000 has already been approved (65 percent). The unfunded component focuses primarily on regional partners, namely the Intergovernmental Authority on Development (IGAD) and the Desert Locust Control Organization for Eastern Africa (DLCO-EA).

Crisis overview

Favourable conditions could lead to 400 times more locusts by June 2020

A massive desert locust upsurge is underway in the Greater Horn of Africa, the Arabian Peninsula and Southwest Asia, which could potentially spread to the Sahel region if not stopped by June or July.

FAO's scale-up and a formal appeal to contain the desert locust upsurge and anticipate impacts on livelihoods were launched in late January 2020, as locust swarms grew in number following Cyclone Pawan's landfall on 7 December 2019. The magnitude of the problem and the number of countries affected is a rare phenomenon in the region.

The desert locust (*Schistocerca gregaria*) is the most destructive migratory pest in the world. In response to environmental stimuli, dense and highly mobile (travelling on the wind up to 150 km per day) desert locust swarms can form. They are ravenous eaters who consume their own weight per day, targeting food crops and forage. A swarm measuring just a single square kilometre can contain up to 80 million adults, with the capacity to consume the same amount of food in one day as 35 000 people. Large swarms pose a major threat to food security and rural livelihoods.

In the Greater Horn of Africa, the upsurge comes as an exacerbating factor to food insecurity. Indeed, the East and Horn of Africa region is already home to some of the most food insecure populations in the world. Now, with countries such as Ethiopia, Kenya and Somalia currently facing one of the worst desert locust infestations in decades, coupled with the impacts of COVID-19, experts fear that the health crisis will transform into a food crisis unless global, regional and country level coordinated action is in place to control the economic crisis.

The East Africa region's infested countries host 25.3 million people in significant acute food insecurity (Integrated Food Security Phase Classification [IPC] Phase 3 and above), which is 28 percent of the caseload of Africa. In addition, five of the desert locust-affected countries have 35 million people classified as Stressed (IPC Phase 2). These people do not have the necessary resilience to endure further disruptions to their livelihoods, such as economic and physical barriers to food due to COVID-19 containment measures.

In the Arabian Peninsula, Yemen has become an important reservoir and source area for desert locust due to continual and widespread rains that have caused unusually favourable ecological conditions for breeding. Since 2018, breeding has been nearly continuous in the interior and coastal areas. Consequently, numerous swarms have developed in the country, some of which invaded Ethiopia, Djibouti and northern Somalia during the summer of 2019. Currently, desert locust are breeding once again within a widespread area of the eastern interior desert and along the southern coast in the governorates of Al Jawf, Marib, Shabwah, Hadhramaut and Al Mahrah. Up to two generations of breeding is expected to occur in the interior until September 2020. The current conflict has exacerbated the situation, disabling an effective response to the locust issue since swarms formed in 2018, unlike the last two major outbreaks in 2007 and 2013 when Yemen ensured effective monitoring and control of forming locust swarms.

If nothing is done in Yemen, sizeable locust populations are likely to build up that will lead to a possible reinvasion of the Horn of Africa, and perhaps even the Indo-Pakistan area, by swarms this summer.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Regional livelihood implications

Considering that crop and fodder losses from desert locust can range up to 100 percent, the current desert locust upsurge threatens livelihoods and food security across the East Africa region, particularly in the context of high levels of existing vulnerability and multiple concurrent hazards facing rural populations at this time (e.g. conflict/insecurity, COVID-19, floods, and macroeconomic difficulties).

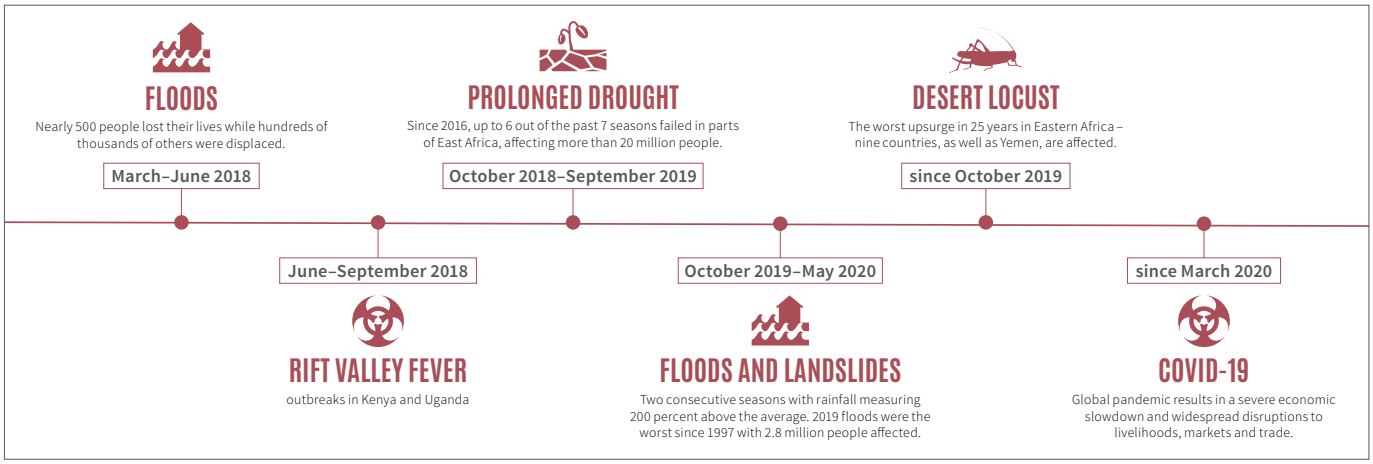
To illustrate potential impacts, according to an independent evaluation, the 2003–2005 desert locust outbreak in the Sahel caused losses of crops and pasture that contributed to localized food insecurity for affected populations (particularly in agropastoral and pastoral areas). Locust damage, combined with poor rainfall, contributed to significant crop production losses. Limited feed also led to the early migration of livestock and high levels of tension between transhumance pastoralists and local farmers over resources.

In desert locust-affected countries of the Greater Horn of Africa, the vast majority of the population depend on agriculture for their livelihoods (for example, up to 80 percent of the population in Ethiopia and 75 percent in Kenya). These farming and herding communities heavily rely on rainfed production systems, with the timing, duration and quantities of rainfall playing a critical role in rangeland rejuvenation and crop production.

Two-thirds of the past nine rainy seasons have been below average or failed across the East Africa region. Meanwhile, during the three seasons where above-average rains were observed, many parts of East Africa faced severe flooding, affecting 3.4 million people during the 2019 short rains and 1.3 million people during the 2020 long rains – as of mid-May 2020. Beyond drought and flooding, human and animal diseases, including the Rift Valley fever outbreak in 2018 and the ongoing COVID-19 pandemic, have also negatively impacted agricultural production and household incomes during recent years.

Such shocks do not just have immediate, short-term effects, they exacerbate prevailing food insecurity and undermine livelihoods and development gains that have taken years to build.

Figure 1. Timeline of natural hazards in the Greater Horn of Africa, 2018–2020



Source: FAO, 2020.

