

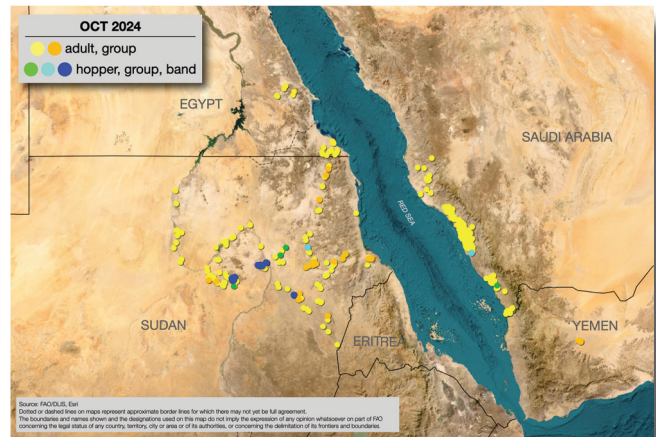
Desert Locust Bulletin

General situation during October 2024 Forecast until mid-December 2024

WESTERN REGION: CALM

SITUATION. Low numbers of adults and a few hoppers in west and northeast of **Chad**, central **Niger**, and in **Mauritania**; a few adults in southern **Algeria**.

FORECAST. Once the summer vegetation dries out in the northern Sahel, a few small groups could form in northwest **Mauritania** for control, and perhaps in the Air Mountains of **Niger**, northeast **Mali**, and **Chad**. Some locusts could eventually move to southern and central **Algeria**.



CENTRAL REGION: CAUTION

SITUATION. Scattered locusts, groups and several bands in northern and eastern **Sudan** (75 ha treated); scattered adults, few hoppers and small groups in **Saudi Arabia**; few hoppers and adult groups in the interior of **Yemen**; isolated adults in southeast **Egypt** and northwestern **Somalia**.

FORECAST. Adults, groups and possibly a few small swarms will gradually move from the interior of **Sudan** to the Red Sea coast. Locust numbers will increase as rainfall occurred and winter breeding commences in Sudan, **Saudi Arabia**, **Eritrea**, **Yemen**, and perhaps southeast **Egypt** and northwest **Somalia** if there is more rainfall along the Red Sea and Gulf of Aden coasts. Some control is needed in Sudan and may be needed in some other countries.

SMALL OUTBREAK IN SUDAN

The Desert Locust situation was calm during October. Summer rainfall began earlier than usual, extending further north in the northern Sahel and southern Sahara until late September. This led to low numbers of hoppers and adults from Mauritania to Sudan and Saudi Arabia, with some in southeast Egypt, Yemen's interior, northwest Somalia, and along the Indo-Pakistan border. Vegetation remained green in Sudan, Mauritania, and Saudi Arabia. By the end of October, a very small outbreak developed in the interior of Sudan where small groups of hoppers and adults and very small bands were present and treated. During the forecast, locust will decrease as vegetation dries out in the summer areas in the northern Sahel, except in Mauritania, where hoppers and adults will increase slightly in the northwest where breeding and a few small groups could form for control. In Sudan, adult groups and possibly a few small swarms will move to the Red Sea coast for winter breeding. Locusts number will gradually increase along the Red Sea and Gulf of Aden coasts in Saudi Arabia, Egypt, Yemen, and perhaps Somalia. However, seasonal models predict mostly below-normal rains from December onwards. As a result, only small-scale breeding is expected during the winter with some control.

EASTERN REGION: CALM

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

FORECAST. As vegetation becomes dry, locust numbers will decrease along the **Indo-Pakistan** border. No significant developments are likely.



Weather & Ecological Conditions in October 2024

Summer rain declined from Mauritania to Eritrea while good rain fell along the Red Sea and parts of the Gulf of Aden coasts. Annual vegetation was still green in most areas.

