



Desert Locust Bulletin

General Situation during July 2022 Forecast until mid-September 2022

WESTERN REGION: CALM

SITUATION. No locust present.

FORECAST. Small-scale breeding will occur in the breeding areas of northern Sahel countries in the presence of a sufficient amount of rain. Scattered locusts could appear in the north of the Sahel (in Mauritania, Mali, Niger and Chad).

CENTRAL REGION: CALM

SITUATION. Few solitary adult and hopper groups are present in the interior of Sudan and solitary adults were present in the interior of Yemen.

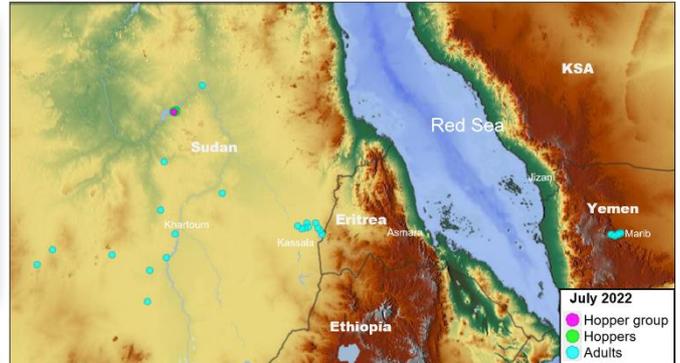
FORECAST. Small-scale breeding will continue in the summer breeding areas with sufficient rainfall in the interior of **Sudan**, and will start in **Yemen**, and to a lesser extent in western **Eritrea**. Limited breeding may also occur in **northeast Ethiopia** and **northwest Somalia** if sufficient rains fell during the forecast period.

The seasonal weather conditions in the Arabian Sea and the Indian Ocean that bring rain towards the south of the Arabian Peninsula, may allow small-scale locust breeding to take place in the Empty Quarter and traditional breeding areas in Oman and the southern parts of the Kingdom of Saudi Arabia.

EASTERN REGION: CALM

SITUATION. No locusts present.

FORECAST. Small-scale summer breeding may occur along both sides of the Indo-Pakistan border with the onset of the monsoon rains. Locust numbers are expected to remain low, and no significant developments are likely.



SUMMER RAINS STARTED IN SUMMER BREEDING AREAS

The Desert Locust situation continued to remain calm during July. Only low numbers of solitary adults and hopper groups were reported from different sites in the summer breeding areas in the interior of Sudan, and few isolated immature solitary adults were reported in the summer breeding areas of Marib Governorate in Yemen. July was characterized by heavy rains in the Sahel region (Mali, Niger and Mauritania), Oman, Yemen and India (Gujarat, Bikaner and Nagaur). Moderate rainfalls were recorded in the North African countries (southern Algeria, Libya and Morocco). Moderate to high rains fell in Eritrea, Ethiopia, Pakistan, Saudi Arabia, Somalia (Somaliland), and Sudan, while low to moderate rains fell in Djibouti and Egypt. The rains fell during July in the breeding areas have contributed to the creation of favourable ecological conditions (vegetation and soil moisture) for locust breeding, where vegetation was found greening/green and soil was observed to be wet or moist in breeding areas in several countries. As the predictable weather models indicated above-normal rains are likely in summer breeding areas during August and September, small-scale breeding will occur in the northern Sahel from Mauritania to western Eritrea, and in breeding areas with sufficient rainfall, particularly in Sudan and Yemen, and along both sides of the Indo-Pakistan border. Limited breeding may also occur in northeast Ethiopia and Somalia if good rains fall during the forecast period. These breeding activities will cause locust numbers to increase slightly by the end of the forecast period.

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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WESTERN REGION

July was characterized by the rainy season in the Sahel with significant precipitations in Mali, Niger and Mauritania, while in Chad only the south and centre of the country have received light to moderate rains. In the North Africa countries, moderate rains fell on southern Algeria, Libya and Morocco with light showers in the Atlas and sporadic showers in the south. The Intertropical Convergence Zone (ITCZ) continued its seasonal movement; where it moved north during the 3rd decade of July in some areas of the western region, comparable to its previous position, namely in north of Mauritania, northeast of Mali and north of Chad, which is above the climatological position of 0.2 degrees. In the Sahel countries, ecological conditions are favourable in Mali and Mauritania and soon will become favourable for breeding in Niger and Chad, while in Algeria only irrigated agricultural schemes may be suitable for locust breeding.

