



©FAO

SOUTHERN AFRICA EMERGENCY LOCUST RESPONSE AND PREPAREDNESS (SAELORP)

June 2022

SDGs:



Countries: Regional (Botswana, Namibia, Zambia and Zimbabwe)

Project Code: TCP/SFS/3801

FAO Contribution: USD 500 000

Duration: 27 August 2020 – 26 December 2021

Contact Info: FAO Subregional Office for Southern Africa
FAO-SFS@fao.org

Implementing Partners

Southern African Development Community (SADC) and Ministries of Agriculture (Botswana, Namibia, Zambia and Zimbabwe).

Beneficiaries

Vulnerable farming communities.

Country Programming Framework (CPF) Outputs

FAO Strategic Objective 5: Increase the resilience of livelihoods to threats and crises. Outcome 5.4: Countries prepared for and managed effective responses to disasters and crises. Regional Initiative 3: Building Resilience in Africa's Drylands.



BACKGROUND

At least four countries in Southern Africa (Botswana, Namibia, Zambia and Zimbabwe) are faced by serious outbreaks of African Migratory Locust (AML; *Locusta migratoria*). The control of hopper bands and swarms by respective governments has been only partially successful, and the pest has spread from its traditional breeding areas in the Okavango delta, Chobe wetlands and the Zambezi plains into new areas. The growing number of AML hotspots represents a potential threat to food and nutrition security and livelihoods for millions of vulnerable households in the affected countries.

In Botswana, pest outbreaks were first reported at three sites in North-West, Chobe and Ghanzi districts. By June 2020, swarms of the pest had spread to around 48 new sites, affecting an estimated 21 728 ha, comprising 730 ha of crops and 20 998 ha of grassland and pasture. The vulnerable smallholder farmers affected lost their entire crop to the pest.

Government response managed to control the swarms in no more than ten percent of the affected area and the pest continued to multiply in the 90 percent of sites where it was not controlled, allowing further outbreaks in other areas.

In Namibia, AML hopper bands and swarms spread from their initial outbreak areas to the key farming regions of Omaheke, Otjozondjupa, Kavango West and Oshikoto. From October 2019 to March 2020, at least 430 000 Namibians, most of whom lived in these areas, were faced by severe acute food insecurity and required humanitarian assistance. The region's population was thus highly vulnerable to a potential second year shock after the previous year's drought.

In Zambia, AML spread from the initial outbreak sites of Kazungula to Mwandia and Sesheke districts, where it affected an estimated 24 000 ha of croplands and grazing lands. Hopper bands and swarms of AML were also reported as far away as Kalabo district in the western part of the country according to the International Red Locust Control Organization for Central and Southern Africa (IRLCOCSA). In 2019, at least 2.3 million vulnerable people faced food insecurity and required humanitarian food assistance. Most of these people live in the Southern and Western provinces, areas affected by AML or at a high risk of the spread of the Red Locust (RL).

In Zimbabwe, in June 2020, AML swarms and hoppers infested two sites in the Chiredze district. Swarms that escaped from control operations in Chiredze reached Manicaland province, where the pest caused serious crop damage. Zimbabwe currently has an estimated 4.3 million people facing severe food and nutrition insecurity in rural areas, while another 2.2 million people in urban areas are said to be cereal food insecure. Locust damage to crops in the areas affected by Cyclone Idai would compound the problems of vulnerable communities already devastated by a multitude of shocks. The locust upsurge also threatened the efforts and investments of the government and development partners (e.g. the World Bank).

The governments of the four affected countries mounted response operations to control the pest hoppers and swarms through ground and aerial spraying. However, these had only limited success. The inability of governments and institutions such as IRLCOCSA to completely control the spreading locust threat was attributed to inadequate technical and logistical capacity, as well as insufficient financial resources. In view of this situation, SADC requested FAO assistance to support its member countries to respond to the pest threat.

IMPACT

Through project support, the capacity of SADC to coordinate and facilitate support to countries affected and at high risk from the locust threat has been significantly strengthened.

