

warning level: **CALM**

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 395



**General Situation during August 2011  
Forecast until mid-October 2011**

(2 Sept 2011)

**Low numbers of solitary Desert Locust adults persisted in some of the summer breeding areas in the northern Sahel of Mauritania, Mali, Niger and Sudan during August. Similar numbers are likely to be present in eastern Chad and western Eritrea. Small-scale breeding was reported in Mauritania and Niger. In Northwest Africa, ground teams in Morocco and Algeria treated residual populations of *transiens* hopper and adult groups from spring breeding. In Southwest Asia, low numbers of solitary adults were present along both sides of the Indo-Pakistan border. During the forecast period, small-scale breeding will occur in areas of recent rainfall in the northern Sahel between Mauritania and western Eritrea, along both sides of the Indo-Pakistan border, and perhaps in the interior of Yemen, causing locust numbers to increase.**

**Western Region.** Low numbers of solitary adults were present in parts of the summer breeding areas in the northern Sahel of **Mauritania**, northern **Mali**, and western and northern **Niger** during August. Good rains fell in most of these areas, causing ecological conditions to remain favourable for breeding. Low numbers of locusts are also likely to be present in eastern **Chad**. Although small-scale breeding was only detected in southwest Mauritania and western Niger, it is almost certainly in progress in the other frontline countries and will continue during the forecast period, causing locust numbers to increase further. In Northwest Africa, ground teams treated residual

infestations of hopper and adult groups south of the Atlas Mountains in **Morocco** (1,175 ha) and **Algeria** (40 ha). During the forecast period, low numbers of locusts are expected to appear in southern Algeria and in areas of recent heavy rainfall in the southeastern part of **Western Sahara**. Limited breeding could occur in both places.

**Central Region.** Average rains fell during August in the summer breeding areas in northern **Sudan** and low numbers of solitary adults were present in North Kordofan, Khartoum and River Nile States. Small-scale breeding will cause locust numbers to increase during the forecast period. Although reports were not received from **Eritrea**, a similar situation and forecast are expected. Low numbers of locusts are likely to be present and breeding on a small scale in the interior of **Yemen** where good rains fell during August. Unfortunately, surveys could not be carried out to confirm this. During the forecast period, locust numbers are expected to increase in areas of recent rainfall in Yemen. No locusts were reported elsewhere in the Region.

**Eastern Region.** Low numbers of solitary adults were present along both sides of the Indo-Pakistan border in Cholistan, **Pakistan** and Rajasthan, **India**. As ecological conditions remain favourable for breeding due to the seasonal monsoon rains, small-scale breeding will cause locust numbers to increase during the forecast period.

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 made available on the Internet.

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## Weather & Ecological Conditions in August 2011

**Seasonal rains continued during August in the northern Sahel between Mauritania and Eritrea as well as along parts of the Indo-Pakistan border, causing vegetation to become green. As a result, ecological conditions were favourable for small-scale breeding.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) continued its northward movement over the northern Sahel in West Africa during August, reaching 21N over Mali. Its position during the second decade was further north than normal between Mali and Chad while it was normal over Mauritania. In Mauritania, good rains fell in southern and central areas, causing vegetation to become green west of Rkiz, near Boutilimit and south of 1720N from Aleg to Nema. Some rains also fell in the northwest and north (Inchiri, Adrar and Tiris Zemmour) while heavier rains fell in adjacent areas of southeast Western Sahara near Agwanit but vegetation remained dry. In southeast Mauritania, heavy rains fell northeast of Oualata on the Malian border. In Mali, light to moderate rains fell in the Adrar des Iforas and heavier rains fell between Araouane and Timetrine and in southern Tamesna. Vegetation was becoming green near Gao and Menaka, and in the main wadis of the Adrar des Iforas. In Niger, good rains fell in Tamesna and the Air Mountains, and vegetation was becoming green in the southern portions of both areas. In Chad, good rains fell at times over the northern Sahel, reaching Beurkia and Fada, and annual vegetation became green in the east as far north as Kalait. In Northwest Africa, light rain associated with the ITCZ fell in southern Algeria. In Morocco, vegetation had dried out along the southern side of the Atlas Mountains in the absence of rainfall.

