

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 465



General Situation during June 2017
Forecast until mid-August 2017

(4.7.2017)

The Desert Locust situation continued to remain calm during June. Preventive control operations were undertaken in Algeria and Iran where small-scale breeding had occurred. Elsewhere, only low numbers of locusts were present in the interior of Sudan. However, unusually early and good rains fell during June throughout most of the summer breeding areas in the northern Sahel of West Africa and Sudan as well as along both sides of the Indo-Pakistan border. This will cause ecological conditions to become favourable for breeding earlier than normal and could allow for two generations of summer breeding this year, especially as the current seasonal forecasts are suggesting above-average rains from July to September in parts of the Sahel. During the forecast period, locust numbers will increase slightly in all summer breeding areas where surveys should commence and continue on a regular basis.

Western Region. The situation remained calm in the region during June. Limited preventive control operations continued in **Algeria** (70 ha) against adults near irrigated agricultural areas in the central Sahara. Elsewhere, no locusts were reported. Unusually good rains fell in June throughout the northern Sahel and in parts of the Sahara. As this is earlier than normal, summer breeding is likely to commence early this year in the northern Sahel between **Mauritania** and **Chad**. If good rains continue until October, there may be a

possibility for two generations of breeding to occur this summer. During the forecast period, small-scale egg-laying and hatching are expected to take place in southern and central Mauritania, northern **Mali** and **Niger**, central and eastern Chad and perhaps southern Algeria.

Central Region. The locust situation remained calm as no locusts were reported in the region during June except for low numbers of solitarious adults in the interior of **Sudan**. Nevertheless, good rains fell throughout most of the summer breeding areas in the interior of Sudan where small-scale egg-laying and hatching are expected to take place during the forecast period. Unusually good rains fell along the Red Sea coast in **Eritrea** and **Yemen** where small-scale breeding could occur on an exceptional basis. Small-scale breeding may also occur in areas of recent rainfall in eastern **Ethiopia** and the interior of **Yemen**.

Eastern Region. Control operations (5,500 ha) were carried out against hoppers and adults in the Jaz Murian Basin of southeastern **Iran** during June. Good pre-monsoon rains fell in summer breeding areas along both sides of the **Indo-Pakistan** border in early June followed by the onset of the monsoon at the end of the month. This will allow ecological conditions to become favourable for small-scale breeding that is expected to occur during the forecast period, causing locust numbers to increase slightly.

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 June 2017

Unusual rains fell earlier and further north than usual in the summer breeding areas of the Sahel in West Africa and Sudan. Pre-monsoon and monsoon rains fell along the Indo-Pakistan border. Consequently, ecological conditions are likely to allow summer breeding to commence earlier than usual this year in both areas.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) moved progressively northwards during June. Its average position was substantially further north than usual by some 125–350 km from central Mali to eastern Chad during the first two decades, reaching Aguelhoc (Mali), In Abangharit (Niger) and Iriba (Chad). In Mauritania, the ITCZ was some 50–150 km further north than usual during the second decade only, reaching Kiffa, Aioun El Atrous and Oualata but occasionally reached Tiris-Zemmour. Consequently, above-average and early rains fell in many areas of the northern Sahel, especially between the Adrar des Iforas in Mali and the Air Mountains in Niger, including the Tamesna Plains in between as well as in parts of the summer breeding areas in central and southern Mauritania (Nema received 100 mm since May) and in Chad between Ati and Abeche. This will cause ecological conditions to become favourable for breeding earlier than normal in all countries. In addition, unusual light to heavy rains fell during the first two decades over the central Sahara from the Hoggar Mountains in Algeria (up to 50 mm) to Tibesti in northwest Chad, extending to southern Libya and the Djado Plateau in northeast Niger during the first decade. Flooding occurred in some areas and runoff from these rains could cause conditions to become favourable for breeding, especially in southern Algeria where vegetation was already green west of Tamanrasset.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) moved progressively northwards during June over Sudan, reaching Hamrat Esh Sheikh, North Kordofan and nearly Khartoum, which is some 75–200 km further north than usual. Consequently, above-average and early rains fell in North Kordofan and ecological conditions were already

becoming favourable for summer breeding. During the second decade, unusual rains fell in Red Sea coastal and foothill areas of Eritrea between Mehimet and Ibb, and on the Tihama of Yemen where good rains had also occurred in May. These rains and runoff may cause ecological conditions to become favourable for breeding. Good rains fell in southwest Saudi Arabia near Najran and in the eastern interior of Yemen from Wadi Hadhramaut to Thumrait, Oman. In the Horn of Africa, light to moderate rains fell in parts of eastern Ethiopia and the plateau of northern Somalia, especially between Ayasha and Jijiga, Ethiopia. Ecological conditions are likely to be favourable for small-scale breeding in most of these areas.