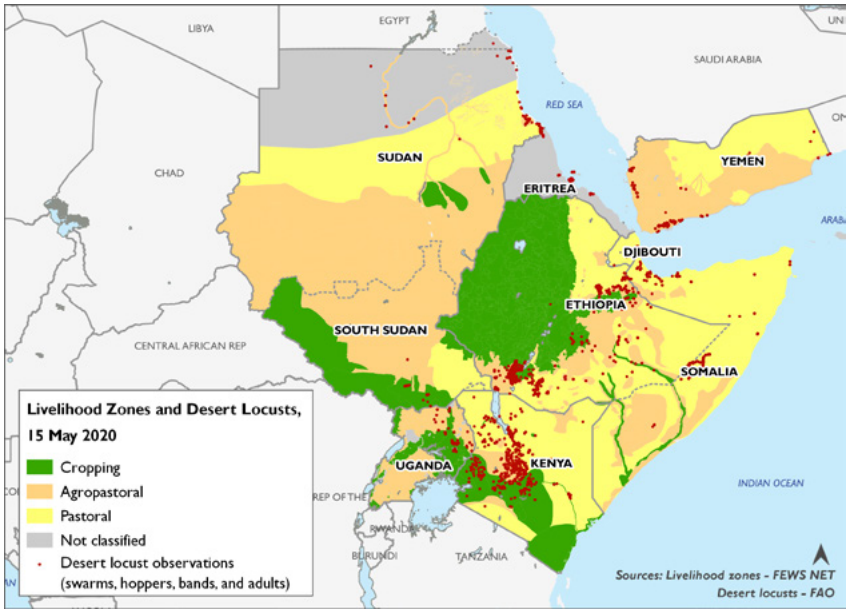
Natural hazards disproportionately affect food insecure, poor people – most of which derive their livelihoods from agriculture. Around 80 percent of the damages and losses caused by droughts are to the agriculture sector, affecting crop and livestock production.

As the magnitude and impact of such climatic events increase, aggravated by climate change and land degradation, more and more households and communities are less able to absorb, recover and adapt, making them even more vulnerable to future shocks. In the Greater Horn of Africa, consecutive years of climatic events have increased households' exposure to risks with limited recovery between shocks.

Especially with its significant potential to become a regional plague, desert locust infestation could lead to further suffering, population movements and rising tensions in already complex environments. Preventing the current desert locust crisis from becoming a catastrophe will be critical to mitigating impacts on the lives of millions of people across the region. The 2003–2005 locust crisis cost USD 2.5 billion in harvest losses.

Given the high precarity of rural livelihoods, the recent wave of desert locust attacks in Yemen can potentially further endanger the survival and sustenance of large sections of the rural population. The crisis has affected the Yemeni population through direct and indirect channels. Direct effects include the destruction of standing crops, agricultural lands and fodder, which have led to losses, reduced income, and increased financial burdens on farmers and livestock owners. Indirect effects operate through local scarcities of key agricultural and livestock products caused by the crisis, leading to higher consumer prices, and accentuated shortages, which negatively affect the local economy in affected areas. It is therefore important to provide immediate relief and protection to those who have lost crops, livestock and livelihoods, as well as to restore their livelihoods for medium- to longer-term sustenance.

Map 2. Livelihood systems in the Greater Horn of Africa and Yemen and desert locust infestation in 2020



Source: FEWS NET, 2020. Conforms to UN World map, February 2020.

Regional food security implications

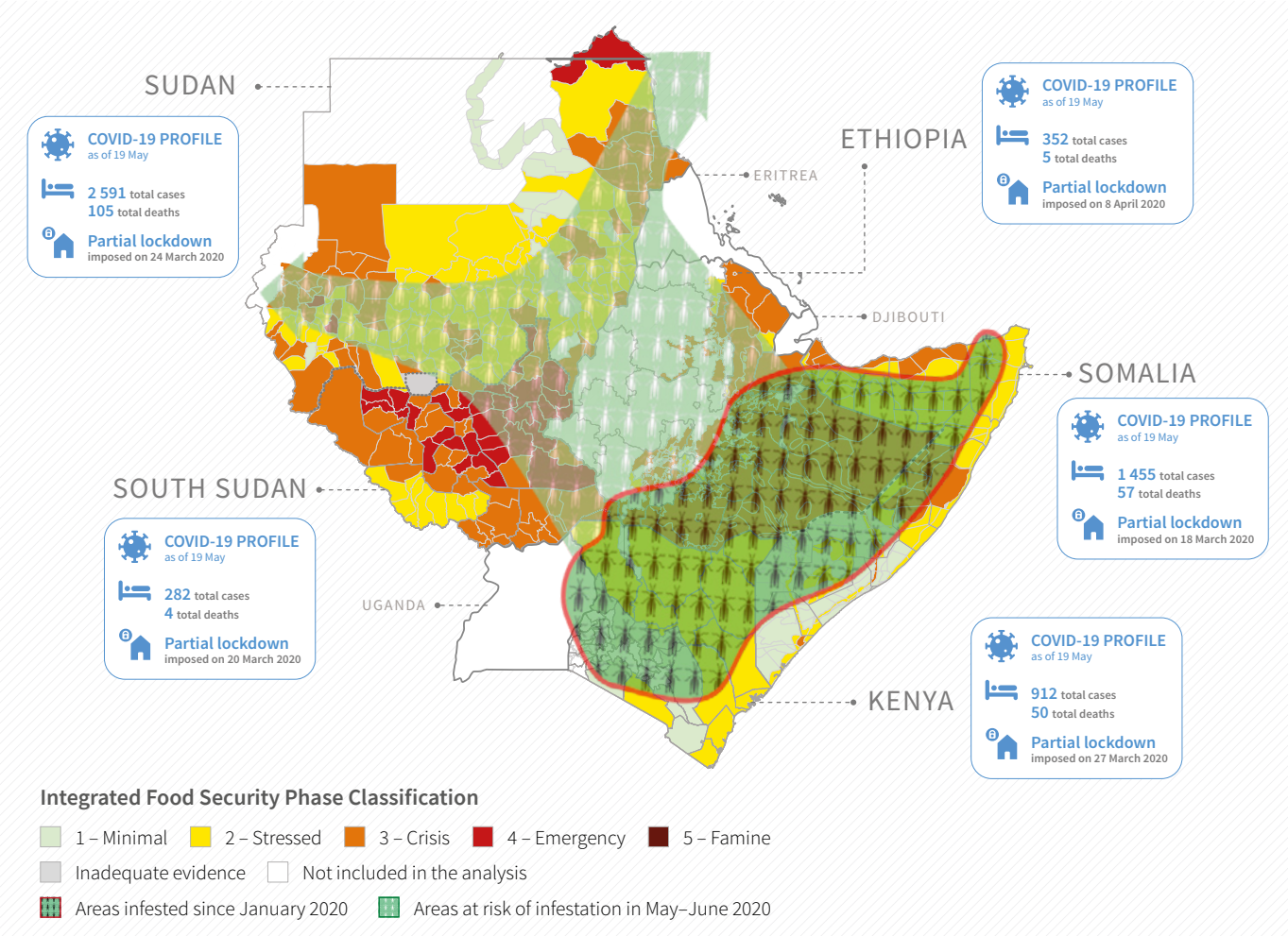
Greater Horn of Africa

Over 25.3 million people are already facing Crisis levels of food insecurity (IPC Phase 3 and above) in Ethiopia, Kenya, Somalia, South Sudan and the Sudan. Over 11 million of those, in Ethiopia, Kenya, Somalia and the Sudan are located in areas currently affected by the desert locust infestation. A further 2.76 million people in South Sudan and 120 000 people in Uganda are under threat from expanding swarms.