WESTERN REGION

During October, the seasonal movement of the Inter-Tropical Convergence Zone (ITCZ) continue to retreat southward from mid-September onwards. Nevertheless, the position during the first two dekads were above normal in Mauritania (30–340 km), Mali (150–280 km), Niger (120–175 km), and Chad (180–230 km). Similarly, every month since June or July, rain has fallen several hundred km further north than normal in the Sahel and southern Sahara until the end of September. In October, only light rain occurred during the first dekad in parts of southern Mauritania, northwest Mali, the central Sahara of Algeria, northwest Niger, and eastern Chad. Very little rain fell during the second dekad except for moderate rain in southwest and northwest Mauritania, and light rain in the north as well as south of the Atlas Mountains along the Morocco-Algeria border. During the third dekad, there was only light to moderate rain in northwest Libya. Annual vegetation was greening in southern Western Sahara, while it was still green in southern, central and northwest Mauritania, northeast Mali and Niger, south of the Atlas Mountains in Morocco, and central and southern Sahara of Algeria. Vegetation was drying in central and eastern Chad and the central pasture of Niger.

CENTRAL REGION

During October, the seasonal movement of the Inter-Tropical Convergence Zone (ITCZ) continue to retreat southward in Sudan, but its position was about 120–210 km further north than usual. Rainfall started early as well as several hundred km further north than normal in central and northern Sudan, including southern Egypt in August. In October, only light to moderate rain occurred in North Kordofan during the first dekad. In the southern Red Sea coast and foothills, light to moderate rains fell in Saudi Arabia and Yemen every dekad, including the third dekad in northern Saudi Arabia. There was light rain in the southern coast and foothills of Eritrea in the first dekad, followed by some rain along the southern coast of Sudan during the second dekad. Light to moderate rain fell in both countries during the third dekad. In the Gulf of Aden during the first dekad, light to moderate rainfall occur in southern Yemen, northwest Somalia, Djibouti as well as the Afar and northern Somali regions of Ethiopia. During the third dekad, there was light rain in northwest Somalia. Annual vegetation was still green in the northern Nile Valley and eastern part of Sudan, in central and southern Red Sea coast of Saudi Arabia, a few places on the southeast Red Sea coast of Egypt and the interior of Yemen, and some places on the coast in northwestern Somalia.

EASTERN REGION

During October, only light to moderate rain fell during the second dekad in parts of Gujarat in India. Annual vegetation started to dry out in many places on both sides of Indo-Pakistan border, but some was green in Gujarat.



Area Treated

The last control operations were conducted in June, involving 3 111 ha. In October:

- Sudan 75 ha



Desert Locust Situation and Forecast

WESTERN REGION

Locusts were present and breeding in the northern Sahel from Mauritania to Chad. As vegetation dries out, a few very small groups could form in northwest Mauritania, where preventive control may be required, and perhaps in northeast Mali, south Algeria, and in the Air Mountains of Niger.

ALGERIA

• SITUATION

During October, isolated maturing solitary adults were seen west of Tamanrasset (2250N/0528E) in the south. No locusts were seen in the central Sahara near Adrar (2753N/0017W).

• FORECAST

Low numbers of locusts could move from Niger and Mali to southern and central Sahara. No significant developments are likely.

BURKINA FASO

• SITUATION

No locusts were reported during October.

• FORECAST

No significant developments are likely.

CHAD

• SITUATION

During October, isolated mature adults were present in southern Barh-el-Gazel near Moussoro (1338N/1629E), northwest Wadi Fira near Arada (1501N/2040E), and south Ennedi Ouest near Kalait (1550N/2054E). A few fourth instar solitary hoppers were seen north of Moussoro on the 2nd. No locusts were found in the west near Ziguey (1443N/1547E) in Kanem as well as north of Abeche (1349N/2049E) in the east of Ouaddai.

• FORECAST

Low numbers of solitary adults will continue to decrease from Kanem to Fada. As vegetation dries out, perhaps a few very small groups could form and slowly move west. Adults and perhaps small groups may also arrive from western Sudan. No significant developments are likely.

LIBYA

• SITUATION

No locusts were reported during October.

• FORECAST

A low number of solitary adults may perhaps be present in parts of the far south near the Chad border and in the southwest near Ghat. No significant developments are likely.

MALI

• SITUATION

No locusts were reported during October.

• FORECAST

Low numbers of solitary locusts will continue to be present in parts of Timetrine, Tilemsi Valley, Adrar des Iforas, and Tamesna. As vegetation dries out, perhaps a few very small groups could form and remain in the Adrar des Iforas. No significant developments are likely.

