



Food and Agriculture  
Organization of the  
United Nations

©FAO/A. MONARD



NOVEMBER  
2018

# TOWARDS SUSTAINABLE LOCUST MANAGEMENT IN CAUCASUS AND CENTRAL ASIA

Locusts and grasshoppers are a serious threat to agriculture, including pastures and rangelands, in Caucasus and Central Asia, where more than 25 million hectares are concerned.

During outbreaks, the three main locust pests, the Asian Migratory Locust (*Locusta migratoria migratoria*), the Italian Locust (*Calliptamus italicus*) and the Moroccan Locust (*Dociostaurus maroccanus*), attack all kinds of crops and natural vegetation and jeopardise food security and livelihoods of

at least 20 million people. The most affected populations are the most vulnerable rural communities, whose health and environment can moreover suffer from adverse impacts of locust control operations.

Locusts are migrant pests, able to fly over up to 100 km per day and settle in new areas, which increases their pest status. In Caucasus and Central Asia, locust traditional habitats and breeding areas are often situated on both sides of borders. This results in frequent movements of

hopper bands and swarms across political boundaries. Locusts are also opportunistic insects and may become more dangerous with global warming and exceptional weather events boosted by climate change.

To reduce the occurrence and intensity of locust outbreaks, FAO has been implementing a multi-funded and interregional “*Programme to improve national and regional locust management in Caucasus and Central Asia (CCA)*” since 2011.

## MAIN RESULTS ACHIEVED, KEY CHALLENGES AND FUTURE DIRECTIONS

The main Programme achievements include the creation of a regional technical network, strengthened national capacities on a wide range of topics related to locust management, and higher attention to human health and environmental aspects.

Building on those achievements and with the critical challenge of ensuring the sustainability of national and regional locust management, countries agreed on a shared vision, based on three main directions:

- Sustainability of regional cooperation;

- Switching from reaction to prevention and disaster risk reduction;
- Further strengthening of human and operational capacities.

In this context, the Technical Workshop on Locusts in CCA, held in November 2017 in Tajikistan, allowed defining a Roadmap, including expected results and envisaged activities, to be used as a framework for the Programme in the coming years.

## TOWARDS LONG-TERM REGIONAL COOPERATION ON LOCUSTS

No successful management of transboundary plant pests can be expected without regional cooperation. The regional network on



# KEY FACTS

## LOCUST MANAGEMENT IN CCA

A MULTI-FUNDED  
PROGRAMME IMPLEMENTED  
BY FAO SINCE 2011 TO  
IMPROVE NATIONAL  
AND REGIONAL LOCUST  
MANAGEMENT

TEN COUNTRIES INVOLVED:  
AFGHANISTAN, ARMENIA,  
AZERBAIJAN, GEORGIA,  
KAZAKHSTAN, KYRGYZSTAN,  
THE RUSSIAN FEDERATION,  
TAJIKISTAN, TURKMENISTAN,  
AND UZBEKISTAN

RESOURCE PARTNERS  
INCLUDE JAPAN AND  
JAPAN INTERNATIONAL  
COOPERATION AGENCY (JICA),  
TURKEY, THE UNITED STATES  
AGENCY FOR INTERNATIONAL  
DEVELOPMENT (USAID)

MAIN RESULTS ACHIEVED:  
EFFECTIVE REGIONAL  
TECHNICAL NETWORK AND  
STRENGTHENED NATIONAL  
CAPACITIES ON LOCUST  
MANAGEMENT

KEY CHALLENGE:  
SUSTAINABILITY OF NATIONAL  
AND REGIONAL LOCUST  
MANAGEMENT IN CAUCASUS  
AND CENTRAL ASIA

## FAO-LOCUST MANAGEMENT IN CCA

### E-MAIL

Annie.Monard@fao.org

### WEBSITES

[www.fao.org/food-chain-crisis](http://www.fao.org/food-chain-crisis)  
[www.fao.org/ag/locusts-CCA](http://www.fao.org/ag/locusts-CCA)

## TOWARDS SUSTAINABLE LOCUST MANAGEMENT IN CAUCASUS AND CENTRAL ASIA



©FAO/T. IDRISOV

locusts, now existing in CCA, was a big step forward but it does not suffice in terms of sustainability. It needs to be maintained and consolidated. That means pursuing key activities such as regular information exchange (regional monthly bulletins), joint activities (cross-border surveys, training etc.) and annual meetings at the regional level. In addition, an appropriate long-term mechanism should be agreed upon and established by the countries. It is only in this way that the regional cooperation can be guaranteed in the long-term, beyond the Programme and external funding.

## TOWARDS PREVENTION AND RISK DISASTER APPROACHES

The locust preventive control strategy relies on monitoring locust population dynamics, allowing more accurate forecast and thus early warning and early reaction. It includes a regular collection of standardised and geo-referenced field data at key periods of locust biological cycles and in the right areas. These data are quickly transmitted and then analysed together with weather and satellite information.

This strategy has proved to be the only effective and sustainable one in the long run, from socio-economic and environmental perspectives. In fact, if well designed and implemented, it contributes to:

- Anticipating and preventing crises;
- Better responding to crises in case they occur; and
- Reducing annual infested and treated areas.

This can be translated into:

- Reduced damage to crops and rangelands and therefore preservation of food security and livelihoods of vulnerable rural communities;

- Reduced negative impact of control operations on human health and the environment;
- Reduced financial costs.

The approach is the result of applied research from the beginning of the 20<sup>th</sup> century, with a solid scientific basis and extensive field practice. Its value has been demonstrated by FAO's experience within the Programme EMPRES (Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases) and continues to be supported by the FAO Desert Locust commissions.

While the Locust Programme in Caucasus and Central Asia relies on this experience, a shift from reaction to prevention and disaster risk reduction is still necessary for the region where infested areas average 8.7 million hectares annually resulting in the treatment of 4.9 million hectares.

Such a significant paradigm shift requires strong advocacy as well as in-depth work in several directions:

- Improved localisation and description of locust hotspots for better-targeted survey operations;
- More accurate locust surveillance, including the use of the Automated System for Data Collection (ASDC);
- Enhanced analysis and forecast using modern tools such as a customised Geographical Information System entitled "Caucasus and Central Asia Locust Management System (CCALM)."

## TOWARDS FURTHER STRENGTHENING OF NATIONAL CAPACITIES

Effective implementation of the locust preventive control strategy relies on the further strengthening of national capacities on locust management, primarily to enhance monitoring and related early warning and reaction.



Some rights reserved. This work is available under a CC BY-NC-SA 3.0 IGO licence