## Desert Locust Joint Survey in the Spring Breeding Areas of the I.R. Iran and Pakistan

**April 2014** 





tl U	The designations employed and the presentation of material in this information product do not in the expression of any opinion whatsoever on the part of the Food and Agriculture Organization United Nations concerning the legal or development status of any country, territory, city or areasts authorities, or concerning the delimitation of its frontiers or boundaries.
	The Food and Agriculture Organization of the United Nations encourages the dissemination of naterial contained in this publication, provided that reference is made to the source.
e fi tl p	All rights reserved. Reproduction and dissemination of material in this information product for ducational or other non-commercial purposes are authorized without any prior written permiss from the copyright holders provided the source is fully acknowledged. Reproduction of material his information product for resale or other commercial purposes is prohibited without written permission of the copyright holders. Applications for such permission should be addressed to the Chief, Publishing Management Service, Information Division, FAO, Viale delle Terme di Caracio 10100 Rome, Italy or by e-mail to copyright@fao.org
	© FAO 2014

# Desert Locust Joint Survey In the Spring Breeding Areas of the I.R. Iran and Pakistan

## **April 2014**

#### I.R. Iran

Mahmoud Chalaki Zebardast

Abdolhamid Bashandeh

Abbas Shanbalak Jaski

#### **Pakistan**

Rasool Buskhsh Dars

Dharam Pal

Mehboob Shah

#### Acknowledgments

The Iranian joint survey team would like to express their special gratitude to the Head of the Plant Protection Organization, Ministry of Jihad-e Agriculture, Government of I. R. Iran for their support in making the necessary arrangements and coordination that led to a successful Desert Locust survey in 2014. The participants also appreciate the assistance of the Sistan-Baluchistan Jihad-e Agriculture Organization for providing facilities.

Similarly, the Pakistan joint survey team is grateful for the assistance and support provided by the Advisor and Director General, Department of Plant Protection, Ministry of National Food Security & Research to the joint survey as well as to the staff of the locust outposts in Baluchistan.

Both teams would like to acknowledge the tireless efforts of the Executive Secretary of SWAC in compiling the two survey reports into a single joint report.

## **Table of Contents**

Acknowledgments	2
ntroduction	4
Methodology	4
Survey	5
Results	5
I.R. Iran	5
Pakistan	5
Conclusions and Recommendations	6
Desert Locust	6
2015 joint survey	6
Appendix 1. Survey participants	8
Appendix 2. Itineraries in I.R. Iran and Pakistan	9
Appendix 3. Rainfall in I.R. Iran and Pakistan	11
Appendix 4. Survey maps – I.R. Iran	15
Appendix 5. Photos	18
Appendix 6. Itinerary for 2015 joint survey	20

#### Introduction

During the 1960s and 1970s, national locust teams from Iran and Pakistan carried out a survey jointly along their common border. The primary objective of the joint survey is to check important spring breeding areas of the Desert Locust that are normally not monitored by national surveys. From the joint survey results, action can be taken as an immediate response to the current situation and to plan for the summer campaign along the Indo-Pakistan border.

The joint survey was interrupted in the late 1970s. In 1994, the  $19^{\rm th}$  session of the FAO Commission for Controlling the Desert Locust in South-West Asia (SWAC) recommended that the Commission assist countries to re-establish the joint survey. In 1995, the joint survey once again commenced on an annual basis after a 20-year gap. The Iran/Pakistan joint survey in 2014 was the  $20^{\rm th}$  annual survey.

In 2010, the survey could not be carried out jointly as it had been for the past 15 years due to deterioration in the security situation in Baluchistan, Pakistan. As the first half of the survey could not be carried out jointly in Baluchistan, Pakistan because the Iranian team did not receive the mandatory security clearances, the Pakistan team undertook the survey. The second half of the survey was carried out in I.R. Iran by both teams jointly. In 2011, the 27th session of SWAC addressed this issue and recommended two possible options for carrying out the joint survey under secure and insecure circumstances. When the security situation is good and clearance for the Iranian team is received from the authorities in Pakistan, then the survey can be undertaken jointly in the traditional sense (Option A); otherwise, Option B should be implemented.

Option B considers that both countries undertake the survey separately in their own territory for approximately three weeks. Under this option, the number of vehicles and drivers is reduced from four to two. At the end of the survey, the team leader and national locust head of each country meet in Zahedan, I.R. Iran to exchange information and discuss the results of the surveys carried out in both countries, and to prepare one single joint survey report to be transmitted to FAO DLIS. This year is the fourth year in which the joint survey has been undertaken according to Option B.

