



No. 538 2 August 2023

# **Desert Locust Bulletin**

General situation during July 2023 Forecast until mid-September 2023

#### **WESTERN REGION: CALM**

**SITUATION.** Scattered solitarious adults become mature in the northern Sahel of **Mauritania** where first instar hoppers started; isolated mature solitarious adults in the central pasture of **Niger**. A few small groups in the south of the Atlas Mountains in **Morocco** (74 ha treated) and isolated immature solitarious adults in the central Sahara of **Algeria**.

FORECAST. Small-scale breeding will increase slightly in the northern Sahel where hatching and hoppers are likely to continue during August with fledging starting in September in the south, central, and perhaps northwest Mauritania as well as parts of northeast Mali, Tamesna Plain in Niger, and central and north Chad. Solitarious adults may persist in central Algeria and appear in the south.

# SAUDI ARABIA SAUDI ARABIA AL Databer AL

#### **CENTRAL REGION: CALM**

SITUATION. Immature adult groups and swarms in Yemen arrived from the north and moved in the interior (1 470 ha treated), including some hoppers; a few immature adult groups moved south in the interior and Red Sea coast of Saudi Arabia (995 ha); transiens adult in southern Oman. A few groups and bands of hoppers, fledgling, and mature adults and groups near the Nile in Sudan (859 ha) while some hopper and adult groups were in the Red Sea coast and highland of Eritrea (892 ha); solitarious adults in Afar, Ethiopia and northwest Somalia; scattered adults in southern Nile Valley Fount

FORECAST. Small-scale breeding will occur in the interior and perhaps the Red Sea coast of Yemen, the interior of Sudan, and the western lowlands of Eritrea. Hatching and hoppers could begin in August with fledging starting from mid-September onwards. Only one generation of breeding is likely to occur this summer. Locusts will decline on the Red Sea coast of Saudi Arabia unless more rains fall. Low numbers of adults may persist in parts of northwest Somalia and Afar, Ethiopia. Isolated adults may remain near the southern Nile Valley in Egypt.

# **EASTERN REGION: CALM**

**SITUATION.** Isolated mature adults seen in Nara and Cholistan, **Pakistan** and Rajasthan, **India**.

**FORECAST.** Only very small breeding could occur along both sides of the Indo-Pakistan border during the monsoon where hatching and solitarious hoppers may appear in August and September.

#### **LOCUST IN YEMEN**

The Desert Locust situation was mainly calm during July. As a result of the end of spring breeding and control in Saudi Arabia, small groups and swarms arrived in northern Yemen and moved throughout the interior of the country where there was control. Hoppers and adult groups were treated in the Nile Valley of Sudan and on the Red Sea coast of Eritrea where some moved into the highland. Adults were seen in northeast Ethiopia, northwest Somalia, and southern parts of Oman and Egypt. In the western region, adults were seen in the northern Sahel of Mauritania where the first summer generation of hoppers appeared during the second half of the month. A few adults were present in Niger. Spring control operations finished in Morocco and only a few adults were seen in Algeria. The southwest monsoon arrived in Indo-Pakistan and a few adults were present. During the forecast, good rain should occur in the northern Sahel from Mauritania to western Eritrea where small breeding will take place with scattered hoppers during August and September followed by fledging after mid-September. During early August, perhaps a few small groups or swarms in northern Ethiopia. According to model forecasts, only a little rain may occur in the summer breeding areas of Yemen and Indo-Pakistan.

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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Mainly light rain in parts of the summer breeding areas from Mauritania to India.

#### **WESTERN REGION**

In July, the seasonal movement of the Inter-Tropical Convergence Zone (ITCZ) should continue northward this time of the year but instead, it was up to 150 km south, below normal, during the first two dekad in Mauritania. In Mali and western Niger, it was about 50 km above normal in the first dekad but then was below normal in the second dekad. In Chad, it was more than 100 km above normal. Light rain fell in a few places in southern Mauritania and during the second dekad in central and northern Chad, but very little rain fell in Adrar des Iforas of northeast Mali and Niger's Tamesna Plains and central pasture. However, good rains fell during the last few days of the month in southern Mauritania where some places had about 100 mm. In northwest Mauritania, early rains occurred in some places. Annual vegetation improved significantly throughout the southern and central areas of Mauritania where it had become green. This also occurred in a few parts of the northern Sahel in Mali, Niger, and Chad. In Northwest Africa, there was no rain and vegetation were only green in parts of the irrigated areas near the Adrar in the central Sahara of Algeria.

