



# Desert Locust Bulletin

## General situation during July 2024 Forecast until mid-September 2024

### WESTERN REGION: CALM

**SITUATION.** A few adults in the central Sahara of **Algeria**.

**FORECAST.** The summer rains will continue to fall along the northern Sahel where low numbers of adults and limited small-scale breeding will occur in southern **Mauritania**, northern **Mali** and **Niger**, in central and northeast **Chad**, and perhaps southern **Algeria**. As a result, hatching and hoppers are expected from early August onwards, followed by immature adults starting in September.

### CENTRAL REGION: CALM

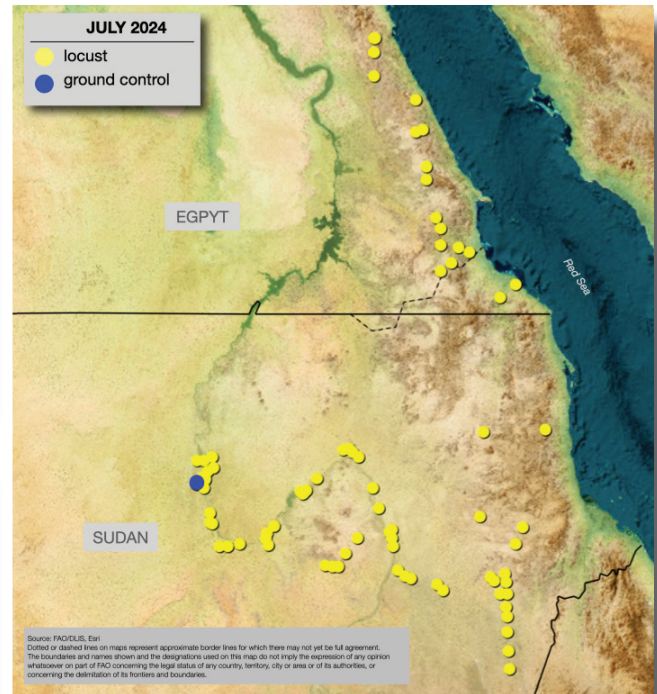
**SITUATION.** A few small groups and more scattered adults were seen moving south in northern **Sudan** (30 ha treated); isolated immature adults continued to decline along the Red Sea coast and interior of **Egypt**.

**FORECAST.** Above-normal rain is expected to continue in the interior from west Darfur in **Sudan** to the western lowlands of **Eritrea**, and the interior of **Yemen**. The first generation of summer breeding will occur with hatching and hoppers in August and September, followed by new immature adults from about mid-September onwards. As a result, numbers will increase slightly, especially around Darfur in Sudan. Locusts will continue to decline in **Egypt** and no significant developments are likely.

### EASTERN REGION: CALM

**SITUATION.** A few isolated adults in **Pakistan**.

**FORECAST.** More rainfall and one generation of limited breeding will occur along the **Indo-Pakistan** border, but numbers are not expected to increase significantly.



### SUMMER BREEDING EXPECTED

The Desert Locust situation was calm during July. More locusts were seen moving south along the northern Nile Valley of Sudan where locusts had arrived from southern Egypt as spring breeding was finished. During the summer, rainfall began in June in some areas in the northern Sahel between Mauritania to western Eritrea, followed by more rain in July. Scattered adults and a few small groups have probably moved further south in the interior near eastern Sudan, western Darfur, and northeast Chad. The first generation of summer breeding in these areas probably started after mid-July with laying. The forecast indicates that hatching and hoppers are expected in August, followed by new immature adults from about mid-September onwards. Similarly, a generation of breeding will also occur in southern and central Mauritania, northeast Mali, Niger, and western Chad of West Africa but numbers will be more limited. In the Arabian Peninsula, above-normal rain is expected in August along the Yemen interior and perhaps parts of the Red Sea coast where there will be a generation of breeding. For the Indo-Pakistan border, good rains fell in July and should continue during August where one generation of limited breeding will occur and numbers are not expected to increase significantly.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service (DLIS) at FAO HQ in Rome, Italy. DLIS continuously monitors the global Desert Locust situation, weather and ecology to provide early warning based on survey and control results from affected countries, combined with remote sensing, historical data and models. The bulletin is supplemented by Alerts and Updates during periods of increased Desert Locust activity.