With East Africa enjoying widespread rains for a second consecutive month in April 2020, conditions are favourable for the further reproduction and development of desert locust. Increasing swarms in areas characterized by low resilience to shocks and by upcoming cropping and rangeland seasons, such as the Ethiopia Belg-dependent and Kenya pastoral areas, raises alarms over the potential increase of food insecurity in the region.

According to an assessment conducted by the Government of Ethiopia, FAO, the IPC Technical Working Group and the Food Security Cluster, among other partners, around one million people have been significantly affected by the desert locust invasion and require emergency food assistance.

Map 3. Multiple layers of food insecurity in the Greater Horn of Africa



Source: Integrated Food Security Phase Classification, February 2020. Conforms to UN World map, February 2020.

Meanwhile, in Kenya, numerous hopper bands have continued to develop in the centre and north, resulting in an increasing number of immature swarms growing and maturing. Infestations were present in 27 arid and semi-arid land (ASAL) counties, especially: Turkana, Marsabit, Samburu, Isiolo, Laikipia, Meru and Embu. Ground and aerial control operations have treated around 80 000 ha of affected land since January 2020.

In Somalia, new swarms are developing and building up at the onset of the Gu planting season, and risk destroying farmers' newly planted crops in Burao, Gebiley, Borama, Beledweyne, Luuq, Baardheere, Garbahaarey, Beled Xaawo, Doolow, Ceel Barde, Xudur, Waajid, Rab Dhuure, Buur Hakaba and Qansax Dheere. The 2020 *Gu/Karan* season's likely production loss due to desert locust is estimated to be 19 000 tonnes and is likely to coincide with flood-induced crop losses in riverine areas, which are estimated to be 11 000 tonnes.

Yemen

The country's food security crisis is described as one of the "world's largest man-made food security crises", driven by constrained food production, food supply and distribution, and people's diminishing purchasing power. According to the World Food Programme (WFP), over 20 million people are estimated to be food insecure (WFP 2019) and depend on development programmes and humanitarian assistance for survival. Estimates indicate that 22 million people are in need of assistance and 10 million people directly face a risk of famine. An estimated 3 million people face additional vulnerabilities on account of being internally displaced. Rural livelihoods, particularly in the agriculture and livestock sectors have been vulnerable to these shocks and are unable to avert the risk of famine, food insecurity and deepening poverty.

Yemen produces only around 20 percent of its food, and food insecurity is one of the major development challenges highlighted by the Government of Yemen. While the locust swarms are rapidly growing, the current impacts on food security have not yet been felt on a large scale in Yemen except in Lahj and Hodeida governorates where most farmers' cropping areas have been affected. The recent zucchini, green chili and tomato shortage was partly because of the locust attacks in parts of Lahj and Hodeida governorates, which produce off-season zucchini, green chili and tomato. In other governorates, the major agricultural cropping areas of the region have not yet been affected as the planting season has not yet begun. However, the World Bank's estimates put the damages and losses for the 2020 agricultural season at USD 222 million, including USD 14 million in production losses in staple crops, USD 108 million in production losses in animals, and USD 100 million in livestock asset damages.

Forecast scenario

Greater Horn of Africa

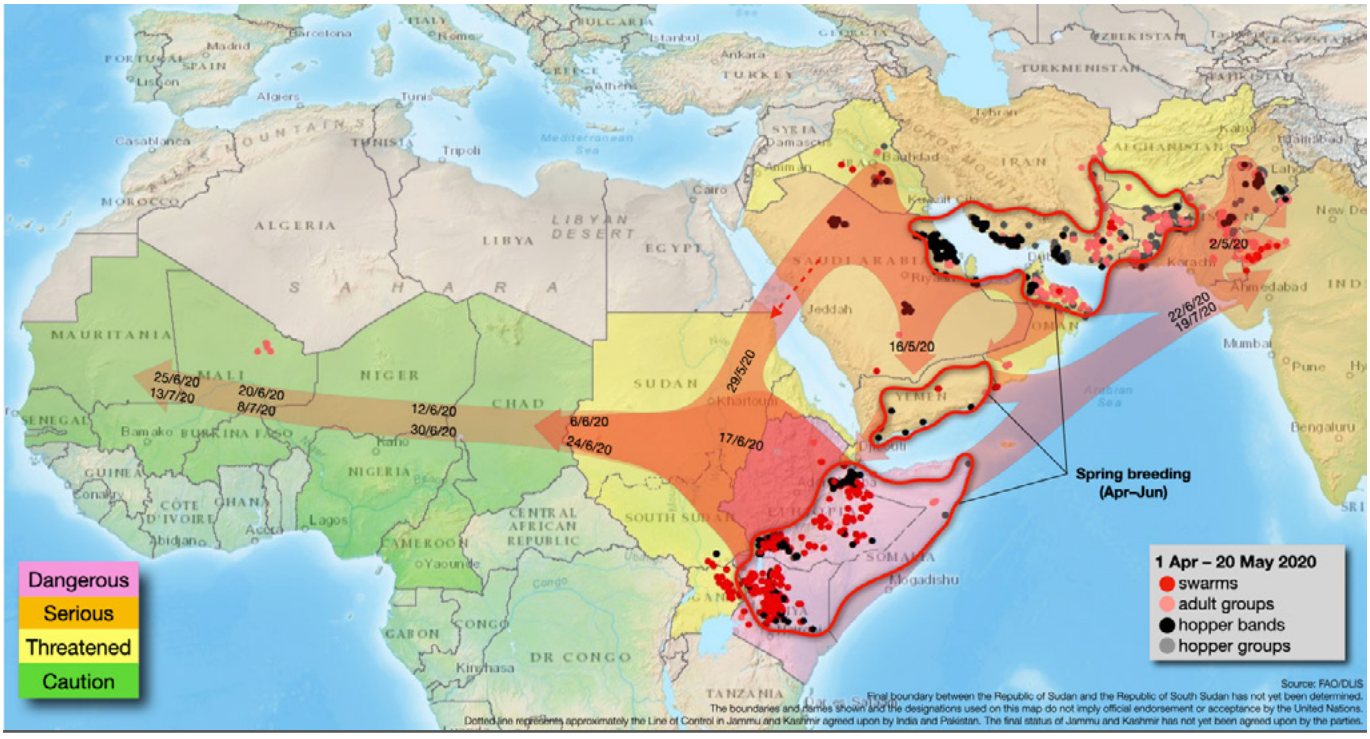
Favourable conditions for desert locust are expected to continue. Current rainfall forecasts indicate relatively average rains during the remainder of the long rains season across bimodal areas (Ethiopia, Kenya, Somalia and Uganda) while above-average to average rains are forecast between May and September across the region's unimodal zone (Djibouti, Eritrea, northern Somalia, South Sudan, the Sudan and western Ethiopia).

In line with these favourable conditions, current desert locust projections by FAO indicate that locust infestations will increase in scale across Ethiopia, Kenya and Somalia and will extend northward into unimodal areas of Ethiopia, Eritrea, Somalia and the Sudan in June, just as agricultural activities in these areas commence.

In February 2020, FAO developed three food security scenarios to help guide its response: best case, mid-case and worst case.