The PIA flights from Quetta to Zahedan were discontinued this year and a further deterioration in the security situation in Baluchistan, Pakistan did not permit travel to the border by ground means. The Pakistan Locust Head proposed Mashhad as an alternate venue of the meeting since flights were available, but this was not possible to organize. Consequently, the Pakistan team leader and locust unit head could not reach the Taftan/Mirjaveh border, cross and enter I.R. Iran to attend the joint meeting in Zahedan. Therefore, the joint meeting was not held and each team prepared their own report for the first time in 19 years. Both reports were submitted to the Executive Secretary of SWAC / Senior Locust Forecasting Officer at FAO Headquarters who compiled the two reports into this single joint report.

#### Methodology

Both teams followed the Standard Operation Procedures (SOP) based on the FAO Desert Locust Guidelines for Survey. Only foot transects were used during the survey because locust densities were very low. In I.R. Iran, the stops made in the 2013 joint survey were checked this year by using the GOTO function in a GPS that contained the waypoints of each stop in 2013.

At each survey stop, both teams collected information on vegetation, soil moisture and locusts and entered it into eLocust2 as well as on the FAO Desert Locust Survey & Control Form. The Iranian team used eLocust2 unit IRN09. The same data were also entered into eLocust3 for testing and practice purposes. Photographs of the potential locust habitats were taken using digital cameras. Supplementary information was collected from local locust officers, shepherds and locals throughout the survey. Rain data for the survey area was collected from the concerned meteorological office. In the evenings, the team sat to discuss the results of the day and plan for the next day.

The Iranian team used eLocust2Importer for viewing and editing eLocust2 data. This application allowed the team to correct errors and complete missing data associated with latitude/longitude coordinates and ecology.

#### Survey

Based on the recommendation from the 2013 joint survey, the survey was carried out from 5 to 24 April 2014 in both countries. Two locust experts, two drivers and one locust assistant participated in the survey. The survey itinerary concentrated on the potential locust breeding areas. The Iranian team consisted of two locust experts, two drivers and one locust assistance while the Pakistani team had two locust experts, two drivers and one maintenance assistant.

#### **Results**

During the survey, the Iranian team checked an estimated 10,470 ha by making 151 stops and covering a distance of 6,500 km. In Pakistan, the team made 147 stops to survey an estimated 15,170 ha while covering 7,883 km.

#### I.R. Iran

As a result of good rains of up to 100 mm during the last few months, ecological conditions had become favorable for locust breeding in nearly all the potential breeding areas in the interior and along the coast in southeast Iran. Vegetation was either already green or becoming green, and the soil moisture was wet. In I.R. Iran, scattered solitarious Desert Locust were observed at 33 of the 151 stops (22 percent) within an estimated infested area of 1,435 ha. Solitarious adults were present at 32 places and *transiens* adults at five places while solitarious hoppers were seen in three places and *transiens* hoppers at one place. Control operations were in progress at one location on 20 ha.

#### **Pakistan**

During the survey it was observed that the ecological conditions were favourable for Desert Locust breeding between Quetta and Nushki, and in the Mull area towards Dalbandin. Light to medium rains fell on 4 April. Consequently, the soil was wet and vegetation was green or greening. Dalbandin and Nokundi areas were totally dry. No locust population was found in the whole area.

Vegetation was green or greening in the adjacent areas of Kharan as well as the Great Sandy Desert even though soil moisture was deep and dry. No locusts were seen. On the other side of Kharan, that is the areas of Boporek, Tomulk, Totazai and Ormagai, soil was dry and no locusts were seen.

It was totally dry in the Borko area, including Shamshi and Washuk up to Panjgur, except in the local area of Basima where vegetation was green or greening. No locusts were seen.

In Mekran, ecological conditions were not favorable for locust breeding and no locusts were seen between Panjgur and Turbat as well as in coastal areas of Gwadar, Jiwani, Pasni, Ormara to Uthal. Locusts were also not seen in the Khuzdar area.

#### **Conclusions and Recommendations**

#### **Desert Locust**

Due to the favourable ecological conditions in I.R. Iran, local breeding is likely to cause locust numbers to increase near Jask and in the Jaz Murian Basin. Consequently, strict vigilance is required in the coming months in these areas and limited control operations may be necessary.

In Pakistan, most of the surveyed areas were not favorable for the locust breeding. In some areas, ecological conditions were favorable for the time being due to local low to moderate rainfall, but conditions will dry out as temperatures increase. Hence, the chances of locust breeding are minimum unless additional rainfall occurs.