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## Weather & Ecological Conditions in July 2024

**Summer rains started in some places from Mauritania to Eritrea, while the southwest monsoon arrived in Indo-Pakistan at the end of the month.**

### WESTERN REGION

During July, the seasonal movement of the Inter-Tropical Convergence Zone (ITCZ) continued to move northwards in the northern Sahel. By the end of the second dekad, it had reached north of Tidjikja in Mauritania, south of Aguelhoc in northeast Mali, at Arlit in Niger, and in northern Chad near Gouro. From central Mauritania to northeast Mali, its position was about normal for this time of the year. However, it was above normal in western Mauritania (50–140 km), Niger (100–330 km), and Chad (280–330 km). During the third dekad, the ITCZ continued to be above normal except for western Mauritania. Very little rain fell during the first dekad in the northern Sahel between Mauritania and Niger. In Chad, light to moderate rains fell in the west near Nokou and the east near Abeche. During the second dekad, light to moderate rains occurred further north in central Mauritania (Brakna, Assaba, Hodh El Gharbi), northeast of Mali in Timetrine, Tilemsi Valley and Adrar des Iforas, good rains in the Tamensa Plains and the central pasture of Niger, and in central and northeast Chad, including heavy rain in Wadi Fira near Iriba. During the third decade, good rains continued above as well as in southwest Mauritania. As a result, annual green vegetation improved in most places.

### CENTRAL REGION

During July, the seasonal movement of the Inter-Tropical Convergence Zone (ITCZ) continue to move northwards in Sudan. During the first two dekad, it had reached up to 250 km further north than normal in North Darfur. However, it changed further east towards the Nile Valley where the first dekad was slightly north than normal (80 km), while the second dekad was further south than normal (100 km). During the third dekad, the ITCZ continued to be above normal from North Darfur (260 km) to east of the Nile Valley (40 km). In terms of rainfall, light to moderate occurred in North Kordofan and from Khartoum to Kassala of Sudan and the western lowland of Eritrea during the first dekad. This was followed by moderate rainfall in West and North Darfur, parts of North Kordofan, and southern parts of Northern, River Nile, and White Nile as well as the southern areas of the western lowland of Eritrea during the second dekad. In Yemen, light rainfall occurred during the first dekad along the southern Red Sea coast and in the interior near Wadi Hadhramaut. During the second dekad, light to moderate rain were seen along the Red Sea and Gulf of Aden coast as well as in the interior from Bayhan to Shabwah and Wadi Hadhramaut and continued during the third dekad with some floods. In the Horn of Africa, light rains fell in northwest Somalia and parts of Afar and Somali region of Ethiopia during the first dekad

followed by moderate rain in the second dekad. Moderate to heavy rainfall occurred in the highlands of Tigray and Amhara during both dekads. Consequently, annual green vegetation continued to improve in many places from West Darfur to western lowland of Eritrea as well as in Yemen.

### EASTERN REGION

During July, monsoon rains fell along both sides of the Indo-Pakistan border. Mainly light rain occurred during the first dekad from Tharparkar, Pakistan to Barmer in Rajasthan, India as well as further north of Jodhpur. More rains fell during the second dekad with moderate rainfall in Tharparkar and Cholistan, Pakistan as well as Barmer, Jaisalmer, and Gujarat of India. However, only light rain fell between Nara Desert of Pakistan to the western part of Rajasthan. Above-normal rain of up to 60% or more occurred in parts of Rajasthan. As a result, annual vegetation was starting to improve in some places.



### Area Treated

Control operations decreased in July to 30 ha compared to 3 111 ha in June.  
Sudan 30 ha



### Desert Locust Situation and Forecast

### WESTERN REGION

**Rain continued to fall in parts of the northern Sahel between Mauritania and Chad where low numbers of locusts with a generation of limited small-scale breeding will occur during August and September.**

#### ALGERIA

##### • SITUATION

During July, isolated immature solitary adults were present in a few irrigated areas in the central Sahara near Adrar (2753N/0017W).

##### • FORECAST

*If more rains occur in the south near Tamanrasset and the borders of Mali and Niger, low numbers of adults could appear, and a generation of limited small-scale breeding could occur from August onward.*

#### BURKINA FASO

##### • SITUATION

No locusts were reported during July.

