



Food and Agriculture
Organization of the
United Nations



Real-time evaluation of FAO's response to desert locust upsurge

2020-2021

Phase II

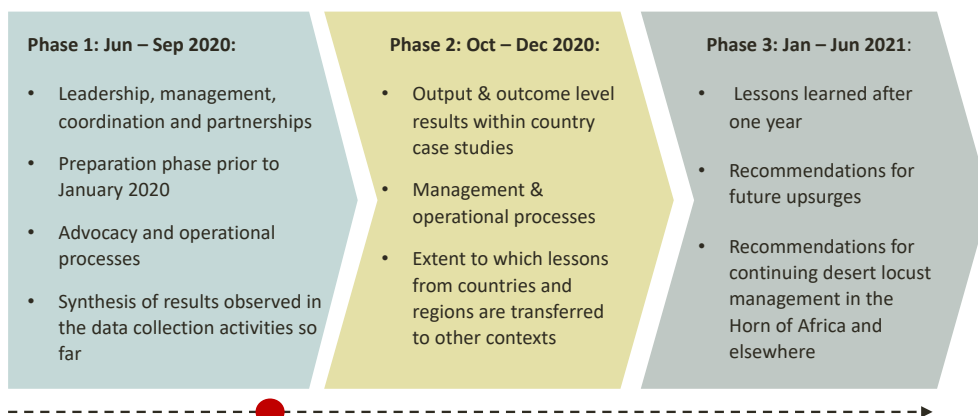
EXECUTIVE SUMMARY

1. Introduction

- 1 Over the course of 2020-2021, the most devastating desert locust upsurge of the past 25 years has spread across parts of the Middle East, the Greater Horn of Africa and South West Asia. The upsurge poses an unprecedented risk to livelihoods and food security in some of the most food insecure countries in the world. The Food and Agriculture Organization of the United Nations (FAO) and its partners have mobilized more than USD 232 million since January 2020. The response includes three key pillars: i) curbing the spread of desert locusts (including surveillance); ii) safeguarding livelihoods and promoting recovery; and iii) coordination and preparedness of the rapid surge support.
- 2 In this context, the FAO Office of Evaluation (OED) has been requested to carry out a real-time evaluation, conducted across three phases spread over one year. Each phase will cover specific aspects of the response, as presented in Figure 1.

Figure 1 • Real-time evaluation (RTE) phases

EVALUATION PHASES: KEY ISSUES INVESTIGATED

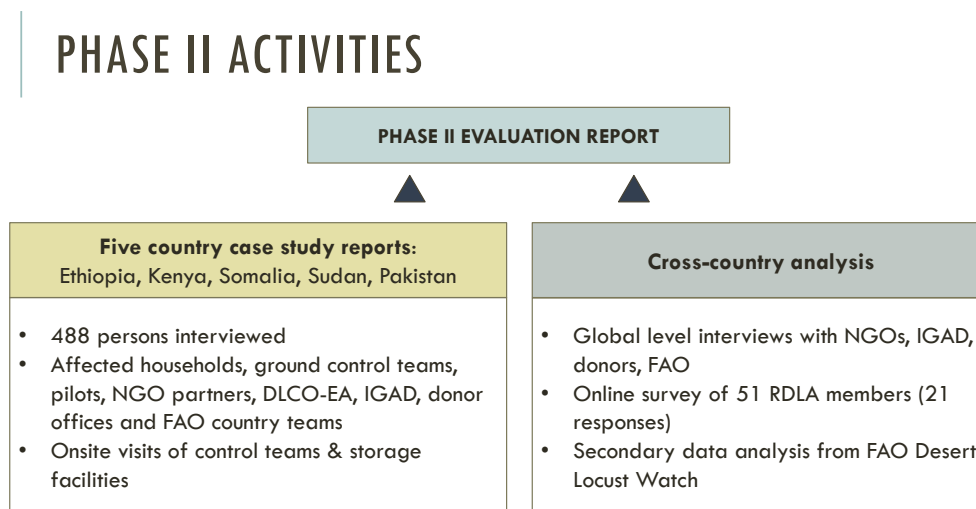


Source: developed by the evaluation team.