In the **Central Region**, the ITCZ position over Sudan was about normal for August, causing good rains to fall at times in the summer breeding areas of the interior of Sudan south of 17N and in adjacent areas of western Eritrea. In Sudan, vegetation was slow in becoming green except in West Darfur, parts of West Kordofan, a few areas of North Kordofan

between Sodiri and Umm Saiyala, and along the Nile River in White Nile, Khartoum, River Nile and Northern States. Vegetation was also becoming green east of Shendi and north of Kassala. In Eritrea, vegetation was becoming green in the southern part of the western lowlands just north of Teseney. In Saudi Arabia, ecological conditions were favourable for breeding on the southern Red Sea coastal plains near Jizan as a result of good rains during August. In Yemen, good rains fell at the end of the month in the interior, especially near the Omani border, and along parts of the Red Sea and Gulf of Aden coasts.

In the **Eastern Region**, rainfall associated with the monsoon along both sides of the Indo-Pakistan border was about normal for August. In Pakistan, very heavy rains fell during the first fortnight of the month in parts of the Tharparkar Desert (Mithi 245 mm, Mirpurkhas 245 mm, Chore 162 mm) while only light showers occurred in Cholistan. Annual vegetation was becoming green in Rajasthan, India between Barmer and the Rajasthan Canal as well as west of Sam, and from the canal to adjacent areas in Cholistan, Pakistan.



### Area Treated

Algeria	40 ha (August)
Morocco	1,175 ha (August)



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

##### • SITUATION

During August, isolated solitary adults were maturing at a few places in the south between Tamchekket (1714N/1040W) and Timbedra (1614N/0809W), in the centre northwest of Moudjeria (1752N/1219W), and in the southwest near Rkiz (1658N/1514W). Copulating adults at densities up to 300 adults/ha were seen near Rkiz.

##### • FORECAST

*Small-scale breeding will cause locust numbers to increase in the southwest, in Trarza and Tagant between Aguilal Faye and Tidjikja, and in parts of Brakna, Assaba and the two Hohds.*

## Mali

### • SITUATION

During August, isolated immature and mature solitary adults were seen during ground surveys at a few places in the Adrar des Iforas near Aguelhoc (1927N/0052E) and in central Tamesna south of Tin Essako (1826N/0229E).

### • FORECAST

*Small-scale breeding will cause locust numbers to increase in the Tilemsi Valley, Adrar des Iforas, Tamesna and Timetrine.*

## Niger

### • SITUATION

During August, isolated third to fifth instar solitary hoppers from egg laying in late July and mature solitary adults were present in the west between Filingué (1421N/0319E) and the Malian border. Scattered immature and mature solitary adults were seen in a few places between Agadez (1700N/0756E) and Arlit (1843N/0721E).

### • FORECAST

*Small-scale breeding will cause locust numbers to increase in the Tillabéri area, Tamesna, the western Air Mountains and the northern Sahel.*

## Chad

### • SITUATION

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

### • FORECAST

*Small-scale breeding will cause locust numbers to increase in the northern parts of Kanem, Batha and Biltine as well as in parts of BET in areas of recent rainfall and green vegetation.*

## Senegal

### • SITUATION

No reports were received 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, mature solitary adults and first instar hoppers were present in one cropping area near Beni Abbes (3011N/0214W). Ground teams treated 40 ha. No locusts were seen elsewhere.

### • FORECAST

*Low numbers of adults are likely to appear in the*

*southern Sahara and breed on a small scale in areas of recent rainfall.*

## Morocco

### • SITUATION

During August, residual locust infestations declined further in the northeast. Ground teams treated 1,175 ha of late instar hoppers and immature *transiens* adult groups, at densities up to 3 locusts/m<sup>2</sup>, between Bouarfa (3232N/0159W) and the Algerian border. By the last decade of the month, no locusts were reported in the area.

### • FORECAST

*Low numbers of locusts may appear in areas of recent heavy rains in the southeast part of Western Sahara, and perhaps breed on a small scale.*

## Libyan Arab Jamahiriya

### • SITUATION

No reports were received during August.

### • FORECAST

*A few solitary adults may be present and could persist near Ghat. No significant developments are likely.*

## Tunisia

### • SITUATION

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

### • FORECAST

*No significant developments are likely.*

## CENTRAL REGION

### Sudan

#### • SITUATION

During August, scattered immature and mature solitary adults at densities up to 150 adults/ha were present in a few places south of Sodiri (1423N/2906E) in North Kordofan, and along the Atbara River southeast of Atbara (1742N/3400E). Egg laying was reported east of Khartoum (1533N/3235E) on the 16<sup>th</sup>. No locusts were seen along the Nile between Khartoum and Abu Hamed (1932N/3320E).

#### • FORECAST

*Small-scale breeding will occur and low numbers of hoppers and fledglings will be present in parts of North Darfur, North Kordofan, White Nile, River Nile, Northern, Kassala and Red Sea states. Consequently, locust numbers will increase in these areas.*



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### Eritrea

- SITUATION

No reports were received during August.