##### • FORECAST

*No significant developments are likely.*

## CHAD

### • SITUATION

No locusts were reported during July.

### • FORECAST

*Low numbers of solitary adults are likely to be present in the northeast Sahel as well as areas between Kanem and Wadi Fira. Since good rains fell in July, breeding probably started by the end of month and will continue during August. As a result, hatching and hoppers are expected from early August onwards, followed by immature adults starting from the beginning of September.*

## LIBYA

### • SITUATION

No locusts were reported during July.

### • FORECAST

*No significant developments are likely.*

## MALI

### • SITUATION

No locusts were reported during July.

### • FORECAST

*Low numbers of solitary adults are likely to be present between Timetrine, Tilemsi Valley, Adrar des Iforas, and Tamesna. A generation of limited small-scale breeding will occur with hatching and solitary hoppers in August and September, followed by new immature adults from about mid-September onwards.*

## MAURITANIA

### • SITUATION

No locusts were reported during July.

### • FORECAST

*Low numbers of solitary adults are likely to be present between Hodh Ech Chargui and Trarza. A generation of limited small-scale breeding will occur with hatching and solitary hoppers towards the end of August and continue during September.*

## MOROCCO

### • SITUATION

No locusts were reported during July.

### • FORECAST

*No significant developments are likely.*

## NIGER

### • SITUATION

No locusts were reported during July.

### • FORECAST

*Low numbers of solitary adults are likely to be present on the Tamesna Plains and along the central pasture areas. A generation of limited small-scale breeding will occur with hatching and solitary hoppers in August and September, followed by new immature adults from about mid-September onwards.*

## SENEGAL

### • SITUATION

No locusts were reported during July.

### • FORECAST

*No significant developments are likely.*

## TUNISIA

### • SITUATION

No locusts were reported during July.

### • FORECAST

*No significant developments are likely.*

## BENIN, CABO VERDE, CAMEROON, CÔTE D'IVOIRE, GAMBIA, GHANA, GUINEA, GUINEA-BISSAU, LIBERIA, NIGERIA, SIERRA LEONE, AND TOGO

### • FORECAST

*No significant developments are likely.*

## CENTRAL REGION

**During the summer, above-normal rain is expected to continue in the interior of Sudan, western Eritrea and Yemen, where the first generation of breeding should occur and numbers will increase slightly.**

## DJIBOUTI

### • SITUATION

No locust reports were received in July.

### • FORECAST

*No significant developments are likely.*

## EGYPT

### • SITUATION

During July, adults continued to decline in the Red Sea and southern Nile Valley. Only isolated immature solitary adults were seen on the coast and subcoastal areas between Abu Ramad (2224N/3624E) to Safaga (2645/3356), and in the southern Nile Valley near Tushka (2247N/3126E).

### • FORECAST

*Locusts will continue to decline along the Red Sea coast, southern Nile Valley, and in the Western Desert. No significant developments are likely.*

## ERITREA

### • SITUATION

No locusts were reported during July.

### • FORECAST

*Low numbers of adults are likely to be present in the western lowlands and continue where one generation of small-scale breeding will occur with hatching and hoppers in August, followed by new immature adults from about mid-September onwards.*

## ETHIOPIA

### • SITUATION

No locust reports were received in July.

• FORECAST

*No significant developments are likely.*

## OMAN

• SITUATION

During July, no locusts were seen in a few places along the Musandam Peninsula, Batinah coast, and the interior between Buraimi (2415N/5547E) and Adam (2223N/5731E).

• FORECAST

*No significant developments are likely.*

## SAUDI ARABIA

• SITUATION

No locusts were reported during July.

• FORECAST

*No significant developments are likely.*

## SOMALIA

• SITUATION

No locusts were reported during July.

• FORECAST

*No significant developments are likely.*

## SUDAN

• SITUATION

During July, more scattered immature and mature solitary adults were seen moving south along the northern Nile Valley from Dongola (1910N/3027E), Ed Debba (1803N/3057E), and Abu Hamed (1932N/3320E) to the Bayuda Desert, Atbara River, and west of the Red Sea Hills from Tomala (2002N/3551E) south to Haiya (1820N/3621E) and Kassala (1527N/3623E). Control operations treated 30 ha of two small groups.