#### 2015 joint survey

Both teams happily noted that most recommendations of the previous year have been completed. There were two recommendations that remained outstanding: (a) the joint border meeting (Item 9) could not be conducted due to insecurity in Baluchistan that prevented travel to Zahedan via Taftan/Mirjaveh and alternative itineraries proved to be too lengthy, complicated and expensive and (b) there were no observers from SWAC member countries or Oman (Item 10).

The 2014 joint survey team would like to suggest several traditional and new points for consideration in improving future joint surveys:

- 1. The joint survey should be continued in the coming years to monitor Desert Locust activity on both sides of the I.R. Iran/Pakistan border and to check for any possible indication of Desert Locust migration across the Persian Gulf;
- 2. Both teams hope that the security situation in Baluchistan, Pakistan will return to normal so that both countries can undertake the regular joint survey in 2015; otherwise, Option B should continued to be implemented;
- 3. In the case of Option A, the practice to start the joint survey in Pakistan first is good and should also be continued;
- 4. Young, energetic, enthusiastic and experienced locust experts should be nominated for future joint surveys as it is a tough job rather than an opportunity to be availed;
- 5. At least one driver in both countries should be from Baluchistan and have experience and familiarity with off-road driving in the desert, sandy, and mountainous terrain.
- 6. At least one driver should be a driver *cum* fitter/mechanic to be responsible for emergency repair of vehicles during the survey; he should be well-equipped with a tool kit and emergency spare parts;

- 7. The survey team including locust experts, drivers and maintenance assistant, driver *cum* fitter should be well trained before the start of the survey and well versed regarding their duties and responsibilities;
- 8. Walkie-talkies provided by FAO were very useful during field operation among survey officers and were helpful for communication among vehicles, and should continue to be used;
- 9. The joint meeting is a very important activity of the joint survey and should always be conducted in future years, noting the following:
  - (a) The joint meeting should be held at the closest major city to the Taftan/Mirjaveh border crossing;
  - (b) In this respect, Zahedan is the closest city with sufficient facilities for meeting and preparing the joint report, accommodation, and capacities for transmitting the survey results to FAO DLIS;
  - (c) It is essential that both team leaders and locust heads participate in joint meeting because the former have observed the situation and collected the data while the latter have an overall view of the situation in the country and region;
  - (d) The team leader and locust head in Pakistan should provide I.R. Iran with sufficient details (scanned copy of passport for both participants) at least one month before the joint survey starts to allow sufficient time to obtain the necessary authorization. This long period is not only due to the Iranian Nouroz holiday period but also because the Pakistani team leader is in the field and cannot apply for a visa. The authorization will be valid only for the Pakistani team leader and locust head to cross the border in Sistan and Baluchistan province of I.R. Iran;
  - (e) The above points should be discussed further at the 29th session of SWAC.
- 10. The SWAC Executive Secretary should prepare a SOP for the joint meeting;
- 11. The importance of the homogenous spring breeding area that consists of both the coast of northern Oman and southeast Iran should be recognized. As there is an agreement between the governments of I.R. Iran and Oman for locust officer exchange visits, an Omani locust officer should participate in the portion of the joint survey on the southeast coast of I.R. Iran while an Iranian officer should participate in a national survey on the northern coast of Oman in the spring. The cost for these exchange visits shall be borne by the respective governments.

## Appendix 1. Survey participants

	Name	Title/Position	Place of posting		
I.R. Iran					
	Mahmoud Chalaki Zabardast	Team Leader	PPO, Tehran		
	Abdolhamid Bashandeh	Locust Officer	PP Office, Sistan-Baluchistan		
	Abbas Shanbalak Jaski	Locust Assistant	PP Office, Hormozgan		
	Norali Nouri Shamsabadi	Mechanic/Driver	PPO, Tehran		
	Nasser Mirabollahi	Driver	PP Office, Sistan-Baluchistan		
Pakistan					
	Rasool Buskhsh Dars	Team Leader			
	Dharam Pal	Locust Officer			
	Mehboob Shah	Maintenance Asst.			
	Ahmed	Driver			
	Muhammad Safdar	Driver			