ACHIEVEMENT OF RESULTS

The project managed to effectively suppress AML and RL in the four locust-affected countries (Botswana, Namibia, Zambia and Zimbabwe). By the end of the project, there were zero reports of swarms of either locust. This was made possible by the provision of training to government locust response staff (555 across the four countries), and by intensive surveillance and control efforts by the relevant ministries of agriculture, with FAO support. The project procured and distributed specialized control equipment and environmentally friendly pesticides (including biopesticides) for use by government response teams. Control efforts prevented crop and livestock pasture damage for an estimated 2.3 million vulnerable farmers. An estimated area of 1 470 589 ha was surveyed, of which 283 728 ha were found to be infested and 62 000 ha were controlled. The project strengthened coordination through biweekly locust meetings, in collaboration with SADC, and the preparedness capacity of communities and ministries of agriculture through the provision of training and the establishment of locust response units and locust early warning systems. The project undertook the surveillance and control of AML and RL, ensuring operational and logistical support to the response. The project also provided the fast track procurement and distribution of specialized locust surveillance and control equipment and requisites, and organized awareness training on the locust threat. This contributed to building the resilience of high-risk communities in terms of better locust preparedness and more sustainable production.

IMPLEMENTATION OF WORK PLAN AND BUDGET

Most activities were implemented in a timely manner. Some delays in implementation were caused by the COVID-19 pandemic, which disrupted supplies, freight, and FAO and government office operations. Materials and equipment imported into the participating countries experienced delays in arriving at the required country destinations and distribution points. A no-cost extension to 31 December 2021 was approved, and the budget and work plan amended accordingly.

FOLLOW-UP FOR GOVERNMENT ATTENTION

Governments should make budget allocations to strengthen their national locust control units, and ensure the continued surveillance and functioning of the locust early warning system in order to be better prepared for future locust outbreaks.

SUSTAINABILITY

1. Capacity development

Locust response leveraged on existing regional protocols, policies and strategies, particularly the SADC Disaster Preparedness and Response Strategy and Fund 2016-2030. At national level, project activities were implemented through the relevant departments in the ministries of agriculture. At the start of the project, stakeholders were sensitized on the project objectives and tenure, and the need for involvement and ownership. Government staff and communities received training and sensitization on locust surveillance and control. The knowledge and skills acquired are expected to be sustained well beyond the life of the project.

2. Gender equality

The project ensured equal participation of men and women, including the disabled and youth, in project activities. Both men and women had equal access to the facilities offered by the project in terms of information, skills and materials.

3. Environmental sustainability

Project stakeholders, including government locust response teams and communities in the affected areas, received sensitization and awareness information on environmental protection during the inception phase of the project. The project used the biopesticide Metarhizium for locust control in ecologically sensitive areas affected by locusts.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

Human rights issues were not addressed by the project.

5. Technological sustainability

The project introduced the use of the elocust3m application as part of the locust early warning system in the affected countries. The technology is applicable in areas with Internet connectivity and also in areas where connectivity does not exist at the point of data collection. Users already have some level of familiarity with the use of this technology, an aspect that strengthens technological sustainability.

6. Economic sustainability

The project augmented ongoing locust response interventions by governments in the affected countries, recognizing that people's food and nutrition security and livelihoods needed to be protected from the socio-economic losses that could be inflicted by the pest. It is expected that governments will maintain the skills and knowledge acquired during the project.



DOCUMENTS AND OUTREACH PRODUCTS

- ❑ **FAO.** 2021. *On the frontlines: Battling Namibia's worst locust crisis.* May 2021. <http://www.fao.org/africa/news/detail-news/en/c/1402098/>.
- ❑ **FAO.** 2020. *Locust outbreaks threaten food security in southern Africa.* September 2020. <http://www.fao.org/africa/news/detail-news/en/c/1306167/>.
- ❑ **Mbazo, T.** 2020. *Pests threaten Botswana's breadbasket Pandamatenga.* The Midweek Sun. September 2020. <https://www.pressreader.com/botswana/the-midweek-sun/20200909/281535113397315>.
- ❑ **Xinhuanet.** 2021. *Namibian farmers grapple with locust invasion amid COVID-19.* March 2021. http://www.xinhuanet.com/english/2021-03/15/c_139812314.htm.

ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Effective emergency locust control in Southern Africa through strengthened capacity of SADC and regional locust control bodies like ILRLCOCSA to support locust-affected and high-risk countries		
Outcome	Resilience of communities and smallholder farmers in the control and management of locust outbreaks strengthened for sustainable food production		
	Indicator	Zero reports of locust incidences in the region and resilience of communities and smallholder farmers strengthened.	
	Baseline	Four countries in SADC reported significant infestations by locust with different degrees of intensity.	
	End Target	Zero reports of locust swarms in the infected countries.	
	Comments and follow-up action to be taken	There were zero reports of swarms of AML and Red Locust RL by the end of the project in December 2021. This was made possible by the intensive surveillance and control of the pest by the ministries of agriculture in the four countries, preventing the pest from causing serious damage to crops and livestock grazing of the estimated 2.3 million vulnerable farmers in the affected countries. An estimated 1 470 589 ha were surveyed, of which 283 728 ha were found to be infected and 62 000 ha were controlled. Communities received awareness training in locust identification, surveillance and reporting for early locust detection. This contributed to building the resilience of high-risk communities. Regular locust surveillance and monitoring by staff and community members in all affected areas need to be continued.	
Output 1	Locust populations are controlled through emergency response		
	Indicators	Target	Achieved
	Swarming locust populations controlled in all affected countries.	All swarming populations of locust eradicated in the region.	Yes
Baseline	Four countries of SADC have active swarming populations of locusts.		
Comments	The affected member states (Botswana, Namibia, Zambia and Zimbabwe) were supported to suppress populations of AML and RL. No swarms of AML and RL were reported by the end of the project.		
Activity 1.1	SADC and countries develop regional locust response plan and national locust response action plans, respectively		
	Achieved	Yes	
	Comments	A regional Locust Response Plan was developed for the locust-affected countries with the participation of the ministries of agriculture and technical support from FAO and SADC. Furthermore, FAO technically supported the ministries of agriculture in all affected countries to develop national locust action plans that aligned with the regional Locust Response Plan. These guided the ongoing surveillance and response interventions. The challenges of the COVID-19 pandemic caused a delay in the implementation of activities.	
Activity 1.2	Countries procure surveillance and mapping equipment, spray equipment and communication equipment with assistance from FAO country offices		
	Achieved	Yes	
	Comments	Through the project, FAO undertook the emergency procurement of monitoring, control and mapping equipment in support of country locust response teams. FAO procured office communication and reporting equipment to ensure timely reporting on the locust situation. This included: 185 mobile tablets; 22 laptops; 18 cellular phones; 8 network routers; 1 digital camera; 9 Global Positioning Systems; 19 binoculars; 41 motorized sprayers; 17 freezers; 300 personal protective equipment (PPE); and 6 knapsack sprayers. More communication equipment will be required in the event of new locust outbreaks.	
Activity 1.3	Countries procure environmental friendly pesticides including Metarhizium and personal protective equipment		
	Achieved	Yes	
	Comments	Using emergency procurement provisions, the project procured 200 kg of biopesticide Metarhizium and 300 sets of PPE, and distributed these to all four affected countries. The biopesticide was used to control locusts in ecologically sensitive areas where synthetic pesticides were inappropriate.	

