



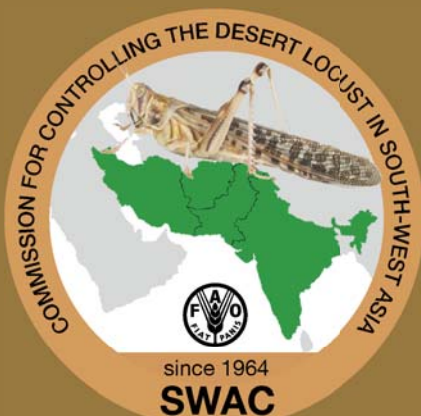
Food and Agriculture Organization
of the United Nations



Desert Locust contingency planning Regional workshop

5–9 November 2016

Tehran, I.R. Iran



FAO Commission for
Controlling the Desert Locust
in South-West Asia

**Report of the
SWAC regional workshop on
Desert Locust contingency planning**

Tehran, I.R. Iran
5–9 November 2016

Food and Agriculture Organization of the United Nations
Rome, 2016

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SWAC regional workshop on Desert Locust contingency planning 5-9 November 2016, Tehran (I.R. Iran)

Introduction

The 29th session of the FAO Commission for Controlling the Desert Locust in South-West Asia (SWAC) recommended that a regional workshop be organized in follow up to the first workshop held in the region on contingency planning (2013). The objective of the current workshop was to:

- (a) update the existing outbreak and invasion contingency plans for each country,
- (b) review the available resources for control and determine national capacities to combat locust outbreaks, invasions and upsurges, and
- (c) to prepare upsurge contingency plans for each country. The workshop was also an occasion to refresh participants on the concepts, purpose and implementation of contingency plans.

Participants

One participant from each SWAC member country attended the workshop (Annex 1). Two of the participants, Afghanistan and Iran, had attended the first workshop; whereas, contingency planning was a new concept for the other two participants, India and Pakistan.

Participants were requested to bring an updated version of their existing contingency plans that were prepared in 2013, a completed list of available resources for locust control campaigns and a laptop.

Programme

The workshop programme emphasized peer review by the participants of each other's contingency plans and allowed ample time for each country to present and discuss their plan in detail (Annex 2). Working hours were from 0900-1300h and 1430-1700h.

Day 1. Formal opening of the workshop with welcome addresses by the Director of the Plant Protection Organization (PPO) in I.R. Iran and the Executive Secretary of SWAC. In the afternoon, concepts and examples of contingency planning (Annex 3), and tools to assist in the preparation of contingency plans such as the Desert Locust Contingency Planning Assistant (DeLCoPA), Pesticide Stocks Management System (PSMS), Desert Locust Contingency Monitoring System (SVDN) and eLert as well as other resources such as the FAO Desert Locust Guidelines were presented and explained.

Day 2. Review of India contingency planning and determination of control capacity based on available resources.

Day 3. Field visit to Emergency Desert Locust Centre in Karaj, and field demonstration of rotary drone for crop pest monitoring. Review of I.R. Iran contingency planning and determination of control capacity based on available resources.

Day 4. Review of Pakistan and Afghanistan contingency planning and determination of control capacity based on available resources in both countries.

Day 5. Conclusion, follow up and next steps.

Main activities

- (a) Review of the concept of contingency planning and the various tools that are available to assist in preparing such plans;
- (b) Discussion, review and updating of each country's existing contingency plans for outbreaks and invasions;
- (c) Identify each country's available resources for outbreaks, invasions and upsurges;
- (d) Prepare upsurge contingency plans.

Results

- (a) Contingency plans for outbreaks, invasions and upsurges had been formulated for India and Pakistan;
- (b) An invasion contingency plan was updated for Afghanistan;
- (c) I.R. Iran decided to revise the contingency plan to include the main 11 locust species in the country because the related budget and resources are not separated according to species. The revised draft will be submitted to the SWAC Executive Secretary before the 30th session;
- (d) Shortfalls in resources identified in the Pakistani and Afghani plans;
- (e) Survey and control resources available in each country were reviewed and updated (Annex 4);
- (f) Control capacity (ha treated/day) based on available resources was reviewed and updated in for I.R. Iran while further details are required for the other countries (Annex 5).

It should be noted that the three frontline countries, India, Iran and Pakistan, have very old and well-established national locust programmes in which sufficient national mechanisms exist for funding outbreak, invasion and upsurge control campaigns without the need to rely on Commission or external sources.