2. Phase II. Data collection activities

- 3 Give the focus on results at field-level, the evaluation team focused their activities on the implementation of country case studies deploying nationally-based desert locust and livelihoods experts to conduct field and site visits, key informant interviews and focus group discussions with the major stakeholders involved in the management of the scale-up appeal and its response. In addition, the team conducted additional key informant interviews with strategic stakeholders at the global-level and a survey of non-governmental organizations (NGOs) involved in the response.

Figure 2 • Data collection activities



Source: developed by the evaluation team.

- 4 A total of **488 individuals were consulted** during the course of the Phase II interviews, including 475 through country case studies, and 13 at global level covering relevant FAO headquarters personnel, regionally-based donors, Intergovernmental Authority on Development (IGAD), the World Bank, and members of the Regional Desert Locust Alliance (RDLA) of NGOs operating in the Horn of Africa. This was supplemented by an **online survey of 51 RDLA members**, of which 21 provided responses (see the Survey report in Annex). A full list of persons interviewed is presented in Appendix 1 of the main report.
- 5 **Case studies were conducted in Ethiopia, Kenya, Pakistan, Somalia, and Sudan.** These countries were selected on the basis of the locust presence during the period of the field visits, combined with security and access challenges in alternative countries (e.g. the Islamic Republic of Iran and Yemen). Each case study included interviews with FAO country office personnel engaged in the locust response, relevant donors and multilaterals in-country, staff of the ministries of agriculture and plant protection departments, control teams and pilots, affected communities, local government bodies and NGOs. Visits were conducted to control sites, storage facilities and samples of farming communities in receipt of livelihood protection assistance. Each national expert produced a minimum of one report. In Pakistan and Sudan, where livelihood operations were not being conducted at the time of the case studies, only one report was produced, focused on the survey and control operations. In Kenya, two reports were produced: one covering locust survey and control, and the other covering livelihood protection. In Somalia, due to the mixed expertise of the national expert and the divergent country contexts, the national consultant produced two reports covering both locust survey and control and livelihoods protection, but treating Puntland and Somaliland as separate country studies.



3. Findings

3.1 Relevance and timeliness

- 6 The surveillance, control forecasting and communication efforts conducted by FAO and its partners increased the preparedness, pre-positioning and planning of locust survey and control efforts. FAO supported surveillance and control capacities in a timely manner, in both frontline and invasion countries in the Horn of Africa and South West Asia, which had clearly observable positive effects on the preparedness of countries to control the upsurge. In particular, the data provided by the Desert Locust Information Service (DLIS) was used by control teams to help plan operations in real-time. Delays were noticed in procurement and supply of equipment for control operations, which acted as a hindering factor, particularly in the timeliness of ground operations – although notably FAO still delivered in a timely manner, despite the challenges observed. On the other hand, some delays were observed in rolling out livelihood packages, which impacted desert locust-affected communities in some locations. Whilst livelihood packages were overall well-tailored to individual and community needs, some challenges regarding coverage and appropriateness of livelihood support were nevertheless observed in specific cases.

3.2 Results observed

- 7 FAO made significant contributions across the full spectrum of preparation, surveillance and control of locust swarms in the Horn of Africa and South West Asia. The Organization also contributed to reducing the food insecurity of locust-affected households in the Horn of Africa. Control operations were successful in treating significant areas of at-risk pastoral and agricultural land in the Horn of Africa and South West Asia (including 161 071 ha in Kenya, 210 000 ha in Sudan, 250 000 ha in Somalia and 1.2 million ha in Ethiopia). Livelihoods packages were distributed across the Horn of Africa, reaching 300 000 households in desert locust-affected communities. FAO worked with its partners to integrate environmental, health and safety (EHS) concerns into the locust response, with mixed results. FAO provided EHS training, training of trainers, and direct provision of equipment such as drum crushers and cleaners. Nevertheless, instances of poor pesticide storage conditions and EHS practices were observed during evaluation site visits in Ethiopia, Pakistan, Somalia and Sudan. Some unintended consequences of the control operations were also reported, although these were mostly anecdotal and small-scale.