In the worst-case scenario, desert locusts could cause severe crop losses in 2020 and the early depletion of pasture in many areas, triggering migration to distant grazing areas. This would have the potential to result in below-average national harvests and rising food prices, and exacerbate the already serious food security situation. Approximately 2.5 to 4.9 million people could fall into Crisis (IPC Phase 3) or worse levels of food insecurity under this scenario.

Map 4. Desert locust spread global forecast, April–May 2020



Source: FAO, 2020. Conforms to UN World map, February 2020.

The mid-case scenario involves significant crop losses and pasture depletion in several areas of the region, causing abnormal livestock migration and low crop yields in the affected zones. In this scenario, between 1 and 2.49 million additional people would likely face severe acute food insecurity (IPC Phase 3 and above).

Under the best-case scenario, desert locust impacts on pasture would be mitigated by average to above-average rainfall, with localized depletion of pasture and minimal adverse food security impacts as livestock are moved to adjacent grazing areas. In terms of cropping areas, desert locust damage in localized areas would cause a 20–30 percent cereal harvest loss in affected areas during the long rainy season. In this scenario, approximately half a million additional people would fall into Crisis (IPC Phase 3) or worse levels of food insecurity.

In February 2020, when these scenarios were developed, indications suggested the region would face the best-case scenario and as such FAO planned its livelihood response activities accordingly. However, since February, the following information suggests that current impacts may be more in line with FAO's mid-case scenario:

- The geographic spread of desert locust in several countries has been much wider than was previously anticipated.

- A recent joint assessment in Ethiopia found that, as of April 2020, desert locust had affected 806 400 agricultural households, 197 163 ha of cropland and 1 350 000 ha of rangeland, and resulted in 356 286 tonnes of lost cereals.[1] A household economy analysis based on these figures showed that an additional 976 381 people would likely be in need of emergency food assistance, similar to FAO's mid-case scenario for Ethiopia of 1 million people.

- The Food Security and Nutrition Analysis Unit – Somalia (FSNAU-Somalia) and the Famine Early Warning Systems Network (FEWS NET) released an update indicating that the combined effects of desert locust and flooding would likely cause Somalia's Gu production to be 15–25 percent below average. Consequently, FSNAU-Somalia and FEWS NET increased their pre-COVID projections of Somalia's food insecure population from 1.3 million people in Crisis (IPC Phase 3) or above in June 2020 to 1.6 million people in severe food insecurity between February and September 2020.[2] This difference of approximately 300 000 people is also similar to FAO's previous mid-case scenario.

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1 Ethiopia Ministry of Agriculture et al. Impact of Desert locust Infestation on Household Livelihoods and Food Security in Ethiopia: Joint Assessment Findings. April 2020.

2 Given COVID-19, FSNAU-Somalia and FEWS NET are now estimating that 3.5 million people will face Crisis or worse food insecurity (IPC Phase 3+) between July and September 2020.

Looking beyond the current season, rainfall forecasts for the next October–December rainy season are showing increased probability of below-average rains across the Horn of Africa.[3] Previous desert locust plagues show that a combination of this pest and drought conditions can often have the most severe food security impacts. With this in mind, should the current desert locust outbreak not be controlled before the upcoming October–December rains, future food security impacts during that season could be much more dire, increasing the urgency for control operations now.

Yemen

Swarms are likely to continue breeding in Yemen's interior between Marib and Wadi Hadhramaut where good rains are expected to support further generations of breeding, each multiplying the population 20-fold and giving rise to hopper groups, bands, adult groups and swarms. Breeding will also occur on the edge of the Empty Quarter in the east of the country. Intensive surveillance of all locust breeding areas as well as effective ground control operations are urgently needed in order to detect and reduce locust populations, prevent more swarms from forming and avoid the spread of the pest to crop and pasture areas as well as migration to neighbouring countries. Unless sustained control operations are carried out, significant agricultural losses are likely.

[3] Early rainfall forecasts for East Africa's October–December short rains are usually much more reliable than similar forecasts for the March–May season.

Strategic approach

Applying the right range of control options at the right time

FAO will continue applying control methods that are technically sound and adapted to the life cycle of desert locusts, drawing from the expertise of its staff at headquarters, regional, subregional, and national levels. The control of large swarms must be a coordinated effort to avert a major food security and livelihoods crisis as well as to mitigate further spread of the pest to other countries, especially in the Sahel region. This will mean continuing to provide urgent, large-scale aerial and ground pest control operations as well as surveillance, trajectory forecasting and data collection. During the hopper stages, ground operations are cost-effective and will be prioritized, unless the terrain is too rough and unfavourable for vehicle-mounted sprayers. Once locusts reach the adult stage, air control operations will be favoured as they have proven to be successful since March.

Anticipating impacts

Through the regional response plan FAO is working to anticipate/prevent damages on crops and rangeland by controlling desert locust as early as possible, and therefore protect livelihoods.

However, and acknowledging that it is impossible to control desert locust through one life cycle (three months), it is important to anticipate and prevent the negative impact of distress responses, especially in the context of COVID-19.

While damage to crops and rangelands have occurred since March, the impact on livelihoods and food security has not been immediate. It will mainly be visible from the typical harvest period (June in bimodal areas, October in unimodal areas) onwards and could extend until the next harvest in December 2020 for bimodal systems and until mid-2021 for unimodal systems.

Farmers who will lose their crops between April and June will have no food stock from late June until the next harvest in December 2020, while pastoral communities who depend on rangeland and will lose grass and biomass due to desert locust will have to move longer distances in search of grazing.

Communities' resilience will be under stress for the next 6 to 12 months. Pastoralists will engage in atypical migration in search of grazing areas with potential implication on security and stability. Farmers and agropastoralists are likely to engage in negative coping strategies.

Establishing the crisis as a corporate priority

In view of the demonstrated scale, complexity and urgency of the crisis, FAO has declared a corporate thematic scale-up for desert locust, activating fast-track procedures so that operations can be planned and launched with greater flexibility, including rapid deployment of staff and scaled-up programmes. In addition, FAO advanced USD 29 million from 28 February to 6 April 2020 while waiting for grant agreements to be signed, an approach that allowed FAO to supply a number of assets before lockdowns were imposed due to COVID-19.

FAO's response to food chain emergencies – such as animal diseases and plant pests and diseases – are managed within the context of the Food Chain Crisis Management Framework. In particular, the Organization's current locust response is being handled by the Emergency Centre for Transboundary Plant Pests, which integrates technical and operational capacities under the overall management of FAO's Plant Production and Protection Division and with the Food Chain Crisis – Emergency Management Unit of the Emergency and Resilience Division operationally managing the response.

Partnering with national governments and key stakeholders

To support country capacities that risk being overwhelmed by the scale of the crisis, FAO is providing technical and operational assistance for control operations and livelihoods support for the most vulnerable. Furthermore, DLCO-EA is a key partner that maintains its own fleet of fixed-wing aircraft to spray crops.

The Organization's partnership with IGAD, including through the Food Security and Nutrition Working Group (FSNWG) co-led with FAO, has proven to be instrumental in promoting dialogue on desert locust, as well as harmonized advocacy and methodologies for damage and impact assessments.

With regard to partnerships with United Nations agencies, FAO and WFP have been working together in a number of ways since the beginning of the crisis, including but not limited to logistics capacity and opportunities for triangulation of various equipment (for example, safety gear has already been advanced, which FAO will replenish).

The Office for the Coordination of Humanitarian Affairs (OCHA) has been and will remain instrumental for coordination, community outreach and resource mobilization, including through access to the Central Emergency Response Fund.

