

warning level: **CALM**

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 467



General Situation during August 2017  
Forecast until mid-October 2017

(1.9.2017)

The Desert Locust situation continued to remain calm during August. Despite good rainfall and favourable breeding conditions, only low numbers of solitarious locusts were present in the summer breeding areas of the northern Sahel in West Africa and Sudan, in the interior of Yemen and along both sides of the Indo-Pakistan border. Nevertheless, locust numbers are expected to increase slightly during the forecast period as breeding continues. Once vegetation starts to dry out at the end of the summer, locusts may concentrate and perhaps form a few very small groups in some places.

**Western Region.** The situation remained calm during August. Low numbers of adults were present in some of the summer breeding areas of the northern Sahel in **Mauritania** and **Niger**. No surveys were conducted in **Mali** and **Chad**. Despite good rains and ecological conditions, only limited breeding was detected in Niger and near irrigated farms in the central Sahara of **Algeria** but is likely to be in progress elsewhere. Small-scale breeding will continue during the forecast period, causing locust numbers to increase slightly from Mauritania to Chad. Once vegetation starts to dry out, locusts could concentrate and form a few very small groups, for example in western Mauritania.

**Central Region.** The locust situation remained calm in the region during August. Low numbers of solitarious adults continued to be present in the interior of **Sudan**

where good rains fell and small-scale breeding is expected to cause locust numbers to increase slightly during the forecast period. Good rains also fell in the interior of **Yemen** where limited breeding was detected and there were unconfirmed reports of locust groups. This could not be confirmed by surveys because of prevailing insecurity. Locusts may also be present in areas of recent rainfall on the Red Sea coast of Yemen. Once vegetation starts to dry out, there is a low risk that locusts could concentrate and perhaps form a few small groups, for example in Sudan and Yemen.

**Eastern Region.** The locust situation remained calm in the region during August. Only low numbers of locusts were present in the summer breeding areas along the **Indo-Pakistan** border where very little rain fell compared to July. Nevertheless, ecological conditions remained favourable for breeding that could cause a slight increase in locust numbers but no significant developments are likely. Isolated adults were present at a few places on the southeast coast of **Iran**.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and are available on the Internet.

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### Weather & Ecological Conditions in August 2017

**Ecological conditions were favourable for breeding in the Sahel of West Africa and Sudan as a result of a third consecutive month of good rains. Monsoon rains declined along both sides of the Indo-Pakistan border but breeding conditions remained favourable. Good rains fell in the interior of Yemen and along parts of the Red Sea coast.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) continued to move northwards over the summer breeding areas in the northern Sahel during the first decade of August when it was located more than 300 km further north than usual, reaching just south of Tamanrasset in southern Algeria. Thereafter, it retreated south to its near-normal position over central Mauritania (north of Tidjikja), northern Mali (Aguelhoc), Niger (In Abangharit) and Chad (Fada) during the second decade. Consequently, good rains fell throughout the summer breeding areas of the northern Sahel for the third consecutive month and conditions were favourable for breeding. The rainfall also extended into southern Algeria where breeding conditions improved.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) continued to move northwards over the interior of Sudan during the first decade of August, reaching Ed Debba in the northern Nile Valley, and then retreated southwards thereafter. Its position was nearly normal for this time of year. Consequently, good rains fell throughout the summer breeding areas from Darfur to the Red Sea Hills in Sudan and in the western lowlands of Eritrea where conditions remained favourable for breeding. Good rains also fell in the interior of Yemen in Marib, Shabwah and Hadhramaut areas as well as along the Red Sea coast, causing ecological conditions to be favourable for breeding in some areas.

In the **Eastern Region**, rainfall associated with the seasonal monsoon declined along both sides of the Indo-Pakistan border where only some showers fell in eastern Rajasthan, India. Nevertheless, ecological conditions were favourable for breeding in Rajasthan, especially in the western portion as a result of 50%



### Area Treated

No control operations were reported during August.



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

###### • SITUATION

During August, isolated immature and mature solitary adults were present in the summer breeding areas north of Aioun El Atrous (1639N/0936W) while mature adults were seen in the centre between Aguilal Faye (1827N/1444W) and Tidjikja (1833N/1126W). No locusts were observed elsewhere during surveys.