- FORECAST

*Small-scale breeding is almost certainly in progress in areas of recent rainfall in the southern part of the western lowlands. This will cause locust numbers to increase along Khor Baraka. Regular surveys should be carried out during the next few months.*

### Ethiopia

- SITUATION

No locusts were seen during surveys carried out in the northern regions of Amhara and Tigray in August.

- FORECAST

*No significant developments are likely.*

### Djibouti

- SITUATION

No reports were received during August.

- FORECAST

*No significant developments are likely.*

### Somalia

- SITUATION

No reports were received during August.

- FORECAST

*No significant developments are likely.*

### Egypt

- SITUATION

No reports were received during August.

- FORECAST

*No significant developments are likely.*

### Saudi Arabia

- SITUATION

No locusts were seen during surveys carried out near Mecca (2125N/3949E) and in the central and northern interior in August.

- FORECAST

*Low numbers of adults may appear in areas of recent rainfall on the southern Red Sea coastal plains near Jizan.*

### Yemen

- SITUATION

Locust surveys could not be carried out during August and no locusts were reported.

- FORECAST

*Low numbers of locusts may present in the interior between Marib and Thamud where small-scale breeding is likely to occur in areas of recent rainfall in the plateau north of Wadi Hadhramaut between Minwakh, Thamud and the Omani border. Scattered adults may be present in areas of recent rainfall on the Red Sea coast.*

### Oman

- SITUATION

No locusts were seen during surveys carried out in Musandam and Buraimi regions in July and August. No locusts were reported elsewhere during August.

- FORECAST

*No significant developments are likely.*

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

- FORECAST

*No significant developments are likely.*

## EASTERN REGION

### Iran

- SITUATION

No locusts were seen during surveys carried out on the southeastern coast near Jask (2540N/5746E) in August.

- FORECAST

*No significant developments are likely.*

### Pakistan

- SITUATION

During the first fortnight of August, isolated mature solitary adults persisted at ten places in Cholistan along the Indian border south of Bahawalpur (2924N/7147E) and at one location in Sukkur on the border east of Rohri (2739N/6857E).

- Forecast

*Small-scale breeding will cause locust numbers to increase along the Indian border in Cholistan, Khaipur and Tharparkar deserts.*

### India

- SITUATION

During August, isolated solitary immature and mature adults were seen at two places north of Phalodi (2706N/7222E) and at one location on the Pakistani border southwest of Barmer (2543N/7125E). No locusts were seen elsewhere during surveys undertaken in Rajasthan and Gujarat.

- **FORECAST**

*Small-scale breeding will cause locust numbers to increase slightly in Rajasthan.*

## **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/ECLo Desert Locust Information Service (ecllo@fao.org). Information received by the end of the month will be included in the FAO Desert Locust Bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

**Google site.** FAO DLIS has created a Google site (<https://sites.google.com/site/faodlis>) for national locust information officers to share problems, solutions and tips in using new technologies (eLocust2, eLocust2Mapper, RAMSES, remote sensing) and to make available the latest files for downloading. The site replaces the FAODLIS Google group, which will no longer be maintained. Interested users should contact Keith Cressman ([keith.cressman@fao.org](mailto:keith.cressman@fao.org)) for details.

**MODIS imagery.** Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution

MODIS imagery as well as daily and decadal rainfall imagery for monitoring breeding conditions in the Desert Locust recession area. These products can be downloaded in different formats suitable for GIS at: [http://iridl.ldeo.columbia.edu/maproom/.Food\\_Security/.Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/.Food_Security/.Locusts/index.html). The site is available in English and French. Address comments and questions to Pietro Ceccato ([pceccato@iri.columbia.edu](mailto:pceccato@iri.columbia.edu)).

**Greenness maps.** Geo-referenced dynamic greenness maps that show the evolution of green vegetation in the Desert Locust recession area for three months can be downloaded every ten days from DevCoCast (<http://www.devcoCast.eu/user/images/dl/Form.do>). The new product was developed by the Université catholique de Louvain and the Flemish Institute for Technical Research in Belgium and funded by the Belgium Science Policy Office. The maps can be used in a GIS to help guide survey teams and in locust analysis and forecasting.

**Twitter.** FAO DLIS disseminates updates on the Desert Locust situation via Twitter, a social media service. The updates can be followed on some mobile phones in some countries (send an SMS to 40404: 'Follow faolocust' (no quotes) and through the Internet (<http://twitter.com/faolocust>) by searching on 'DesertLocust'.