The Food Security Clusters are also fundamental entry points for coordination at country level between all stakeholders, including international and national NGOs.

Advocating for flexible funding

To ensure maximum impact in a rapidly evolving situation, FAO is advocating that resource partners contribute to the Locust Window of the Special Fund for Emergency and Rehabilitation Activities (SFERA).

This mechanism provides FAO with the financial means to react quickly to crises, reducing the time between funding decisions and actions on the ground. SFERA's pooled funding approach provides the flexibility to adjust activities and support the geographical and thematic areas of greatest need. Likewise, the programme approach enables operations to adapt as the situation changes, streamlining activities to ensure the most appropriate assistance reaches affected populations sooner.

Engaging with the Global Network Against Food Crises

The Global Network Against Food Crises, a partnership created to identify and jointly implement durable solutions to food crises, will be engaged to support coordination, consensus building, and serve as a platform to discuss the most effective programmatic approaches. The Global Network has a key role to play in supporting the uptake and mainstreaming of early warning early action, as well as ensuring lessons learned are utilized, documented and disseminated within the framework of knowledge management.

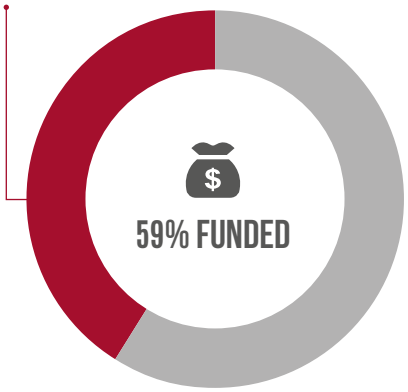
FAO priorities

▶ 1. Curb the spread of desert locust

Budget required
USD 121.715 million

Funding needed by
end of June 2020

FUNDING GAP
USD 50 million



Resource partners contributed USD 69.9 million (98 percent of the estimated needs) against the February version of the appeal. This was enough to secure adequate control and scale-up surveillance until late May or mid-June.

The control of the second generation (or wave) of desert locust from March to May was a massive effort and by mid-April, Kenya and Ethiopia could hardly identify new targets in some of the most populated areas (Isiolo, Samburu, Kitui in Kenya or southern Oromia and Southern Nations, Nationalities, and Peoples' regions of Ethiopia).

Nonetheless, this does not mean that all swarms and hopper bands were controlled, although the population of desert locust has been reduced. A number of swarms in the region were able to breed and lay eggs underground. Furthermore, some swarms have so far not been controlled in hard-to-reach and remote places throughout the region.

Until the end of December, the strategy of FAO and the affected governments will involve controlling the third generation of desert locust (July to September) and preventing the resurgence of new breeding swarms towards the end of the year. Detecting desert locust as early as possible is a critical component and will be based on ground and aerial survey operations, followed by the application of timely and appropriate control measures.

- Continuous surveillance

  The ongoing response has demonstrated the direct correlation between targeting and control. It has also highlighted gaps in surveillance actions. Indeed, control teams on the ground and in the air can only operate if targets have been identified. In other words, they can control only what they can see. From June to December, the following actions will need to be implemented:

  Massive roll-out of eLocust3m

  The adoption of the smartphone application will facilitate the recording and transmitting of data to national locust centres and FAO's Desert Locust Information Service in Rome. Combined with remote sensing imagery and historical data, the information is used to support early warning, forecasts and the planning and prioritization of survey and control operations. To date, fewer than 100 users are using eLocust3m to report frequently. The adoption and scale-up of eLocust3m is too slow and the strategy is shifting from sole use by government authorities to larger groups of users (especially NGOs) to facilitate crowdsourcing and information sharing.

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A focus on remote areas

In order to extend the surveillance coverage, it will be important to: (i) extend the contracts for currently hired helicopters; (ii) hire more helicopters (at least two more for Kenya and one more for Ethiopia) and long-range fixed-wing aircraft with about five hours flying capacity (at least one in Kenya); and (iii) hire more vehicles for ground identification and transects.

Innovation

With dedicated funding provided for innovation by the Bill and Melinda Gates Foundation, FAO is further developing and putting to use the following: (i) digital tools for improved data collection in real time (eLocust3g and eLocust3m); (ii) remotely-sensed 1km^2 soil moisture maps that are updated every ten days in order to improve control by identifying potential breeding areas; and (iii) a trajectory model to estimate swarm migrations for improved early warning.

- Ground and aerial control

  FAO will continue supporting national governments to implement ground and aerial control. A large number of spraying assets have been procured between February and April, but spraying capacity must remain intact, at least for the next three months, while surveillance and climate forecasts will help pre-empt the needs for the last quarter of the year.

Fixed-wing aircraft

FAO is currently renting five aircraft (three in Kenya and two in Ethiopia), which makes a total of 26 aircraft in the region between governments, DLCO-EA and FAO. Contracts will need to be extended carefully at least until August, in order to preserve the chance of controlling desert locust this year. Further international tenders will be raised in order to identify additional aircraft. This strategy is meant to cope with potential needs in South Sudan and Uganda, as well as the potential relocation of DLCO-EA aircraft to some frontline countries around June. Furthermore, due to routine maintenance and the renewal of licenses it is rare for all aircraft to be operational at the same time.

Helicopters

FAO contracted and dispatched three helicopters for Somalia with the dual purpose of supporting surveillance and control. Similar to the situation for the fixed-wing aircraft, contracts will need to be extended (upon satisfactory performance) at least until August. Additional months will be considered based on the remaining swarms.

Pesticides

Pesticide selection will remain regulated by the recommendations of the Pesticide Referee Group and national registration lists in the affected countries. The choice of a pesticide also depends on each situation (vegetation type, target [hoppers or swarms], etc.).

The worst-affected countries (Ethiopia and Kenya) have sufficient stocks of pesticides to support operations until mid-June at the latest. Additional procurements will be necessary in order to control at least the third desert locust generation. The situation will be reviewed regularly in order to minimize the stock that will need to be managed at the end of the upsurge. Discussions about triangulation will also be initiated between countries in the Greater Horn of Africa, the Arabian Peninsula, the Sahel region and Southwest Asia. South Sudan and Uganda have placed some orders for pesticides and may increase procurement if necessary. Frontline countries in the Greater Horn of Africa and Yemen are also placing orders of pesticides in view of the need to control June–July summer breeding.

Biopesticides

Non-chemical options will continue to be pursued wherever possible, and buffer zones maintained when spraying to protect water sources and environmental protection areas.

Somalia placed orders for 12 000 kg of *Metarhizium* biopesticide, enough to treat 240 000 hectares. Stock management and surveillance of desert locust will help identify additional needs. All procured pesticides and biopesticides will continue to undergo a rigorous quality control process. FAO uses Baltic Control®, a leading global inspection, verification, testing and certification company.

Baltic Control is internationally recognized and operates through a network of offices and trusted representatives across all geographical regions of the world.

Under this component, FAO aims to support the treatment of 1.7 million hectares (including 400 000 hectares already controlled between January and mid-May).

- Assess impacts and monitor environmental, health and safety standards

  Various types of assessments are being conducted throughout the implementation of the response plan, each addressing a specific question and helping FAO and partners to adjust interventions as needed.