#### **CENTRAL REGION**

During July, rain fell in parts of the summer breeding area in the interior of Sudan, the western lowland of Eritrea, and the interior of Yemen. The movement of the Inter-Tropical Convergence Zone (ITCZ) in Sudan was up to 200 km further north than usual in West and North Darfur but was below normal further east from North Kordofan to the Red Sea Hills. As a result. light to moderate rains fell from Geneina in the west, about 200 km south of Khartoum, to Kassala in the east as well as the southern part of the western lowlands of Eritrea. Moderate rain fell in the highland of Tigray and Amhara of Ethiopia and light rain in the lowland of the Afar and the northern part of Somalia. In northwest Somalia, a little bit of rain fell on the plateau. In the Arabia Peninsula, light rain fell near the coast of Qunfidah during the first dekad while, in Yemen, a few small showers occurred for a few days in parts of the interior as well as the Red Sea coast. Consequently, small annual green vegetation occurred in most of these areas.

#### **EASTERN REGION**

The onset of the southwest monsoon covered the Indo-Pakistan border on 2<sup>nd</sup> July, which was about one week before the normal time. During the first dekad, moderate rains fell in the Tharparkar Desert in Pakistan and southern Rajasthan and Gujarat in India while light rains fell in parts of Nara, Cholistan, and northern Rajasthan. During the second and third dekad, mainly light rain fell along both sides of the Indo-Pakistan

border and green annual vegetation continued to improve in some places.



# **Area Treated**

Control operations declined in July to 4 290 ha compared to 22 680 ha in June.

Eritrea 892 ha

Morocco 1 689 ha (June, revised)

74 ha

Saudi Arabia 995 ha Sudan 859 ha Yemen 1 470 ha



#### **WESTERN REGION**

#### **A**LGERIA

• SITUATION

During July, isolated immature solitarious adults were seen in a few places in the central Sahara between Adrar (2753N/0017W) to Reggane (2643N/0010E) during the first half of the month.

• FORECAST

Some scattered adults may arrive in the southern Sahara near northern Mali and Niger. Summer rains and breeding could occur.

#### **BURKINA FASO**

• SITUATION

No locusts were reported during July.

• FORECAST

No significant developments are likely.

# CHAD

• SITUATION

No locusts were reported during July.

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Low numbers of adults are likely to appear in the northern Sahel between Kanem and Fada where breeding on a small scale could occur.

#### LIBYA

• SITUATION

No locusts were reported during July.

FORECAST

No significant developments are likely.

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#### MALI

SITUATION

No locusts were reported during July.

FORECAST

Low numbers of adults are likely to appear in the northern Sahel between Timetrine, Tilemsi Valley, Adrar des Iforas, and Tamesna as well as in the west near Nioro and Nara where breeding could occur on a small scale.

#### MAURITANIA

#### SITUATION

During July, isolated and scattered immature solitarious adults were seen in the northeast from Akjoujt (1945N/1421W) to Atar (2032N/1308W) and further south between Moudjeria (1752N/1219W) to north of Kaedi (1612N/1332W), near Kiffa (1638N/1124W), and between Aioun El Atrous (1639N/0936W) to east of Nema (1636N/0715W). Many of the solitarious adults became mature in the south during the last dekad of the month. Laying started about the end of the first week and isolated first instar solitarious hoppers were seen at one place east of Kiffa on the  $23^{\rm rd}$  of this month.

#### • FORECAST

Small-scale breeding will increase slightly in the northern Sahel between Trarza and Hodh Ech Chargui with hatching and solitarious hoppers likely to continue during August with fledging starting in early September. In the northwest, breeding may occur early than normal during the summer due to good rain in Inchiri and southwest Adrar.

#### Могоссо

#### • SITUATION

During July, isolated immature solitarious adults and two small groups were seen at the end of the first dekad in the northeast near Figuig (3207N/0113W). Isolated immature solitarious adults were seen further southwest near Erfoud (3128N/0410W) during the last dekad. Control operations treated 74 ha. Elsewhere, no locusts were seen.

• FORECAST

No significant developments are likely.

# NIGER

#### • SITUATION

During July, isolated mature solitarious adults were seen in a few places in the central pasture near Tasker (1507N/1041E) during the last week of the month.

