2013

SWAC
REGIONAL WORKSHOP ON
DESERT LOCUST CONTINGENCY PLANNING

13-15 October 2013

Tehran, I.R. Iran

Commission for Controlling the Desert Locust in South-West Asia (SWAC)

SWAC Regional Workshop on Desert Locust Contingency Planning
13-15 October 2013, Tehran (I.R. Iran)

Introduction

Effective early response to locust infestations and their management relies on having well established and tested contingency and action plans in place in frontline and invasion countries before a locust emergency or crisis develops. So far, the issue of preparing effective contingency and action plans has yet to be discussed in sufficient detail within the FAO Commission for Controlling the Desert Locust in South-West Asia (SWAC). On the other hand, much work has been done in the other two locust commissions – the FAO Commission for Controlling the Desert Locust in the Western Region (CLCPRO), within the framework of the EMPRES programme, and the FAO Commission for Controlling the Desert Locust in the Central Region (CRC).

The issue of preparing effective contingency and action plans was discussed at the 28th session of SWAC held in New Delhi, India from 5 to 7 December 2012 (agenda item 4). It was felt that a systemic approach be taken in introducing and developing contingency plans in the region, similar to what was done in the Central Region by organizing a regional workshop, determining what can be provided within national budgets and how SWAC can further supplement this process. As a first step, the session recommended that the Executive Secretary organize a regional workshop on contingency planning to be held in Tehran, I.R. Iran for two persons from each member country.

The three-day workshop was held at the guesthouse of the Ministry of Jihad-e-Agriculture in Evin, Tehran. Accommodations and meals were also provided at the same venue for the participants.

Two participants attended the workshop from Afghanistan, India and Pakistan and four participants attended from I.R. Iran (Annex 1). The participants were primarily directors and deputy directors responsible for planning control operations and implementing Desert Locust campaigns during emergencies, that is, invasions, outbreaks and upsurges.

Arrangements for the workshop were made by the Plant Protection Organization, Ministry of Jihad-e Agriculture, I.R. Iran. The Executive Secretary of SWAC conducted the workshop.

The Director of the Plant Protection Organization, Agha-Reza Fotouhi, opened the workshop and the PPO Technical Deputy Director, Javad Soroush, closed the workshop.

Workshop programme

The workshop was meant to be informal and practical. The objective of the workshop was to introduce the concept of contingency planning and for each country to prepare a preliminary draft of a national contingency plan (Annex 2).

The first day was spent on introducing the concepts and components of contingency plans, resources, and tools that can be used to help draft contingency plans. The second day was devoted to drafting a national contingency plan in which each country prepared a draft. The third day was spent presenting and reviewing the draft contingency plans and determining what follow up actions are required.

Contingency planning concepts and tools

Concepts

A contingency plan is *a plan that deals with rare events occurring irregularly and unpredictably but whose nature is known at least roughly*. Several examples were provided of a contingency plan. For instance, if you rely on public transport to reach work every morning and there is a bus strike, then you may have a contingency plan that indicates you will get a ride with your friend who has a car. The Government of India probably has a very sophisticated contingency plan for cyclones that develop in the Bay of Bengal and threatens the east coast of the country. This plan was undoubtedly invoked during the same week of the workshop for Cyclone Phailin that affected more than 12 million people. Similarly, the Government of Pakistan probably had contingency plans to face recent earthquakes in Baluchistan.

A contingency plan for Desert Locust will be different for each country, based on the structure of the national locust programme, available resources and if the country is a frontline or an invasion country. But in all cases, the plan should address the problem of insufficient resources in the national locust unit during outbreaks and invasions, and in the country during upsurges.

Although contingency plans may differ from country to country, there are a number of components that will be similar such as resources, advanced warning, scenarios, triggers, responsibilities, testing and updating.

Resources

Participants were requested in advance to bring a complete listing of resource and other information needed to prepare a contingency plan to the workshop (Annex 3). They were shown how to estimate what area (hectares) the available resources can treat against Desert Locust infestations based on parameters in the *FAO Desert Locust Guidelines* in order to determine the existing control capacity in each country (Annex 4). It is important to establish this as a baseline from which different scenarios can be explored in the contingency plan. In this way, resources gaps and additional needs can be identified and addressed.

Tools

Several different English language tools were introduced to the participants who were shown how to use each one to help draft a contingency plan.