Activity 1.4	FAO supports operational and logistical requirements and requisites through FAO Country Offices		
	Achieved	Yes	
Activity 1.4	Comments	FAO country offices in Botswana, Namibia, Zambia and Zimbabwe supported locust operational and logistic activities. The project provided daily subsistence allowance, fuel and lubricants for field surveillance and control operations by government locust response teams. FAO procured mobile telephones for elocust3m surveillance. In Botswana, FAO contracted an aircraft for a 14-hour locust aerial surveillance in Chobe. More support and training are needed in the use of the elocust3m mobile application.	
	Countries provide support to locust control ground operations with technical and financial support from FAO		
Activity 1.5	Achieved	Yes	
	Comments	The FAO provided country offices with technical and financial support to enable the affected countries to conduct an effective and timely control of the AML and RL threat, including the development of work plans. FAO sent field budget authorizations to all the affected countries in order to support the financial needs of the emergency locust response. The COVID-19 pandemic disrupted both locust operational and field operations activities as a result of the restrictions on gatherings and movement. Continuous locust training is needed.	
Activity 1.6	Contract relevant service providers to assist countries to implement the requisite activities		
	Achieved	Yes	
Activity 1.6	Comments	Various service providers were engaged by the project to support the locust response. The response in Zambia was complemented by ILRCOCSA for the implementation of aerial surveillance and spraying in line with existing agreements outside the project. Botswana contracted a private service provider to undertake surveillance operations in Chobe for a limited time. The government in Namibia requested some security wings to support locust surveillance operations. The COVID-19 restrictions hindered the repair and servicing of ILRCOCSA airplanes in South Africa, thereby limiting their capacity.	
	Coordination capacity of SADC countries for the locust response is enhanced through existing mechanisms		
Output 2	Indicators	Target	Achieved
	Coordination capacity for locust management built.	Coordination capacity for locust management is built in the four countries.	Yes
Baseline	Inadequate coordination for locust management exists in all SADC countries.		
Comments	FAO supported SADC by coordinating regular meetings on a biweekly basis to strengthen communication and the sharing of locust information and knowledge and control operations across the four locust-affected countries. Regular locust update meetings need to continue in order to ensure that there is continuous information-sharing and that the region has updated information on the locust outbreaks.		
Activity 2.1	FAO Subregional Office for Southern Africa (SFS) to support SADC to establish intercountry locust monitoring and field response standard operating procedures		
	Achieved	Yes	
Activity 2.1	Comments	FAO was tasked to support SADC in establishing an intercountry locust monitoring mechanism. FAO leveraged on existing SADC disaster risk reduction and emergency response mechanisms to rally the convergence of affected countries on the locust coordination platform. Through the elocust3m application, hotspot areas in the affected countries were mapped. The information collected from the surveillance and monitoring activities was used for decision-making. Continued monitoring and surveillance of hotspot areas are encouraged.	
	FAO SFS to organize locust joint virtual or physical planning meetings between countries and key stakeholders to support SADC		
Activity 2.2	Achieved	Yes	
	Comments	FAO supported SADC by organizing and facilitating virtual biweekly locust meetings to provide regular updates on locust activity in the affected countries.	
Activity 2.3	FAO SFS to undertake joint project monitoring with partners. A participatory monitoring framework that will enable the capturing of progress against indicators will be developed with the participation of key implementing partners		
	Achieved	Yes	
Activity 2.3	Comments	Through the various ministries, the affected countries participated in, and contributed to, the progress of monitoring and its associated reporting framework under the auspices of SADC and SFS.	

Activity 2.4	FAO to support SADC to create awareness to governments in the region at high level meetings		
	Achieved	Yes	
	Comments	FAO worked with the SADC Food, Agriculture and Natural Resources Directorate to create awareness and advocacy on the AML and RL situation in the region. FAO participated in developing locust update information that was used to brief the ministers of agriculture at the ministerial meeting held during the project.	
Output 3	Preparedness capacity of communities and relevant support institutions for control of locust infestations strengthened		
	Indicators	Target	Achieved
	Early warning system set up to manage locust invasions.	The four countries possess functional early warning systems in place.	Yes
Baseline	No early warning system at national level is set up for monitoring locust.		
Comments	<p>Ministries of agriculture formed locust response teams and identified community representatives in the affected areas that required training in locust management and the use of the elocust3m application to strengthen the reporting and early warning system. An estimated 555 government extension locust response staff members were trained in locust surveillance, monitoring and management. The project also sensitized and created locust awareness to over 1 200 community locust-monitoring agents.</p> <p>The procured mobile gadgets for the elocust3m application were distributed at both national and community level; this strengthened locust preparedness capacity.</p> <p>There is a need to procure more smart phones in order to be able to use the elocust3m application for reporting purposes.</p>		
Activity 3.1	FAO SFS to develop community locust early warning early action standard procedures for countries		
	Achieved	Yes	
	Comments	<p>A locust early warning system was set up for all four affected countries with community participation using existing structures of the ministry of agriculture at all levels. The training of staff in the effective management of locusts at community level using the elocust3m early warning system was undertaken. The trained staff then went on to train 1 200 community locust-monitoring agents and other stakeholders to support the early warning system in the four locust-affected countries.</p> <p>In addition to enhancing the competencies of communities and other key stakeholders in the affected districts to carry out effective monitoring, surveillance and reporting, using FAO's elocust3m application, a new Excel database was developed in Zambia to enable community-level extension officers to upload data that the elocust3m system is not able to capture.</p> <p>Although the eLocust3m application was utilized following tailor-made training, there is a need to have formal standard reporting procedures using the application.</p>	
Activity 3.2	FAO to support the establishment of National Locust control units within existing national plant protection entities		
	Achieved	Yes	
	Comments	FAO supported the establishment of national locust control units in the relevant ministry of agriculture departments in all four locust-affected countries.	
Activity 3.3	FAO SFS to support the training of trainers (ToT) for relevant IRLCOCSA and government staff. Given the ongoing COVID-19 situation, the training may be physical or virtual depending on the obtaining situation at the time		
	Achieved	Yes	
	Comments	FAO provided ToT for pesticide risk awareness at regional level. At national level, a total of 618 response staff members was trained in pesticide risk awareness and management across the four countries, as follows: 35 in Botswana, 158 in Namibia, 385 in Zambia and 40 in Zimbabwe.	
Activity 3.4	FAO SFS to support the development of livelihoods and ecological profiles		
	Achieved	No	
	Comments	The livelihoods and ecological profiles are not yet developed in the affected countries. This is expected to be achieved through ongoing complementary projects.	
Activity 3.5	FAO SFS to support countries to hold ToT for communities virtually or physically depending on the COVID-19 situation at the time		
	Achieved	Yes	
	Comments	An estimated 1 200 community locust awareness and monitoring agents were trained across the four countries. Zambia had the highest number of trained community locust awareness and monitoring agents (858) under the project; the other three countries trained 342 agents. This activity needs to be scaled up to reach all locust high-risk areas in order to enhance community preparedness for locust outbreaks.	