Each country has slightly different arrangements and unique characteristics. In India, the Locust Warning Organization maintains a pesticide-on-demand contract with a national supplier for Desert Locust control operations. Pakistan is the only country affected by Desert Locust that has its own dedicated aerial fleet. I.R. Iran has established two emergency centres where equipment is stored to be used only in Desert Locust survey and control operations. The contingency plan is used to help justify annual funding of the national locust programme. Afghanistan is an invasion country and has not faced Desert Locust for more than 25 years, yet it controls Moroccan Locust every year; hence, some of these resources could be utilized for Desert Locust control if necessary.

Fortunately, Desert Locust upsurges and plagues rarely affect the SWAC region. Consequently, past control campaigns have been limited with the exception of July to October 1993 when India and Pakistan treated more than 300,000 ha each. Since then, control operations were undertaken in only 7 out of 23 years, treating no more than 35,000 ha in a country and often much less. When the region is invaded by swarms, it usually occurs during the spring (March–May) from the Arabian Peninsula and at the beginning of the summer (June–July) from southern Arabia and the Horn of Africa.

Follow up and next steps

1. Iran should finalize their contingency plan for outbreak, invasion and upsurge and submit it to the SWAC Executive Secretary before the 30th session;
2. India and Pakistan should include additional details concerning aircraft in their upsurge contingency plans;
3. Afghanistan and Pakistan should address the shortfalls in resources required for outbreak, invasion and upsurge control campaigns;
4. All countries should review, update and provide sufficient details for determining control potential during outbreaks (excluding Afghanistan) and upsurges;
5. Organize a mock field exercise to test the Iranian contingency plan in 2017 or 2018, funded by SWAC;
6. Consider the development of simple inventory database that is incorporated within RAMSES GIS, funded by SWAC.

Annex 1. Workshop participants

Name	Title	Contact
Afghanistan		
Mirjan Hemat	Head, Emergency Pest Action Division PPQD/MAIL, Kabul	hemat009@gmail.com
India		
B.S. Phogat	Additional Plant Protection Advisor & Head Locust Control & Research Scheme DPPQS/MAFW, Faridabad	appa.ipm-ppqs@gov.in
I.R. Iran		
Mehdi Ghaemian	Deputy Director, Public Pest Management PPO, Tehran	mehdi.ghaemian@gmail.com
Mahmoud Chalaki	Head, Locust & Rodent Control Group PPO, Tehran	mahmoud.chalaki@gmail.com
Ali BabaliFashki	Locust Information Officer PPO, Tehran	a.babalifashki@gmail.com
Pakistan		
Fakhar Ul Zaman	Entomologist, DPP, Bahawalpur	fakharzaman24@yahoo.com

Annex 2. Workshop programme

5 Nov 2016 (Saturday)	
1000-1200h	Opening and welcome
1430-1700h	Concepts of contingency planning, resources, tools
6 Nov 2016 (Sunday)	
0900-1300h	India contingency plan: review & updating
1430-1700h	India resources: control capacity
7 Nov 2016 (Monday)	
0830-1300h	Field visit to Karaj: Desert Locust Emergency Centre & drone demo
1430-1700h	I.R. Iran contingency plan: review & updating I.R. Iran resources: control capacity
8 Nov 2016 (Tuesday)	
0900-1300h	Pakistan contingency plan: review & updating Pakistan resources: control capacity
1430-1700h	Afghanistan contingency plan: review & updating Afghanistan resources: control capacity
9 Nov 2016 (Wednesday)	
1400-1530h	Conclusion, follow up, next steps

Annex 4. Contingency planning parameters

Work rate of ULV sprayers in Desert Locust control

Sprayer type	Target size (ha)	Target type	Treatment (ha/day)
Handheld, backpack	0.1 – 10	bands	15
Vehicle-mounted	1 – 100	bands, swarms	100
Aircraft	> 25	bands, swarms, flying	5,000