(a) DeLCoPA

The Desert Locust Contingency Planning Assistant (DeLCoPA) was developed in 2009 to help national Locust Control Units to be better prepared to cope more effectively with Desert Locust emergencies. It provides guidance to identify and mitigate constraints, gaps or operational weaknesses. The process should help to reinforce response and coordination mechanisms and to clarify roles and responsibilities before an emergency. DeLCoPA can help the decision maker to put in place measures that enhance preparedness prior to an emergency developing and to provide a valuable reference document for approaching donors for assistance to respond to the emergency. DeLCoPA is managed by AGPMM (Locust and Transboundary Plant Pests and Diseases (EMPRES)) at FAO Headquarters.

Locust Directors, in consultation with the Locust Information Officer and the Campaign Officer, can use DeLCoPA as a management tool. It can be used to identify gaps in organizational structure, operations, and contingency plans; to perform “what if” scenarios

before implementing changes; and as an instructional tool to teach the important aspects of a Desert Locust Unit, its interrelations with other agencies, any why its activities are important.

Each participating country in the workshop was provided with a user name and password to access the online version of DeLCoPA[1].

(b) PSMS

The FAO Pesticide Stocks Management System (PSMS) is an online application to be used by countries to record and monitor their inventories of pesticides and their usage in order to assist them in managing the most efficient usage[2]. The application aims to help reduce the creation of obsolete pesticides and enable countries to plan strategies for responding more effectively to pest outbreaks. PSMS is managed by AGPMC (Pesticides Management) at FAO Headquarters.

Currently, PSMS contains information about obsolete pesticide stocks in I.R. Iran but there is no information available for other SWAC countries.

(c) eLERT

The FAO Locust Emergency Response Toolkit (eLERT) is a dynamic and interactive online database whose main objective is to serve as reference, at both national and international levels, to respond more timely and effectively to the needs in a fast evolving crisis situation[3]. It provides important information on critical aspects such as pesticides registered in the affected countries for locust control, technical specifications of recommended equipment, suppliers, standard contracts for aerial operators and consultants to reinforce the response capacities in the field, contact lists of important partners, rosters of consultants, etc. The eLERT should help people and agencies to act more effectively in coping with locust threats, thus preventing damage to the livelihoods of the rural population. The eLERT can be used to provide more details about resources mentioned in contingency plans. AGPMM manages the eLERT.

(d) FAOSTAT

FAOSTAT contains large-time series and cross sectional data relating to hunger, food and agriculture for 245 countries and territories and 35 regional areas, from 1961 to the most recent year. The online application consists of innovative tools for visualization and basic statistical analysis[4]. FAOSTAT can be used to help develop the introductory section of a contingency plan, explaining the threat that Desert Locusts pose to national agriculture and food security. The Statistics Division (ESS) at FAO Headquarters maintains FAOSTAT.

Other statistical data is available from national sources in each country.

[1] http://delcopa.herongroupllc.com (eclo@fao.org)
[2] http://psms.fao.org/psms/login.htm (psms@fao.org)
[3] https://sites.google.com/site/elertsite/ (eclo@fao.org)
[4] http://faostat3.fao.org

(e) FAO Desert Locust Guidelines

FAO has prepared the *Desert Locust Guidelines* that comprise biology and behaviour, survey, information and forecasting, control, campaign organization and execution, safety and environmental precautions, and appendixes (reference). Particular sections within the guidelines are relevant to contingency planning. For example, the characteristics of different sprayer types and work rate can be found in the *Control Guideline* (page 17). The resources needed to control 1,000 km^2 of swarms or equivalent bands is presented in the *Campaign Organization and Execution Guideline* (page 5) and contingency plans in mentioned on page 13.

Advanced warning

FAO's Desert Locust Information Service (DLIS) at FAO Headquarters keep all locust-affected countries informed of the current Desert Locust situation and provides early warning to countries of the scale, timing and location of locust migration, invasion and breeding. The timing and reliability of early warning varies in outbreaks, upsurges and plagues (Annex 5).

Scenarios

The participants agreed to develop contingency plans for three different scenarios: swarm invasion, outbreak in which hopper bands form from local breeding, and an upsurge consisting of hopper bands and swarms. In the case of Afghanistan, only an invasion scenario was developed since it is not a frontline Desert Locust country. For the remaining countries, all three scenarios were to be addressed.

Testing and updating

A contingency plan should be tested before a locust emergency develops. This will allow countries to identify the strengths and weaknesses of the plan and to modify it accordingly. A contingency plan can be tested through a mock exercise that involves all participants in a country. Such an exercise was recently completed in the Western Region.