MAURITANIA

• SITUATION

During October, isolated mature solitary adults were present in Trarza east of Aguilal Faye (1827N/1444W), Brakna north of Magta Lahjar (1730N/1305W), Tagant near N'Beika (1758N/1215W), northwest in Inchiri south of Akjoujt (1945N/1421W), and southwest Adrar. Isolated 1st to 3rd instars solitary hoppers were seen southeast of Akjoujt during the last dekad where laying started the end of September. Elsewhere in the south, no locusts were seen in northern Assaba and western Hodh El Gharbi.

• FORECAST

Low numbers of solitary hoppers and adults will continue to increase slightly in the northwest, where laying and hatching will occur from northern Trarza to the southern parts of Inchiri and southwest Adrar. Fledgling and new immature adults will begin during the second half of November onwards. Consequently, a few very small groups could form. Preventive control may be required.

MOROCCO

• SITUATION

During October, no locusts were seen south of the Atlas Mountains.

• FORECAST

Low numbers of solitary adults could appear in the south. No significant developments are likely.

NIGER

• SITUATION

During October, scattered immature and mature solitary adults were present in the central pasture northeast of Tasker (1507N/1041E) and south of Ténéré. A few isolated third instar hoppers were seen in which laying started around the last dekad of September and hatching occurred during the second week of October.

• FORECAST

Low numbers of solitary locusts will continue to be present in parts of the Tamesna Plains and south of Ténéré. As vegetation dries out, perhaps a few very small groups could form and move to the Air Mountains. No significant developments are likely.

SENEGAL

• SITUATION

No locusts were reported during October.

• FORECAST

No significant developments are likely.

TUNISIA

• SITUATION

No locusts were reported during October.

• 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

A very small outbreak in the interior of Sudan, where adults and groups will move to the Red Sea coast for the winter breeding season. Locusts in Saudi Arabia, Yemen, Somalia, and Egypt will gradually increase slightly along the Red Sea and Gulf of Aden coasts, where small-scale breeding could occur if there is more rainfall. Some control operations will be required.

DJIBOUTI

• SITUATION

No locust reports were received in October.

• FORECAST

Low numbers of solitary adults may appear along the southeast coast, but more rainfall is required before winter breeding commences. Consequently, significant developments are unlikely.

EGYPT

• SITUATION

During October, a few isolated mature solitary adults were present in the southeast Red Sea Hills and subcoastal areas

near El Sheikh El Shazly (2412N/3438E), while isolated immature solitary adults were seen further south between Abu Ramad (2224N/3624E) and the Sudan border. No locusts were present along the northwest coast near Mersa Matruh (3120N/2713E), the interior near Siwa (2912N/2531E), and along the Nile Valley near Tushka (2247N/3126E).

• **FORECAST**

Low numbers of solitary adults may continue along the southeast Red Sea coast and subcoastal areas, where small-scale winter breeding could occur if there is more rainfall. No significant developments are likely.

ERITREA

• **SITUATION**

No locusts were reported during October.

• **FORECAST**

As vegetation will dry along the western lowlands, low numbers of adults will move to the northern and central Red Sea coast, where small-scale winter breeding should commence.

ETHIOPIA

• **SITUATION**

During October, no locusts were seen in the lowland areas of the Afar Region between Chifra (1136N/4001E) to Semera (1148N/4100E).

• **FORECAST**

No significant developments are likely.

OMAN

• **SITUATION**

During October, no locusts were seen in the Musandam Peninsula, the Batinah coast, the interior between Buraimi (2415N/5547E) and Adam (2223N/5731E), and one place in the southern interior of Dhofar west of Thumrait (1736N/5401E).

• **FORECAST**

No significant developments are likely.

SAUDI ARABIA

• **SITUATION**

During October, isolated and scattered immature and mature solitary adults were present along the central and southern Red Sea coast from Mecca (2125N/3949E) to south of Jizan (1656N/4233E) and the Yemen border, including a mature adult group on the 6th south of Qunfidah (1909N/4107E). At the beginning of the month, a few isolated 2nd to 3rd instars solitary hoppers were seen in one place near Jizan, while a group of 2nd to 4th instars hoppers were observed south of Qunfidah on the 29th. No locusts were seen along the northern Red Sea coast and interior.

• **FORECAST**

Low numbers of solitary hoppers and adults will gradually increase and a few groups could form primarily along the central and southern Red Sea coast. Small-scale winter breeding could continue if there is more rainfall. Preventive control may be required.