In the **Eastern Region**, the southwest monsoon continued its northward movement over India during June and arrived in Gujarat and Rajasthan by the end of the month. It also reached adjacent areas of Pakistan from Tharparkar to Cholistan, which is about two weeks earlier than normal. Consequently, above-average rains fell along both sides of the Indo-Pakistan border during the third decade of June. These rains as well as good pre-monsoon rains that fell for a second consecutive month in early June will cause ecological conditions to become favourable for breeding in both countries. In Iran, no rain fell in the southeast during June, however vegetation remained green in the Jaz Murian Basin near Halil River.



Area Treated

Algeria	8 ha (30–31 May)
	70 ha (June)
Iran	5,500 ha (June)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

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

• FORECAST

Small-scale breeding may have already commenced in the two Hodhs and will extend to other areas of the south, causing locust numbers to increase slightly during the forecast period.

Mali

• SITUATION

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

• FORECAST

Small-scale breeding may have already commenced in the Adrar des Iforas, Timetrine and Tamesna and will continue during the forecast period, causing locust numbers to increase slightly.

Niger

• SITUATION

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

• FORECAST

Small-scale breeding may have already commenced in the Tamesna and perhaps Air Mountains, and will extend to central pasture areas during the forecast period, causing locust numbers to increase slightly.

Chad

• SITUATION

No locust activity was reported during June.

• FORECAST

Small-scale breeding will occur in central and eastern areas, causing locust numbers to increase slightly.

Senegal

• SITUATION

No reports received.

• 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 June, mature solitary adults persisted near irrigated farms in the Adrar (2753N/0017W) valley of the central Sahara. Ground teams treated 70 ha on 1–18 June. Scattered mature solitary adults were present west of Tamanrasset (2250N/0528E).

• FORECAST

Small-scale breeding is likely to occur in some areas of runoff in the south from recent rains in the Hoggar Mountains, causing locust numbers to increase slightly.

Morocco

• SITUATION

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

• FORECAST

No significant developments are likely.

Libya

• SITUATION

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

• FORECAST

Low numbers of locust may be present and breeding on a small scale in areas of recent rainfall in the extreme southwest near Ghat and along the Niger border.

Tunisia

• SITUATION

No locust activity was reported during June.

• FORECAST

No significant developments are likely.

CENTRAL REGION

Sudan

• SITUATION

During June, scattered solitary adults were maturing in the north along the Nile Valley between Dongola (1910N/3027E) and Merowe (1830N/3149E), and in the east near Derudeb (1731N/3607E) and Kassala (1527N/3623E). No locusts were seen in North Kordofan, White Nile, Khartoum and River Nile states.

• FORECAST

Small-scale breeding will cause locust numbers to increase slightly between West Darfur and the Red Sea Hills.

Eritrea

• SITUATION

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

• FORECAST

Low numbers of adults may appear and breed in areas of recent rainfall and runoff on the Red Sea coastal plains between Mehimet and Ibb. If more rains fall, low numbers of adults will appear and breed on a small scale in the western lowlands.

Ethiopia

• SITUATION

No surveys were carried out and no locusts were reported during May and June.



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• FORECAST

Isolated adults may be present in areas of recent rainfall between Ayasha and Jijiga where small-scale breeding could occur.

Djibouti

• SITUATION

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

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

No reports received.

• FORECAST

Isolated adults may be present in areas of recent rainfall on the escarpment and plateau near Boroma where small-scale breeding could occur.

Egypt

• SITUATION

During June, no locusts were seen during surveys in the Lake Nasser area near Abu Simbel (2219N/3138E) and Tushka (2247N/3126E).

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

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

• FORECAST

Low numbers of adults may be present in areas that received recent rainfall in the southwest interior near Najran and May rainfall on the southern coastal plains of the Red Sea between Qunfidah and Jizan.

Yemen

• SITUATION

No reports received.

• FORECAST

Low numbers of adults are likely to be present and breeding in the interior on the edge of Ramlat Sabatyn between Marib and Ataq, in Wadi Hadhramaut and perhaps on the plateau and in the wadis of the north and east between Thamud and Hat where good rains fell recently.

Oman

• SITUATION

During June, no locusts were seen during surveys carried out on the Musandam Peninsula, Madha and in the northern interior near Buraimi (2415N/5547E), Nizwa (2255N/5731E) and Adam (2223N/5731E).

• FORECAST

No significant developments are likely.

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

• FORECAST

No significant developments are likely.

EASTERN REGION

Iran

• SITUATION

During June, isolated solitarious hoppers of all instars mixed with isolated and scattered immature and mature solitarious adults were present in the Jaz Murian Basin east of Ghale Ganj (2731N/5752E). Adults were seen copulating at one place on the 27th. Ground teams undertook control at seven locations, treating 5,500 ha.

• FORECAST

Although a few small adult groups may form in the Jaz Murian Basin, locust numbers will decline due to control operations and unfavourable conditions.