3.3. Enabling factors and constraints

- 8 Coordination with national and local actors was cited as the most common enabling factor in the locust control and livelihood protection work in all country case studies. FAO's regular coordination meetings, open information sharing and strength of partnerships were all reported as being the main enabling factors in the success of the response. In addition, surveillance capacity across the Horn of Africa and South West Asia was enhanced through a combination of new technology, robust data cleaning processes, and strategic and timely communication to partners.
- 9 Challenges were noted around the procurement of equipment, notably for ground control operations in the Horn of Africa. Procurement delays were caused by a range of factors, covering the full spectrum of the supply chain: from supplier constraints making it difficult to scale-up production rapidly enough at the start of the upsurge; through difficulties negotiating contracts with suppliers and matching technical specifications to supply; challenges arising from the level of human resources available to manage the centralized procurement process; and inevitable external challenges associated with international transit and last-mile delivery during a global pandemic. Notably, some lessons from previous crises on streamlining procurement systems were not fully implemented prior to this upsurge, contributing to the problems observed.

- 10 Stock management was also a challenge, notably in Ethiopia, Kenya and Pakistan. Human resources capacity also posed a persistent constraint on operations, although this was partially mitigated by the early phase technical support provided to invasion countries. External hindering factors to FAO's response included weaknesses in the regional architecture for locust control in the Horn of Africa. Insecurity and lack of access posed a significant constraint to operations in Ethiopia and Somalia and, to a lesser degree, parts of northern Kenya. Lastly, COVID-19 also constrained the desert locust control and surveillance activities in several countries.

3.4 Coordination

- 11 FAO performed very well on coordination of what was a highly complex, multi-component, multi-actor response. Evidence suggests that FAO developed a context-relevant coordination system, well suited to the cross-border and dynamic nature of desert locust upsurges, as well as the pre-existing capacity and response architecture in the Horn of Africa and South West Asia. FAO also sought to build subnational coordination capacity through engagement of local and subnational governance structures, most notably in Pakistan and Somalia, where provincial government bodies have significant roles in the locust response. FAO's information management systems were also highly regarded, with significant work going into collecting and sharing survey data fit for use during control operations and for national strategic prioritization efforts as the locust upsurge evolved. Areas where FAO could have improved coordination efforts included clarifying roles and decision-making procedures in the early stages of the livelihood protection response, as well as increasing the participation and influence of national and local civil society organizations in the design and mapping of livelihood activities.

3.5 Innovation and learning

- 12 FAO deployed innovative approaches to surveillance operations throughout the Horn of Africa and Pakistan during the locust upsurge, which had observable impacts on the quality and reach of survey data. FAO helped to implement use of insect growth regulators (IGRs) and biopesticides in areas where it had not been used before, with particular success in Somalia and emerging results in parts of Kenya and Pakistan. Less innovations were seen in the livelihoods response, although some new approaches were observed in Ethiopia. FAO did make efforts to help country teams learn from each other throughout the reporting period, which was cited as encouraging learning and process improvement between teams during the upsurge, although a more systematic approach to sharing learning and innovation could improve the response in the medium- and long-term.





4. Conclusions and recommendations

4.1 Conclusions

EFFECTIVENESS

- 13 FAO made significant contributions across the full spectrum of preparation, surveillance and control of locust swarms and livelihood protection in the Horn of Africa and South West Asia.
- 14 FAO contributed to the reduction of swarm size and damage to crops and livelihoods assets in the Horn of Africa and South West Asia; and helped to guard against the spread of locust movements into the Sahel.
- 15 FAO also contributed to reducing the food insecurity of locust-affected households in the Horn of Africa.