Contingency plans should be updated on a regular basis to reflect changes in the structure and staffing of the national locust programme as well as its available resources and new procedures.

Contingency plan outline

After substantial discussion and considering available reference materials and national contingency plans in other regions, a generalized outline was suggested for a national contingency plan in the SWAC countries.

I. Introduction – ministries involved; Desert Locust biology, threat, preventive control; definitions
II. National locust programme – overview, structure, activities, resources
III. Contingency planning – preparation, testing, updating, trigger, execution, responsibilities, funding
IV. Scenarios – invasion, outbreak, upsurge
V. Appendices – resource inventories, organogram, ministries, contacts, procedures, draft contracts for aircraft, pesticides, etc.

Conclusions and follow-up

The workshop was a successful first step in introducing contingency planning to the SWAC region. By the end of the workshop, the participants from India, I.R. Iran and Pakistan had prepared a preliminary draft of a contingency plan for invasion and outbreak scenarios while the participants from Afghanistan prepared a draft plan for an invasion (Annex 6). There was insufficient time to prepare a plan for an upsurge. This as well as associated action plans will need to be developed in subsequent steps as part of the systemic approach adopted in introducing and developing contingency plans in the region.

The participants agreed that further action should be taken in the coming year to follow-up the issues discussed and work completed during the current workshop:

1. Upon return to their countries, the participants should finalize and complete the draft contingency plans prepared at the workshop, including a preliminary draft of an upsurge scenario and associated action plans, by 31 December 2013;
2. The participants should share their draft contingency plans with each other and with the SWAC Executive Secretary so that feedback can be provided;
3. FAO DLIS should advise countries about the appropriateness of the different scenario levels indicated in the draft contingency plans;
4. Government approval of the final contingency plan should be obtained in each country during 2014;
5. The final contingency plan for each country should be presented during the 50th anniversary SWAC celebrations (Tehran, December 2014);
6. A review of the status of contingency planning should be included in the agenda of the 29th session of SWAC (Tehran, December 2014),
7. A systematic approach to maintaining updated national capacity via an online mechanism similar to the *Watch System of National Capacities for Desert Locust Preventive Control in the Western Region* (SVDN) could be considered.

SWAC will continue to facilitate the preparation of contingency plans and provide the necessary feedback and advice to member countries.

Annex 1. Participants

Afghanistan

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Head of Locust and Rodent Control Group
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FAO

Keith Cressman
Executive Secretary, SWAC
Senior Locust Forecasting Officer
Locust and Transboundary Plant Pest and Diseases (EMPRES)
Rome

Others

Mehdi Ghaemian
Assistant Director for Controlling General Pests
Plant Protection Organization
Tehran

Annex 2. Programme

12 October 2013 Sunday

Arrival of participants

13 October 2013 Monday

1. Opening
2. Introduction to contingency planning
3. Resources used in control campaigns
4. Useful tools to assist in contingency planning
5. Contingency plan outline

14 October 2013 Tuesday

6. Drafting of national contingency plans (Afghanistan, India, I.R. Iran, Pakistan)

15 October 2013 Wednesday

7. Presentation and review of national contingency plans
8. Conclusion and follow-up
9. Closing

16 October 2013 Thursday

Departure of participants

Annex 3. Required information for the workshop

The Executive Secretary of SWAC requested each country to bring the following items and information to the workshop:

1. laptop computer
2. available resources in your country
    a. trained/untrained/seconded/head staff (indicate: total number and source of each, and also indicate as number of field teams for survey and for control)
    b. survey/control/transport vehicles (indicate: type and total number of each, and also indicate as number of field teams for survey and for control)
    c. handheld/backpack/vehicle/aerial sprayers used for Desert Locust control (indicate: type and total number of each - only working units)
    d. aircraft used for Desert Locust survey and control (indicate: type and total number of each, use (survey, control, both) - only working units)
    e. aerial standing contracts (explain how this mechanism works)
    f. eLocust2 (indicate: only working units)
    g. pesticides used for Desert Locust control (indicate: formulation (ULV, EC) name and litres each)
    h. camping equipment (indicate: only working units)
    i. safety equipment (indicate: only working units)
    j. emergency funds (indicate: source, how much money, required time to make available, how to access or activate)
3. important agriculture areas in your country that need to be protected (indicate: on a map, area (ha), cash value, what time of year is most critical)
4. sensitive areas (national parks, protected sites, water bodies, etc.) where control operations are not possible or limited to bio-pesticides (indicate: on a map, area (ha))
5. previous Desert Locust control campaigns (indicate: duration, area treated, type of campaign (bands, swarms, both), resources used, finances used)
6. existing plans (bring copies of any emergency, campaign, action, or contingency plans)