CENTRAL REGION

Heavy rains fell in Oman, interior and highlands of Yemen, moderate to high rains fell in Eritrea, Ethiopia, Saudi Arabia, and Sudan, while low to moderate rains fell in Djibouti, Egypt, and Ethiopia. These rains are likely to allow ecological conditions to become more favourable for Desert Locust breeding during the coming period. In Somaliland, rainfall was recorded in the last week of July in the west of Berbera coastal areas (Ceelsheikh area). Green vegetation was observed in inland and sub-coastal in the western regions, Awdal, Gabiley and west of M/Jeex regions. Dry vegetation was observed in the eastern regions, Saaxil, Togdheer and Sanaag regions and soil moisture was dry in all surveyed locations.

EASTERN REGION

Heavy rain fell at coastal areas of Gujarat, India, and moderate to heavy rain in the breeding areas of India (Bikaner and Nagaur) and all the potential locust breeding areas of Pakistan (Tharparkar, Nara and Cholistan, Balochistan). Vegetation was found green/greening and soil observed to be wet or moist in the breeding areas of both countries, except some places. Poor rainfall was reported in Iran, where vegetation was dry or drying with high temperature and low soil moisture.



Area Treated

No control operations were carried out during July.



**Desert Locust
Situation and Forecast**

WESTERN REGION

ALGERIA

• SITUATION

No locusts were reported in July.

• FORECAST

No *significant* developments are likely.

BURKINA-FASO

• SITUATION

No locusts were reported during July.

• FORECAST

No *significant* developments are likely.

CHAD

• SITUATION

No locusts were reported during July.

• forecast

The increasing rains in the gregarization areas would likely improve the ecological conditions for locust breeding and survival.

LIBYA

• SITUATION

No locusts were reported during July.

• FORECAST

No *significant* developments are likely.

MALI

• SITUATION

No locusts were reported during July.

• FORECAST

Small-scale breeding may occur in the north of the country in the Tamesna and Adrar des Iforas areas where rains have been recorded, but locust numbers will remain low.

MAURITANIA

• SITUATION

No locusts were reported during July.

• FORECAST

Small-scale breeding is expected in the areas that receive rains in the south and centre of the country and in Tiris Zemmour. Ecological conditions for breeding will improve and persist over the forecast period.

MOROCCO

• SITUATION

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

• FORECAST

No *significant* developments are likely.

NIGER

• SITUATION

No locusts were reported during July.

• FORECAST

Small-scale breeding of solitary adults is likely to occur in the pasture areas and on the Tamesna Plains that receive summer rains.

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, CAMEROON, CAPE VERDE, CÔTE D'IVOIRE, GAMBIA, GHANA, GUINEA, GUINEA BISSAU, LIBERIA, NIGERIA, SIERRA LEONE, AND TOGO

• FORECAST

No *significant* developments are likely.

CENTRAL REGION

DJIBOUTI

• SITUATION

No locusts were reported during July.

• FORECAST

No *significant* developments are likely.

EGYPT

• SITUATION

During July, no locusts were seen during the surveys in southern Red Sea coastal plains near Halaib (2213N/3638E) and Abu-Ramad (2224N/3624E), the inner areas to the west of Marsa Alam (2504N/3454E), and near Lake Nasser in Abu-Simbel (2219N/3138E) and Toshka (2247N/3126E).

• FORECAST

No *significant* developments are likely.

ERITREA

• SITUATION

No locusts were reported during July.

• FORECAST

Low numbers of solitary adults are likely to appear in the western lowlands and breed on a small-scale in areas that receive summer rains. No significant developments are likely.

ETHIOPIA

• SITUATION

No locusts were reported during July during the ground and

aerial survey operations that were undertaken in the southern parts of Oromia region, and the southern Nations, Nationalities and peoples' region.

• FORECAST

No significant developments are likely.

KENYA

• SITUATION

No locusts were seen or reported during July.

• FORECAST

No *significant* developments are likely.

OMAN

• SITUATION

During July, no locusts were reported during surveys carried out in Al Dakhyiah, Al Batinah North, Al Batinah South, Al Buraimi and Musandam.

• FORECAST

Small scale breeding could occur in some traditional breeding areas, but no significant developments are likely.

SAUDI ARABIA

• SITUATION

No locusts were reported during July from surveys carried out in Makkah, Al-Madinah, Asir, Najran and Jazan regions.

• FORECAST

No *significant* developments are likely.

SOMALIA

• SITUATION

No locusts were reported during July.

• FORECAST

No *significant* developments are likely.

SUDAN

• SITUATION

During July, Low density immature and mature adult groups mixed with scattered adults, as well as 4th to 6th instar hopper groups and fledglings, from breeding in June, were found at one location near Derbi in the River Nile State where additional scattered mature solitary adults were seen at other sites near Abu-Hamed and east of Shendi (1641N/3322E). Additional isolated and scattered mature solitary adults were seen at several locations near Kassala (1527N/3623E). Low numbers of mature solitary adults were reported at few sites in North Kordofan, White Nile and, west and east Khartoum states. No locusts were reported during surveys carried out in Sinkat in the Red Sea state.