###### • FORECAST

*Small-scale breeding will cause locust numbers to increase in southern and central areas. Once vegetation begins to dry out, locusts may increase in number and concentrate in western areas where there is a low risk of a few very small groups forming.*

##### **Mali**

###### • SITUATION

No surveys were carried out and no locusts were reported during August.

###### • FORECAST

*Low numbers of adults are likely to be present and breeding on a small scale in parts of the Adrar des Iforas, Timetrine, Tilemsi Valley and Tamesna. This will cause locust numbers to increase during the forecast period.*

##### **Niger**

###### • SITUATION

During August, isolated immature and mature solitary adults were present in the southeastern Air Mountains and on the central Tamesna Plains near In Abangharit (1754N/0559E). Small-scale breeding occurred in the Air east of Timia (1809N/0846E) where isolated second to fifth instar solitary hoppers were present. Limited egg-laying was observed in the Tamesna on the 14<sup>th</sup>.

- **FORECAST**

*Small-scale breeding will continue on the Tamesna Plains and in the Air Mountains, causing locust numbers to increase slightly during the forecast period. Limited breeding may also be in progress in the central pasture zone.*

### **Chad**

- **SITUATION**

No reports received.

- **FORECAST**

*Low numbers of adults are almost certainly present in central and eastern areas where small-scale breeding is likely to be in progress and will continue during the forecast period, causing locust numbers to increase slightly.*

### **Senegal**

- **SITUATION**

No locust activity was reported during August.

- **FORECAST**

*No significant developments are likely.*

### **Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Sierra Leone and Togo**

- **FORECAST**

*No significant developments are likely.*

### **Algeria**

- **SITUATION**

During August, isolated mature solitary adults mixed with a few second and third instar solitary hoppers were present near an irrigated farm in the Adrar (2753N/0017W) valley of the central Sahara. Some adults were seen copulating at the end of the month. No locusts were seen west of Tamanrasset (2250N/0528E).

- **FORECAST**

*Small-scale breeding will continue in the Adrar Valley, and is likely to occur in the south between Tamanrasset and the Mali/Niger border, causing locust numbers to increase slightly.*

### **Morocco**

- **SITUATION**

No locust activity was reported during August.

- **FORECAST**

*No significant developments are likely.*

### **Libya**

- **SITUATION**

A late report indicated no locust activity during July. No reports were received in August.

- **FORECAST**

*No significant developments are likely.*

### **Tunisia**

- **SITUATION**

No locust activity was reported during August.

- **FORECAST**

*No significant developments are likely.*

## **CENTRAL REGION**

### **Sudan**

- **SITUATION**

During August, isolated immature and mature solitary adults were present in the Nile Valley near Dongola (1910N/3027E), Ed Debba (1803N/3057E), Abu Hamed (1932N/3320E) and Atbara (1742N/3400E). Similar populations were also present in the summer breeding areas of North Kordofan southeast of Abu Uruq (1554N/3027E), in White Nile northwest of Ed Dueim (1400N/3220E), and in the Baiyuda Desert. Small-scale breeding occurred near Ed Debba where scattered third instar solitary hoppers were observed. No locusts were seen west of the Red Sea Hills and near Kassala (1527N/3623E).

- **FORECAST**

*Small-scale breeding will cause locust numbers to increase slightly between West Darfur and the Red Sea Hills, and to a lesser extent in the Nile Valley.*

### **Eritrea**

- **SITUATION**

A late report indicated that low numbers of immature and mature solitary adults were present on the Red Sea coast near Sheib (1551N/3903E) in July. A few adults were seen copulating at the end of the month.

No surveys were carried out and no locusts were reported during August.

- **FORECAST**

*Low numbers of adults are likely to be present and breeding on a small scale in the western lowlands as well as on the central Red Sea coast near Sheib. Consequently, locust numbers are expected to increase slightly during the forecast period in both areas.*

### **Ethiopia**

- **SITUATION**

No reports received.

- **FORECAST**

*No significant developments are likely.*



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### **Djibouti**

- **SITUATION**

No surveys were carried out and no locusts were reported during August.

- **FORECAST**

*No significant developments are likely.*

### **Somalia**

- **SITUATION**

A late report indicated that no surveys were carried out and no locusts were reported during July. No reports were received in August.

- **FORECAST**

*No significant developments are likely.*

### **Egypt**

- **SITUATION**

No reports received.