## Appendix 2. Itineraries in I.R. Iran and Pakistan

## I.R. Iran

Day	Date	Survey route	Night halt	
1	05/04/2014	Start joint survey in Zahedan	Zahedan	
2	06/04/2014	$Zahedan \rightarrow Khash \rightarrow Gosht \rightarrow Saravan$	Saravan	
3	07/04/2014	Saravan → Soran → Saravan	Saravan	
4	08/04/2014	$Saravan \rightarrow Zaboli \rightarrow Iranshahr$	Iranshahr	
5	09/04/2014	Iranshahr $ ightarrow$ Jolgeh Chah Hashem $ ightarrow$ Dalgan	Dalgan	
6	10/04/2014	Dalgan → Dalgan areas →Espakeh → Nikshahr	Nikshahr	
7	11/04/2014	Nikshahr → Nikshahr area → Chabahar	Chabahar	
8	12/04/2014	Chabahar $\rightarrow$ Konarak area $\rightarrow$ Chabahar	Chabahar	
9	13/04/2014	Chabahar → East Vashnam → Kambel→ Kohdim → Chabahar	Chabahar	
10	14/04/2014	Chabahar $\rightarrow$ Beris $\rightarrow$ Sham $\rightarrow$ Govater $\rightarrow$ Chabahar	Chabahar	
11	15/04/2014	/04/2014 Chabahar → west Vashnam → Maleki → Berijdar → Afkan → Chabahar		
12	16/04/2014	Chabahar $\rightarrow$ Zar abad $\rightarrow$ Jask area $\rightarrow$ Jask	Jask	
13	17/04/2014	$Jask \rightarrow Jask kohneh \rightarrow Kohmobarak \rightarrow Bandar abbas$	Bandar abbas	
14	18/04/2014	Bandar abbas → Minab → Bandar abbas	Bandar abbas	
15	19/04/2014	Report day for first half of survey results	Bandar abbas	
16	20/04/2014	Bandar abbas $\rightarrow$ Manujan $\rightarrow$ Qale Ganj $\rightarrow$ Solan $\rightarrow$ Qale Ganj	Qale Ganj	
17	21/04/2014	Qale Ganj → west Jaz Murian → Qale Ganj	Qale Ganj	
18	22/04/2014	Qale Ganj $ ightarrow$ East Jaz Murian $ ightarrow$ Zehkalut $ ightarrow$ Dalgan	Dalgan	
19	23/04/2014	Dalgan → Sangan → Sardegal → Bampour → Iranshahr	Iranshahr	
20	24/04/2014	Iranshahr → Zahedan	Zahedan	
21	25/04/2014	Report day for second half the survey& winding up, Locust head travel to Zahedan	Zahedan	
22	26/04/2014	Checking eLocust2 data	Zahedan	
23	27/04/2014	Preparing final report	Zahedan	
24	28/04/2014	Locust head and team leader return to their base.	Zahedan	