  Food security impact assessments

  This is coordinated at regional level by the FSNWG and rolled-out at country level. FSNWG participants include IGAD Member States, United Nations agencies, NGOs and food security clusters. Country assessments include: (i) damage monitoring (ongoing); (ii) food security and livelihood impact assessments (June/July in bimodal areas, October in unimodal areas); and (iii) IPC analyses (post-harvest).

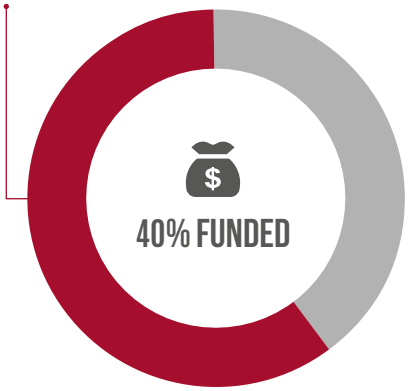
  Human health and environmental safety

  FAO pays strict attention to human health and environmental safety aspects, utilizing corporate protocols developed for environmental precautions to avoid contamination and adverse health effects. Assessments will be conducted not only on the impact of the desert locust upsurge on production and livelihoods and efficacy of control operations, but also on the potential environmental and health impacts relating to desert locust control.

  Safe pesticide management is a core component of control activities. In addition to training on safe pesticide handling, capacities will be built for proper storage and the disposal of drums and containers.

FUNDING GAP

USD 59.9 million



▶ 2. Safeguard livelihoods and promote early recovery

Budget required
USD 99.765 million

Funding needed by
end of July 2020

- Provide farming re-engagement packages

  While the main farming areas are currently not under immediate risk, the less productive and more fragile ASAL areas are more exposed to the crisis. In the last decades, communities living in these areas have been exposed to several and repeated shocks, which resulted in eroded coping mechanisms and close to collapse livelihood systems (agro-pastoralists and pastoralists), with the number of food insecure people constantly/continuously increasing. It is therefore paramount to protect these communities and their livelihoods through early detection of damages and, consequently, the early enrolment of affected households in the safeguard livelihoods' programme.

  Ongoing continuous monitoring and impact assessments are essential for informing FAO's livelihoods response. This exercise has been launched in five countries (Ethiopia, Kenya, Somalia, South Sudan and Uganda) and preliminary results are expected to be reported by the end of May 2020. Thus, supporting the geographical refinement of the programme's targets.

Figure 2. Planned timeframe for bimodal farming systems

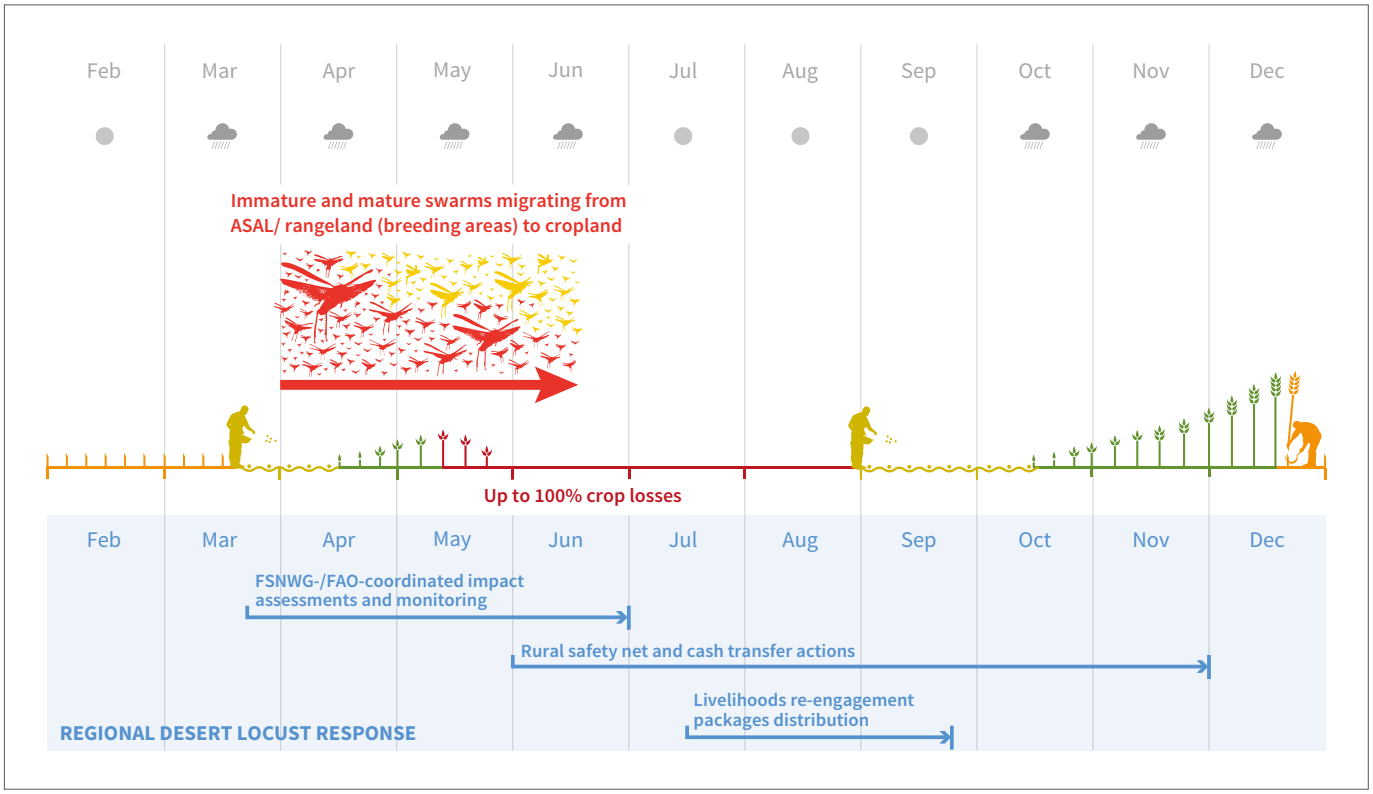
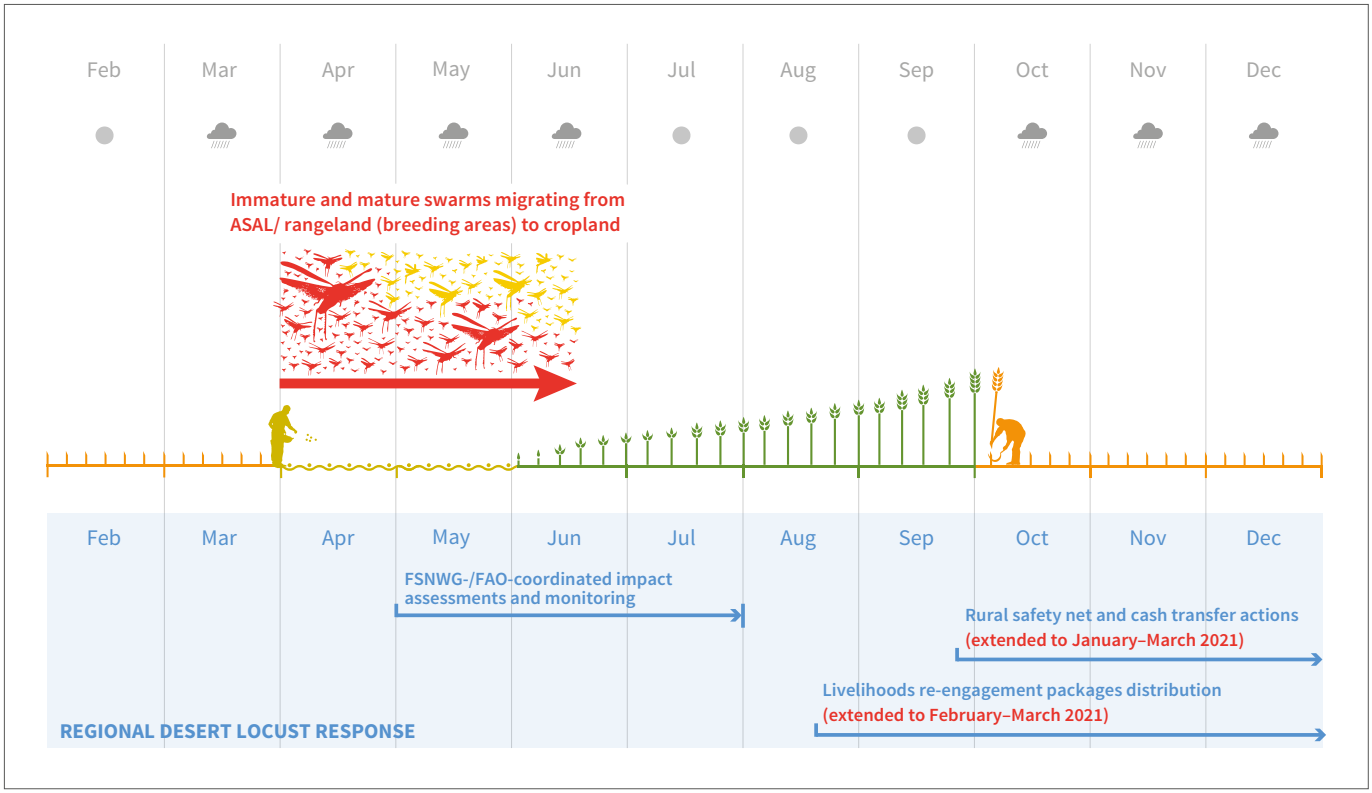