• FORECAST

*Scattered adults and perhaps a few small groups will continue to move south to the interior of North and West Darfur, North Kordofan, northern White Nile, southern River Nile, and the eastern region near Kassala. The first generation of summer breeding may have started during the second half of July with laying in North and West Darfur, followed by hatching and hoppers in August, and new immature adults from about mid-September onwards. This will also occur in the other areas between North Kordofan to Kassala.*

## YEMEN

• SITUATION

No locusts were reported during July.

• FORECAST

*Low numbers of solitary adults are likely to be present in the interior between Al Hazm, Bayhan, Shabwah, Hadhramaut Valley and the northern plateau as well as parts of the Red Sea coastal area. As a result of rain during July plus above-normal rain expected in August, one generation of limited small-scale summer breeding will occur with hatching and hoppers from early August onwards, followed by immature adults starting from mid-September.*

## BAHRAIN, DEMOCRATIC REPUBLIC OF THE CONGO, IRAQ, ISRAEL, JORDAN, KENYA, KUWAIT, LEBANON, PALESTINE, QATAR, SOUTH SUDAN, SYRIAN ARAB REPUBLIC, TÜRKIYE, UGANDA, UNITED ARAB EMIRATES, AND UNITED REPUBLIC OF TANZANIA

• FORECAST

*No significant developments are likely.*

## EASTERN REGION

**Good rains fell during the southwest monsoon along the Indo-Pakistan border where one generation of limited breeding will occur, but numbers are not expected to increase significantly.**

## AFGHANISTAN

• SITUATION

No locust reports were received in July.

• FORECAST

*No significant developments are likely.*

## INDIA

• SITUATION

During July, no locusts were seen in Rajasthan and Gujarat.

• FORECAST

*Low numbers of solitary adults are expected to be present in parts of Barmer, Jaisalmer, Phalodi, and Bikaner of Rajasthan as well as northwest Gujarat due to the good rain that fell during July. As a result, one generation of limited small-scale summer breeding will occur with hatching and hoppers from early August onwards, followed by immature adults starting from the mid-September.*

## ISLAMIC REPUBLIC OF IRAN

• SITUATION

During July, no locusts were seen along the south from Bushehr (2854N/5050E) in the southwest to Chabahar (2517N/6036E) in the southeast, in the interior near Shiraz (2936N/5234E), in the southeast interior of Jaz Murian Basis, and in the northeast.

• FORECAST

*No significant developments are likely.*

## PAKISTAN

• SITUATION

During July, a few immature solitary adults were seen in the Nara Desert southeast of Sukkur (2742N/6854E) while a few mature solitary adults were seen in Cholistan near Islamgarh (2751N/7048E) and the border of India. No locusts were seen in Tharparkar.

• FORECAST

*Low numbers of adults are likely to be present between Tharparkar to Cholistan due to the good rain that fell during July. As a result, one generation of limited small-scale summer breeding will occur with hatching and hoppers from early August onwards, followed by immature adults starting from mid-September.*



## Announcements

### Locust warning levels

A colour-coded scheme indicates the alert level, perceived risk, or threat of current Desert Locust infestations to crops, and appropriate response:

- **Green** – calm situation (low alert); no threat to crops (*maintain regular monitoring*)
- **Yellow** – cautious situation (moderate alert); potential threat to crops (*increased vigilance, control may be needed*)
- **Orange** – serious situation (high alert); threat to crops (*survey and control must be undertaken*)
- **Red** – dangerous situation (very high alert); significant threat to crops (*intensive survey and control operations must be conducted*)

The scheme is applied to the Locust Watch web page and the monthly bulletins and updates.

### Locust reporting

**RAMSES data.** Countries should connect to the Internet and backup the RAMSES database whenever data are added or changed; do not wait until the end of the month.

**Bulletins.** Affected countries are encouraged to prepare decadal, fortnightly, or monthly bulletins that summarize and analyze the situation, and share them with other countries.

**Reporting.** All information should be sent by e-mail to the FAO Desert Locust Information Service (ecl@fao.org and faodlislocust@gmail.com). Reports received by the first day of the new month will be included in the FAO Desert Locust Bulletin; 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.