Pakistan

• SITUATION

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

• FORECAST

Low numbers of adults will appear in parts of Tharparkar, Nara and Cholistan and breed on a small scale, causing locust numbers to increase slightly.

India

• SITUATION

No locusts were seen during June in Rajasthan and Gujarat.

• FORECAST

Low numbers of adults will appear in parts of Rajasthan and Gujarat and breed on a small scale, causing locust numbers to increase slightly.

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 (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) 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.** Extraordinary session and 12th Executive Committee meeting, Bamako (3–6 July)
- **CRC.** 5th Regional aerial training course, Moshi, Tanzania (17–21 July)
- **CLCPRO.** 16th EMPRES liaison officers meeting and 13th Steering Committee meeting, Agadir, Morocco (1–9 December)
- **SWAC.** Desert Locust Information Officer workshop, Tehran (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 km² • band: 1–25 m²

SMALL

- swarm: 1–10 km² • band: 25–2,500 m²

MEDIUM

- swarm: 10–100 km² • band: 2,500 m² – 10 ha

LARGE

- swarm: 100–500 km² • band: 10–50 ha

VERY LARGE

- swarm: 500+ km² • 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 AREAS

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



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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.

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.



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

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

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

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>

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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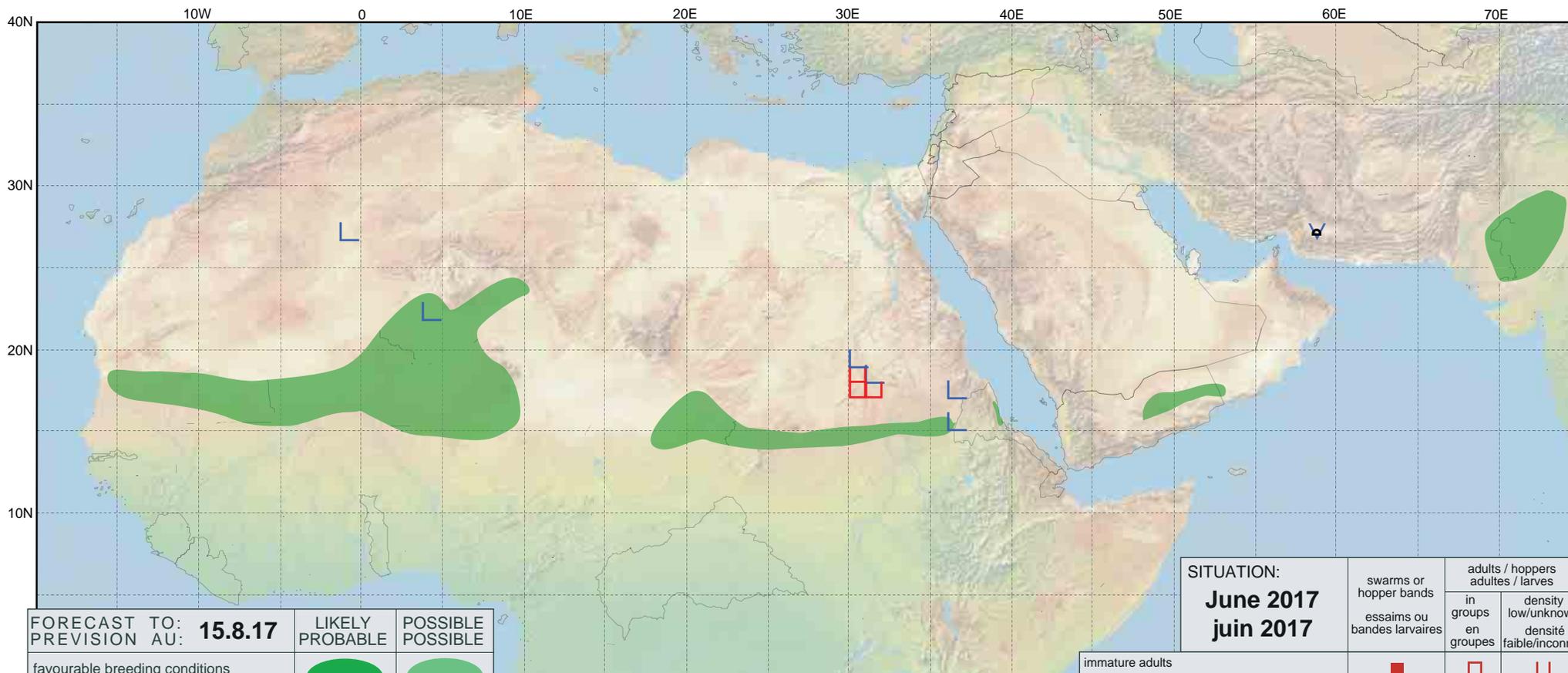
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	15.8.17	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: June 2017 juin 2017	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)			