Figure 3. Planned timeframe for unimodal farming systems



With the number of people potentially impacted across the region ranging from 500 000 to 2.5 million, FAO is targeting 100 000 farming households (agro-pastoralists and farmers) under this component to receive cash transfers combined with a farming re-engagement package. The targeted number of households represents only 40 percent of the estimated number of people affected, and therefore the appeal reports only FAO's targets.

Livelihood protection is a common effort of many stakeholders and FAO will be coordinating both targeting and interventions with existing stakeholders' coordination fora. Implementation of actions from all other stakeholders (United Nations agencies, international NGOs, national NGOs, community-based organizations, government agencies and departments) are expected to complement this target, by providing livelihoods support to the majority of the remaining people in needs.

Interventions are focusing on the most at-risk areas where communities are already facing food insecurity. With up to 100 percent losses experienced at household level – and with not enough time to replant most staple crops – these families will be facing food shortages from June–July in bimodal areas and October–December in unimodal areas.

Farming households severely affected by desert locust will be targeted to benefit from cash programming (such as cash+, where the provision of cash transfers is combined with productive inputs) and the involvement in rural safety net programmes where feasible.

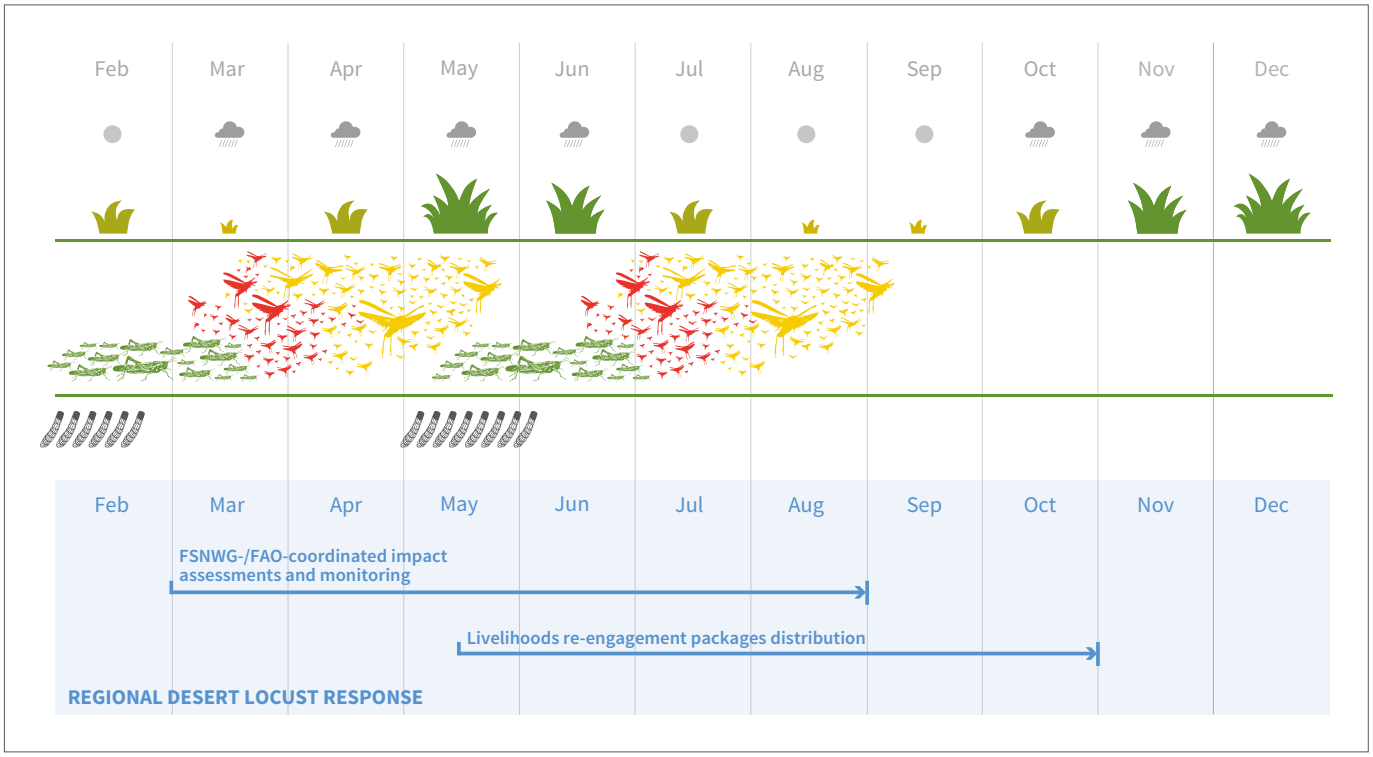
Transfers will be provided when food stocks are expected to run out and will continue on a monthly basis until just after the beginning of the next productive season (October–November 2020 for bimodal farming systems[1] and April–May 2021 for unimodal farming systems[2]). Rates will be based on the minimum expenditure basket and those established by coordination fora, including Cash Working Groups. In Yemen, specifically, FAO will provide immediate support to affected small primary producers (including farmers, livestock owners and beekeepers), agricultural labourers, tenant farmers and sharecroppers through short-term employment opportunities under the cash for work programme of the Yemen Social Fund for Development.