SOMALIA

• **SITUATION**

During October, a few isolated immature and mature solitary adults were seen in the escarpment northeast of Boroma (0956N/4313E).

• **FORECAST**

Low numbers of solitary adults may appear along the northwest coast, where small-scale winter breeding could occur if there is more rainfall. No significant developments are likely.

SUDAN

• **SITUATION**

During October, scattered mature solitary adults persisted along the northern Nile Valley, extending from north of Dongola (1910N/3027E) to Berber (1801N/3400E) and the Bayuda Desert. In the last dekad, groups of some medium-density hoppers, immature and mature adults, and very small bands were seen in the Bayuda Desert where a small outbreak developed. East of the Nile Valley to the Red Sea Hills, hoppers and groups were present from Berber to Hayma (1957N/5616E), while scattered adults, groups, and laying occurred from northeast Wadi Diib and the Egypt border to south near Kassala (1527N/3623E). During the end of the month along the Red Sea coast, solitary and gregarious mature adults and several groups were present and breeding in Tokar (1827N/3741E), while scattered mature solitary adults were seen further north near Eit (2009N/3706E). Control operations treated 75 ha in the Bayuda Desert.

• **FORECAST**

Vegetation will continue to dry out in the interior, causing hoppers, groups, and small bands to fledge. Adults and small groups from Darfur will slowly move west to Chad and beyond, while other adults, groups, and perhaps a few small swarms will gradually move from North Kordofan and the Nile Valley to the Red Sea coast and the northeast subcoastal areas. The first generation of winter breeding will commence in November onwards, and locust numbers are expected to increase. Preventive control will be required.

YEMEN

• **SITUATION**

During mid-October, a few scattered 3rd to 6th instars solitary hoppers as well as scattered and groups of mature solitary and gregarious adults were seen by locals at two places in the interior between Marib (1527N/4519E) and Safer (1534N/4547E).

• **FORECAST**

Once vegetation dries out, low numbers of locust and some small groups are likely to move from the interior towards the Red Sea and Gulf of Aden coasts. If there is more rainfall, small-scale winter breeding could commence in these areas. Preventive control may be required.

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

A few isolated adults along the Indo-Pakistan border will decline and no significant developments are expected.

AFGHANISTAN

• SITUATION

No locust reports were received in October.

• FORECAST

No significant developments are likely.

INDIA

• SITUATION

During October, isolated immature solitary adults were seen in western Rajasthan near the border west of the Indira Gandhi Canal in Bikaner district and in Jaisalmer district south and northwest of Sam (2649N/7030E). No locusts were seen in Gujarat.

• FORECAST

Low numbers of solitary adults will continue to decrease in Rajasthan as vegetation continues to become dry. No significant developments are likely.

ISLAMIC REPUBLIC OF IRAN

• SITUATION

During October, no locusts were seen near the coast, stretching from Abadan (3021N/4817E) in the southwest to Chabahar (2517N/6036E) in the southeast as well as in the interior of Shiraz (2936N/5234E), in the southeast interior between the Jaz Murian Basin and Zaboli (2707N/6140E), and in the northeast near Birjand (325228N/591313E).

• FORECAST

No significant developments are likely.

PAKISTAN

• SITUATION

During October, a few isolated mature solitary adults were seen in the Cholistan Desert northeast of Islamabad (2751N/7048E) and the border of India. No locusts were seen in Nara and Tharparkar deserts and in the coastal area of Baluchistan near Lasbela (2614N/6619E).

• FORECAST

Low numbers of solitary adults will decrease along the Indo-Pakistan border as vegetation continues to become dry. No significant developments are likely.



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]

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]

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-hqfao.hub.arcgis.com/)
- FAO Hand-in-Hand (data.apps.fao.org/)

Jamal Chihrane

We are deeply saddened to announce the passing of Jamal Chihrane on 14 October. Dr Chihrane served as the head of the Desert Locust Information Office at Morocco's National Anti-Locust Centre (CNLAA) for nearly 25 years, retiring in April this year. We would like to express our sincere condolences to his family, colleagues, and the government.