## **Survey route in Pakistan**

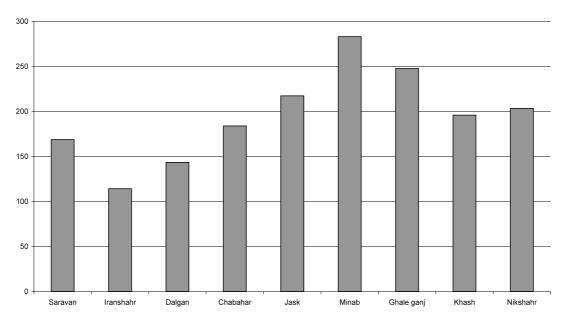


## Appendix 3. Rainfall in I.R. Iran and Pakistan

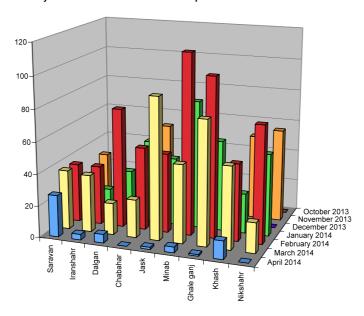
## I.R. Iran

	п	ahr		har			ganj		ıhr
Gregorian Date	Saravan	Iranshahr	Dalgan	Chabahar	Jask	Minab	Ghale ganj	Khash	Nikshahr
2013/10/13 2013/10/26							2	5.1	
October 2013	0	0	0	0	0	0	2	5.1 5.1	0
2013/11/04 2013/11/05						12.7	2		2
2013/11/06								12.2	_
2013/11/13 2013/11/14	0.5		5					20.6	8
2013/11/15	0.3			13.6	0.5	0.2			10
2013/11/16 2013/11/17					0.5	0.2	1		
2013/11/18 2013/11/21				3	3		3		
2013/11/22	30.5	19.2	6	38.5	29.8	4.4	3.2	20.6	38.8
2013/11/23 November 2013	31.3	19.2	11	55.1	0.3 <b>33.6</b>	18.6 <b>35.9</b>	9.2	0.2 <b>53.6</b>	58.8
2013/12/17 2013/12/18	1.5 10.2								
December 2013	10.2 11.7	0	0	0	0	0	0	0	0
2014/01/03 2014/01/05						0.7	0.2		
2014/01/06	2	6.2	7	26.0		0.1	11.2	10	166
2014/01/07 2014/01/08	17	6.3	7	26.8	21.6	9.4 7.8	4.8	10	16.6
2014/01/12 2014/01/18						2.2	13.4		
2014/01/19	0.1	10.7	15	25.6		43.4	27.4	9.5	35.2
2014/01/20 _2014/01/31	5.5	1	8 1.5		21.3	17		5.7	
<b>Ianuary 2014</b> 2014/02/01	24.6	18	<b>31.5</b> 14	52.4	<b>42.9</b> 0.5	80.6	57	<b>25.2</b> 3	<b>51.8</b> 4.1
2014/02/02	1.4 3.7				0.5				6.3
2014/02/03 2014/02/04	1.4	2	2 14.5			1.5	18 9.8	1.4 12.7	
2014/02/05	6.1	15.9				23.5	6	5.9	9.8
2014/02/06 2014/02/07			9 1			1.2			
2014/02/10 2014/02/12					0.1		3.4		
2014/02/13		0.5			6.6	3.8		0.5	4.0
2014/02/18 2014/02/19		0.5	2			2.9	6.2	0.5	1.8
February 2014 2014/03/08	<b>37.2</b> 7.2	<b>37.4</b> 1.2	75.5	52.4	50.1	113.5	100.4	<b>48.7</b> 20.1	<b>73.8</b> 0.3
2014/03/09	, .2	1.4					10.2	0.1	0.0
2014/03/13 2014/03/14			2.5			0.2	10.2 52.6	2.4	
2014/03/15 2014/03/16	1.9 11.4	23	12		1.4	40.4 1.9	5	8.9 4	4 0.6
2014/03/21		23				1.7		5.1	0.0
2014/03/22 2014/03/23	1.2 1.3	6						1.1 3.3	
2014/03/26 2014/03/27	14.6	6	4.5	14.5 9.5	5.9 63.5	7	10 0.4	6.8	11.4 2.8
2014/03/28			_1		18.5				
<b>March 2014</b> 2014/04/01	<b>37.6</b> 2.7	<b>36.2</b> 3.4	<b>20</b> 3.5	24	89.3	49.5	78.2	51.8	19.1
2014/04/02						<b>ງ</b> 1	1	0.1	
2014/04/03 2014/04/04	0.5	0.1	2		1.4	2.1 1.5		0.1 3.6	
2014/04/15 2014/04/20	23.2							7.7 0.1	
April 2014	26.4	3.5	5.5	0	1.4	3.6	1	11.5	0
Total	168.8	114.3	143.5	183.9	217.3	283.1	247.8	195.9	203.5

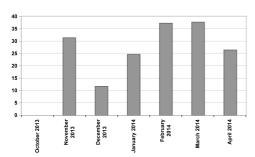
Rainfall data of the Desert Locust potential areas in I.R.Iran in 2013-14



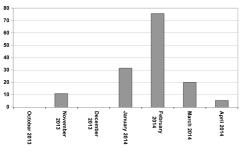
Monthly rainfall data of the Desert Locust potential areas in I.R.Iran in 2013-14