### eLocust3 digital tools

In addition to the original eLocust3 tablet, FAO has three free tools for data collection in the field:

- eLocust3m – a smartphone app for survey and control data, developed with PlantVillage (Android: play.google.com; iOS: appl.apple.com; how-to-use videos: tiny.cc/eL3mVideos)
- eLocust3g – a GPS app for emergencies, developed with Garmin (tiny.cc/eLocust3g)
- eLocust3w – an Internet form for emergencies, developed in Kobo (tiny.cc/eLocust3w)

The geo-referenced data collected by these tools feed into FAO's global early warning system and are critical for real-time monitoring, near-instant analysis, and planning field operations in each country.

[[www.fao.org/ag/locusts/en/activ/2573/eL3suite/index.html](http://www.fao.org/ag/locusts/en/activ/2573/eL3suite/index.html)]

### Standard Operating Procedures (SOPs)

FAO has developed pocket-sized SOPs for use on the field of Desert Locust biology, survey, and control, including instructions

on how to use eLocust3 tools, that are available in different languages.

[[www.fao.org/ag/locusts/en/publicat/gl/sops/index.html](http://www.fao.org/ag/locusts/en/publicat/gl/sops/index.html)]

### Community awareness

As communities have an important role to play in Desert Locust management, FAO has developed:

- Posters – six simple, easy-to-understand posters, providing basic messaging on pesticide containers, safety measures, pesticide exposure, farmer advice, Desert Locust, and following instructions ([www.fao.org/ag/locusts/en/publicat/2581/index.html](http://www.fao.org/ag/locusts/en/publicat/2581/index.html))
- Animation – a simple SWABO animation for all readers to learn about the world's most dangerous migratory pest ([www.youtube.com/watch?v=3TOhuA-v1m4](http://www.youtube.com/watch?v=3TOhuA-v1m4))

### Publicly available locust data

Desert Locust survey and control data are available for research and other non-commercial purposes:

- FAO Locust Hub ([locust-hub-hqfao.hub.arcgis.com/](http://locust-hub-hqfao.hub.arcgis.com/))
- FAO Hand-in-Hand ([data.apps.fao.org/](http://data.apps.fao.org/))

### 2024 calendar

- **CRC.** Locust pesticide management system workshop, Muscat, Oman (1–5 September)
- **CLCPRO/CRC.** Field training for MSc on locust management sciences, Mauritania (10–25 September)
- **CLCPRO/CRC.** Joint survey using dLocust drones, Mauritania (1–10 October)
- **CLCPRO.** 11<sup>th</sup> Session and 17<sup>th</sup> Executive Committee, Marrakech, Morocco (21–25 October)
- **CRC.** 33<sup>rd</sup> Session and 37<sup>th</sup> Executive Committee, Kuwait City, Kuwait (24–28 November)
- **CLCPRO/CRC.** Field test of drone for spraying, Mauritania (13–15 December)



## 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

### Moderate

- 21–50 mm

### Heavy

- more than 50 mm

### 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

## Other reporting terms

### Breeding

- The process of reproduction from copulation to fledging.

### 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.

## Regions

### Western

- Locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during upsurges and plagues only: Benin, Burkina 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 and Gulf of Aden: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during upsurges and plagues only: Bahrain, D.R. Congo, 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



## Useful tools and resources

**FAO/DLIS Locust Watch.** Information, maps, activities, publications, archives, FAQs, links  
<http://www.fao.org/locust-watch>

**IRI RFE.** Rainfall estimates every day, dekad and month  
[http://iridl.ldeo.columbia.edu/maproom/.Food\\_Security/.Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/.Food_Security/.Locusts/index.html)

**JRC Greenness maps.** Dynamic maps of green vegetation evolution every dekad  
<https://locust.cgls.dev/s/6ddC96njJcRxZy7>

**Lobelia Soil moisture maps.** Dynamic maps of soil moisture detected every dekad  
<https://fao-locust.lobelia.earth>

**NASA WORLDVIEW.** Satellite imagery in real time  
<https://worldview.earthdata.nasa.gov>

**NOAA.** HYSPLIT locust forecast trajectory model  
<https://locusts.arl.noaa.gov>

**Ventusky.** Real time rainfall, winds and temperatures for locust migration  
<http://www.ventusky.com>

**Windy.** Real time rainfall, winds and temperatures for locust migration  
<http://www.windy.com>

**Zoom Earth.** Real time rainfall, winds and temperatures for locust migration  
<https://zoom.earth>

**eLocust3 suite.** Digital tools for data collection in the field (mobile app, web form, GPS)  
<http://www.fao.org/locust-watch/activities>