Activity 3.6	Countries to develop and disseminate awareness materials in local languages for communities		
	Achieved	Yes	
	Comments	The four countries developed and disseminated locust awareness materials in local languages for communities. An estimated 3.5 million people were sensitized through locust outreach materials. There is a need to develop more brochures, leaflets and fliers translated into local languages.	
Activity 3.7	Countries to establish community locust surveillance and monitoring systems at national levels		
	Achieved	Yes	
	Comments	Countries established community locust surveillance and monitoring systems at local level. They were supported by locust response units with FAO support.	
Activity 3.8	FAO SFS to procure surveillance and mapping equipment for communities and IRLCOCSA		
	Achieved	Partially	
	Comments	Support to IRLCOSA was cancelled after a review of its competency for the task. FAO SFS procured surveillance and mapping equipment to support locust-affected communities in all the affected countries. The equipment, however, was for designated locust response staff.	
Activity 3.9	FAO SFS to provide logistical support for IRLCOCSA aerial and ground operations		
	Achieved	No	
	Comments	This activity was discontinued following further review of IRLCOCSA's aerial capability.	
Activity 3.10	Countries to support the establishment of sustainable energy for community reporting and communication		
	Achieved	No	
	Comments	This activity was discontinued as a result of COVID-19 pandemic challenges in the procurement process.	
Activity 3.11	Countries to procure community information technology (IT) communication equipment through assistance from FAO Country Offices (computers, mobile telephones)		
	Achieved	Yes	
	Comments	With support from FAO, the four countries procured IT equipment to support extension staff and communities in locust surveillance.	
Activity added	Provide support to servicing of IRLCOCSA spray and surveillance aircraft/helicopter		
	Achieved	No	
	Comments	The activity was cancelled following a review of IRLCOCSA's aerial capability.	
Output 4	Regional Locust Risk Communication Strategy developed for national and regional level		
	Indicators	Target	Achieved
	Risk communication modalities set up to manage locust invasions.	The four targeted SADC member states to implement and benefit from the risk communication strategy and share with the rest of the member states.	Yes
Baseline	Only four countries, members of IRLCOCSA, have some kind of risk communication. Eleven countries do not have any risk communication modalities.		
Comments	A regional locust risk communication strategy was developed to guide communication on locust response in the four affected countries.		
Activity 4.1	Countries develop targeted awareness material		
	Achieved	Partially	
	Comments	All countries developed targeted awareness material using the AML Field Guide, brochures and leaflets. Locust awareness materials were developed and distributed to locust-affected districts in both English and local languages.	
Activity 4.2	Countries implement an outreach programme through electronic media (television, radio), Twitter, WhatsApp, print media, banners, etc.		
	Achieved	Partially	
	Comments	Countries implemented an outreach programme through electronic media (television, radio), Twitter, WhatsApp, print media, banners etc. All countries established locust response WhatsApp groups to share information and updates on the locust situation in their respective countries.	

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

Food and Agriculture Organization of the United Nations

Viale delle Terme di Caracalla
00153 Rome, Italy