RELEVANCE AND TIMELINESS

- 16 Support was well-tailored to national capacities and food security contexts in most cases.
- 17 FAO faced some specific challenges in adapting its response to the political contexts in Ethiopia and Somalia.
- 18 The decision to scale-up livelihoods operations in the third quarter of 2020, while based on good data regarding damage assessments in the region, did impact the utility and relevance of some of the support provided.

ENABLING FACTORS AND CONSTRAINTS

- 19 Some issues were observed in pesticide selection by individual countries, which impacted the effectiveness of control operations.
- 20 The locust response took place in a uniquely challenging external context.
- 21 Procurement processes hampered FAO's efforts to ensure timely supply of equipment and pesticides for control operations.

COORDINATION

- 22 FAO performed very well on the coordination of what was a highly complex, multi-component and multi-actor response, including most notably the transparency of its learning processes.
- 23 FAO was able to build and maintain new partnerships in this response, including with foundations and private actors.

INNOVATION AND LEARNING

- 24 The response utilized a number of innovations in survey and control approaches combined with good information sharing between countries; but more could have been done to strategically embed innovation and learning across contexts.
- 25 Good efforts have been made to increase the strategic, medium, long-term, learning across contexts and partners, as FAO emerged from the initial emergency phase in 2020. If continued, these efforts will improve the preparedness of the international community to future locust upsurges.

4.2 Recommendations

- 26 The following recommendations are drawn from the conclusions presented in section 4.1, as well as the country case study reports.
- 27 Six priority areas for recommendations emerged from this process, with distinct recommendations being made across each one:
- i. country-level training and capacity development
 - ii. national locust control architecture
 - iii. procurement
 - iv. pesticide management
 - v. livelihoods support
 - vi. innovation and learning
- 28 For each priority area, a range of recommendations have been made targeting either FAO headquarters, donors and partners, or FAO country offices. For ease of reference, each recommendation has been coded either "**MEDIUM-TERM**" (i.e. through autumn and winter 2021) or "**LONG-TERM**" (i.e. beyond that).

#	RECOMMENDATION	TARGET
PRIORITY AREA 1 - COUNTRY-LEVEL TRAINING AND CAPACITY		
Recommendation 1.	Continue supporting national capacity for survey and control operations, while focusing on extending capacity to remote, hard-to-reach areas and including community groups. MEDIUM-TERM.	FAO headquarters and donors
Recommendation 2.	In Ethiopia, increase the engagement of FAO country office technical personnel in field-level monitoring during desert locust operations. MEDIUM-TERM.	FAO Ethiopia
Recommendation 3.	In Ethiopia, support technical capacity for survey and control operations within the regions, to ensure that regional governments are able to act more quickly in future emergencies. LONG-TERM.	FAO Ethiopia
Recommendation 4.	In Kenya, support capacity for surveillance and control in remote areas, particularly in the Rift Valley and western Kenya. MEDIUM-TERM.	FAO Kenya
Recommendation 5.	In Pakistan, improve the technical capacity building and refresher training at both federal and provincial levels, with a focus on including community groups and farmers wherever possible, to ensure hatching sites and hopper bands are identified prior to swarm formation. MEDIUM-TERM.	FAO Pakistan
Recommendation 6.	In Somalia, support technical capacity at regional and district levels to enhance the capacity of localized survey and ground control teams. MEDIUM-TERM.	FAO Somalia
Recommendation 7.	In Sudan, continue supporting technical assistance to field-level teams as they deal with small-scale desert locust activity during autumn and winter 2021. MEDIUM-TERM.	FAO Sudan
PRIORITY AREA 2 - NATIONAL LOCUST CONTROL ARCHITECTURES		
Recommendation 8.	Support national and federal governments to build and embed robust governance structures and policies for locust response. MEDIUM-TERM.	FAO headquarters
Recommendation 9.	Open a dialogue with the Ethiopian Ministry of Agriculture regarding the establishment of an autonomous operational unit dedicated entirely to locust management. MEDIUM-TERM.	FAO Ethiopia