**eLERT.** The Locust Group has created a dynamic and interactive online reference database that can be used to respond to assistance needs in a fast evolving locust emergency. It provides information on pesticides, equipment, suppliers, environmental monitoring, contracts, and contacts. The eLERT should help agencies to act more effectively in coping with locust threats. Visit eLert at <http://sites.google.com/site/elertsite>.

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

- **Desert Locust situation updates.** Archives Section – Briefs
- **Desert Locust risk map.** Archives Section – Risk maps
- **Summer 2011 forecast.** Home page



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**2011 events.** The following activities are scheduled or planned:

- **EMPRES/WR.** 10<sup>th</sup> Liaison Officer meeting, N'Djamena, Chad (12-16 December)
- **EMPRES/WR.** 7<sup>th</sup> Consultative Committee meeting, N'Djamena, Chad (19-20 December)
- **DLCC.** 40<sup>th</sup> session, Cairo, Egypt (to be confirmed)



### 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.

#### **OTHER REPORTING TERMS**

##### **BREEDING**

- the process of reproduction from copulation to fledging.

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

- July - September/October

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

- October - January/February

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

- February - June/July

##### **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.

##### **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.

##### **RECESSION**

- period without widespread and heavy infestations by swarms.

##### **REMISSION**

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

#### **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: Burkino Faso, Cape Verde, Gambia, Guinea and Guinea-Bissau.

### **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, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

### **EASTERN**

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



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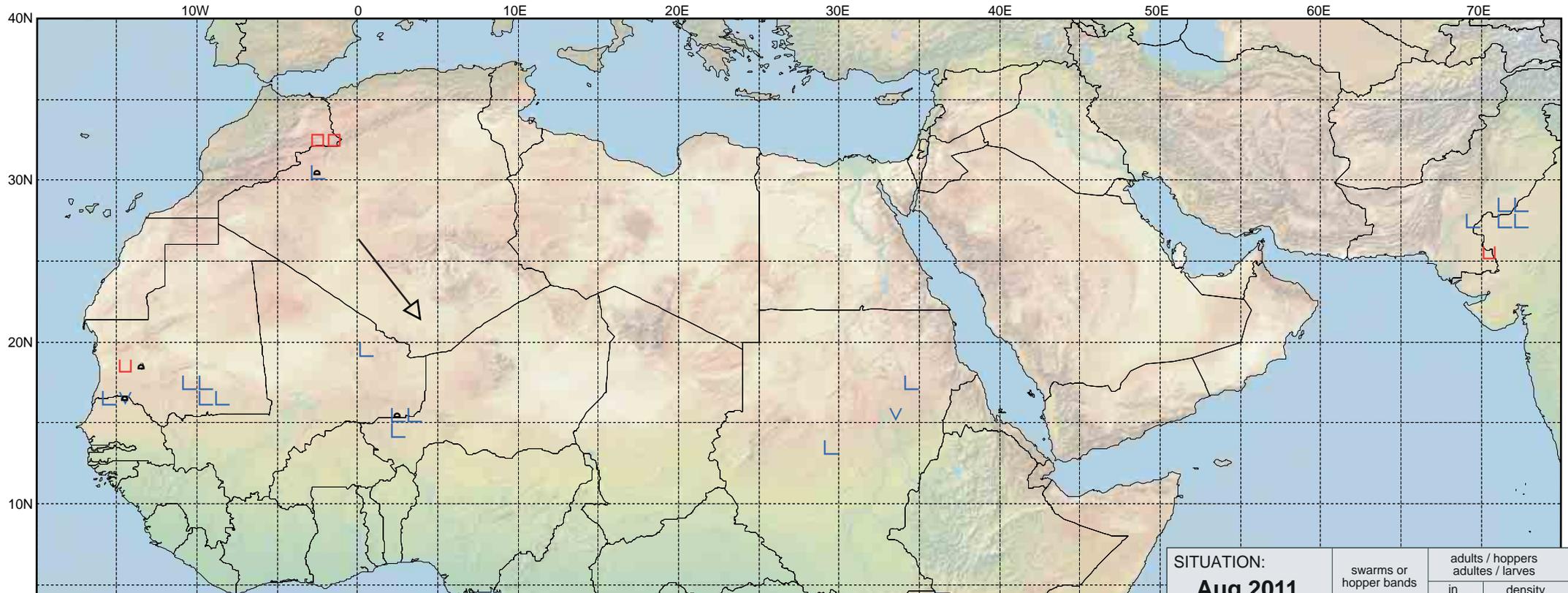
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU: <b>15.10.11</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		

SITUATION: <b>Aug 2011 août 2011</b>	swarms or hopper bands	adults / hoppers adultes / larves	
	essaims ou bandes larvaires	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)			