- **FORECAST**

*No significant developments are likely.*

### **Saudi Arabia**

- **SITUATION**

During August, no locusts were seen during surveys carried out on the southern coastal plains of the Red Sea to the north of Jizan (1656N/4233E).

- **FORECAST**

*No significant developments are likely.*

### **Yemen**

- **SITUATION**

During August, immature and mature solitarious adults were present in Wadi Hadhramaut east of Sayun (1559N/4844E) and on the plateau to the north where some adults were copulating. Isolated immature solitarious adults were present west of Am Rija (1302N/4434E) on the Aden coast. There were confirmed and unconfirmed reports of low numbers of solitarious adults and perhaps a few small groups in wadis between Marib (1527N/4519E) and Bayhan (1452N/4545E) but this could not be followed up due to insecurity.

- **FORECAST**

*Small-scale breeding is expected to continue in the interior on the edge of Ramlat Sabatyn between Marib and Ataq, in Wadi Hadhramaut and on the plateau to the north, causing locust numbers to increase. Similar*

*populations may be present and breeding on the Red Sea coastal plains in areas of recent rainfall.*

### **Oman**

- **SITUATION**

During August, no locusts were seen by surveys carried out in the Musandam Peninsula and in the northern interior of Dakhiliya near Nizwa (2255N/5731E) and Adam (2223N/5731E).

- **FORECAST**

*No significant developments are likely.*

**Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda**

- **FORECAST**

*No significant developments are likely.*

### **EASTERN REGION**

#### **Iran**

- **SITUATION**

During August, isolated mature solitarious adults persisted in a few places on the southeast coast near Chabahar (2517N/6036E). No locusts were seen on the coast near Jask (2540N/5746E).

- **FORECAST**

*No significant developments are likely.*

#### **Pakistan**

- **SITUATION**

During August, isolated mature solitarious adults persisted in a few places of Lasbela west of Karachi (2450N/6702E) and in Cholistan near the Indian border south of Rahimyar Khan (2822N/7020E) and Islamgarh (2751N/7048E).

- **FORECAST**

*Small-scale breeding will cause locust numbers to increase slightly in parts of Tharparkar, Nara and Cholistan as well as in the Lasbela area.*

#### **India**

- **SITUATION**

During August, isolated mature solitarious adults were present at a few places in Rajasthan to the west of Bikaner (2801N/7322E).

- **FORECAST**

*Small-scale breeding will cause locust numbers to increase slightly in parts of Rajasthan and Gujarat.*

#### **Afghanistan**

- **SITUATION**

No reports received.

- **FORECAST**

*No significant developments are likely.*



## Announcements

**Desert Locust warning levels.** A colour-coded scheme indicates the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

**Locust reporting.** During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLD Desert Locust Information Service (eclod@fao.org). Reports received by the first two days of the new month will be included in the FAO Desert Locust Bulletin for the current month; otherwise, they will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

**New information on Locust Watch.** Recent additions to the web site ([www.fao.org/ag/locusts](http://www.fao.org/ag/locusts)) are:

- **WMO/FAO Weather and Desert Locusts booklet.** Publications – Documents
- **CRC/SWAC Desert Locust Information Officers workshop.** Publications – Reports 2017
- **SWAC Iran/Pakistan Joint Survey results.** Publications – Reports 2017

**RAMSES training videos.** New training videos are available on YouTube for Rv4.1 users – see Useful tools and resources section of this bulletin.

**2017 events.** The following activities are scheduled or planned:

- **CLCPRO.** Technical meeting on the use of remote sensing imagery in preventive locust management in the Western Region, Niamey, Niger (11–13 September)
- **CLCPRO.** Regional training in survey techniques for newly recruited scouts, Akjoujt, Mauritania (2 October – 5 November)
- **CLCPRO.** 16<sup>th</sup> EMPRES liaison officers meeting and 13<sup>th</sup> Steering Committee meeting, Agadir, Morocco (1–9 December)

- **SWAC.** Desert Locust Information Officer workshop, Tehran (December) [tbc]
- **CRC.** 10<sup>th</sup> Subregional training course on Desert Locust campaigns (December) [tbc]



## Glossary of terms

The following special terms are used in the Desert Locust Bulletin when reporting locusts:

### **NON-GREGARIOUS ADULTS AND HOPPERS**

#### **ISOLATED (FEW)**

- very few present and no mutual reaction occurring;
- 0–1 adult/400 m foot transect (or less than 25/ha).