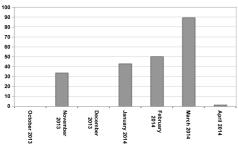
## Monthly rainfall of Saravan



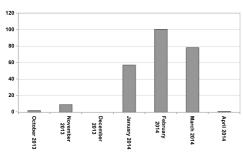
## Monthly rainfall of Dalgan



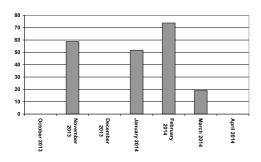
Monthly rainfall of Jask



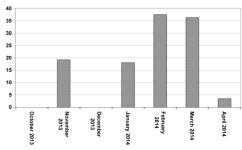
Monthly rainfall of Gale Ganj



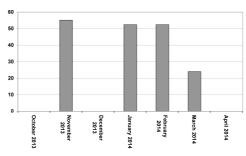
Monthly rainfall of Nikshahr



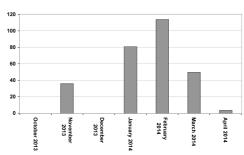
## Monthly rainfall of Iranshahr



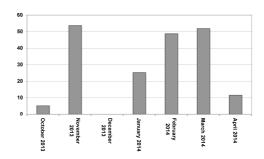
Monthly rainfall of Chabahar



Monthly rainfall of Minab

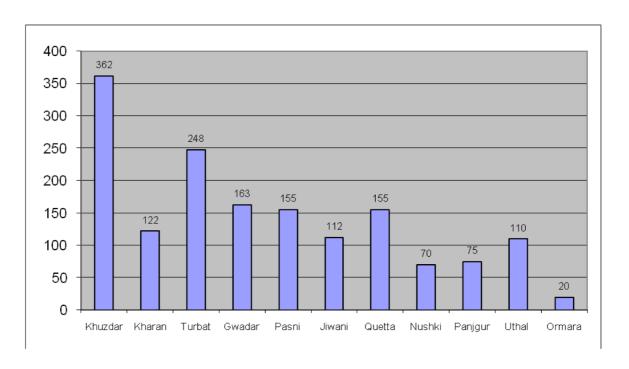


Monthly rainfall of Khash

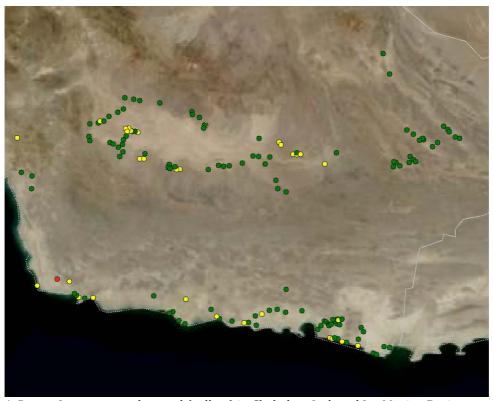


## Pakistan

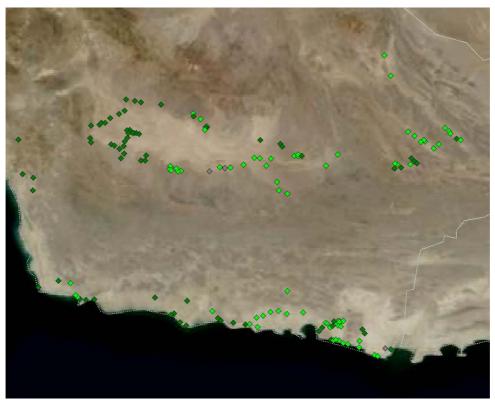
	April- 2013	May- 2013	Jun- 2013	July- 2013	Aug- 2013	Sept- 2013	Oct- 2013	Nov- 2013	Dec- 2013	Jan- 2014	Feb- 2014	Mar- 2014	Apr- 2014	TOTAL
Khuzdar	66		18		183			6			40	49		362
Kharan	55			37								20	10	122
Turbat	55				115			41			23	14		248
Gwadar	46							45		32	29	11		163
Pasni	39		21		39			21		19	4	12		155
Jiwani	45							24		39		4		112
Quetta	35							20			30	48	22	155
Nushki	35											25	10	70
Panjgur	24									30		21		75
Uthal	25				51			2				14	18	110
Ormara										10		10		20



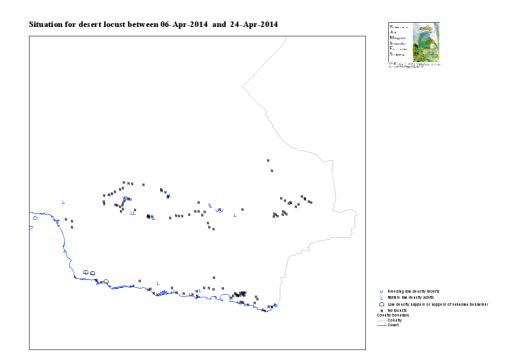
Appendix 4. Survey maps – I.R. Iran



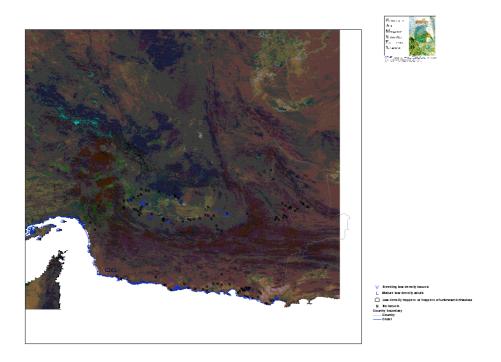
1. Desert Locust were observed (yellow) in Chabahar, Jask and Jaz Murian Basin