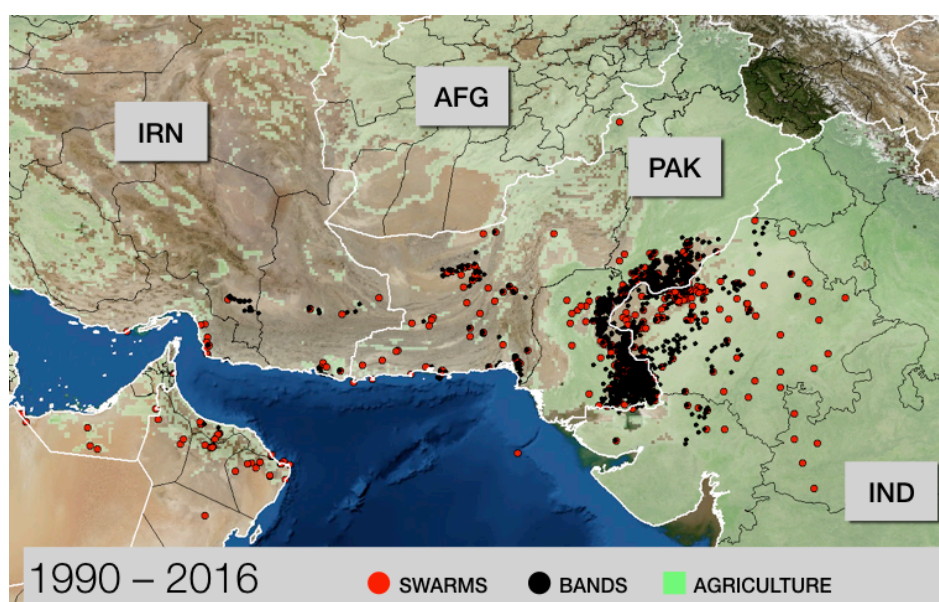
Resources needed to control 100,000 ha

Control method	Sprayers	Pesticide (l)	Trucks
Aerial swarm control	4	50,000	3
Aerial block band control	84	1,250,000	75
Individual band control	167	50,000	9
Handheld crop protection (only 25% treated)		38,000	127

Three-month invasion campaign – a race against time

Week	Locust behaviour
1	Swarm invasion and laying (1–2 weeks)
2	
3	
4	Hatching and band formation (3–5 weeks)
5	
6	
7	Fledging and new swarm formation (1–3 weeks)
8	
9	
10	

Locations of Desert Locust hopper bands and swarms in SWAC, 1990–2016



Annex 4. Survey and control resources in SWAC countries

(as of November 2016)

ITEM	AFG	IND	IRN	PAK
Sprayers				
ULV sprayers - handheld	660	96	50	1,800
ULV sprayers - backpack	15	0	0	0
ULV sprayers - vehicle-mounted	19	20	30	23
ULV sprayer - aerial	0	0	0+3	3
Vehicles				
4WD pickups	8	39	30+20	15
4WD station wagons	0	3	0	11
motorcycles	115	0	4+10	0
Other				
eLocust3	0	35	12	30
HF radios	0	38	8	17
GPS	34	34	50+20	14
Pesticide				
ULV formulation @ 1 L/ha	0	2,000	10,000+10,000	42,908
ULV formulation @ 0.5 L/ha	60,000	0	20,000+20,000	0
Staff - NLCU				
survey officers	50	51	24+30	50
control officers	68	51	30+30	50
locust information officers	20	2	2	2
drivers	8	35	15+15	16
Staff - seconded				
survey officers	0	0	15	on demand
control officers	0	0	30	on demand
drivers	0	0	15	on demand
Finances				
annual operating budget/USD	116,000	1,283,669	500,000	12,500
emergency funds - NCLU/USD	1,200,000	0	300,000	on demand
emergency funds - other	539,919	on demand	500,000+1,000,000	on demand

Notes

Iran: PPO + Agriculture Offices

Pakistan: no specific annual budget; funds are provided according to requirements

Annex 5. Control potential in SWAC countries

(as of November 2016)

There was insufficient information to fully determine the control potential in Afghanistan, India and Pakistan; however, this was nearly completed for I.R. Iran.

	AFG	IND	IRN	PAK
Outbreak				
Area treated (ha)				
per day		3,440	2,300	
per week			13,800	
per month			57,500	
Pesticide (litres)				
per day			2,300	
per week			13,800	
per month			57,500	
Teams				
survey		31		
handheld control		10	20	
vehicle control		10	20	
Working days				
per week			6	
per month			25	
Upsurge				
Area treated (ha)				
per day			5,340	
per week			32,040	
per month			133,500	
Pesticide (litres)				
per day			5,340	
per week			32,040	
per month			133,500	
Teams				
survey		31		
handheld control		10	96	
vehicle control		10	39	
Working days				
per week			6	
per month			25	

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