**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 Facebook.** Information exchange using social media  
<http://www.facebook.com/faolocust>

**FAOLocust Slideshare.** Locust presentations and photos  
<http://www.slideshare.net/faolocust>

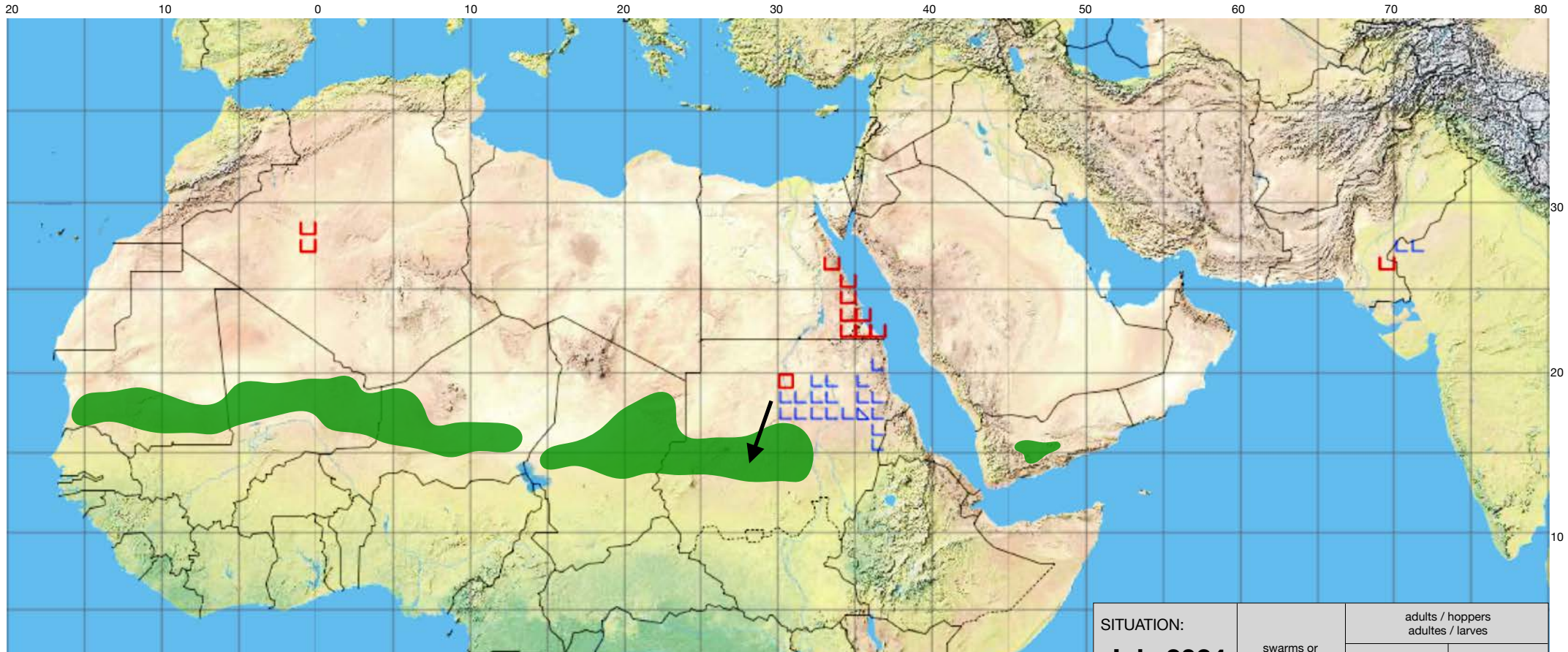
**FAOLocust Twitter.** The very latest updates posted as X/tweets  
<http://www.twitter.com/faolocust>

**FAO/ESRI Locust Hub.** Desert Locust maps and data download, and emergency response progress  
<https://locust-hub-hqfao.hub.arcgis.com>



# Desert Locust Summary

## Criquet pèlerin – Situation résumée



FORECAST TO : PREVISION AU : <b>15.09.24</b>	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarms(s) essaim(s) limité(s)		
non swarming adults adults non essaimant		

SITUATION: <b>July 2024</b> <b>juillet 2024</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 partially 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 example) larves et adultes (symboles combinés)			