• FORECAST

Small scale breeding will continue causing an increase in locusts numbers, particularly, in the River Nile and Kassala states, giving a rise to hopper and adult groups.

YEMEN

• SITUATION

During July, low density isolated immature solitary adults were seen at few sites in Sirwah and Bidbdah districts of Marib (1527N/4519E). No more locusts were seen during the surveys in the other interior near Al Hazm (1609N/4447E),

Sana'a (1521N/4412E), and on the Red Sea coast between Suq Abs (1600N/4312E) and Zabid (1410N/4318E).

• FORECAST

Small-scale breeding will commence in the interior areas that received good rains recently in Marib, Al Jawf, Shabwah and Hadramaut. Limited breeding can occur on the Red Sea and Gulf of Aden coastal plains where good rains fell recently.

BAHRAIN, D.R. CONGO, IRAQ, ISRAEL, JORDAN, KUWAIT, LEBANON, PALESTINE, QATAR, SOUTH SUDAN, SYRIA, TANZANIA, TURKEY, UGANDA, AND UAE

• FORECAST

No *significant* developments are likely.

EASTERN REGION

AFGHANISTAN

• SITUATION

No locust reports were received in July.

• FORECAST

No *significant* developments are likely.

INDIA

• SITUATION

No locusts were seen by surveys in Rajasthan and Gujarat during July.

• FORECAST

Low numbers of solitarious adults may appear in parts of eastern Rajasthan and small-scale breeding may occur in the breeding areas that will receive rains in the forecast period.

IRAN

• SITUATION

During July, no locusts were seen by surveys in the three provinces (Khuzestan, Khorasan, and Sistan & Baluchestan).

• FORECAST

No *significant* developments are likely.

PAKISTAN

• SITUATION

During July, no locusts were seen in the summer-monsoon breeding areas of Tharparkar (Mirpur Khas), Nara (Sukkur) and Cholistan (Rahimyar Khan and Bahawalpur). Similarly, no locusts were seen in Uthal area of Balochistan. In total, 344 localities were checked with an area of 74,600 ha surveyed

during the month.

• FORECAST

Small scale may occur in summer-monsoon breeding areas during the forecast period.



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 to 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 (eclo@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 (download: <http://tiny.cc/eL3m>; how-to-use videos: <http://tiny.cc/eL3mVideos>)
- eLocust3g – a GPS app for emergencies, developed with Garmin (<http://tiny.cc/eLocust3g>)
- eLocust3w – an Internet form for emergencies, developed in Kobo (<http://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.

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

STANDARD OPERATING PROCEDURES (SOPs)

FAO has developed pocket-sized SOPs for use in the field on Desert Locust biology, survey, and control, including instructions on how to use eLocust3 tools, that are available in different languages.

[<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, which can be edited (<http://www.fao.org/ag/locusts/en/publicat/2581/index.html>)
- Animation – a simple SWABO animation for all readers that clearly explains about the dangers of Desert Locust (<https://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 (<https://locust-hub-hqfao.hub.arcgis.com>)
- FAO Hand-in-Hand (<https://data.apps.fao.org>)

REAL-TIME EVALUATION REPORT

The full report of the 2020–2021 Desert Locust upsurge real-time evaluation is available: <http://tiny.cc/RTE2022>

2022–2023 CALENDAR

- **CLCPRO.** Joint survey using drones, Mauritania (16 September– 5 October)
- **CLCPRO.** Workshop for review of the tools developed to implement the health and environment standard, Senegal, (11–14 October)
- **CLCPRO-CRC.** Interregional workshop on the applied research, Tunisia (8–11 November)
- **CLCPRO.** 10th session, Algiers, Algeria (27 November – 1 December, tbc)
- **SWAC.** Desert Locust Information Officer workshop, Tehran, Iran (5–7 December)
- **SWAC.** 33rd session, Esfahan, Iran (11–13 December)
- **DLCC.** 42nd session (March, Kenya, 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

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

Warning levels

Green

- Calm. Low alert. No threat to crops; maintain regular surveys and monitoring

Yellow

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

Orange

- Serious. High alert. Threat to crops; survey and control operations must be undertaken

Red

- Danger. Very high alert. 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 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: 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.

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



Useful tools and resources

FAO Locust Watch. Information, maps, activities, publications, archives, FAQs, links
<http://www.fao.org/ag/locusts>

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

FAO regional commissions. Western Region (CLCPRO), Central Region (CRC), South-West Asia (SWAC)
<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

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

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

eLocust3 suite. Digital tools for data collection in the field (mobile app, web form, GPS)
<http://www.fao.org/ag/locusts/en/activ/DLIS/eL3suite/index.html>

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>