Recommendation 10.	In Somalia, continue supporting capacity within the Ministry of Agriculture to enhance national capacity for survey and control, while pursuing new avenues for disseminating locust information and awareness across national and regional authorities. MEDIUM-TERM.	FAO Somalia
Recommendation 11.	In Sudan, maintain support for the operational costs of survey and control in the short-term, to ensure control operations are continuous, timely and unaffected by national budgetary constraints. MEDIUM-TERM.	FAO Sudan
Recommendation 12.	Work closely with the Sudanese government to build a well-defined national contingency plan for locust response. MEDIUM-TERM.	FAO Sudan
Recommendation 13.	In Sudan, support the capacity and reach of the newly established national Locust Control Department. MEDIUM-TERM.	FAO Sudan
Recommendation 14.	In Sudan, support the newly established national desert locust training and applied research centre in the Red Sea coast. MEDIUM-TERM.	FAO Sudan
PRIORITY AREA 3 - PROCUREMENT		
Recommendation 15.	<p>Review the nature of the challenges around the supply chain and along the procurement process to remove constraints on timely response to future locust emergencies. Options should include:</p> <ul style="list-style-type: none"> i. Increasing capacity in the central procurement team during locust emergencies, indexed against the size of the operational response. ii. Increasing technical capacity in agricultural aircraft deployment for anticipatory action and emergency responses, as part of the wider initiative to strengthen emergency response capacity in this area. iii. Working with external providers or partners such as the International Civil Aviation Organization (ICAO) to streamline agricultural aircraft (asset) procurement during review locust upsurges ensuring the technical soundness and regulatory framework. iv. Exploring the possibility of future aircraft contracts to cover regional operations or otherwise include the ability to move between countries easily, so as to facilitate the movement of aerial assets as the upsurge moves and evolves, without the need for separate contracts in each country of operation. v. Establishing an annual internal cross-divisional meeting mechanism aimed to conduct joint Desert Locust supply-chain and procurement risk analysis, aimed to identify solutions/mitigation measures to improve the effectiveness and efficiency of upsurge responses vi. Increasing – and annually reviewing – the pre-approved supplier lists for all aspects of the survey and control response, including pesticides and control equipment. Annual reviews should aim to foster proactive regular engagement with suppliers during non-emergency periods, as a means to maintaining readiness for deployment in an emergency. This should include, <i>inter alia</i>, reviewing technical specifications, and making updates where necessary, ensuring that suppliers have direct access to listed assets (such as aircraft), have experience in country, and are able to meet technical requirements and new specifications as and when they are updated by FAO. vii. Establishing long-term agreements with pre-approved suppliers for equipment and pesticides where suppliers have a demonstrated track record of delivery in locust emergencies and where the competition for supply contracts is restricted due to the specialization required. 	FAO headquarters

- viii. Pre-positioning of non-perishable items (e.g. atomizers for fixed wing aircraft, ground spray equipment, drum crushers) in a global storage facility, managed and maintained by FAO and partners to ensure appropriate periodicity of inspection and renewal.
- ix. Streamlining the process and requirements around raising procurement requests to ensure that these are quickly processed during early stages of locust upsurge.