2024 calendar

- **CRC.** 33rd Session and 37th Executive Committee, Kuwait City, Kuwait (24–28 November)
- **CLCPRO/CRC.** Field test of drone for spraying, Mauritania (13–15 December)
- **CLCPRO.** 11th Session and 17th Executive Committee, Marrakech, Morocco (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.

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, Sierra 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

JRC Greenness maps. Dynamic maps of green vegetation evolution every dekad
<https://locust.cgls.dev/s/6ddC96njcRxZy7>

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>

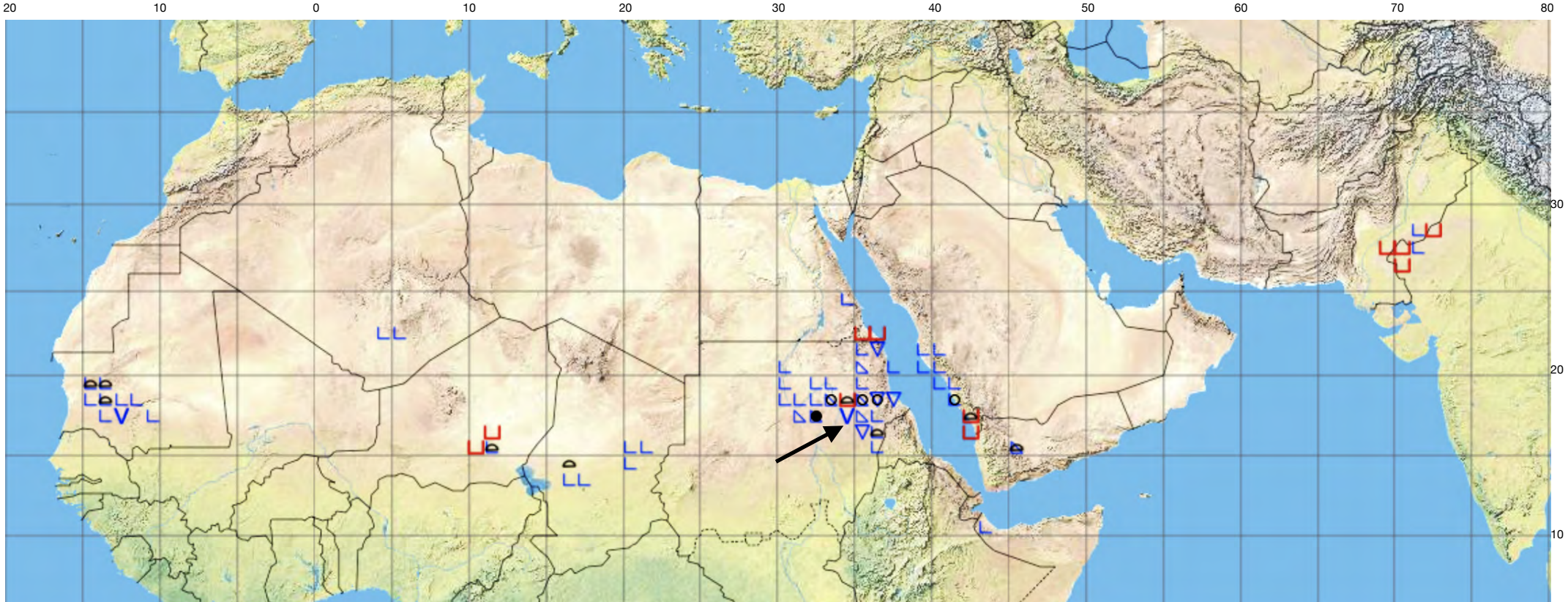
FAOLocust Twitter. The very latest updates posted as X/tweets
<http://www.twitter.com/faolocust>

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 : 15.12.24	LIKELY PROBABLE	POSSIBLE POSSIBLE	SITUATION: Oct 2024 oct 2024		
			swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves	
				in groups en groupes	density low/unknown densité faible/inconnue
favourable breeding conditions conditions favorables à la reproduction			immature adults adultes immatures		
major swarm(s) essaim(s) important(s)			mature or partially mature adults adultes matures ou partiellement matures		
minor swarms(s) essaim(s) limité(s)			adults, maturity unknown adultes, maturité inconnue		
non swarming adults adults non essaimant			egg laying or eggs pontes ou œufs		
			hoppers larves		
			hoppers & adults (combined example) larves et adultes (symboles combinés)		