#### **SCATTERED (SOME, LOW NUMBERS)**

- enough present for mutual reaction to be possible but no ground or basking groups seen;
- 1–20 adults/400 m foot transect (or 25–500/ha).

#### **GROUP**

- forming ground or basking groups;
- 20+ adults/400 m foot transect (or 500+/ha).

### **ADULT SWARM AND HOPPER BAND SIZES**

#### **VERY SMALL**

- swarm: less than 1 km<sup>2</sup>      • band: 1–25 m<sup>2</sup>

#### **SMALL**

- swarm: 1–10 km<sup>2</sup>      • band: 25–2,500 m<sup>2</sup>

#### **MEDIUM**

- swarm: 10–100 km<sup>2</sup>      • band: 2,500 m<sup>2</sup> – 10 ha

#### **LARGE**

- swarm: 100–500 km<sup>2</sup>      • band: 10–50 ha

#### **VERY LARGE**

- swarm: 500+ km<sup>2</sup>      • band: 50+ ha

### **RAINFALL**

#### **LIGHT**

- 1–20 mm of rainfall.

#### **MODERATE**

- 21–50 mm of rainfall.

#### **HEAVY**

- more than 50 mm of rainfall.



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### **OTHER REPORTING TERMS**

#### **BREEDING**

- the process of reproduction from copulation to fledging.

#### **SUMMER RAINS AND BREEDING AREAS**

- July–September/October  
(Sahel of West Africa, Sudan, western Eritrea; Indo-Pakistan border)

#### **WINTER RAINS AND BREEDING AREAS**

- October–January/February  
(Red Sea and Gulf of Aden coasts; northwest Mauritania, Western Sahara)

#### **SPRING RAINS AND BREEDING AREAS**

- February–June/July  
(Northwest Africa, Arabian Peninsula interior, Somali plateau, Iran/Pakistan border)

#### **RECESSION**

- period without widespread and heavy infestations by swarms.

#### **REMISSION**

- period of deep recession marked by the complete absence of gregarious populations.

#### **OUTBREAK**

- a marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms.

#### **UPSURGE**

- a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to- gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions.

#### **PLAGUE**

- a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

#### **DECLINE**

- a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.



### **Useful tools and resources**

**FAO Locust Watch.** Information, maps, activities, publications, archives, FAQs, links

<http://www.fao.org/ag/locusts>

**IRI RFE.** Rainfall estimates every day, decade and month

[http://iridl.ldeo.columbia.edu/maproom/.Food\\_Security/.Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/.Food_Security/.Locusts/index.html)

**IRI Greenness maps.** Dynamic maps of green vegetation evolution every decade

[http://iridl.ldeo.columbia.edu/maproom/Food\\_Security/Locusts/Regional/greenness.html](http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html)

**IRI MODIS.** Vegetation imagery every 16 days

[http://iridl.ldeo.columbia.edu/maproom/Food\\_Security/Locusts/Regional/MODIS/index.html](http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/MODIS/index.html)

**Windy.** Real time rainfall, winds and temperatures for locust migration

<http://www.windy.com>

**eLocust3 training videos.** A set of 15 introductory training videos are available on YouTube

<https://www.youtube.com/playlist?list=PLf7Fc-oGpFHEdv1jAPaF02TCfpcnYoFQT>

**RAMSESv4 training videos.** A set of basic training videos are available on YouTube

<https://www.youtube.com/playlist?list=PLf7Fc-oGpFHGyzXqE22j8-mPDhhGNq5So>

**RAMSESv4 and eLocust3.** Installer, updates, videos, inventory and support

<https://sites.google.com/site/rv4elocust3updates/home>

**FAOLocust Twitter.** The very latest updates posted as tweets

<http://www.twitter.com/faolocust>

**FAOLocust Facebook.** Information exchange using social media

<http://www.facebook.com/faolocust>

**FAOLocust Slideshare.** Locust presentations and photos

<http://www.slideshare.net/faolocust>

**eLERT.** Online database of resources and technical specifications for locust emergencies

<http://sites.google.com/site/elertsite>

## **WARNING LEVELS**

### **GREEN**

- Calm. No threat to crops. Maintain regular surveys and monitoring.