Input packages to re-engage locust-affected farmers in the next production season will include a diverse set of seeds to ensure a variety of nutritious foods in order to improve both the food security and nutrition status of beneficiaries. Seeds will include those of staple crops (grains and legumes) as well as vegetables.

The packages will be tailored according to each context and agroecological zone and will include handheld tools, harvest storage means (e.g. hermetic bags and locally made household silos), fertilizers and agricultural services, such as irrigation services and tractor hours.

[1] Northern Kenya, Central-South and Northeast Somalia, and South and Southeast Ethiopia.
[2] Northwest Somalia, South Sudan, Sudan, Eritrea, and North and Northeast Ethiopia. An additional month of cash support will be considered in unimodal systems, for the period from lean season to early harvest.

Figure 4. Planned timeframe for rangeland areas under bimodal systems



- Provide livestock-based livelihoods packages.
  As desert locust are breeding, hatching and maturing mainly in grazing areas of the arid and semi-arid lands across the region, there are already reports of up to a 40 percent reduction in pasture availability. While during the rainy season pasture lands regenerate rapidly, if infestations continue on rangelands up to the dry season, livestock-holding households (especially those with reduced mobility) will need immediate access to survival and supplementary feeding programmes during the July–September period to: (i) avoid animal stress; and (ii) prevent deteriorations in animal health, which ultimately impact livestock productivity and household malnutrition – especially in children under five years of age.

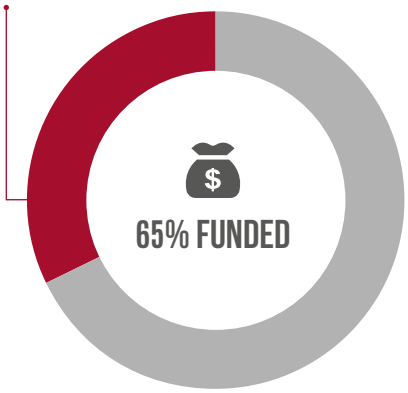
  By providing both roughage (e.g. hay) and concentrates (e.g. multinutrient blocks, pellets and mixed rations) sufficient to sustain core breeding livestock during the July–September period, weight loss will be limited and health status sustained until the rangelands recover in October, with the start of the next rainy season. As much as possible, the programme is sourcing feed and fodder from local surplus, with special efforts made to facilitate and promote the harvesting, baling/briquetting from producing areas. This action will, as much as possible, build on local commercial channels, to boost the local economy while addressing the needs of the most vulnerable.

  FAO will continue to closely monitor and conduct impact assessments to inform the livelihoods response targeting livestock holders.

  At present, FAO is targeting 53 000 livestock-keeping households under this component.

FUNDING GAP

USD 3.53 million



Desert locust dashboard

fao.org/locusts/response-overview-dashboard/en/

▶ 3. Coordination and preparedness

Budget required
USD 10.16 million

Funding needed by
August 2020

- Deploy rapid surge support
  Twelve experts out of the 19 deployed since 24 January are still providing support to FAO country offices and governments. While additional deployment has been compromised by COVID-19, it will be essential to maintain expertise in the region for as long as necessary through the extension of contracts for consultants and experts.

- Facilitate regional partnerships and collaboration
  The regional FSNWG, co-led by FAO and IGAD, will continue to provide a framework for harmonized food security analysis, taking into account impact assessments, and providing the technical means for countries to conduct timely assessments. Furthermore, IGAD is leading ministerial briefings on desert locust and discussions should also lead to a mid- to long-term preparedness and capacity building plan for which FAO, DLCO-EA and the Commission for Controlling the Desert Locust in the Central Region are providing strategic and technical support.

- Enhance regional advocacy and national-level coordination
  In collaboration with OCHA, FAO will continue to lead dialogue and advocacy with partners through monthly briefings. FAO and OCHA will also facilitate the inclusion of specific desert locust-related livelihoods interventions into country-based coordination, through Food Security Clusters (Somalia, South Sudan, the Sudan and Yemen) or through government-led working groups where clusters are not activated (Djibouti, Eritrea, Ethiopia, Kenya, Uganda and the United Republic of Tanzania). Where applicable, this will translate into adjustments to Humanitarian Response Plans. The FSNWG will continue to organize regular press conferences to highlight food security impact analyses and inter-governmental collaboration.

- Strengthen regional and national capacity and enhance preparedness
  Given the possibility of a cause-effect relationship between climate change and desert locust infestations, it is imperative to strengthen regional and national capacity for surveillance and control operations. At regional level, this will include supporting DLCO-EA by purchasing control equipment. At country level, it will include supporting the development and updating of regional and national contingency plans for desert locust crises, promoting learning across countries to boost competencies in forecasting, surveillance and control, and exploring the use of new technologies for surveillance, such as drones. Such efforts will take into consideration guidance from the Commission for Controlling the Desert Locust in the Central Region.

FAO desert locust upsurge appeal for rapid response and anticipatory action – budget for January–December 2020 (in USD)

Activities	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	South Sudan	Sudan	United Republic of Tanzania	Uganda	Yemen	Total
1. Curb the spread of desert locust	**2 485 000**	**6 335 000**	**48 250 000**	**21 600 000**	**22 600 000**	**3 450 000**	**7 300 000**	**445 000**	**5 850 000**	**3 400 000**	**121 715 000**
Continuous surveillance	1 178 000	1 500 000	14 000 000	5 200 000	3 400 000	800 000	1 000 000	445 000	1 850 000	1 100 000	30 473 000
Ground and aerial control	1 257 000	4 635 000	32 500 000	15 750 000	17 800 000	1 750 000	6 300 000	-	3 500 000	2 200 000	85 692 000
Assess impacts and monitor environmental, health and safety standards	50 000	200 000	1 750 000	650 000	1 400 000	900 000	-	-	500 000	100 000	5 550 000
2. Safeguard livelihoods and promote early recovery	**3 290 000**	**4 000 000**	**29 250 000**	**10 500 000**	**34 300 000**	**6 900 000**	**1 500 000**	**-**	**6 825 000**	**3 200 000**	**99 765 000**
Provide farming re-engagement packages (including cash)	2 250 000	3 000 000	26 250 000	7 500 000	26 000 000	6 000 000	800 000	-	4 875 000	1 700 000	78 375 000
Provide livestock-based livelihoods packages	1 040 000	1 000 000	3 000 000	3 000 000	8 300 000	900 000	700 000	-	1 950 000	1 500 000	21 390 000
3. Coordination and preparedness	**50 000**	**1 000 000**	**1 500 000**	**750 000**	**1 000 000**	**250 000**	**200 000**	**60 000**	**150 000**	**150 000**	**10 160 000**
Deploy rapid surge support											1 500 000
Facilitate regional partnerships and collaboration											500 000
Enhance regional advocacy and national-level coordination											500 000
Strengthen regional and national capacity and enhance preparedness	50 000	1 000 000	1 500 000	750 000	1 000 000	250 000	200 000	60 000	150 000	200 000	7 660 000*
TOTAL FUNDING REQUIRED	**5 825 000**	**11 335 000**	**79 000 000**	**32 850 000**	**57 900 000**	**10 600 000**	**9 000 000**	**505 000**	**12 825 000**	**6 800 000**	**231 640 000**

* This subtotal includes USD 2.5 million for regional capacity-building and preparedness.

Saving livelihoods saves lives

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