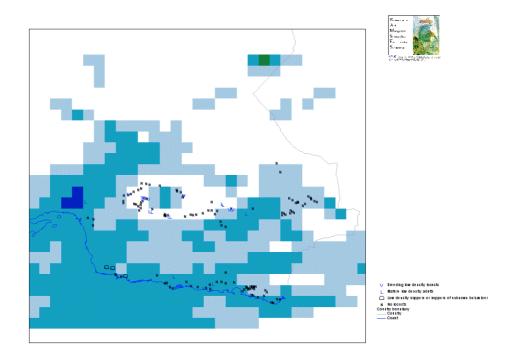
2. Vegetation was green or greening (light green) in the surveyed areas



## 3. I.R. Iran joint survey results for 2014 (RAMSESv3)



4. MODIS image of the joint survye area (6-21 March 2014)



5. Rainfall estimates for March 2014 (IRI, Columbia University)

## Appendix 5. Photos

## I.R. Iran



Team participants of I.R. Iran. Standing left to right: Abdolhamid Bashandeh (Locust officer), Norali Nori Shamsabadi (Driver), Naser Mirabdollahi (Driver), Mahmoud Chalaki Zabardast (Team leader), Abbas Shanbalak Jaski (Locust assistant)



Data collected in eLocust2, eLocust3 and FAO Desert Locust Survey & Control Form in I.R.



Vegetation greenness and density in Jaz Murian Basin, I.R. Iran



Checking area for Desrt Locust in I.R. Iran



Mature transiens adult in I.R. Iran



Checking soil moisture in I.R. Iran

## **Pakistan**



The 2014 Pakistan joint survey team



Checking soil moisture near Kharan, Pakistan



Searching for locusts in Panjgur area, Pakistan



Greening vegetation in the Nushki area, Pakistan



Dry terrain in the Washuk area, Pakistan



Pakistan Locust officer entering field data in eLocust2

## Appendix 6. Itinerary for 2015 joint survey

## Option A (normal joint survey)

Day	Date	Route in Pakistan and I.R. Iran	Night halt
1	05/04/2015	I.R. Iran team cross into Pakistan at Mirjaveh	Taftan
2	06/04/2015	Taftan → Dalbadin → Chagi Hills → Nushki	Nushki
3	07/04/2015	Nushki → Kharan → Kharan area (Naroo)	Kharan
4	08/04/2015	Kharan area (Shamsi-Boroko)	Kharan
5	09/04/2015	Kharan area (Ormage and Sole areas)	Kharan
6	10/04/2015	$Kharan \rightarrow Basima \rightarrow Nag \rightarrow Panjgur$	Panjgur
7	11/04/2015	Panjgur → Prome → Panjgur	Panjgur
8	12/04/2015	Panjgur → Hoshab → Turbat	Turbat
9	13/04/2015	$Turbat \rightarrow Solaika \rightarrow Turbat$	Turbat
10	14/04/2015	Turbat → Suntsar → Gwader	Gwader
11	15/04/2015	Gwader → Jiwani → Gwadar	Gwader
12	16/04/2015	Gwadar → Kulanch → Pasni	Pasni
13	17/04/2015	Pasni area	Pasni
14	18/04/2015	Pasni $\rightarrow$ Ormara $\rightarrow$ Uthal	Utal
15	19/04/2015	Uthal → Quetta	Quetta
16	20/04/2015	Report day, prepare 1st half joint survey results	Quetta
17	21/04/2015	Quetta → Nushki → Taftan	Taftan
1	22/04/2015	Pakistan and Iran teams cross border point Taftan/Mirjaveh	Zahedan
2	23/04/2015	$Zahedan \rightarrow Khash \rightarrow Gosht \rightarrow Saravan$	Saravan
3	24/04/2015	Saravan → Souran → Zaboli → Iranshahar	Iranshahr
4	25/04/2015	Iranshahar → Jolgeh Chah Hashem → Iranshahar	Iranshar
5	26/04/2015	Iranshahar → Espaken → Nikshahar → Chahbahar	Chabahar
6	27/04/2015	Chahbahar $\rightarrow$ Beris $\rightarrow$ Sham $\rightarrow$ Govater $\rightarrow$ hahbahar (Foreign officers should arrive to Tehran by 04:00 as they will fly to Chabahar on this day all together)	Chabahar
7	28/04/2015	Chahbahar $\rightarrow$ Vashnam $\rightarrow$ Dashtiari $\rightarrow$ Negur $\rightarrow$ Chahbahar	Chabahar
8	29/04/2015	Chahbahar → Zarabad → Jask → Jask area	Jask
9	30/04/2015	Jask → Minab → Bandar Abbas	Bandar abbas
10	01/05/2015	Report day, prepare 2 <sup>nd</sup> half joint survey results (Foreign officers depart for Tehran in the evening and they will return to their country on next day)	Bandar abbas
11	02/05/2015	Bandar Abbas $\rightarrow$ Qale Ganj $\rightarrow$ Sowlan $\rightarrow$ Qale Ganj	Qale Ganj
12	03/05/2015	East Jaz Murian → Qale Ganj	Qale Ganj
13	04/05/2015	Zeh Kalout $\rightarrow$ Dalgan $\rightarrow$ Sangan $\rightarrow$ Sardegal $\rightarrow$ Bampour $\rightarrow$ Iranshahar	Iranshahr
14	05/05/2015	Iranshahar → Zahedan → sent $2^{nd}$ half results	Zahedan
15	06/05/2015	Locust Heads / JS team meeting, prepare JS report	Zahedan
16	07/05/2015	Locust Heads / JS team meeting, prepare JS report	Zahedan
17	08/05/2015	Zahedan, Mirjaveh, Pakistani Team cross the border	