#### • FORECAST

Low numbers of adults are likely to appear in the northern Sahel along the central pasture areas and on the Tamesna Plains where breeding may occur on a small scale. Hatching and solitarious hoppers could begin in August with fledging starting about mid-September.

#### 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**

#### **D**JIBOUTI

• SITUATION

No locusts were reported during July.

FORECAST

No significant developments are likely.

#### **E**GYPT

#### • SITUATION

During July, a few scattered immature solitarious adults were seen in the southern Nile Valley near Tushka (2247N/3126E). No locusts were seen nearby in farms near Abu Simbel (2219N/3138E), Sh. Oweinat (2219N/2845E) and Aswan (2405N/3256E), in the northwest near Siwa (2912N/2531E), and near the subcoastal areas of the southeast Red Sea coast near El Sheikh El Shazly (2412N/3438E).

• FORECAST

No significant developments are likely.

#### **E**RITREA

#### • SITUATION

During July, groups of late instar hoppers and immature adults were seen on the central coast of the Red Sea near Sheib (1551N/3903E) and Afabet (1612N/3841E). A few immature adult groups were seen in the highlands during the second and third weeks near Ginda (1527N/3905E) and Nakfa (1640N/3828E). Control operations treated 892 ha.

#### FORECAST

Low numbers of solitarious adults are likely to appear in the western lowlands and breed on a small scale. Hatching and solitarious hoppers could begin in August with fledging starting from mid-September onwards.

#### Етніоріа

#### • SITUATION

A late report in June said that mature solitarious adults were present in the lowland near Chifra (1136N/4001E) in eastern Amhara and western Afar.

During July, a few immature solitarious adults and an immature group were seen near Chifra at the end of the month. There

were unconfirmed reports of a few groups or small swarms in the highland of eastern Tigray while solitarious adults may have been seen near Ayasha (1045N/4234E) in the northern Somali Region.

#### FORECAST

Low numbers of solitarious adults and perhaps a few groups or small swarms may appear in parts of the eastern highland of Tigray and Amhara and the lowland of Afar and the northern Somali Region.

#### **O**MAN

#### SITUATION

During July, scattered maturing transiens adults were seen near a farm closer to Marmul (1808N/5516E) in the southern interior that probably arrived from eastern Yemen. In the north, no locusts were seen on the Musandam Peninsula, Batinah coast, and in the interior from Buraimi (2415N/5547E) to Adam (2223N/5731E).

#### • FORECAST

No significant developments are likely.

#### SAUDI ARABIA

#### • SITUATION

During July, a few last late instar hopper groups were in the interior near Al Dawadimi (2430N/4422E) and on the southern Red Sea coast near Qunfidah (1909N/4107E) while a few immature groups were in the interior east of Medinah (2430N/3935E), near Bisha (2000N/4236E), south of Wadi Dawasir (2028N/4747E), and on the central Red Sea coast near Jeddah (2130N/3910E). During the second half of the month, scattered immature and mature solitarious adults in Lith (2008N/4016E), Qunfidah and Bisha decreased rapidly, and no more locusts were seen. Control operations treated 995 ha. Elsewhere, no locusts were seen.

#### • FORECAST

No significant developments are likely.

#### SOMALIA

#### • SITUATION

During July, isolated and scattered immature solitarious adults were seen in the northwest near the escarpment and in parts of the coastal and plateau areas. No locusts were seen in the northeast near the coast in Bosaso (1118N/4910E) and in the interior near Gardo (0930N/4905E), Garowe (0824N/4829E), and Galkayo (0646N/4725E).

# • FORECAST

Low numbers of solitarious adults may persist in parts of the northwest. No significant developments are likely.

#### SUDAN

#### • SITUATION

On the  $2^{nd}$  of June, several groups of mature adults were seen near the Nile River for about 50 km between Merowe (1830N/3149E) and Abu Hamed (1932N/3320E).

During July, scattered mature solitarious adults were present along the Nile River from Shendi (1641N/3322E) to the north of Dongola (1910N/3027E), Atbara River from Ed Damer (1734N/3358E) to nearly Gedaref (1401N/3524E), in the Bayuda Desert, and west of the Red Sea Hills. Small fifth instar and fledgling groups and bands were present on the Nile River between Merowe and Abu Hamed where scattered immature adults appeared in the third dekad. Scattered third to fifth instar solitarious hoppers were present near Haiya (1820N/3621E) in the Red Sea Hills early in the month. Control operations treated 859 ha.