### **YELLOW**

- Caution. Potential threat to crops. Increased vigilance is required; control operations may be needed.

### **ORANGE**

- Threat. Threat to crops. Survey and control operations must be undertaken.

### **RED**

- Danger. Significant threat to crops. Intensive survey and control operations must be undertaken.

## **REGIONS**

### **WESTERN**

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during plagues only: Benin, Burkino Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sierre Leone and Togo.

### **CENTRAL**

- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda.

### **EASTERN**

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



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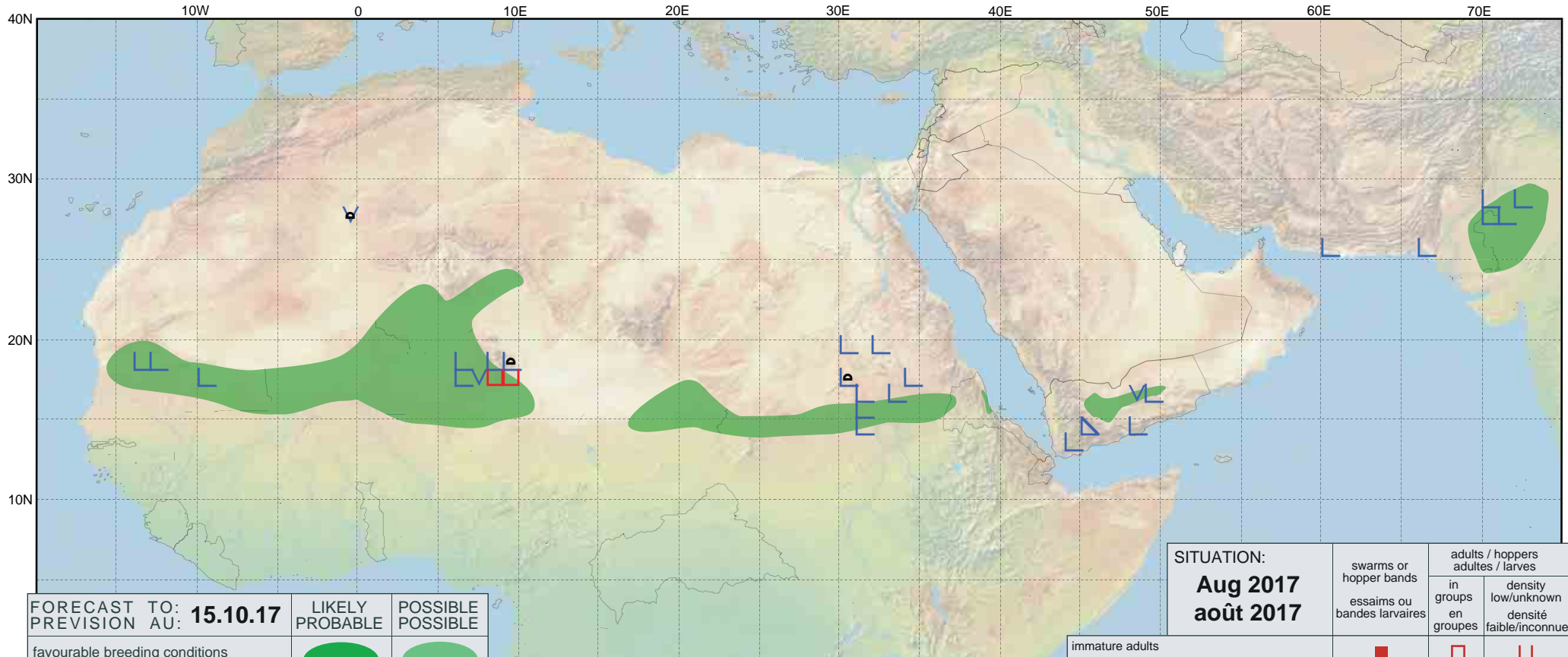
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU: <b>15.10.17</b>	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

<b>SITUATION:</b> <b>Aug 2017</b> <b>août 2017</b>	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves	
		in groups en groupes	density low/unknown densité faible/inconnue
immature adults adultes immatures			
mature or partly mature adults adultes matures ou partiellement matures			
adults, maturity unknown adultes, maturité inconnue			
egg laying or eggs pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)			