## Option B (separate surveys in each country)

Day	Date	Route	Night halt
1	05/04/2015	Start joint survey in Zahedan	Zahedan
2	06/04/2015	$Zahedan \rightarrow Khash \rightarrow Gosht \rightarrow Saravan$	Saravan
3	07/04/2015	Saravan → Soran → Saravan	Saravan
4	08/04/2015	Saravan → Zaboli → Iranshahr	Iranshahr
5	09/04/2015	Iranshahr → Jolgeh Chah Hashem → Dalgan	Dalgan
6	10/04/2015	Dalgan → Dalgan areas →Espakeh → Nikshahr	Nikshahr
7	11/04/2015	Nikshahr → Nikshahr area → Chabahar	Chabahar
8	12/04/2015	Chabahar $\rightarrow$ Konarak area $\rightarrow$ Chabahar (Foreign officers should arrive to Tehran by 04:00 as they will fly to Chabahar on this day all together)	Chabahar
9	13/04/2015	Chabahar $\rightarrow$ East Vashnam $\rightarrow$ Kambel $\rightarrow$ Kohdim $\rightarrow$ Chabahar	Chabahar
10	14/04/2015	Chabahar → Beris → Sham → Govater → Chabahar	Chabahar
11	15/04/2015	Chabahar → west Vashnam → Maleki → Berijdar → Afkan → Chabahar	Chabahar
12	16/04/2015	Chabahar → Zar abad → Jask area → Jask	Jask
13	17/04/2015	Jask → Jask kohneh → Kohmobarak → Bandar abbas (Foreign officers depart for Tehran in the evening and they will return to their country)	Bandar abbas
14	18/04/2015	Bandar abbas → Minab → Bandar abbas	Bandar abbas
15	19/04/2015	Report day for first half of survey results	Bandar abbas
16	20/04/2015	Bandar abbas → Manujan → Qale Ganj → Solan → Qale Ganj	Qale Ganj
17	21/04/2015	Qale Ganj → west Jaz Murian → Qale Ganj	Qale Ganj
18	22/04/2015	Qale Ganj $\rightarrow$ East Jaz Murian $\rightarrow$ Zehkalut $\rightarrow$ Dalgan	Dalgan
19	23/04/2015	Dalgan → Sangan → Sardegal → Bampour → Iranshahr	Iranshahr
20	24/04/2015	Iranshahr → Zahedan	Zahedan
21	25/04/2015	Report day for second half the survey& winding up	Zahedan
22	26/04/2015	Locust head travel to Zahedan	Zahedan
23	27/04/2015	Meeting of Team Leaders and Locust heads of both countries to exchange views and information on JS	Zahedan
24	28/04/2015	Meeting of Team Leaders and Locust heads of both countries to draft the JS Report.	Zahedan
25	29/04/2015	Meeting of Team Leaders and Locust heads of both countries to submit the final JS report to DLIS, Rome	Zahedan
26	30/04/2015	The delegates of Pakistan and Iran travel back to their destination	