Annex 4. Existing control capacity in SWAC countries

The current control capacity in each member country of SWAC is quite good. The three frontline countries have well-established locust programmes. In India, the Locust Warning Organization is solely responsible for Desert Locust management with its own budget. In I.R. Iran, the national locust programme is decentralized at the provincial level and overseen at the federal level by the Plant Protection Organization in Tehran. In Pakistan, a specific section within the Department of Plant Protection in Karachi manages the national locust program. Pakistan is the only country in the Desert Locust recession area with its own fleet of aircraft dedicated to Desert Locust. The frontline countries have access to an unspecified level of national emergency funds that can be made available during locust invasions and outbreaks. Afghanistan does not have resources specifically devoted to Desert Locust; instead, some of the resources available for Moroccan Locust can be used.

	Current control capacity
AFG (for Moroccan Locust)	
• vehicles with sprayers	20
• ULV stock	60-80,000 L
• ha/day	2,000
• total days	30
IND	
• vehicles with sprayers	18-22
• ULV stock (supplemented by private supplier)	2,000 L
• ha/day (VM+HH)	2,860 - 3,300
• total days	depends on pesticide
IRN	
• vehicles with sprayers	24
• ULV stock	0 L (10,000L EC)
• ha/day	500
• total days	20
PAK	
• vehicles with sprayers	14
• aircraft	3
• ULV stock	41,600 L
• ha/day	1,400
• total days	30

Note:
There are no ULV formulated pesticides available in I.R. Iran for Desert Locust control due to current sanctions.

Annex 5. FAO DLIS early warning

The warning and associated reliability provided by the FAO Desert Locust Information Service (DLIS) at FAO Headquarters in Rome varies according to the locust situation.

	Warning	Reliability
Outbreak	less than one month	low-moderate
Upsurge	up to 3 months	low
Plague	up to 6 months	moderate-high

This should be taken into consideration when preparing contingency plans based on different scenarios.

Annex 6. Invasion and outbreak scenarios

There are sufficient resources currently available in India and Pakistan to control an outbreak or an invasion. Similarly, I.R. Iran has enough resources but EC-formulated pesticide would have to be used instead of ULV. Afghanistan may have sufficient resources to respond to an invasion, using a portion of those resources available for Moroccan Locust and bearing in mind security concerns within the south of the country.

	Outbreak (minimum 30 days)	**Invasion (5 days)**
AFG		
• vehicles with sprayers		**6**
• aircraft		-
• ULV stock		**12,000 L**
• ha/day		600
• total days		20
IND		
• vehicles with sprayers	18-22	18-22
• aircraft	-	contract
• ULV stock	**2,000 L**	**2,000 L**
• ha/day (VM+HH)	2,860 - 3,300	2,860 - 3,300
• total days	depends on pesticide	depends on pesticide
IRN		
• vehicles with sprayers	5	30
• aircraft	-	8 (contract)
• ULV stock	10,000 L EC	**10,000 L EC**
• ha/day	500	3,000
• total days	20	3 (ground), 1 (air)
PAK		
• vehicles with sprayers	11	-
• aircraft	-	3
• ULV stock	41,600 L	**41,600 L**
• ha/day	1,100	15,000
• total days	38	2

Notes:

1. Due to the availability of large quantities of manpower, India has the potential to use hand-held sprayers in both scenarios.
2. Limiting factors are indicated in **bold** as follows:
   a. Afghanistan – as there as not specific resources allocated for Desert Locust, existing resources available for Moroccan Locust can be used. However, not all resources can be mobilized due to insecurity. Those that can be shifted to the south of the country, where a Desert Locust is most likely to occur, can only treat a very small invasion.
   b. India – LWO maintains a very small strategic stock of ULV formulated pesticide in order to avoid storage and obsolescence problems. Contractual arrangements with private sector suppliers make ULV formulated pesticide available within 24 hours.
   c. I.R. Iran –ULV formulated pesticides are not available for Desert Locust control due to current sanctions. If Desert Locust control operations are required under current circumstances, then EC formulated pesticide will have to be used but this will only be possible in areas where large supplies of water are available.
   d. Pakistan – if aerial control operations are undertaken during an invasion, additional pesticide may be required, depending on the scale of the invasion.