#### • FORECAST

Low numbers of solitarious adults are likely to appear between West Darfur and Kassala states and breed on a small scale. Hatching and solitarious hoppers could begin in August with fledging starting from mid-September onwards. Only one generation of breeding is likely to occur this summer in the interior.

#### YEMEN

#### SITUATION

During July, a few immature swarms arrived from the north during the first week and moved into the highland near Sada'a (1656N/4345E) and Sana'a (1521N/4412E) as well as the interior near Al Hazm (1610N/4446E) while immature and mature solitarious adults were seen near Ataq (1435N/4649E), the Hadhramaut Valley, plateau and in the east near Hat (1719N/5205E) close to Oman. During the second week, a few immature swarms moved from Sana'a to the highland near lbb (1358N/4411E) while more groups were in the interior from Al Hazm to Ataq and Shabwah (1522N/4700E), Hadhramaut Valley and the plateau. During the second half of the month, many of the adults were becoming mature while immature scattered adults and a few groups appeared on the east coast near Al Ghaydah (1612N/5210E). Scattered late instar hoppers and fledglings were seen at one place in the plateau indicating that laying started at the beginning of June with hatching during the last dekad of the month. Control operations treated 1 470 ha.

#### • FORECAST

Low numbers of solitarious adults and some groups are likely to breed on a small scale in parts of the interior between Al Hazm, Hadhramaut Valley and the plateau where hatching, hoppers, fledgling, and new immature adults can occur in August and September. This may also occur on the Red Sea coast. Only one generation of breeding is likely to occur this summer.

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

# • FORECAST

No significant developments are likely.

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# **EASTERN REGION**

#### **A**FGHANISTAN

• SITUATION

No locusts were reported during July.

FORECAST

No significant developments are likely.

#### INDIA

#### SITUATION

During July, isolated mature solitarious adults were seen in Rajasthan from Bikaner (2801N/7322E) west towards the Indira Gandhi Canal and the border of Pakistan. No locusts were seen in Gujarat.

#### FORECAST

Only very small breeding could occur in parts of Rajasthan and Gujarat during the monsoon where hatching and solitarious hoppers may appear in August and September.

#### IRAN

#### SITUATION

During July, no locusts were seen in the interior of the southeast near Pishin (2605N/6145E) and the Jaz Murian Basis, the interior of Fars region close to Shiraz (2936N/5234E), and in the southwest coast east of Abadan (3021N/4817E).

FORECAST

No significant developments are likely.

#### **P**AKISTAN

• SITUATION

During July, isolated immature solitarious adults were present in the monsoon area of Nara Desert southeast of Sukkur (2742N/6854E) while isolated immature and mature solitarious adults were seen in a few places in the Cholistan Desert near Islamgarh (2751N/7048E) and southeast of Bahawalpur (2924N/7147E).

#### • FORECAST

Only very small breeding could occur in parts of the Tharparkar, Nara and Cholistan deserts during the monsoon where hatching and solitarious hoppers may appear in August and September.



# **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 (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]

# **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.

[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)  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)

# **Publicly available locust data**

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

- FAO Locust Hub (locust-hub-hgfao.hub.arcgis.com/)
- FAO Hand-in-Hand (data.apps.fao.org/)

#### 2023 calendar

- CLCPRO. Regional training on communication during locust recession and emergency management, Dakar, Senegal (25–29 September)
- CLCPRO/CRC. Interregional training course on aerial control application of Desert Locust, Agadir, Morocco (30 October – 3 November)
- CLCPRO. Training on the use of SVDN version 3 and monitoring/evaluation system, Bamako, Mali (27 November – 1 December)
- CLCPRO. 16<sup>th</sup> session of the Executive Committee, Nouakchott, Mauritania (4–8 December)
- SWAC. Desert Locust Information Officer workshop and 33rd session, Rome (18–22 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 km² • band: 25–2,500 m²

Medium

• swarm:  $10-100 \text{ km}^2$  • band:  $2,500 \text{ m}^2 - 10 \text{ ha}$ 

Large

• swarm: 100–500 km<sup>2</sup> • 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

#### 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,

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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.



# **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

**FA0 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

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# **Desert Locust Summary Criquet pèlerin – Situation résumée**