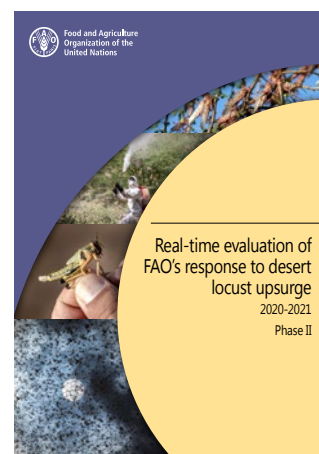
Recommendation 16.	Increase the flexibility of fast-track procurement rules and processes specifically for L3 emergency contexts relating to locust emergencies, to allow greater use and streamlining of procurement from pre-qualified suppliers rather than public tenders. LONG-TERM.	FAO headquarters
Recommendation 17.	Document lessons learned from the procurement issues highlighted in the 2020 upsurge, to improve preparedness for future responses. LONG-TERM.	FAO headquarters
PRIORITY AREA 4 - PESTICIDE MANAGEMENT		
Recommendation 18.	Review pesticide management procedures at country-level across the Horn of Africa, Middle East and South West Asia, and work with national governments to overcome country-specific constraints. MEDIUM-TERM.	FAO headquarters and donors
Recommendation 19.	Improve country-level dissemination and awareness of the published recommendations of the Locust Pesticide Referee Group (LPRG). LONG-TERM.	FAO headquarters and all country offices
Recommendation 20.	Work with Somalia and Ethiopian national and regional authorities to pre-position pesticide stocks in more accessible locations for control teams operating in remote areas. MEDIUM-TERM.	FAO Ethiopia and FAO Somalia
Recommendation 21.	In Pakistan, work with federal and provincial authorities to improve the safe storage and disposal of pesticide stocks and empty containers. MEDIUM-TERM.	FAO Pakistan
Recommendation 22.	Support Sudan in strengthening its pesticide stock management systems and finding safe solutions for pesticide disposal. MEDIUM-TERM.	FAO Sudan
PRIORITY AREA 5 – LIVELIHOODS SUPPORT		
Recommendation 23.	Continue the current level of livelihood support, while working with implementing partners to increase diversification and decentralization of the supply process within countries. MEDIUM-TERM.	FAO Regional Resilience Hub, Eastern Africa and implementing partners
Recommendation 24.	In Kenya, increase the availability of livelihood recovery expertise within the FAO country office. MEDIUM-TERM.	FAO Kenya
Recommendation 25.	In Kenya, conduct continuous needs assessments for the ongoing livelihood response. MEDIUM-TERM.	FAO Kenya
Recommendation 26.	In Ethiopia, improve coordination of the livelihood response through increased NGO participation and decentralizing the supply procurement for agricultural and pastoralist inputs to the regional level. MEDIUM-TERM.	FAO Ethiopia
Recommendation 27.	In Ethiopia, improve diversification of livestock asset suppliers and seed types. MEDIUM-TERM.	FAO Ethiopia





PRIORITY AREA 6 – INNOVATION AND LEARNING

- Recommendation 28.** Develop a dedicated mechanism for sharing, learning and fostering innovation between countries as the response evolves throughout autumn and winter of 2021. Such a mechanism should sit at the global-level to ensure lessons transfer between regions, and should have the capacity to: i) build a strategic approach to guide country offices as they seek to encourage national governments and regional bodies to innovate in the response; ii) foster and develop relationships with international research institutes and private sector actors; iii) share and coordinate the pre-existing lessons learning from innovative methods piloted in field contexts; and iv) address the dissemination, uptake, and usage of innovation in locust-affected countries. Opportunities for research could be progressed through a cross-country learning platform to avoid duplication of effort and ensure widespread and timely sharing of lessons learned. Opportunities for engagement with national governments and regional bodies could include increasing opportunities for the scientific study of innovative approaches including, for example, increased use of biopesticides and novel chemical pesticides in control operations, or wider use of drones and electronic data collection technologies during survey to enhance forecasting. **MEDIUM-TERM.**
- FAO headquarters**
-
- Recommendation 29.** Across all locust affecter regions, work with research institutes and the private sector to support innovation in the areas of surveillance, forecasting and control. **MEDIUM-TERM.**
- FAO Kenya**
-
- Recommendation 30.** Support research and communication efforts around innovative monitoring and forecasting methods for future upsurges. **MEDIUM- to LONG-TERM.**
- FAO Kenya**



[Link to the full evaluation report – Phase II](#)

Office of Evaluation
E-mail: evaluation@fao.org
Web address: www.fao.org/evaluation

Food and Agriculture Organization of the United Nations
Rome, Italy

Cover photo credits (top to bottom): 1. 2. & 4. ©FAO/Sven Torfinn, 3. ©FAO/Luis Tato



Some rights reserved. This work is available under a [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/) licence